

"LET'S BEAT DIABETES" 2009 TRACKING SURVEY

RESEARCH REPORT FOR

COUNTIES MANUKAU DISTRICT HEALTH BOARD



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1 SUMMARY

INTRODUCTION

The Let's Beat Diabetes Benchmark Survey 2006/2007 provided baseline statistics for the Let's Beat Diabetes (LBD) Programme in the Counties Manukau DHB (CMDHB) region, against which to assess its relative impact over time.

The large-scale general population survey was designed to track changes in knowledge, attitude and behaviours around healthy eating, physical activity, diabetes, general health and health literacy and support networks. It also provided information to inform LBD programme planning, including its social marketing campaign development.

OBJECTIVES

In 2009 the Let's Beat Diabetes Tracking Survey was undertaken to:

- Identify shifts in knowledge, attitude and behaviour during the 2007-2009 period
- Identify gaps in knowledge and barriers to change
- Provide evidence of community need and programme impact to leverage community, organisational and sector engagement
- Inform the direction and development of the Let's Beat Diabetes programme.

The key areas of questioning covered by the survey were in relation to: nutrition, physical activity, diabetes, demographics and how to reach different ethnic groups. The majority of questions and wording were maintained from 2007 in order to achieve consistent and valid results.

CONTEXT OF CHANGE

During the 2.5 year interim between the Benchmark and Tracking Survey significant work under the Let's Beat Diabetes Programme umbrella was focused into increasing awareness and maintaining or changing attitudes, behaviours and opportunities of the population with a particular focus on Maaori, Pacific and those living in low socioeconomic areas. More recently there has been a specific focus on South Asian populations.

This included the second phase of the Let's Beat Diabetes Social Marketing campaign which used billboards, adshells, print and radio media and community events to bring diabetes into everyday conversations and raise knowledge of its causes and complications and how to prevent the condition.

Promotion and community development activities encouraged better awareness of diabetes, and opportunities for improved nutrition and physical activity through:

- Funding grassroots organisations
- Providing nutrition and physical activity initiatives through marae, Pacific churches and other culturally specific settings
- Promoting healthy eating, healthy action activities through early childhood education centres, primary, intermediate and secondary schools, developing Breakfast Club guidelines and administering the Nutrition Fund¹
- Developing resources for vulnerable families and training programmes for frontline NGO staff.

¹ The Nutrition Fund was available to assist the development of capacity of schools and early childhood centres to provide environments that support healthy eating and improve nutrition

Let's Beat Diabetes has also been involved in a significant multi-sectoral drive toward community and home fruit and vegetable gardening, to improve access, consumption and activity levels. These had only experienced one growing season of activity prior to the survey. In addition, CM Active which provides opportunities for physical activity and physical activity workforce development across "hubs" was only just getting started when the tracking survey was undertaken.

A continued focus on Primary Health Care during the period between surveys continued with a significant increase in the number of people participating in Self Management, Diabetes Get Checked and Chronic Care Management programmes. In addition, there was an ongoing focus on secondary care and the primary-secondary care interface; however, while this work is important, it is not expected to have had a significant impact on the benchmark tracking results.

CONSIDERATIONS

The 2007 Benchmark Survey was conducted during summer whereas the 2009 Tracking Survey was undertaken during the winter season. Some changes in reported behaviours may be due to seasonal differences.

The period following the 2007 Benchmark Survey was marked by a deepening economic recession globally. The recession had a notable effect on households in high deprivation areas and is also likely to have had some affect on opportunities to change behaviour.

FURTHER INFORMATION

This report presents the findings and some discussion of these. For further consideration of the implications and conclusions, readers should refer to the following report available on the LBD website, www.letsbeatdiabetes.co.nz :

"Let's Beat Diabetes"; Looking Back Moving Forward: A review of progress since 2005 and recommendations for the future, Chad Paraone, Tracey Barron, Brandon Orr-Walker, Siniva Sinclair.

This website, www.letsbeatdiabetes.co.nz, also provides information on the LBD programme and information for those who are interested in what can be done to reduce the risk of diabetes.

RESEARCH METHODS AND SAMPLE DESCRIPTION

- Because of the importance of retaining consistency the methods were kept the same as for the benchmark survey.
- As that survey had not been able to take account of deprivation levels (NZDep) when first reported, the data from that survey was re-weighted prior to the current survey, so that both surveys were weighted to reflect the Counties Manukau DHB population aged 16 years and over in terms of age within gender within NZDep within ethnicity². This ensured the data provided a good representation of the population being surveyed.
- Interviews were completed with 2,363 persons aged 16 years and over living in the Counties Manukau District Health Board region between 25 June and 23 September, 2009. The benchmark survey included 2,520 persons and was conducted between 31 October 2006 and 8 March 2007.
- The interviewing was undertaken using computer assisted telephone interviewing (CATI) and the average interview lasted 23 minutes.
- There was over-sampling of ethnic groups to provide 606 Maori, 594 Pacific people, 642 Asian and 868 persons of Other ethnic groups (people could be in more than one ethnic group) in the current survey and similar numbers in the benchmark survey.

² Re-weighting means the figures were adjusted using mathematical methods so that they reflected the answers that would be expected if the sample matched the Counties Manukau population in regards to age, gender, socioeconomic status and ethnicity. This takes into account that people may answer questions differently because of their background and/or living circumstances.

- The Pacific sample consisted of (benchmark numbers in brackets): 235 (295) Samoan people, 135 (173) Tongan people, 146 (186) Cook Island Maaori, 56 (62) Niuean people and 57 (58) Other Pacific people.
- Within the Asian category there were: 430 (299) from South Asia, including 256 (185) from India and 148 (98) Fijian Indians³; 151 (222) from East Asia, including 121 (173) from China⁴; and 69 (91) from South East Asia⁵.
- Ethnic group comparisons were based on age standardised data, to remove any ethnic differences which were due to some groups having younger populations.
- Fifty-eight percent of those interviewed were females.
- Response rates can be expressed in different ways, and for this survey there were added challenges in calculating an overall response rate due to the boosting samples. This is further discussed in the main section of this paper, but in summary the best measure was deemed to be 58 percent weighted response rate for those selected from a general sample (others were selected from ethnic booster samples); this compares with 55% for the previous survey.
- Changes between surveys are reported at both the 95 and 99 percent confidence levels, the latter being denoted by an asterisk (*) in the commentary.

KEY FINDINGS

PERCEPTIONS RELATING TO HEALTHY WEIGHT

- As in the previous survey, people clearly had a good understanding that physical activity is an important contributor to having a healthy weight.

³ South Asian also included: Pakistani, Sri Lankan, Bangladeshi, Nepalese, Afghan

⁴ East Asian also included: Korean, Japanese and Taiwanese.

⁵ South East Asian included: Singaporean, Filipino, Indonesian, Cambodian, Malaysian, Vietnamese, Thai, Burmese, Laotian

- They also realised that diet is important, but there remains room for improvement in awareness of the various different components of a healthy diet.
- Almost two-thirds mentioned eating fruit and/or vegetables, with the level of 64 percent in the current survey not being significantly different from the 62 percent in the previous survey.
- There were 61 percent who made comments that have been grouped into a general nutrition category, which showed a seven percent increase since the benchmark survey*. The main comments that got included in this category were: drink water/ so many glasses per day (15%), eat a balanced diet (13%), eat foods high in fibre (10%), eat fish/seafood (9%), have a healthy diet (9%).
- Reducing fat was mentioned by just under half (48%), which while being a slight increase on the 46 percent in the previous survey, was not a significant change.
- There was decreased mention of reducing takeaways/junk food, down by six percent to 28 percent. This decrease was present among Pacific people (down 8% to 15%*) and Other ethnic groupings (down 6% to 32%*).
- There was also decreased mention of reducing portion size, down by five percent to 27 percent. Again it was Pacific people (down 9% to 23%*) and Other ethnic groupings (down 4% to 31%) who showed significant decreases.
- Reducing sugar was mentioned by just under one-in-five (18%), a similar level to the 17 percent in the previous survey. However, Maaori did have increased mentions (up 5% to 18%).
- If people believe they or someone close to them is at risk of health problems because of being overweight, then it might be expected that they would be more motivated to change. Forty percent were worried that they or someone in their family has or may get health problems because of being overweight, which was the same as in the benchmark. Maaori had a marked increase of 15 percent, from 49 percent to 64 percent*. However, Pacific people showed the reverse trend, decreasing by 7 percent to 64 percent*, although they remained the most concerned along with Maaori.
- There was a six percent decrease in the proportion who agreed that they knew what the recommended weight was for them to be healthy (down to

70%). Maaori (down 7% to 66%*) and Other ethnic groupings (down 8% to 70%*) showed the most change.

- There was a significant four percent* decrease in agreement that they knew what the recommended body shape was for them to be healthy. This decrease was also evident among the Other ethnic groupings (down 5% to 70%).
- Those who thought their doctor would say they were obese increased among Maaori between surveys (by 8% to 26%*), while the total sample figure remained at a similar level to the previous survey (12%).
- The previous survey did not include a BMI measure. This survey included self-reported height and weight, and a calculation of BMI based on this suggests that a quarter of the sample would be classified as obese, while just over another quarter (28%) would be classified as overweight but not obese⁶.
- Calculated obesity rates were highest among the Pacific people where one-in-two reached a BMI of 30 or over. The rate was also high for Maaori (44%).
- These rates differ from those of the New Zealand Health Survey, which were based on actual height and weight measurements. Nationally age-standardised adult obesity rates were 61% for Pacific peoples and 40% for Maaori, while modelled estimates for Counties Manukau, based on the population sample from this area (1300 people aged 15+ years), were 78% for Pacific and 51% for Maaori.

Thus self recognition of overweight and obesity is still very limited for the CMDHB population and this has major implications for ongoing awareness raising initiatives and programme planning.

HEALTHY EATING

- There was no statistical change in the proportion who could correctly specify five as the minimum recommended servings of fruit and vegetables (47%).

⁶ As there were eight percent where there was insufficient information provided to calculate the BMI, the proportions who were overweight and obese were effectively slightly higher.

- In interpreting the changes in fruit and vegetable consumption, it must be remembered that this is likely to have been affected by the current survey being in winter when fruit in particular may be less available, less fresh, less desirable (wanting more hot foods) and more expensive, plus there was evidence that cost was becoming a greater barrier (see later).
- The proportion eating two or more servings of fruit per day decreased (from 70% to 66%*) and the mean number of servings decreased from 2.4 to 2.2*.
- The mean number of servings also decreased for Maaori (down from 2.6 to 2.3*) and Pacific people (down from 2.6 to 2.2*), although it should be noted that both groups had been above average in the previous survey and their current figures were similar to the current total sample level.
- The number of vegetable servings remained similar to the previous survey, with 40 percent eating three or more per day. The mean number of servings also remained unchanged at 2.2.
- The fact that vegetable consumption did not decrease despite the seasonal influences may be an indicator that there has effectively been some improvement in this area.
- Just over a quarter (26%) were eating at least two fruit and three vegetable servings per day, which did not differ statistically from the previous survey (28%). Pacific people reported a six percent increase (from 11% to 17%*), while Other ethnic groupings decreased four percent (to 32%).

Other Eating Behaviours

- The consumption of fizzy or energy drinks was asked as an indicative measure of sugar consumption and this showed one of the largest decreases recorded between the surveys with a nine percent decrease in having consumed in the last seven days (down 9% to 40%*). Those who were drinking also reported drinking on fewer days (down from 3.0 to 2.6*).
- The decrease in the proportion consuming fizzy/energy drinks was particularly evident for Pacific people (down 14% to 52%*), and Other Asians (down 16% to 26%*), but also for South Asians (down 10% to 32%*) and Other ethnic groupings (down 7% to 38%*). The same groups

also showed decreases in the mean number of days they were drinking fizzy/energy drinks (based on those who were drinking it). Pacific people decreased from 3.1 to 2.6 days*, South Asians from 3.0 to 2.3*, Other ethnic groupings from 3.1 to 2.5* and Other Asians from 2.9 to 2.2.

- This decrease in reported consumption of fizzy drinks is particularly relevant given Counties Manukau children had the highest reported rate of frequent consumption of fizzy drinks in the New Zealand Health Survey, and this behaviour was specifically targeted by Let's Beat Diabetes activities.
- Eating more than needed remained at the same level as previously, with six in every ten reporting having done so in the last week. South Asians did show a decrease (by 9% to 43%). The mean number of days on which these people had eaten more than they needed also remained at similar levels to previously, except for Maaori who reported an increased number of days (up from 3.2 to 3.8*).
- Most people had something to eat for breakfast in the previous seven days (93%), which was similar to previously, and they did so on an average of 6.2 days per week (up from 6.1*). Other Asians reported an increased proportion who were eating breakfast (up 7% to 99%*), while Pacific people who were eating breakfast were now doing so on more days of the week (up from 5.1 to 5.7).
- A new question in the current survey asked how many days people had eaten "fast food or takeaways from places like McDonalds, KFC, Burger King, Pizza shops or fish and chip shops" in the last seven days. Six-in-ten had done so (59%), this level being at 72 percent for Maaori and 68 percent for Pacific people. Among those who were consuming takeaways, the average person did so 1.7 days per week, but this figure was at 2.1 for both Maaori and Pacific people.

Low Fat Cooking Behaviours

- Almost three-fifths (58%) of main meal preparers reported that they 'never' cook meat or vegetables in butter or lard, followed by one-third who said 'sometimes' and one-in-ten (9%) who said they 'usually' do. These results were similar to the previous survey, however South Asians did report a decrease in 'usually' cooking in this way (down 11% to 12%*). The opposite

trend was apparent for Other Asians who reported a reduction in the 'never' category (down 13% to 49%).

- There was an increase in the proportion of meal preparers who said they 'usually' cook meat (including corned beef) with the fat removed or drained off (up 10% to 61%). This increase was also evident for South Asians (up 18% to 60%*) and Other ethnic groupings (up 14% to 69%). The opposite trend was evident for Pacific meal preparers, where there was a six percent increase (to 17%) in those who said they 'never' cooked in this way.
- There was an increase in the proportion of meal preparers who said they 'usually' cook chicken with the skin on (up 5% to 36%). This increase was evident for Other ethnic groupings (up 7% to 33%*) and Maaori (up 9% to 60%).

Support To Eat Healthily

- There was increased support to eat healthily reported as coming from:
 - Other adults in the household (up 3% to 73%)
 - Wider family/whaanau and close friends (up 5% to 59%*)
 - Doctors/medical centre staff (up 4% to 60%)
- Among Maaori who had used a marae in the region, 53 percent (25% of all Maaori) said they had received support from people at the marae⁷.
- The increased total sample support from other adults in the household was also present for South Asians (up 6% to 85%). The increased support from family/whaanau and close friends was present among Maaori (up 9% to 59%*) and Pacific people (up 5% to 72%). South Asians (up 7% to 76%) and Other Asians (up 9% to 61%) each reported increased support from their doctors or other staff at their health centre. There was increased mention of support from children in the household by South Asians (up 12% to 66%*), while Maaori who were employed reported increased support from work colleagues (up 10% to 50%*).

⁷ No comparison is made with the previous survey because of different questions being asked.

- Pacific and South Asian peoples were more likely than others to feel they were receiving support from most sources, whereas people from Other ethnic groupings were less likely to feel this.
- These findings are consistent with the LBD campaign having a focus on people supporting one another to change their eating behaviours.

Children's Eating

- There was a decrease in the proportion of parents who said they gave 'a lot' of support to their children to eat healthily (down 6% to 71%*).
- This decrease was also evident for Pacific people (down 10% to 67%*).
- One-in-five felt their children's food could be 'a lot' healthier. The most common response was from two-fifths (41%) who felt it could be 'a bit healthier', whilst another two-fifths (39%) felt it was 'healthy enough'. These levels were similar to the previous survey.
- Maaori parents were now less likely to feel their children's diet was 'healthy enough' (down 9% to 26%).

Interest And Difficulty In Eating More Healthily

- Just under two-thirds (63%) were interested in eating more healthily than they currently do, a level that was unchanged since the previous survey. However there were increases for both Maaori (up 7% to 72%) and Pacific people (up 8% to 85%*).
- Most of those who were interested in eating more healthily either didn't find it difficult or found it only 'a little' difficult.
- Pacific people reported an increase in being interested but finding it 'very' difficult (up 4% to 14%).
- The more difficulty people reported in changing their current eating behaviours, the less healthy were their eating behaviours.
- Among those who were not interested in eating more healthily, two-thirds felt their diet was already healthy enough, which was an eight percent increase on the previous survey.

- Further analysis has shown that those who were not interested in eating more healthily because they thought their diet was 'already healthy enough' were in fact eating more healthily than others.

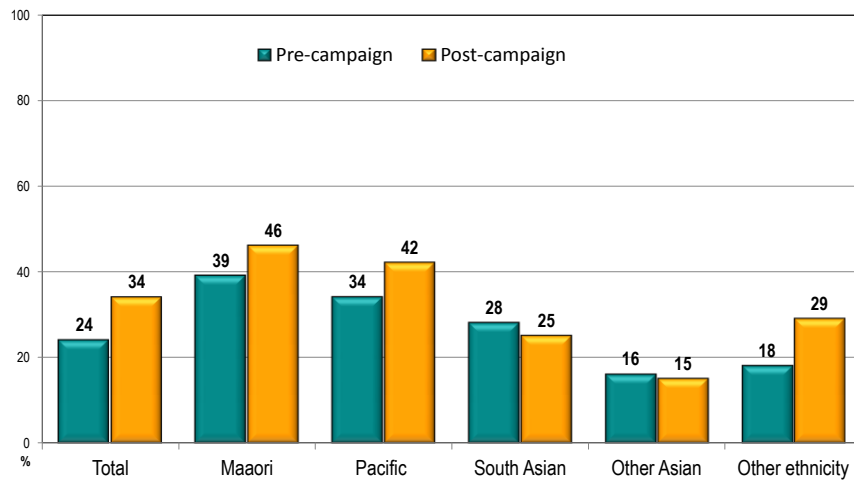
Possible Barriers To Healthy Eating

- The effect of the recession appeared to be evident in a 10 percent increase in the proportion who agreed⁸ that they can't afford the cost of healthier types of food.⁹ Because of the smaller numbers answering this question, it was more difficult to obtain significant changes. The indications were that the increased concern with cost was greater among Maaori (a non-significant increase of 7% to 46%) and Pacific people (a non-significant increase of 8% to 42%), the two groups for whom cost was already a greater barrier, as shown in the graph which follows.
- There was a 16 percent increase in concern with cost by obese persons*, such that now almost one-in-two were concerned.

⁸ Asked of those who reported that they had some difficulty in eating more healthily

⁹ The proportion that agree/disagree in this question are the people that strongly agreed/disagreed or agreed/disagreed with the statement of interest on a 7 point scale. The "Agree" and "Disagree" figures do not include those who "agreed a little" or "disagreed a little".

Agree that can't afford the cost of healthier types of food



- One-seventh (14%) agreed that they don't have enough knowledge about which foods are healthy for them, a similar level to previously.
- One-in-eight (13%) agreed that there is not enough healthy food available in the places where they eat or shop. While this was a similar level to last time, there was a six percent decrease in the proportion who disagreed with this statement (down to 60%).

PHYSICAL ACTIVITY

Comparison With Recommended Minimum Levels Of Activity

- There were marked decreases in reported levels of physical activity, which again may well be a product of the current survey being in winter.

- Over half (55%) said they were doing less than what they thought was the recommended minimum levels of activity, up 7 percent* from the pre-campaign measurement.
- The increases in those saying they were doing less were most marked among Pacific people (up 15% to 56%*) and Other ethnic groupings (up 7% to 55%*).
- There was a nine percent decrease in the proportion who were physically active*, with a corresponding drop in the proportion who were regularly physically active (down 10% to 38%*) and an increase in those who were sedentary (now one-in-six, up 6%* from the benchmark).
- The best estimate available for the proportion of the sample reaching the recommended level of physical activity was 39 percent, which was a 10 percent decrease from the benchmark survey.
- The average hours people were active decreased from 9.8 to 7.4* and this was spread across all but the Other Asian ethnic group.
- The average person did 2.3 hours a week of vigorous activity, down markedly from the average of 3.2 hours pre-campaign*. This decrease was evident across all ethnic groups.

Support To Be Physically Active

- There were a number of sources of support to be physically active that received increased mentions compared with the previous survey¹⁰, namely:
 - Wider family/whaanau and close friends (up 4% to 58%*)
 - Doctor or medical centre staff (up 5% to 55%*)
 - Employers (up 9% to 48%* among those who were employed)
 - People worked with (up 4% to 52%* among those who were employed)
- Two of the main ethnic groupings found their doctor or medical centre staff more supportive: Maaori (up 8% to 59%*) and South Asians (up 8% to 71%).

¹⁰ All figures are based on the Total Sample unless otherwise specified.

- Among Maaori who had used a marae in Counties Manukau in the previous year, just under half (49%) found people on marae to be supportive of physical activity.
- Children, workplace colleagues and employers tended to be more supportive of physical activity than healthy eating. The converse applied for other adults in the household and doctors, who were more supportive of healthy eating.

Children's Physical Activity

- There was a reduction (down 5% to 67%*) in the proportion of parents who said they give 'a lot' of support to their children to be physically active and a corresponding increase (up 4%* to 24%) in the proportion who said they give 'some' support. This change was most pronounced among Pacific parents (down 14% to 63%*).
- The majority (61%) thought their children were doing enough physical activity to be healthy. Just over one-in-ten (11%) thought their children would need to do 'a lot more' to be healthy, which was a two percent decrease.

Interest In Being More Physically Active

- As in the benchmark survey, two-thirds were interested in being more physically active than they currently were.
- Three-quarters of those who were interested in being more physically active had some difficulty in doing so, a result that was very consistent with the pre-campaign result.
- People found it more difficult to be more physically active than they did to eat more healthily.
- Those who expressed some difficulty with being more physically active were above average in feeling they were doing less than the recommended amount of activity and this was evidenced in their reported levels of activity.

- Of those who were not interested in being more physically healthy, seven-out-of-ten felt they were already doing enough and their activity levels supported this.
- Pacific people were now more likely to say that 'I would need to do a lot more to be physically healthy' (up 13% to 14%*).

Possible Barriers To Being More Physically Active

- A third of those who had difficulty being more active (32%) agreed that they can't afford the cost of things they would need "such as babysitters, clothes, equipment and gym membership", which was a five percent increase (up to 27%*).
- The same proportion as in the pre-campaign survey, one-in-eight, agreed that there weren't enough places in their area for them to go or join, such as parks, walking groups or sports clubs.

LINKS BETWEEN HEALTHY EATING AND PHYSICAL ACTIVITY

- There was a close relationship between responses for eating and physical activity in terms of interest in and difficulty of making changes.
- Those who were more active tended to eat more healthily, although this pattern was not as strong as might perhaps have been expected.
- Those who mentioned barriers for activity were also above average for mentioning barriers for eating, with the strongest correlation being between cost as a barrier to eating better food, and cost as a barrier to more physical activity.

ROLE OF PRIMARY CARE

Contact With Doctor/Nurse

- There was a four percent increase (up to 70%) in the proportion who said they had spoken to a doctor or nurse in the last twelve months about their own personal health. The increases were particularly notable for Maaori (up 8% to 71%*), South Asians (up 14% to 77%*) and Other Asians (up 11% to 63%).
- There were increases for primary care talking to people about topics that relate to diabetes:
 - Talked to about their exercise or physical activity (up 4% to 41%* of all persons¹¹)
 - Talked to about healthy eating or weight (up 5% to 38%*)
 - Talked to about their risk of diabetes or heart disease (up 5% to 36%*)
- Half (49%) mentioned any one of these three, up four percent* from the pre-campaign survey. This increase was evident for Maaori (up 10% to 56%*), Pacific people (up 8% to 67%*), South Asians (up 10% to 61%*) and Other Asians (up 16% to 47%*).
- Mention of any one of these three was well over nine-in-ten for those with diabetes (94%). There was an increase for those who a doctor would describe as overweight (up 5% to 54%) and those with a family history of diabetes (up 5% to 50%). There was also a similar but non-significant increase for those who a doctor would describe as obese (up 5% to 64%)
- Nearly one-fifth (18%) were spoken to about stopping smoking and among smokers it was 50%.
- One-in-eight reported being given a green prescription. This rate is considerably higher than referrals actually received by green prescription programmes.

¹¹ The primary care findings are based on the total sample, not just those who had been in the last 12 months.

AWARENESS AND UNDERSTANDING OF DIABETES

Awareness Of How To Prevent Diabetes

- When asked "What can be done to prevent diabetes?" there was increased unprompted mention of:
 - Eating fruit and/or vegetables (up 7% to 37%*)
 - reducing fat (up 4% to 30%)
 - Other nutrition related comments (up 19% to 55%), which included 'watch what you eat/have a healthy diet' (up 29% to 39%)
 - Lifestyle related comments (up 4% to 13%*), which included don't smoke (6%), lead a healthy lifestyle (5%), and look after your health (4%)
- There were no significant changes for: keeping fit/active (56%), reducing weight (21%), reducing takeaways/junk food (12%) and reducing portion size (12%)
- Almost one-in-five (18%) mentioned obtaining professional advice/education/ assistance, which included information/education (9%) and having regular health checks (down 4% to 8%)
- A new question in the current survey asked: "What types of problems can happen to people who get diabetes?" and the answers were recorded unprompted. The most common responses related to having heart attacks (35%), losing limbs/legs (29%) and going blind (27%). There were 17 percent who did not know of any problems.
- The proportion who thought their knowledge of diabetes was 'good' decreased five percent since the pre-campaign survey, which was matched by a four percent increase in those rating their knowledge as 'fair'. This was mainly due to changes among people of Other ethnic groupings.
- When asked whether particular statements about diabetes were true or false, there was little change from the benchmark levels. This meant that there were still 44 percent who thought it was 'mainly people who eat a lot of sugar who get diabetes'. The other statements already had relatively high

proportions giving the correct answer, so it was difficult to obtain significant improvements.

- A new question in the current survey identified that there was a lack of knowledge about the benefits of breastfeeding in terms of lowering the risk of becoming obese and developing diabetes. Four-in-ten knew this to be true, while almost as many (36%) were unsure and a quarter thought it was false. Pacific people (46%) and South Asian people (47%) were the most likely to say it was true.
- There was a four percent increase in those agreeing that: "I am worried that someone in my family has diabetes or may get it".
- When considered in conjunction with the previously reported data for concern about them or someone in their family having or getting health problems because of being overweight, there were half (51%) who agreed with at least one of these two statements. There were increases for Maaori (up 12% to 73%*) and South Asian people (up 11% to 68%*). The other ethnic groups remained at similar levels to the benchmark survey (Pacific people 75%, Other Asians 49% and 38% for people of Other ethnic groupings). In the current survey the level was also higher for people with diabetes (68%), those with a family history of diabetes (67%) and those who a doctor would describe as obese (80%).
- There were three-quarters who had some contact with someone with diabetes, this rate being higher for Maaori (87%*) and South Asian people

(80%). The rate was lowest among people of Other ethnic groupings, but even they were still at 72 percent.

PREVALENCE OF DIABETES AND AT RISK GROUPS

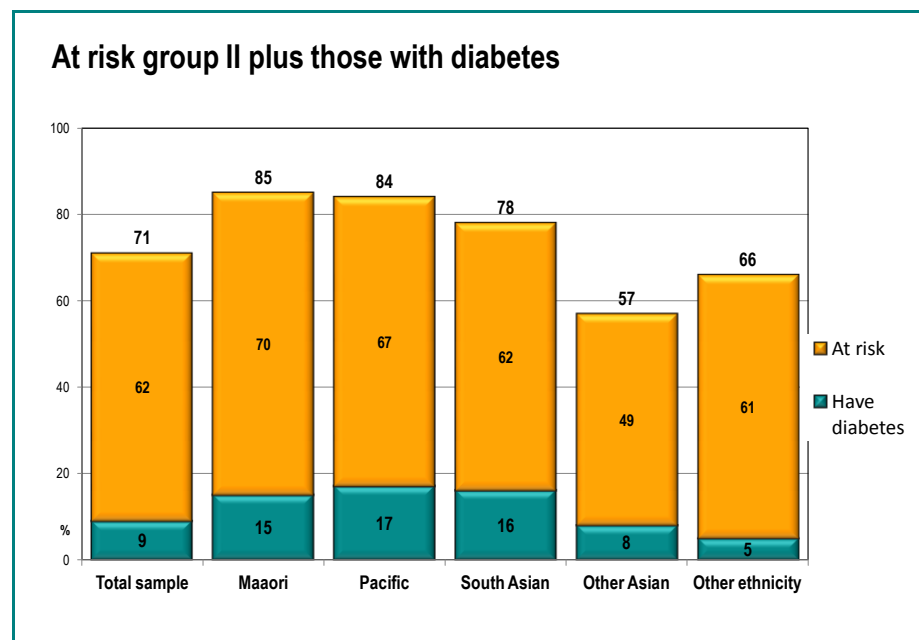
Prevalence Of Diabetes

- As shown in the table which follows there has been a two percent increase in the reported rate of diabetes since the benchmark survey*. The age standardised rate for Maaori more than doubled to 15 percent; the South Asian rate doubled, to 16 percent*; and the Other Asian rate also doubled, to eight percent. The Pacific people's rate increased by three percent, but this was not large enough to be significant. However, Pacific people still had the highest rate at 17 percent. The rate changed very little among people from Other ethnic groupings (primarily New Zealand Europeans), which accounts for the increase among the total sample only being two percent, while other ethnic groups showed much more dramatic increases.
- These rates of diabetes differ from other data sources used by Counties Manukau DHB, and the DHB will be doing more analysis on this.

| PREVALENCE OF DIABETES | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| Crude rate | 6.5 | 8.6▲▲ | 5.1 | 11.3↑▲▲ | 10.7↑↑ | 13.7↑↑ | 6.4 | 12.4↑▲▲ | 3.2↓ | 6.9 | 5.2 | 5.7↓↓ |
| Age standardised | 7.0 | 9.4▲▲ | 6.7 | 14.5↑↑▲▲ | 13.9↑↑ | 17.3↑↑ | 7.5 | 15.5↑↑▲▲ | 3.6↓ | 7.8▲ | 4.7↓ | 5.1↓↓ |

Persons 'At Risk' Of Diabetes

- There were over six-in-ten (62%) 'at risk'¹² (which included persons who were obese, overweight¹³, had a family history of diabetes, had diabetes during pregnancy but no longer had it, or were classified as 'sedentary', which was defined as doing less than half an hour's physical activity in the last week).
- The graph which follows shows the combined diabetes and 'at risk' levels. It can be seen that the combined levels were very high for Maaori (85%), Pacific (84%) and South Asians (78%), but even among the other two ethnic groups almost half were at risk.



¹² Note this differs from the definition of 'at risk' used in the LBD System Dynamics Model which has been used to calculate potential future numbers of those with diabetes in Counties Manukau, for which obesity was used as the key driver of risk.

¹³ The obese and overweight are based on BMI calculated from self-reported weight and height.

VEGETABLE GARDENING

- New questions in this survey identified that just under half (48%) were in a household that had a vegetable garden or someone in their household was involved in a community vegetable garden.
- Another quarter (23%) were interested in getting involved in vegetable gardening in the next 12 months.

COMMUNICATING WITH ETHNIC SPECIFIC AUDIENCES

- Questions were included to assist in identifying how best to reach the different ethnic audiences with social marketing communications. The results are summarised in the table which follows.
- In response to feedback from Maaori advisors to the DHB, the questions about the use of marae were changed from those asked in the benchmark survey. This means changes from the previous survey aren't able to be reported but the new questions provide more useful information on marae usage by Maaori.
- These new questions ascertained that just over just over half (53%) of Maaori had been to a marae in the CMDHB region within the previous 12 months, with just under a third (30%) having been three or more times.
- The main reasons for attending were: family/social events, including tangi (69% of those who had attended) and courses/education (25%), and healthcare or health information (11%).

| ENGAGEMENT WITH MEDIA AND COMMUNITY/ CULTURAL GROUPS | TOTAL MAAORI* | | TOTAL PACIFIC * | | ASIAN * | | TOTAL OTHER ETHNIC GROUPS* | |
|--------------------------------------------------------------------------|---------------|---------------|-----------------|---------------|--------------|---------------|----------------------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 489 | 521 | 624 | 517 | 530 | 609 | 882 | 718 |
| | % | % | % | % | % | % | % | % |
| Listen to own ethnic radio stations at least once a week | 54 | 39▼▼ | 62 | 63 | 56 | 56 | 0 | 0 |
| Read own ethnic newspapers/magazines at least once a week | 27 | 22 | 43 | 48 | 49 | 43▼ | 0 | 0 |
| Watch own ethnic TV programmes at least once a week | 86 | 90▲ | 65 | 68 | 0 | 0 | 0 | 0 |
| Text on a mobile phone at least once a week | 74 | 74 | 54 | 60 | 67 | 77▲▲ | 68 | 76▲▲ |
| Have internet access at home | 66 | 66 | 47 | 57▲▲ | 89 | 91 | 84 | 87 |
| Use email for personal use rather than work reasons at least once a week | 57 | 56 | 42 | 42 | 76 | 77 | 66 | 70 |
| Add content/comments to websites or online blogs at least once a month | 24 | 33▲▲ | 25 | 26 | 43 | 41 | 19 | 32▲▲ |
| Am an active member of a local group, club or committee | 49 | 44 | 42 | 43 | 30 | 33 | 45 | 50 |
| Attend a local church or a place of worship regularly | 23 | 28 | 75 | 80 | 52 | 51 | 25 | 24 |

* These results and the ones below have all been run as age standardised weightings

** New question in 2009

2 INTRODUCTION

BACKGROUND

'Let's Beat Diabetes' (LBD) is a major initiative being undertaken by Counties Manukau District Health Board (CMDHB) to develop a societal response to address Type 2 diabetes. This is in response to a growing epidemic of Type 2 diabetes, which is expected to have an increasingly major impact both on the health status of the CMDHB population but also the costs of providing health care. There are ten action areas in the Let's Beat Diabetes strategy. This research is being undertaken as part of the social marketing action area, but it is also being used to inform the evaluation of the overall project.

RESEARCH OBJECTIVES

- This LBD tracking survey was designed to identify changes since the benchmark survey conducted two and a half years previously¹⁴.
- It also provides information to inform on-going LBD programme planning.
- The focus of the research was on the general population, including identified priority groups.

THE 'LET'S BEAT DIABETES' PROGRAMME

LBD activity is organised around ten distinct but interrelated action areas. Achieving progress in each of these action areas is the responsibility of all partner agencies, organisations and communities across Counties Manukau and New Zealand, not just the health sector. This is because, ultimately, beating

the diabetes epidemic requires changes to the way people live, as well as to the environments within which they live.

The partnerships that underlie each of the action areas are the key vehicles for making progress against the diabetes epidemic. The ten action areas are:

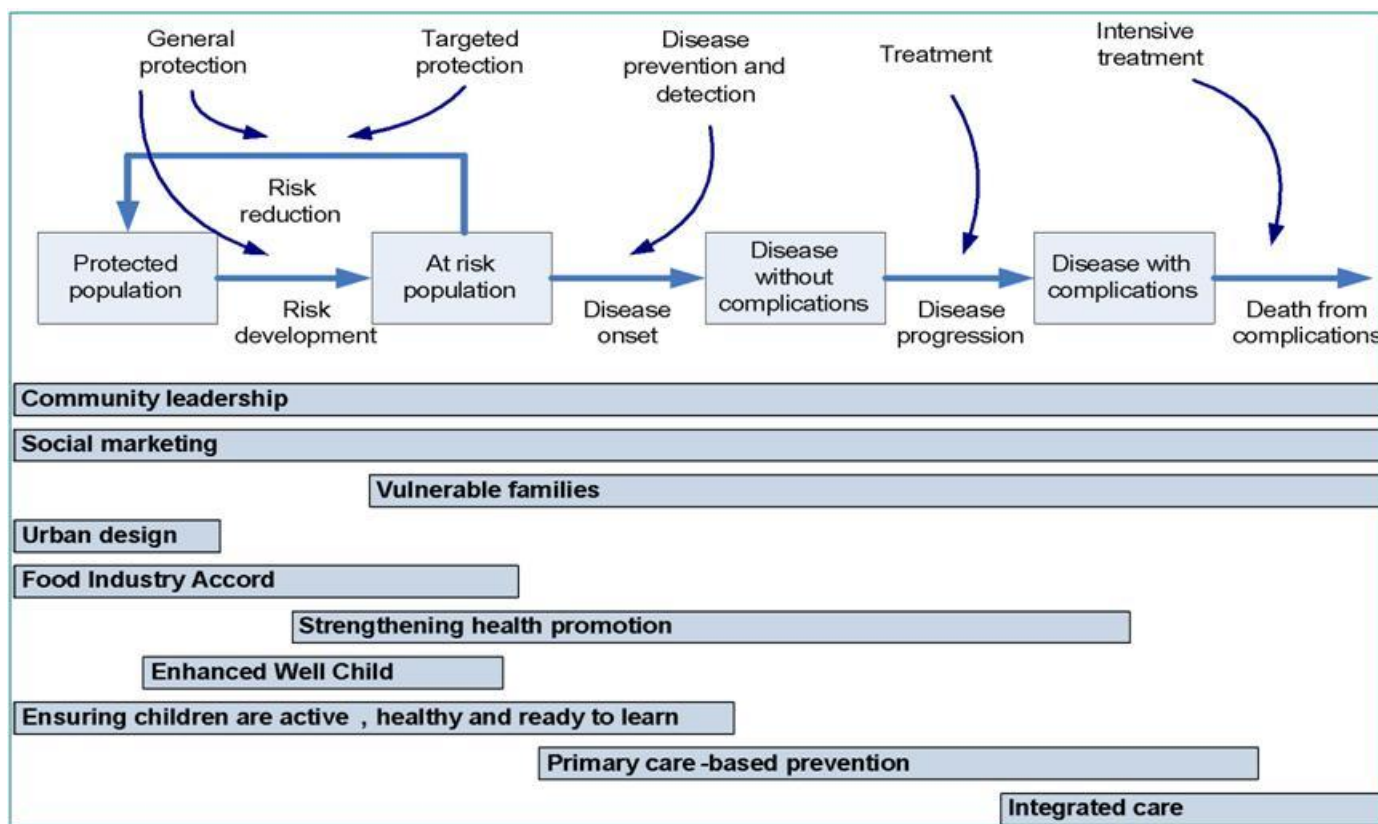
1. **Supporting community leadership and action** – through activities in Maaori and Pacific communities, workplaces and a Community Action Fund providing support to grassroots health-promoting activities.
2. **Promoting behaviour change through social marketing** – via the 'Swap2Win' communications programme (see www.swap2win.co.nz).
3. **Changing urban design to support healthy, active lifestyles** – where LBD works with local government and housing partners.
4. **Supporting a healthy environment through a Food Industry Accord** – where LBD and representatives of the food industry work collaboratively to influence and support behaviour change within the food industry and the wider population via innovative projects.
5. **Strengthening health promotion co-ordination and activity** – to improve the alignment and effectiveness of these activities.
6. **Enhancing well child services to reduce childhood obesity** – to develop resources and interventions focusing on children's early years.
7. **Ensuring children are active, healthy and ready to learn** – through a series of initiatives in schools and early childhood centres.
8. **Supporting primary care-based prevention and early intervention** – linking with CMDHB's Chronic Care Management Programme.
9. **Enabling vulnerable families to make healthy choices** – working with social service agencies to develop integrated services that reduce the risk of obesity and diabetes.

¹⁴ The data reported for the original benchmark survey has been reweighted to now take into account levels of deprivation.

10. **Improving service integration and care for advanced disease** – to develop sustainable systems to improve the uptake of best practice processes, and the co-ordination of services across primary and secondary care.

The ten action areas fit together to form an overall strategy that reduces risk factors for diabetes (particularly obesity) and slows disease progression, while building capacity across the different partner organisations and a sustainable whole society approach. Figure 1 below shows the zones each action area is designed to influence.

Figure 1: Alignment of Action areas with disease continuum



3 OVERVIEW OF RESEARCH METHODS

3.1 RESEARCH METHODS

IMPORTANCE OF CONSISTENCY OVER TIME

With repeat surveys that are seeking to monitor change over time, retaining consistency of methods is critical. Therefore the methods, with one exception, were the same as in the benchmark survey, the key features of which are outlined below.

CHANGE FROM BENCHMARK SURVEY

The one change in methods this time was to take greater account of level of deprivation, as measured by the NZDep06 index, based on the 2006 Census. This data was not available at the time of the previous survey, so was not incorporated in either the sample stratification or the weighting prior to analysis (the School of Population Health did some subsequent analysis once the NZDep06 data became available).

What was identified in the benchmark survey was that the sampling resulted in Maaori being under-represented in low deprivation groups. This was not surprising when the sampling was based on households with landline phones. This could have been overcome by stratifying the sample selection by NZDep areas, so that more of the phone numbers were drawn from low deprivation areas. However, it was decided that this might impact the comparability of the data. Therefore deprivation was incorporated into the weighting for both the current survey and the benchmark survey, so that both samples accurately reflected the NZDep levels of the CMDHB population. This entailed Phoenix reweighting the benchmark survey and reporting these reweighted figures in the current report.

QUESTIONNAIRE DEVELOPMENT

Considerable time and effort went into the design of the questionnaire for the benchmark survey, with the CMDHB team taking the lead role, supported by Phoenix Research. The CMDHB team included Maaori and Pacific members and Asian input was also obtained. To meet the objective of assessing changes since the benchmark, the original questions were almost all retained with the same wording. Changes to the questionnaire are listed in Appendix D.

The benchmark questionnaire was extensively pre-tested with the different ethnic groups to ensure the questions were working as intended. A similar process was used to test the new questions in the current survey.

METHOD OF DATA COLLECTION

A CATI (computer assisted telephone interviewing) method was used because it was the most cost-effective approach. It does enable high levels of call backs and provides a high degree of monitoring of interviewer quality. It also provides a level of anonymity (compared with face to face interviewing) that is good for surveying sensitive topics.

All respondents were offered the opportunity to be interviewed by an interviewer from their ethnic group if they were Maaori, Pacific or Chinese¹⁵, and Pacific Island respondents were offered the choice of being interviewed in English, Samoan or Tongan. Twenty-eight interviews were completed in Samoan (was 45 in the benchmark survey) and 19 in Tongan (previously 28), using translated questionnaires.

¹⁵ The ethnicity of the respondent was not known until the call had been made to the household and the qualifying respondent selected.

DATA COLLECTION/ SAMPLING

Interviews were completed with 2,363 persons aged 16 years and over living in the Counties Manukau District Health Board region between 25 June and 23 September, 2009. The benchmark survey included 2,520 persons and was conducted between 31 October 2006 and 8 March 2007.

The interviewing was undertaken using computer assisted telephone interviewing (CATI) and the average interview lasted 23 minutes in the current survey and 24 minutes in the benchmark survey.

The sampling was designed to provide sufficient sized sub-groups of Maaori, Pacific people, Asians and Other ethnic groups (including New Zealand European), to allow for identification of change over time. This necessitated three different stages of sampling:

- The main survey, which was randomly selected from Telecom white pages phone listings with all ethnic groups included, continuing until the Other ethnicities quota was filled
- The main booster sample, which was also randomly selected from the white pages listings, but the selection was for only Maaori, Pacific and Asian persons

- A Pacific booster sample, which was randomly selected from areas within CMDHB where at least one-quarter (25%) of the population were Pacific people (these areas accounted for 82% of the CMDHB Pacific population in the 2006 Census)

ETHNIC COMPOSITION OF SAMPLE/ MEASUREMENT OF ETHNICITY

The numbers generated from each sample were as shown below. It is important to note that a person was included in **each** ethnic group they mentioned, which is why summing the numbers in each ethnic group adds to more than the total number of interviews shown on the bottom line. It is also the reason why there are people in the Pacific booster sample who were also of other ethnicities.

It can be seen that far fewer Pacific people needed to be generated via the Pacific booster in the current survey, compared with the benchmark survey.

Table 1: Ethnic composition of sample

| TOTAL ETHNIC GROUP MENTIONS | GENERAL SAMPLE | | MAIN BOOSTER SAMPLE | | PACIFIC BOOSTER SAMPLE | | TOTAL | |
|-----------------------------|----------------|----------------|---------------------|----------------|------------------------|----------------|-------------|----------------|
| | Benchmark | Current survey | Benchmark | Current survey | Benchmark | Current survey | Benchmark | Current survey |
| Maaori | 122 | 71 | 453 | 533 | 19 | 2 | 594 | 606 |
| Pacific people | 90 | 71 | 343 | 468 | 279 | 55 | 712 | 594 |
| Asian | 118 | 116 | 468 | 522 | 13 | 4 | 599 | 642 |
| Other ethnicities | 762 | 627 | 217 | 239 | 19 | 2 | 998 | 868 |
| TOTAL INTERVIEWS | 1008 | 828 | 1221 | 1475 | 291 | 60 | 2520 | 2363 |

This sampling process provided the following numbers in each of the Pacific groups (benchmark survey numbers in brackets): 235 (295) Samoan people, 135 (173) Tongan people, 146 (186) Cook Island Maaori, 56 (62) Niuean people and 57 (58) Other Pacific people. Within the Asian category there were: 430 (299) from South Asia, including 256 (185) from India and 148 (98) Fijian Indians¹⁶; 151 (222) from East Asia, including 121 (173) from China¹⁷; and 69 (91) from South East Asia¹⁸.

A question was also included in the survey which asked people who mentioned more than one ethnic group to identify which group they "most strongly identify with". As can be calculated from the table which follows, there were 80 (96) people who were classified as Maaori when using total response ethnicity who did not consider Maaori to be their main ethnic group. These accounted for 13 percent (14%) of all Maaori mentions. The comparable figure for Pacific people was 11 percent (9%) and for Asians it was four percent (6%). With Other ethnic groups, 21 percent (19%) of those who were in this group for total response ethnicity did not count this as their main ethnic group.

Table 2: Comparison of ethnicity measures

| ETHNIC GROUP | TOTAL RESPONSE ETHNICITY | | MAIN ETHNICITY | |
|-------------------|--------------------------|----------------|----------------|----------------|
| | Benchmark | Current survey | Benchmark | Current survey |
| Maaori | 594 | 600 | 498 | 526 |
| Pacific people | 712 | 594 | 651 | 531 |
| Asian | 599 | 642 | 565 | 617 |
| Other ethnicities | 998 | 868 | 803 | 684 |

¹⁶ South Asian also included: Pakistani, Sri Lankan, Bangladeshi, Nepalese, Afghan

¹⁷ East Asian also included: Korean, Japanese and Taiwanese.

¹⁸ South East Asian included: Singaporean, Filipino, Indonesian, Cambodian, Malaysian, Vietnamese, Thai, Burmese, Laotian

Analyses were undertaken comparing data from the total response ethnicity group for Maaori with those who specified Maaori as their main ethnic group. There were no significant differences between these two groups for any of the questions. The same was done for Pacific peoples and again there were no significant differences between the groups.

RESPONSE RATES

If necessary, 25 calls were made to each number to try and obtain a completed interview. Participation was voluntary and no incentives were used to encourage participation.

Response rates can be expressed in different ways, and for this survey there were added challenges in calculating an overall response rate due to the boosting samples. Two forms of response rate have been calculated. The weighted response rate was calculated using the method recommended by the Ministry of Health and for the General sample it was 58 percent (was 55 percent in the benchmark survey). The weighted response rate for the main Booster sample was 90 percent (88% previously) and for the Pacific Booster it was 95 percent (89%), while for Samoan and Tongan language interviews it was 74 (76) and 56 (67) percent respectively. These rates provided an average of 77 percent (75% in benchmark). However, the booster sample rates were affected by the large proportions who said there were no qualifiers in the household (e.g. on the Pacific booster saying that there are no Pacific persons in the household). It is likely that some of these will have used this as a way to avoid a direct refusal and this will have led to inappropriately high weighted response rates. Therefore the 58 percent for the general sample is deemed to be the best indicator of the response rate using this method.

The other form of response rate has been calculated by taking the number of completed interviews and dividing them by the number of completed plus the number of refusals. This provided a rate of 67 percent for the General sample,

71 percent for the Booster sample, 72 percent for the Pacific Booster, 97 percent for the Samoan and 95 percent for the Tongan translations, providing an overall rate of 70 percent.

WEIGHTING

For analysis purposes the data has been weighted with the intention of accurately reflecting the age within gender within ethnicity, within NZDep06 (deprivation level) composition of the CMDHB population.

When comparing ethnic group data, the age composition of each ethnic group has been standardised, to ensure differences emerging are not due to the differing age compositions of the different ethnic groups. For all the other analyses reported the standard population weighting has been used, unless otherwise specified. The two different weightings have in some cases resulted in slightly different figures for the total sample. To retain consistency in the report, all total sample figures reported are based on the age standardised weighting.

A SUFFICIENTLY REPRESENTATIVE SAMPLE TO GIVE CONFIDENCE IN THE RESULTS

A key question with any survey is how representative is the achieved sample, compared with the Counties Manukau population? The weighting by age, gender, ethnicity and NZDep06 was designed to ensure that these groups were all represented in their correct proportions (e.g. that there was the correct proportion of Pacific males aged 16 to 24 years in the highest deprivation quintile). The proportions in each group in the current survey were based on CMDHB modelling of their population based on the 2006 Census and projected population changes since then.

As noted previously, the 2006/07 data was reweighted for the current report, to accurately reflect the CMDHB population at the 2006 Census, including age, gender, ethnicity and level of deprivation. At the time of the 2006/07 analyses there was no deprivation data available and population modelling had to be used for estimating the other demographics in the weighting.

Given that the weighting has ensured the correct representation of the sample on all these key demographics and given the level of the response rates, this sample can be considered sufficiently representative to give confidence in the results.

4 RESEARCH FINDINGS

4.1 INTRODUCTION

This chapter presents all the research findings, with sub-sections for each major area covered by the research, these being:

- Perceptions relating to healthy weight
- Healthy eating
- Physical activity
- Links between healthy eating and physical activity
- Role of primary care
- Awareness and understanding of diabetes
- Prevalence of diabetes and at risk groups
- Communicating with ethnic specific audiences

At the end of each of the sub-sections there is a Discussion section, which draws together the findings and considers the implications for the Let's Beat Diabetes programme.

4.2 NOTES ON REPORTING

It is important that this section is read before reading the main findings, so that the reader understands what analyses have been undertaken and how the differences highlighted in the findings have been identified.

ANALYSES UNDERTAKEN

The level of analysis in this report is restricted to simple cross tabulations. These analyses are not able to address possible confounding effects, such as the impact of level of deprivation on the responses of different ethnic groups.

There were two main sets of analyses undertaken:

- Examination of any changes in the results between the benchmark and the current survey, for the total sample and the demographic groups
- Identification of differences in responses to the *current* survey across the demographic groups, as listed below

The demographic groups that were included in the analyses were as follows:

- Ethnic groups, based on all ethnicities mentioned (total response ethnicity), specifically Maaori, Pacific, South Asian (mainly Indian, including Fijian Indian), Other Asian, and Other ethnic groupings (mainly New Zealand Europeans)
- Pacific ethnic groups (Samoan, Tongan, Cook Island Maaori, Niuean, Other), which were only reported if the total Pacific data showed significant changes or differences from the total sample
- Persons with diabetes
- At risk group (excluding persons with diabetes), which included:
 - Obese persons: For the comparison of surveys, this was based on persons who did not have diabetes and thought a doctor would say

they were obese. In the current survey BMI was also estimated (based on self-reported height and weight), so the reporting of demographic differences within the current survey was based on obese persons (including those with diabetes) defined as having an estimated BMI of 30 or over.

- Overweight persons: For the comparison of surveys, this was based on persons who did not have diabetes and who thought a doctor would say they were overweight, *including* those who also thought the doctor would say they were obese. The reporting of demographic differences in the current survey is based on overweight *but not obese* persons (including those with diabetes) being defined as having an estimated BMI of 25 to 29.9.
- Persons with a family history of diabetes
- Women with a history of diabetes during pregnancy (GDM), but who did not currently have diabetes
- Sedentary persons (did less than half an hour's physical activity in the last week)
- Persons interested in eating more healthily
- Persons interested in being more active
- Main meal preparers
- Household shoppers
- Age within gender (males and females in each of three age groups: 16 to 24 years, 25 to 44 years and 45 years and over)
- Level of deprivation (NZDep06), which is an established rating of areas in which people live, based on a number of socio-economic variables
- People with children and people with three or more children

REPORTING FORMAT

Each question is reported separately. This reporting begins with commentary on the total sample findings and any changes since the benchmark survey.

There is then commentary on the results for the key ethnic groups (Maaori, Pacific people, South Asians, Other Asians, people of Other ethnic groupings (mainly New Zealand Europeans), including changes since the benchmark. This is followed by a table and sometimes a graph showing these key findings by ethnic group. There is then the section which reports on other changes since the benchmark, for other demographic groupings. The final section looks just at the current survey and reports on differences between demographic groups.

MARGINS OF ERROR

At the 99 percent confidence level, the margin of error for a reported proportion of 50 percent, based on the total sample of 2,363 in the current survey, is plus or minus 2.6 percent. This means that, even though this was a sample of the population, one can be 99 percent confident that the real level is somewhere between 47.4 percent and 52.6 percent.

For a figure of 50 percent based on an ethnic sub-sample of 600 interviews, the margin of error is plus or minus 5.3 percent. The margin of error reduces as the percentage moves further away from 50 percent in either direction. For example, when asked what someone can do to have a healthy weight, 54 percent made general nutrition related comments. The margin of error for this figure, which is near 50 percent was 2.5 percent. However the margin of error for the nine percent who mentioned reducing alcohol consumption was 1.5 percent, because the smaller the number, the smaller the margin of error. Likewise 92 percent mentioned being physically active. As this is a long way from 50 percent, the margin of error is also smaller, being just 1.5 percent.

SIGNIFICANCE TESTING

Significance testing is used to identify whether differences between figures are large enough to be likely to be showing real differences, as opposed to those that might have happened by chance. For example, if it is reported that diabetes was more prevalent among Pacific people, this means that the rate of diabetes for Pacific people was sufficiently high, compared with the total sample, for the statistical analyses to identify the difference as significant.

All significant differences have been reported, unless the analysis did not add sufficient value to understanding of the data to justify its inclusion.

Changes between the benchmark and the current survey that were statistically significant increases have been shown by ▲▲ for increases at the 99% level and ▲ for increases at the 95% level. Likewise decreases have been shown by ▼▼ and ▼. Given there was no allowance in these analyses for design effects and the large number of significance tests that were undertaken, it is recommended that the 99% level be used where possible. However, it also seemed appropriate to identify changes at the 95% level, so that readers could be aware of these as well.

Comparisons have also been made *within each survey* to identify where sub-groups (e.g. Maaori) were significantly higher or lower than the total sample levels. Where the sub-group was significantly higher it is denoted by ↑↑ for a 99% difference and ↑ for a 95% difference. Where the sub-group was significantly lower than the total sample it is denoted by ↓↓ and ↓. While the tables show this analysis for both the surveys, the reporting is only based on the differences present within the current survey and only those significant at the 99% level have been commented on.

In the reporting of changes *between surveys*, both the 95% and 99% level changes have been included, but those that were significant at the 99% level have been denoted by an asterix (*).

The comparisons with the previous survey have been reported for those that are significant at both the 95 percent and 99 percent levels, with the 99 percent ones being identified by an * in the reporting. For the analysis of demographic differences within the current survey, only differences significant at the 99 percent level were included.

Bases reported in tables

The bases shown in the tables (the figures in brackets above the percentages) are the actual numbers of people interviewed (i.e. unweighted numbers), while all the percentages shown are based on weighted data.

Response scales

On some questions people were asked to specify how much they agreed or disagreed with a statement on a seven point scale from 'agree strongly' to 'disagree strongly'. In the reporting, the proportions saying either 'strongly agree' or 'agree' have been grouped into an 'agree' category. A similar process was used to create a 'disagree' category. People giving more neutral response are not reported, so the 'agree' and 'disagree' do not add to 100 percent. The neutral responses were: 'agree a little', 'neither agree nor disagree', 'disagree a little' and 'don't know'.

COMPARISONS WITH NEW ZEALAND HEALTH SURVEY

Comparisons have been made with the most recent New Zealand Health Survey, where CMDHB figures were available, via the LBD team. This survey was undertaken between October 2006 and November 2007, so is more directly comparable with the LBD benchmark survey. There were 1301 persons interviewed from CMDHB region (compared with the 2,363 in the current LBD survey). This LBD sample also has larger numbers of Maaori, Pacific and Asian persons. To obtain estimates for CMDHB, the NZHS has used modelling processes.

The NZHS was undertaken face to face and had a weighted response rate of 68 percent (compared with 58% for the General sample in this LBD survey).

Comparisons have been made using the age standardised data from the LBD surveys and the NZHS. It should be noted that the NZHS used an age standardisation that was based on an international WHO standardisation, whereas the LBD surveys were simply standardised to reflect the overall age composition of the CMDHB population aged 16 years and over.

4.3 PERCEPTIONS RELATING TO HEALTHY WEIGHT

This section considers:

- How aware people were of what is required to have a healthy weight
- How concerned they were about getting diabetes and the health risks of being overweight
- Whether people felt they knew what their recommended weight and body shape was
- Types of people who are more likely to be obese (this was based on persons with an estimated Body Mass Index (BMI) of 30 or more, calculated from their self-reported height and weight)
- Types of people who were more likely to be overweight (based on a BMI of 25 to 29.9)

AWARENESS OF OPTIONS FOR HAVING A HEALTHY WEIGHT

Respondents were asked what they could do if they wanted to have a healthy weight. The responses were all unprompted (i.e. no options were read out), which tends to produce lower levels of mentions than for prompted questions. The answers given were recorded verbatim and then coded into categories after interviewing.

Physical activity was the most mentioned by respondents, with the level of 92 percent being the same in both surveys. Almost two-thirds mentioned eating fruit and/or vegetables (could be mentioned separately), with the level of 64 percent in the current survey not being significantly different from the 62 percent in the previous survey.

There were 61 percent who made comments that have been grouped into a general nutrition category, which showed a seven percent increase since the benchmark survey*. The main comments that got included in this category were: drink water/ so many glasses per day (15%), eat a balanced diet (13%), eat foods high in fibre (10%), eat fish/seafood (9%), have a healthy diet (9%), reduce carbohydrates (8%), eat regular meals (7%), eat protein (7%), eat carbohydrates/complex carbohydrates (7%), eat less meat (7%), eat white meat (5%), avoid processed foods (4%), and follow the food pyramid (3%). The increase in this grouped category was evident among the Other ethnic groupings (up 7% to 64%*) and Pacific people (up 7% to 55%).

Reducing fat was mentioned by just under half (48%), which while being a slight increase on the 46 percent in the previous survey, was not a significant change.

There was decreased mention of reducing takeaways/junk food, down by six percent to 28 percent. This decrease was present among Pacific people (down 8% to 15%*) and Other ethnic groupings (down 6% to 32%*).

There was also decreased mention of reducing portion size, down by five percent to 27 percent. Again it was Pacific people (down 9% to 23%*) and Other ethnic groupings (down 4% to 31%) who showed significant decreases.

Reducing sugar was mentioned by just under one-in-five (18%), a similar level to the 17 percent in the previous survey. However, Maaori did have increased mentions (up 5% to 18%).

Obtaining and receiving education, professional advice and assistance was mentioned by 11 percent (10% previously). Maaori reported a five percent increase in mentions of this category (up to 13%*).

Table 3: What to do for a healthy weight

| WHAT TO DO FOR A HEALTHY WEIGHT | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Physical activity | 92 | 92 | 92 | 91 | 91 | 89↓ | 89 | 87↓↓ | 92 | 90 | 93 | 95↑ |
| Eat fruit and vegetables | 62 | 64 | 62 | 66 | 58 | 60↓ | 62 | 67 | 60 | 63 | 64 | 65 |
| Nutrition - general | 54 | 61▲▲ | 49 | 55↓ | 48↓ | 55↓▲ | 55 | 61 | 52 | 50↓↓ | 57 | 64▲▲ |
| Reduce fat | 46 | 48 | 48 | 50 | 41↓ | 45 | 47 | 47 | 49 | 42 | 48 | 50 |
| Reduce takeaways/ junk food | 34 | 28▼▼ | 28↓↓ | 26 | 23↓↓ | 15↓↓▼▼ | 36 | 35↑↑ | 27↓ | 29 | 38↑ | 32↑▼▼ |
| Reduce portion size | 32 | 27▼▼ | 28 | 23 | 32 | 23▼▼ | 20↓↓ | 19↓↓ | 23↓↓ | 18↓↓ | 35 | 31↑▼ |
| Reduce sugar | 17 | 18 | 13↓↓ | 18▲ | 15 | 17 | 17 | 19 | 19 | 17 | 19 | 18 |
| Lifestyle general | 13 | 13 | 12 | 14 | 14 | 16 | 19↑↑ | 16 | 17 | 23↑ | 13 | 12 |
| Professional advice/ education/assistance | 10 | 11 | 8 | 13▲▲ | 11 | 14 | 7 | 11 | 6↓ | 7 | 11 | 11 |
| Reduce alcohol | 9 | 8 | 8 | 8 | 4↓↓ | 4↓↓ | 10 | 7 | 7 | 7 | 11 | 10 |
| Don't know | 2 | 3▲▲ | 3↑ | 4 | 3↑ | 6↑↑▲ | 4↑ | 5 | 3 | 7↑↑ | 1↓↓ | 2▲ |
| Refused | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Other Changes Since Previous Survey

There was *increased* mention of **fruit and vegetables** among:

- People in the at-risk group (up 4% to 64%)
- Main meal preparers (up 4% to 67%)
- People living in areas of high deprivation (up 5% to 63%)
- Males aged 25 to 44 years (up 8% to 64%)
- Those who were responsible for any children (up 5% to 68%*)

- Those interested in being more physically active (up 4% to 67%*)

The **general nutrition** category had *increased* mentions among:

- Cook Island Maori (up 13% to 62%)
- Those in the at-risk group (up 5% to 59%)

- People who a doctor would describe as overweight (up 7% to 61%*)¹⁹
- For people who were main meal preparers, there was an increase (up 7% to 62%*)
- Household shoppers (up 6% to 62%*)
- People living in areas of low deprivation (up 9% to 63%*) and medium deprivation (up 8% to 62%*)
- For males aged 45 or over (up 8% to 56%)
- Females aged 25 to 44 years (up 7% to 65%)
- Females aged 45 years and over (up 6% to 63%)
- Those responsible for any children (up 8% to 62%*) and three or more children (up 12% to 60%*)
- Those interested in eating more healthily (up 5% to 60%*)
- Those interested in being more physically active (up 6% to 62%*)

There was *increased* mention of **reducing fat consumption** by:

- Main meal preparers (up 5% to 51%)
- People living in areas of high deprivation (up 5% to 49%)
- People who were sedentary (up 10% to 50%)

There was *decreased* mention of **takeaways/junk food** among:

- Samoan people (down 11% to 15%*)
- People in the at-risk group (down 5% to 28%*)
- People who a doctor would describe as overweight (down 7% to 27%*)
- Those with a family history of diabetes (down 7% to 28%*)

- Meal preparers (down 6% to 30%*)
- Household shoppers (down 7% to 29%*)
- People living in areas of low deprivation (down 7% to 34%*) and high deprivation (down 6% to 22%*)
- Males aged 16 to 24 years (down 12% to 25%*)
- Males aged 45 or older (down 7% to 23%)
- Females aged 16 to 24 years (down 20% to 22%*) and females aged 45 or older (down 9% to 27%*)
- Those responsible for any children (down 4% to 28%)
- Those interested in eating more healthily (down 7% to 26%*)

There was *decreased* mention of **reducing portion size** among:

- Samoan people (down 11% to 24%*)
- Cook Island Maaori (down 15% to 22%*)
- Tongan people (down 11% to 18%)
- People in the at-risk group (down 6% to 28%*)
- People who a doctor would describe as overweight (down 7% to 29%*)
- People who were obese (down 12% to 25%*)
- People with a family history of diabetes (down 11% to 25%*)
- Main meal preparers (down 4% to 28%*)
- Household shoppers (down 6% to 27%*)
- People living in areas of high deprivation (down 9% to 22%*)
- Males aged 16 to 24 years (down 12% to 15%*)
- Females aged 25 to 44 years (down 11% to 26%*)
- Those responsible for any children (down 7% to 26%*) and three or more children (down 11% to 24%*)
- Those interested in eating more healthily (down 4% to 27%*)

¹⁹ When comparisons are being made with the previous survey, the overweight category includes obese persons and excludes persons with diabetes

- Those interested in being more physically active (down 6% to 27%*)

There was *increased* mention of **controlling sugar intake** by females aged 45 years or older (up 6% to 26%*). There was *decreased* mention by males aged 16 to 24 years (down 12% to 6%*).

The general **lifestyle** category received *increased* mentions by:

- Those in the at-risk group (up 3% to 15%)
- People who were sedentary (up 12% to 19%*)
- Females aged 16 to 24 years (up 6% to 10%)

Education/professional advice/ assistance had *increased* mentions by:

- Those in the at-risk group (up 3% to 12%*)
- People who a doctor would describe as overweight (up 4% to 13%)
- Those with a family history of diabetes (up 5% to 12%*)
- Household shoppers (up 3% to 13%*)
- People living in medium deprivation areas (up 3% to 12%)
- Those interested in eating more healthily (up 4% to 13%*)

Differences Within Current Survey

Those who said **physical activity** were *less* prevalent among:

- Tongan people (85% vs 92% of total sample)

Those who said **fruit and vegetables** were *more* prevalent among:

- Females aged 16 to 24 years (74% vs 64% of total sample)
- Females aged 25 to 44 years (73%)

And *less* prevalent among:

- Males aged over 45 years (54%)

Those who said **nutrition in general** were *less* prevalent among:

- Niuean people (40% vs 61% of total sample)

Those who said **fat** were *more* prevalent among:

- Females aged 25 to 44 years (57% vs 48% of total sample)

And *less* prevalent among:

- Those with a family history of diabetes (42%)
- Females aged 16 to 24 years (39%)

Those who said **takeaways/ junk food** were *more* prevalent among:

- Those from low deprivation areas (34% vs 28% of total sample)

And *less* prevalent among:

- Those from high deprivation areas (22%)
- Samoan people (15%)
- Tongan people (15%)
- Cook Island Maori (14%)

Those who said **portion size** were *more* prevalent among:

- Those from low deprivation areas (32% vs 27% of total sample)

And *less* prevalent among:

- Those from high deprivation areas (22%)
- Males aged 16 to 24 years (15%)

Those who said **sugar** were *more* prevalent among:

- Females aged 45 years and over (26% vs 18% of total sample)
- Main meal preparers (21%)

And *less* prevalent among:

- Females aged 16 to 24 years (7%)
- Males aged 16 to 24 years (6%)

Those who said **lifestyle in general** were *more* prevalent among:

- Sedentary persons (19% vs 13% of total sample)

And *less* prevalent among:

- Males aged 16 to 24 years (5%)

Those who said **professional advice/ education/ assistance** were *less* prevalent among:

- Males aged 25 to 44 years (7% vs 11% of total sample)

Those who said **alcohol** were *more* prevalent among:

- Those from low deprivation areas (12% vs 8% of total sample)

And *less* prevalent among:

- Those from high deprivation areas (5%)
- Samoan people (3%)
- Males aged 16 to 24 years (2%)

Those who said **don't know** were *more* prevalent among:

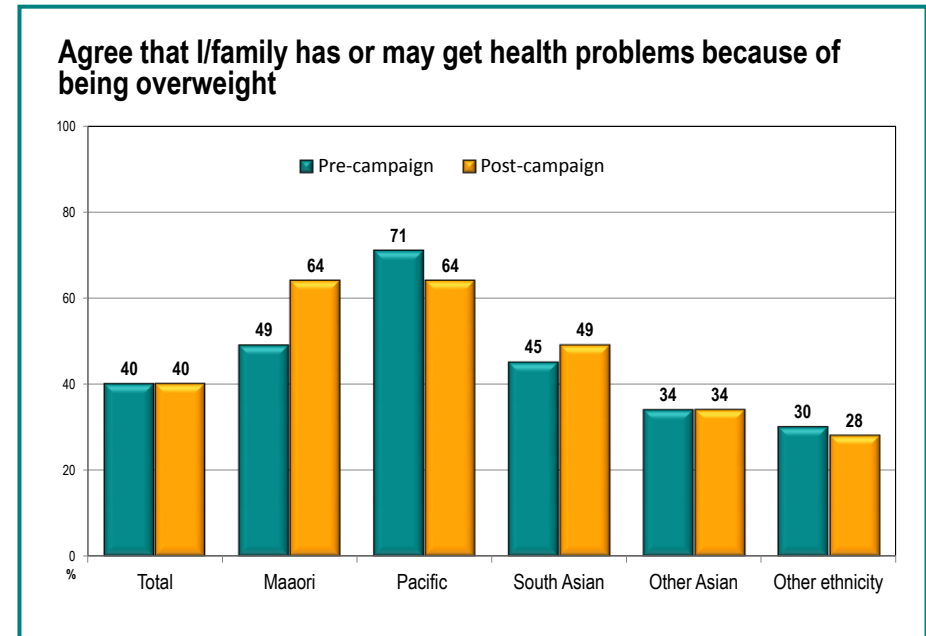
- Tongan people (8% vs 3% of total sample)

CONCERN WITH THE HEALTH RISKS OF BEING OVERWEIGHT

There was a small improvement, with a three percent decrease in the proportion disagreeing that they are worried that they or someone in their family has health problems or may get health problems because of being overweight²⁰. There was no change from the four-in-ten who agreed with this statement.

Maaori had a marked increase of 15 percent (from 49 percent to 64 percent*). Pacific people showed the reverse trend, decreasing by 7 percent to 64 percent*. While people from Other ethnic groupings showed no significant changes in level of agreement, they did show a decrease in disagreement, which contributes to an improvement (down 5% to 45%).

Graph 1: Concern with health risks of being overweight



²⁰ As with all the agree/disagree scales, the 'agree' figures are for those who 'agreed' and 'strongly agreed' with the statement of interest. If the respondent had diabetes they responded to a slightly different statement that read: "I am worried that someone in my family has diabetes or may get it".

Table 4: Worried that I/family has or may get health problems because of being overweight

| WORRIED THAT I/ FAMILY HAS OR MAY GET HEALTH PROBLEMS BECAUSE OF BEING OVERWEIGHT | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|--------------------------------------------------------------------------------------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Agree | 40 | 40 | 49↑↑ | 64↑↑▲▲ | 71↑↑ | 64↑↑▼▼ | 45 | 49↑↑ | 34 | 34 | 30↓↓ | 28↓↓ |
| Disagree | 40 | 37▼ | 27↓↓ | 22↓↓▼ | 14↓↓ | 20↓↓▲▲ | 40 | 33 | 43 | 47↑↑ | 50↑↑ | 45↑↑▼ |

Other Changes Since Previous Survey

People who were now **more likely to agree** that they were worried were:

- Males aged 16 to 24 years (up 13% to 41%*)
- Those who a doctor would describe as obese (up 10% to 71%)

As noted above, **decreased disagreement** is also a sign of improvement. The following were groups who had increased disagreement but not increased agreement:

- Meal preparers (down 5% to 29%*)
- People from medium deprivation areas (down 7% to 36%*)
- Females aged 16 to 24 years (down 9% to 31%*)
- Those who are interested in eating more healthily (down 5% to 29%*)

People who were **less likely to agree** that they were worried were:

- Those with a family history of diabetes (down 6% to 49%)
- People with diabetes (down 11% to 50%)
- Those responsible for children (down 7% to 40%*)
- Those responsible for three or more children (down 10% to 45%*)

Differences Within Current Survey

People **more** likely to **agree** that they were worried were:

- Those with diabetes (50% vs 40% for total sample*)
- Those with a family history of diabetes (49%*)
- Those who were in the at-risk group (45%*)
- Samoan people (67%*)
- Cook Island Maaori people (65%*)
- Tongan people (67%*)
- Niuean people (56%)
- People who were interested in eating more healthily (49%*)
- People who were interested in being more physically active (44%*)
- Females aged 16-24 years (52%*)
- People from areas of high deprivation (52%*)
- People who were obese (58%*)

Disagreement with this statement was greater among:

- People from areas of low deprivation (51% vs 37% of those answering*)

AWARENESS OF RECOMMENDED WEIGHT AND BODY SHAPE TO BE HEALTHY

There was a six percent decrease in the proportion who agreed that they knew what the **recommended weight** was for them to be healthy (down to 70%). Maaori (down 7% to 66%*) and Other ethnic groupings (down 8% to 70%*) showed the most change.

There was a significant four percent* decrease in agreement that respondents knew what the recommended body shape was for them to be healthy. This decrease was also evident among the Other ethnic groupings (down 5% to 70%).

Table 5: Awareness of recommended weight and body shape

| AGREEMENT WITH STATEMENTS | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|---------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Know what the recommended weight is for me to be healthy | | | | | | | | | | | | |
| Agree | 76 | 70▼▼ | 73 | 66▼▼ | 70↓↓ | 66 | 80 | 75↑ | 76 | 76 | 78 | 70▼▼ |
| Disagree | 8 | 9 | 7 | 14↑↑▲▲ | 15↑↑ | 13↑↑ | 6 | 7 | 7 | 7 | 6 | 7 |
| Know what the recommended body shape is for me to be healthy | | | | | | | | | | | | |
| Agree | 73 | 69▼▼ | 68↓ | 65↓ | 72 | 67 | 71 | 72 | 68 | 66 | 75 | 70▼ |
| Disagree | 8 | 9 | 11↑↑ | 14↑↑ | 10 | 11 | 8 | 11 | 7 | 10 | 7 | 8 |

Recommended body weight to be healthy

Other Changes Since Previous Survey

People who were now *less likely to agree* that they knew their recommended body weight were:

- Those in the at-risk group (down 9% to 66%*)
- Those who a doctor would describe as overweight (down 9% to 65%*)
- Those who a doctor would describe as obese (down 15% to 62%*)
- People who had a family history of diabetes (down 8% to 68%*)

- Main meal preparers (down 7% to 71%*)
- Household shoppers (down 8% to 70%*)
- People living in low deprivation areas (down 10% to 71%*)
- People living in medium deprivation areas (down 9% to 67%*)
- Males aged 25 to 44 years (down 8% to 68%)
- Females aged 25 to 44 years (down 7% to 71%)
- Females aged 45 years and over (down 8% to 73%*)
- Those responsible for any children (down 10% to 67%*)

- Those who were interested in eating more healthily (down 5% to 69%*)
- Those who were interested in being more active (down 5% to 70%*)

For people who were sedentary, there was an *increase* in the proportion who *disagreed* (up 8% to 14%).

Differences Within Current Survey

Groups who were *more likely* than the total sample to *agree* that they knew their recommended body weight were:

- People with diabetes (85% vs 70% of total sample)

Groups who were *less likely* to *agree* were:

- Males aged 16 to 24 years (60%)
- Females aged 16 to 24 years (55%)

There was *higher disagreement* among:

- Sedentary persons (14% vs 9% of the total sample)

Recommended body shape to be healthy

Other Changes Since Previous Survey

People who were now *less likely to agree* that they knew what the recommended body shape was for them to be healthy included:

- The at-risk group (down 5% to 66%)
- Those who a doctor would describe as overweight (down 5% to 64%)
- Main meal preparers (down 4% to 71%)
- Household shoppers (down 4% to 70%)
- People living in low deprivation areas (down 5% to 71%)

- Males aged 25 to 44 years (down 8% to 67%)
- Females aged 45 years and over (down 6% to 72%*)
- Those responsible for children (down 6% to 67%*)
- Those who were interested in eating more healthily (down 3% to 68%)
- Those who were interested in being more active (down 4% to 68%)

Differences Within Current Survey

Females aged 16 to 24 years were *less likely* than the total sample to *agree* that they knew their recommended body weight were females aged 16 to 24 years (60% vs 69% for total sample).

Females aged 25-44 years and over had *higher disagreement* (14% vs 9%*).

PREVALENCE OF OVERWEIGHT AND OBESE PERSONS

Self-reported height and weight were collected in the current survey (but not the previous survey), to allow an estimation of body mass index (BMI). A BMI of 25 to 29.9 is considered being overweight, while 30 plus is considered obese.

There were a quarter of the sample who would be classified as obese, while just over another quarter (28%) would be classified as overweight on the basis of their self-reported height and weight. As there were eight percent where there was insufficient information provided to calculate the BMI, the proportions who would be overweight and obese were effectively slightly higher.

Calculated obesity rates were highest among the Pacific people where one-in-two reached a BMI of 30 or over. The rate was also high for Maaori (44%).

These rates differ from those of the New Zealand Health Survey, which were based on actual height and weight measurements. Nationally age-standardised adult obesity rates were 61% for Pacific peoples and 40% for Maaori, while modelled estimates for Counties Manukau, based on the population sample from this area (1300 people aged 15+ years), were 78% for Pacific and 51% for Maaori.

Table 6: BMI

| BMI | Total | Maaori | Pacific | South Asian | Other Asian | Other |
|------------------------|-------|--------|---------|-------------|-------------|-------|
| | 2,363 | 606 | 594 | 430 | 214 | 868 |
| | % | % | % | % | % | % |
| Less than 25 | 39 | 18↓↓ | 11↓↓ | 49↑↑ | 65↑↑ | 48↑↑ |
| Overweight: 25 to 29.9 | 28 | 29 | 17↓↓ | 32 | 25 | 32 |
| Obese: 30+ | 25 | 44↑↑ | 50↑↑ | 17↓↓ | 7↓↓ | 17↓↓ |
| Don't know/ refused | 8 | 9 | 22↑↑ | 3↓↓ | 2↓↓ | 4↓↓ |

MATCH BETWEEN BMI AND SELF-REPORT

In the questionnaire persons were asked: "If a doctor was checking your body shape and weight today, do you think they would say you were overweight?" If they said "Yes", they were then asked: "And would the doctor be likely to say you were obese?" There were only 12 percent who reported themselves as obese and another 28 percent as overweight.

The table which follows shows that only one-in-three (33%) of those who were classified as obese via the estimated BMI actually reported themselves as

being obese. Another 41% reported themselves as being overweight, leaving a quarter who did not even consider themselves overweight or were unsure.

Among those who were overweight as measured via the estimated BMI, 42 percent reported themselves in this category and another seven percent thought they were obese. This left just over half (51%) who did not consider themselves overweight or were unsure.

Table 7: Doctor likely to say obese/overweight, by BMI

| DOCTOR LIKELY TO SAY OBESE/OVERWEIGHT | Total | BMI | | | |
|---------------------------------------|-------|--------------|-----------------------|-----------|--------------------|
| | | Less than 25 | Overweight 25 to 29.9 | Obese 30+ | Don't know/refused |
| | 2,363 | 879 | 629 | 617 | 238 |
| | % | % | % | % | % |
| Obese | 12 | 1↓↓ | 7↓↓ | 33↑↑ | 24↑↑ |
| Overweight | 28 | 8↓↓ | 42↑↑ | 41↑↑ | 30 |

The following table shows the data that was collected in both surveys, which was based on whether people thought a doctor would say they were overweight or obese. These figures include people with diabetes. The obese levels remained at a similar level to the previous survey (12%), but levels for Maaori increased by 8 percent to 26 percent*.

Those who thought they were overweight decreased by three percent to 28 percent. This decrease was evident for Maaori (down 7% to 27%*), and Other Asians (down 5% to 16%, but not a significant change).

Table 8: Doctor likely to say obese/overweight

| DOCTOR LIKELY TO SAY OBESE/OVERWEIGHT | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|---------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Obese | 13 | 12 | 18 | 26↑↑▲▲ | 32↑↑ | 26↑↑▼ | 12 | 10 | 5↓↓ | 7↓ | 8↓↓ | 7↓↓ |
| Overweight | 31 | 28▼ | 34↑↑ | 27▼▼ | 28 | 27 | 22↓↓ | 24 | 22↓↓ | 16↓↓ | 32 | 29 |

Other changes since previous survey

Other groups reporting the doctor being *less* likely to say they were **obese** were:

- Those with three or more children, who reported a decrease (down 6% to 16%)
- Females aged 25 to 44 years (down 5% to 14%)

Other groups reporting a *decrease* in **being overweight** were:

- People who were sedentary (down 9% to 34%)
- Household shoppers (down 4% to 33%)
- People in areas of high deprivation (down 5% to 31%)
- Males aged 25 to 44 years (down 15% to 25%*)
- Those who were responsible for any children (down 5% to 32%)

TYPES OF PEOPLE WHO WERE MORE LIKELY TO BE OBESE

Obese persons, based on an estimated BMI of over 30, were *more* prevalent among:

- Those with a history of diabetes during pregnancy but not currently with diabetes (51% vs 25% of total sample*)
 - People with diabetes (46%*)
 - People from high deprivation areas (37%)
 - Those with a family history of diabetes (31%*)
 - Those who were at risk of diabetes (32%*)
 - All of the Pacific groups: Samoan people (50%*), Cook Island Maori (53%*), Tongan (48%*), Niuean (49%*) and Other Pacific people (42%*)
 - Those responsible for three or more children (32%)
 - Those interested in eating more healthily than they currently do (30%)
 - Those interested in being more physically active (28%*)
- And *less* prevalent among:
- People from low deprivation areas (14%)
 - Females 16 to 24 years (14%)

TYPES OF PEOPLE WHO WERE MORE LIKELY TO BE OVERWEIGHT

Overweight persons, based on an estimated BMI of 25 to 29.9, were *more* prevalent among:

- Those with diabetes (46% vs 28% of total sample)
- Males aged 25 to 44 years (39%)
- Males aged 45 years and over (37%)
- People from low deprivation areas (35%) and medium deprivation areas (33%)
- Those with a family history of diabetes (31%)

And *less* prevalent among:

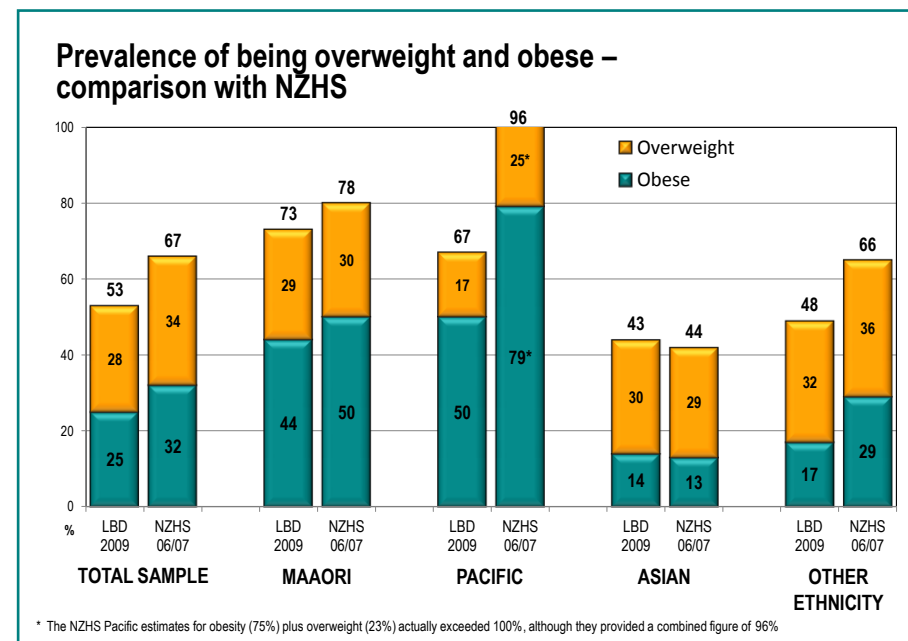
- People from high deprivation areas (22%)
- Females aged 25 to 44 years (21%)
- Males aged 16 to 24 years (14%)
- Females aged 16 to 24 years (9%)
- People who were sedentary (22%)

COMPARISONS WITH NZ HEALTH SURVEY DATA

The graph below makes comparison with CMDHB data from the most recent New Zealand Health Survey, which was undertaken in 2006/07. This involves face to face interviews and actual measurement of height, weight and waist girth, so their data might be assumed to be more accurate in that respect. However, the limited sample size and the required modelling does reduce the accuracy of the NZHS data. Evidence of its limitations was that the individual levels for being obese and overweight for Pacific totalled 104 percent, even though the combined total that NZHS calculated was 96 percent. The

comparisons suggest that the LBD levels reported (based on the estimated BMI using self-reported height and weight) might be understated.

Graph 2: Prevalence of being overweight and obese comparison with NZHS



DISCUSSION

Very limited self recognition of being overweight and obese

The fact that self-reported weight and height lead to lower BMI estimates than when actual measurements are used is important in the context of the finding that estimates of those who thought their doctor would say they were obese were also considerably lower than actual classification by measurement. **It**

implies that self recognition of overweight and obesity is still very limited for the CMDHB population and this has major implications for ongoing awareness raising initiatives and programme planning.

Need to consider results in context of changes in campaign direction

The responses to the question on what they could do if they wanted to have a healthy weight need to be considered in relation to the later question which asked "what can be done to prevent diabetes". When the first campaign began the emphasis was on addressing obesity rather than diabetes directly, so the question on how to have a healthy weight was the key measure of success of that campaign direction. However the direction of the campaign changed to emphasise diabetes and therefore the later question on how to prevent diabetes is more likely to reflect the impacts of the campaign overall. For example, that later question did show some increase in mentioning reducing fat intake, which was not reflected in the responses to the healthy weight question.

Some positive results for Maaori

If people believe they or someone close to them is at risk of health problems because of being overweight, then it might be expected that they would be more motivated to change. While the overall proportion who were worried that they or someone in their family has or may get health problems because of being overweight remained at four-in-ten, the 15 percent increase in concern among Maaori was a positive result. Maaori also had increased mention of reducing sugar intake.

While fewer Maaori now agreed that they knew what the recommended weight was for them to be healthy, this may reflect an increased appreciation of what

it takes to be healthy, leading to an uncertainty as to whether they know what the recommended weight is for them. The level of mismatch between people's (of all ethnic groups) perceptions as to whether they are overweight and obese and the BMI measures does raise questions as to whether people do really know what their recommended weight is. Therefore a reduction in the proportions saying they know what their recommended weight is may reflect an increasing realistic perspective on matters.

The increased Maaori rates of obesity, (based on what they think a doctor would say), reinforces the importance of improving Maaori knowledge and behaviours.

Worsening results for Pacific people

Pacific people had decreased mention of reducing takeaways/junk food and portion size and concern about health problems from being overweight. As one of the key audiences for LBD this is a concern, particularly given one-in-two were classified as obese using the BMI measure in this survey.

4.4 HEALTHY EATING

This section examines the following issues relating to healthy eating.

- Fruit and vegetable consumption:
 - ♦ Awareness of minimum number of recommended servings
 - ♦ Reported levels of fruit and vegetable consumption
- Other eating behaviours: drinking fizzy/energy drinks, eating more than needed, having something to eat for breakfast, eating takeaway foods
- Low fat cooking behaviours: cooking meat or vegetables in butter or lard, cooking meat with the fat removed or drained, cooking chicken with the skin on
- Sources of support to eat healthily
- Children's eating: Support given by caregivers to children to eat healthily and the perceived healthiness of the food their children eat
- Interest and difficulty in eating more healthily
- Possible barriers to healthy eating

Because it is a large and key section, it concludes with a section that seeks to integrate some of the findings relating to healthy eating. Each of the separate sub-sections ends with its own discussion.

FRUIT AND VEGETABLE CONSUMPTION

Awareness of Minimum Number of Recommended Servings

Respondents were asked: "What is the minimum number of fruit and vegetable servings that adults are recommended to eat per day to stay healthy?" If they asked, they were told that "one serving of fruit or vegetables is what fits into the palm of your hand or it's one cup of salad." This question came directly

after questions asking them how many servings of fruit and vegetables they eat on a typical day, and servings were defined as part of those questions.

Under half (47%) gave the correct response of five servings (similar to the 48% previously) while another three percent mentioned more than five servings (down from 4% previously). The mean number of 4.3 remained unchanged. There was a five percent* increase in those who did not know (up to 27%), with this increase also being evident among the Other ethnic grouping (up 6% to 24%).

Graph 3: Knowledge of recommended fruit and vegetable servings

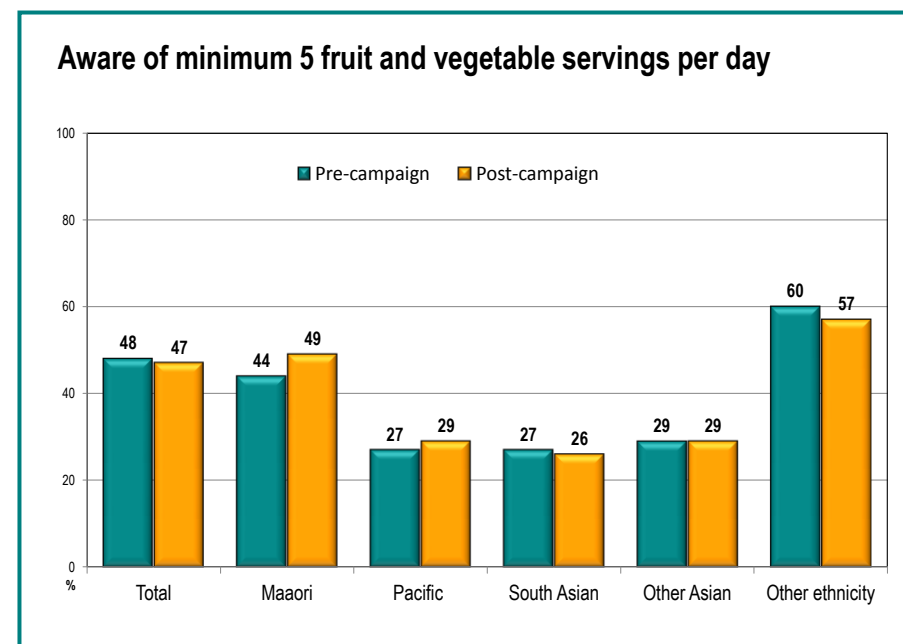


Table 9: Knowledge of recommended fruit and vegetable servings

| KNOWLEDGE OF RECOMMENDED MINIMUM NUMBER OF FRUIT AND VEGETABLE SERVINGS PER DAY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|---------------------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| One to two | 12 | 11 | 11 | 9 | 19 | 20↑↑ | 25 | 20↑↑ | 20 | 15 | 8 | 7↓↓ |
| Three | 11 | 9 | 8 | 7 | 16 | 14↑↑ | 15 | 14↑↑ | 16 | 15↑↑ | 8 | 7↓ |
| Four | 3 | 3 | 5 | 2▼▼ | 5 | 5 | 2 | 6▲▲ | 3 | 4 | 2 | 2 |
| Five | 48 | 47 | 44 | 49 | 27 | 29↓↓ | 27 | 26↓↓ | 29 | 29↓↓ | 60 | 57↑↑ |
| More than five | 4 | 3▼▼ | 4 | 1▼ | 6 | 1 | 1 | 4 | 5 | 3 | 4 | 3 |
| Don't know | 22 | 27▲▲ | 28 | 31↑ | 28 | 31▼▼ | 30 | 30 | 28 | 34↑ | 17 | 24▲▲ |
| Mean | 4.3 | 4.3 | 4.3 | 4.3 | 3.9 | 3.6↓↓▼▼ | 3.3 | 3.6↓↓▲ | 3.7 | 3.9↓↓ | 4.5 | 4.6↑↑ |

Other Changes Since Previous Survey

There were *increased* mentions of the correct **five servings** for:

- Males aged 16 to 24 years (up 14% to 61%*)

There was *decreased* mention of the correct five servings for:

- Males aged 25 to 44 years (down 8% to 34%)

Differences Within Current Survey

The proportion of people giving the correct **five servings** per day was *higher* for:

- Females aged 25 to 44 years (65% vs 45% for total sample)
- Males aged 16 to 24 years (61%)

- Females aged 16 to 24 years (61%)
- Meal preparers (53%)

REPORTED FRUIT AND VEGETABLE CONSUMPTION

Number of fruit servings personally eat daily

In interpreting the changes in fruit and vegetable consumption, it must be remembered that this could have been affected by the differing times of the year that the survey took place, plus the changed economic climate.

Respondents were asked: "On average how many, if any, 'servings' of fruit (fresh, frozen, canned or stewed) do you eat on a typical day? A serving is what fits into the palm of your hand, like a medium apple, one medium or two small plums. Please do NOT include fruit juice or dried fruit." It should be noted that fruit juice (excluding cordial) is considered a serving of fruit, but it

was excluded to be consistent with the Ministry of Health approach, so the levels in this survey could be expected to have some under-reporting.

The proportion eating two or more servings of fruit per day decreased (from 70% to 66%*). The proportion saying three servings decreased by four percent to 23 percent*, as did the proportion eating more than three (by 3% to 15%*). There was a corresponding increase in those eating one or less (up 7% to 31%*). There was a three percent* reduction in those who didn't eat any fruit. The mean number of servings decreased from 2.4 to 2.2*.

The decrease in eating two or more servings of fruit was evident among Maaori (down 8% to 62%) and Pacific people (down 7% to 64%). Other Asians showed the opposite trend with an increase of nine percent to 73 percent.

The mean number of servings also decreased for Maaori (down from 2.6 to 2.3*) and Pacific people (down from 2.6 to 2.2*), although it should be noted that both groups had been above average in the previous survey and their current figures were similar to the current total sample level. People of Other ethnic groupings decreased from 2.4 to 2.3.

Table 10: Fruit servings personally eat daily

| NUMBER OF FRUIT SERVINGS PERSONALLY EAT DAILY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Don't eat fruit | 5 | 2▼▼ | 5 | 4↑ | 2↓↓ | 2 | 1↓↓ | 0↓ | 4 | 1 | 6 | 2 |
| One or less servings per day | 24 | 31▲▲ | 25 | 33▲▲ | 24 | 32 | 31↑↑ | 34 | 31↑↑ | 25 | 22 | 29▲▲ |
| Two servings per day | 29 | 32▲ | 27 | 25↓↓ | 27 | 34▲▲ | 32 | 37↑ | 33 | 38 | 30 | 31 |
| Three servings per day | 23 | 19▼▼ | 21 | 19 | 24 | 16▼▼ | 22 | 18 | 20 | 19 | 23 | 20 |
| More than three | 18 | 15▼▼ | 23↑↑ | 19↓ | 20 | 14▼▼ | 12↓ | 10↓↓ | 10↓↓ | 16 | 18 | 16 |
| Don't know | 1 | 1 | 0 | 1 | 3↑↑ | 2 | 0 | 0 | 1 | 1 | 0 | 1 |
| Eat 2 plus servings per day | 70 | 66▼▼ | 70 | 62▼▼ | 71 | 64▼▼ | 67 | 65 | 64↓ | 73↑▲▲ | 71 | 67 |
| Mean number of fruit servings | 2.4 | 2.2▼▼ | 2.6↑ | 2.3▼▼ | 2.6↑ | 2.2▼▼ | 2.2↓ | 2.1↓ | 2.1↓↓ | 2.3 | 2.4 | 2.3▼ |

Other Changes Since Previous Survey

Those reporting *decreased* **mean number of fruit servings** were:

- Samoan people (from 2.6 to 2.1*)
- Tongan people (from 3.0 to 2.2*)
- People in the at-risk group (from 2.3 to 2.1*)
- Those who a doctor would describe as overweight (from 2.4 to 2.1*)²¹
- Those who a doctor would describe as obese (from 2.6 to 2.1)
- Those with a family history of diabetes (from 2.4 to 2.1*)
- People with diabetes (from 2.5 to 2.1)
- Main meal preparers (from 2.5 to 2.4*)
- Main household shoppers (from 2.5 to 2.3)
- People living in high deprivation areas (from 2.5 to 2.2*)
- Males aged 16 to 24 years from 2.7 to 2.3)
- Females aged 25 to 44 years (from 2.7 to 2.4*)
- Females aged 45 years and over (from 2.6 to 2.4)
- Those responsible for children (from 2.5 to 2.3*)
- Those who were interested in eating more healthy (from 2.4 to 2.1*)
- Those who were interested in being more active (from 2.4 to 2.2*)

Differences within current survey

Those consuming a *higher* **mean number of fruit servings**, compared with the total sample, were:

- Those responsible for three or more children (2.5 servings vs 2.2 for the total sample)

²¹ When comparisons are being made with the previous survey, the overweight category includes obese persons and excludes persons with diabetes

- Meal preparers (2.4 servings)

Those consuming a *lower* **mean number of fruit servings**, were:

- Sedentary persons (1.9 servings)
- Obese persons (2.1 servings)

Number of vegetable servings personally eat daily

The number of vegetable servings remained similar to the previous survey, with 40 percent eating three or more servings per day. The mean number of servings also remained unchanged at 2.2. There was a three percent increase in mention of one or less servings per day (up to 36%).

Pacific people reported an 11 percent increase in the proportion who were eating three or more servings of vegetables (up to 26%), although this level still remained well below the total sample level of 40 percent.

Table 11: Vegetable or salad servings personally eat daily

| NUMBER OF VEGETABLE OR SALAD SERVINGS PERSONALLY EAT DAILY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|----------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Don't eat vegetables | 1 | 0 | 1 | 1↑ | 2↑ | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| One or less servings per day | 33 | 36▲ | 32 | 34 | 49↑↑ | 44↑↑ | 41↑↑ | 47↑↑ | 33 | 38 | 27↓↓ | 31↓↓ |
| Two servings per day | 32 | 30 | 33 | 35↑ | 33 | 33 | 35 | 32 | 42↑↑ | 32▼ | 30 | 29 |
| Three servings per day | 19 | 18 | 20 | 17 | 8↓↓ | 15▲▲ | 16 | 13↓ | 16 | 15 | 23↑↑ | 20 |
| More than three | 14 | 15 | 13 | 11↓ | 4↓↓ | 6↓↓ | 7↓↓ | 6↓↓ | 8↓↓ | 13 | 19↑↑ | 20↑↑ |
| Don't know | 1 | 0▼ | 1 | 1↑↑ | 3↑↑ | 0▼▼ | 1 | 1 | 2 | 2 | 0 | 0 |
| Eat 3 plus servings per day | 40 | 40 | 36 | 36 | 15↓↓ | 26↓↓▲▲ | 29↓↓ | 24↓↓ | 28↓↓ | 33 | 51↑↑ | 48↑↑ |
| Mean number of servings per day | 2.2 | 2.2 | 2.2 | 2.1▼ | 1.7↓↓ | 1.8↓↓▲▲ | 1.9↓↓ | 1.8↓↓▼ | 2.1↓ | 2.1 | 2.4↑↑ | 2.4↑↑ |

Other Changes Since Previous Survey

There were *increases* in the **mean number of vegetable or salad servings** per day among the following groups:

- Samoan people (from 1.6 to 1.8)
- Cook Island Maaori (from 1.7 to 2.0)

There were *decreases* among:

- People with diabetes (from 2.3 to 1.9*)
- Those who were sedentary (from 2.2 to 1.9*)
- Main meal preparers (from 2.5 to 2.4)

- Main household shoppers (from 2.4 to 2.3)
- Those from medium deprivation areas (from 2.3 to 2.1*)
- Those who were interested in eating more healthily (from 2.1 to 2.0)

Differences within current survey

Those consuming a *higher mean number vegetable or salad servings*, compared with the total sample, were:

- Females aged 45 and over (2.5 servings vs 2.2 for total sample)
- Females aged 25 to 44 years (2.4 servings)

- Meal preparers (2.4 servings)
- People from low deprivation areas (2.4 servings)
- Household shoppers (2.3 servings)

Those consuming a *lower* **mean number of vegetable or salad servings** were:

- Sedentary persons (1.9 servings)
- Those with diabetes (1.9 servings)
- Females aged 16 to 24 years (1.9 servings)
- Males aged 25 to 44 years (1.9 servings)
- Those with a family history of diabetes (2.0 servings)
- Obese persons (2.0 servings)
- Males aged 45 years and over (2.0 servings)

- Those interested in eating more healthy (2.0 servings)

Total number of fruit and vegetable servings consumed

When the number of fruit and vegetable servings were summed, the average person consumed 4.4 servings, which was a decrease on the 4.6 servings in the benchmark survey*. There were also decreases for Maaori (down from 4.8 to 4.4), South Asians (down from 4.1 to 3.8) and people of Other ethnic groupings (down from 4.9 to 4.7). There were 42 percent who were eating the recommended five or more servings per day, which was a non-significant decrease from 45 percent in the previous survey. Maaori were down from 44 percent to 40 percent, but this was also not significant.

Table 12: Total fruit and vegetable servings consumed

| TOTAL FRUIT AND VEGETABLE SERVINGS CONSUMED | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|---------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Less than one | 1 | 1 | 0 | 3↑↑▲▲ | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1 to 1.9 | 3 | 5▲▲ | 5↑ | 2↓↓▼ | 2 | 6▲▲ | 4 | 4 | 4 | 2 | 3 | 5▲▲ |
| 2 to 2.9 | 13 | 15 | 10↓ | 17▲▲ | 14 | 17 | 16 | 20↑↑ | 13 | 15 | 13 | 13 |
| 3 to 3.9 | 17 | 17 | 17 | 17 | 23↑↑ | 25↑↑ | 21 | 22↑ | 24↑↑ | 24↑ | 14↓ | 14↓ |
| 4 to 4.9 | 20 | 18 | 22 | 17▼ | 20 | 17 | 28↑↑ | 24↑↑ | 20 | 18 | 18 | 17 |
| 5 to 5.9 | 15 | 17 | 10↓↓ | 15▲ | 13 | 14 | 10↓ | 11↓↓ | 18 | 13 | 17 | 19 |
| 6 to 6.9 | 12 | 11 | 11 | 11 | 11 | 10 | 8↓ | 10 | 6↓↓ | 10 | 13 | 13 |
| 7 or more | 18 | 14▼▼ | 23↑↑ | 15▼▼ | 11↓↓ | 10↓↓ | 12↓ | 7↓↓▼ | 12↓ | 15 | 21↑ | 17▼ |
| Don't know/ refused | 2 | 2 | 2 | 2 | 5↑↑ | 2▼▼ | 1 | 1 | 3 | 3 | 1 | 1 |
| Mean number of servings per day | 4.6 | 4.4▼▼ | 4.8 | 4.4▼▼ | 4.2↓↓ | 4.0↓↓ | 4.1↓↓ | 3.8↓↓▼ | 4.2↓↓ | 4.4 | 4.9↑↑ | 4.7↑↑▼ |
| Eat 5 plus servings per day | 45 | 42 | 44 | 40 | 35↓↓ | 33↓↓ | 30↓↓ | 28↓↓ | 35↓↓ | 38 | 51↑↑ | 48↑↑ |

Other Changes Since Previous Survey

Decreases in **mean numbers of fruit and vegetable servings** were present among:

- Tongan people (from 4.7 to 3.8)
- Those in the at-risk group (from 4.5 to 4.2*)
- Those who a doctor would describe as overweight (from 4.6 to 4.3*) and obese (from 4.8 to 4.2*)
- Those with a family history of diabetes (from 4.4 to 4.1*)
- People with diabetes (from 4.8 to 4.0*)
- Main meal preparers (from 5.0 to 4.7*)
- Household shoppers (from 4.9 to 4.6*)
- People in areas of medium deprivation (from 4.7 to 4.4*)
- People in areas of high deprivation (from 4.5 to 4.2)
- Females aged 16 to 24 years (from 4.7 to 4.2)
- Females aged 25 to 44 years (from 5.2 to 4.8*)
- Females aged 45 or more (from 5.2 to 4.9)
- Those who were responsible for any children (from 4.6 to 4.4*)
- Those interested in eating more healthily (from 4.5 to 4.2*)

- Those interested in being more active (from 4.6 to 4.4*)

Differences within current survey

Those reporting *higher mean numbers of fruit and vegetable servings* than the total sample were:

- Main meal preparers (4.7 vs 4.4*)
- People who were overweight (4.7*)
- Household shoppers (4.6)
- People living in areas of low deprivation (4.7*)
- Females aged 25 to 44 years (4.8*)
- Females aged 45 years or more (4.9*)
- Those responsible for three or more children (4.7)

Those who had *fewer* servings, on average, than the total sample were:

- Samoan people (3.9*)
- Tongan people (3.8*)
- People who were obese (4.1*)

- People in the at-risk group (4.2)
- People with a family history of diabetes (4.1*)
- People who were sedentary (3.8*)
- People with diabetes (4.0)
- People who live in areas of high deprivation (4.2)
- Males aged 25 to 44 years (3.9*)
- Males aged 45 years and over (4.0*)
- Those interested in eating more healthily (4.2*)

Eating two fruit and three vegetable servings per day

Just over a quarter (26%) were eating at least two fruit and three vegetable servings per day, which did not differ statistically from the previous survey (28%). Pacific people reported a six percent increase (from 11% to 17%*), while Other ethnic groupings decreased four percent (to 32%).

Table 13: Eat 2 fruit/3 vegetable servings or more per day

| EAT 2 FRUIT/ 3 VEGETABLES SERVINGS OR MORE PER DAY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Eat 2 fruit and 3 vegetable servings or more per day | 28 | 26 | 25 | 22↓ | 11↓↓ | 17↓↓▲▲ | 19↓↓ | 15↓↓ | 18↓↓ | 24 | 36↑↑ | 32↑↑▼▼ |

Other Changes Since Previous Survey

Those reporting *increased* consumption of **at least two fruit and three vegetable servings** per day were:

- Samoan people (up 7% to 18%)
- People with diabetes (up 10% to 18%)

Those reporting *decreased* consumption of **at least two fruit and three vegetable servings** per day were:

- People with diabetes (down 10% to 18%)
- Main meal preparers (down 5% to 31%*)
- Main household shoppers (down 4% to 30%)
- Females aged 16 to 24 years (down 9% to 21%)
- Females aged 25 to 44 years (down 8% to 30%*)
- Those who were interested in eating more healthily (down 3% to 22%)

Differences within current survey

People who ate **2 or more fruit and 3 or more vegetable servings** were *more* prevalent among:

- Main meal preparers (31% vs 26%*)
- Household shoppers (30%)
- People in areas of low deprivation (33%*)
- Females aged 45 years or older (35%*)

This level of eating fruit and vegetables was *less* prevalent among:

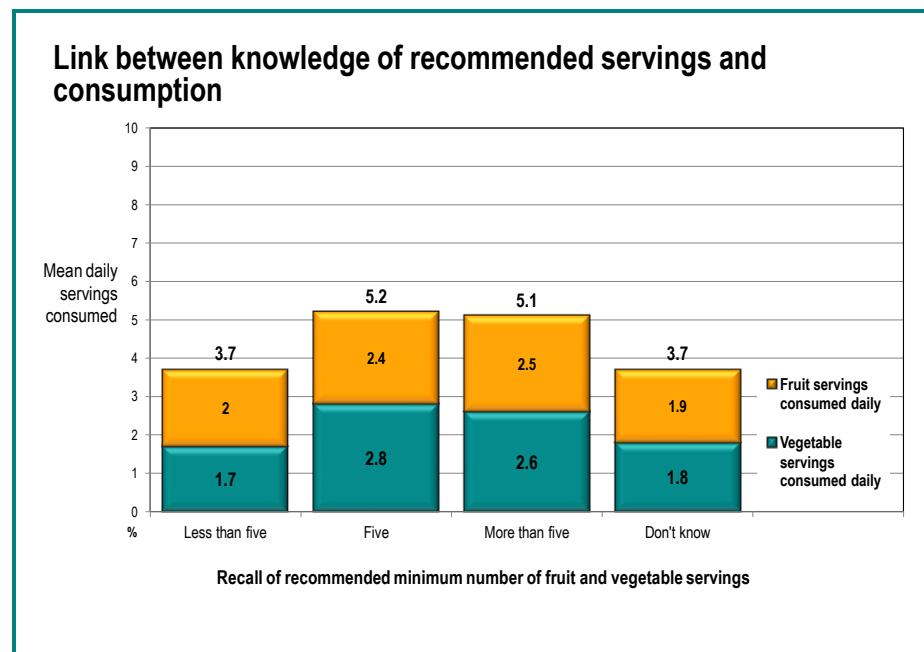
- Samoan people (18%*)

- Cook Island Maaori (17%*)
- Tongan people (16%*)
- Niuean people (14%)
- 'Other' Pacific people (13%)
- People who were obese (22%)
- People who were sedentary (20%*)
- Those with a family history of diabetes (22%)
- People with diabetes (18%*)
- People in areas of high deprivation (21%*)
- Males aged 25 to 44 years (19%*)
- Those responsible for any children (23%)
- Those interested in healthy eating (22%*)

LINKS BETWEEN KNOWLEDGE AND BEHAVIOUR

As shown in the graph below, people who thought the recommended minimum number of servings of fruit and vegetables was less than five tended to also consume lower amounts of fruit and vegetables. Those who knew that five servings was the recommended minimum amount averaged five servings, as did those who thought the recommended amount was higher than five. Those who did not know the recommended minimum were at the same level as those who thought it was less than five.

Graph 4: Link between knowledge of recommended servings and consumption



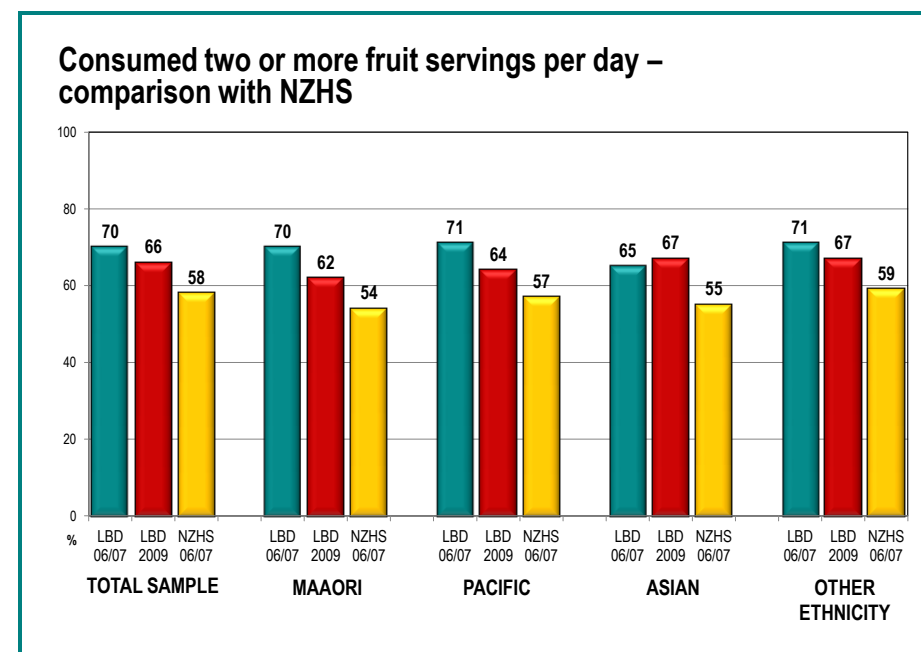
COMPARISONS WITH NEW ZEALAND HEALTH SURVEY

As shown in the graphs which follow, despite the decrease in fruit consumption in the current LBD survey, the levels recorded for eating two plus servings per day were still higher than in the 2006 New Zealand Health Survey. Conversely, the proportions consuming three plus servings of vegetables were much lower in both LBD surveys compared with the 2006 NZHS survey.

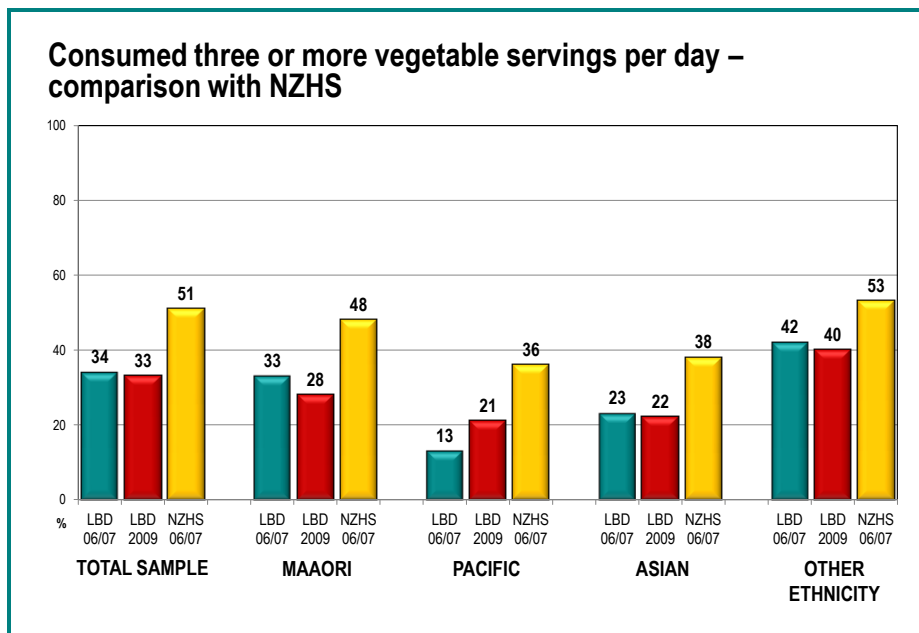
It is difficult to understand the differences between the findings for the two surveys, given the questions used were quite similar. The NZHS questions asked about eating "per day" whereas the LBD survey used the term "on a typical day". The LBD survey also described a serving as "what fits into the

palm of your hand", whereas the NZHS relied just on examples, but these did include an example of adding different quantities. The LBD survey gave examples for fruit, but for vegetables simply described it as, "One serving of cooked vegetables is what fits into the palm of your hand or it's one cup of salad." The NZHS survey included examples that mentioned specific vegetables, namely potato/kumara and peas. It is also possible that the face to face nature of the NZHS may have allowed people more time to calculate their quantities. However, even if people were imagining different serving sizes, this doesn't explain why the LBD survey fruit figure was higher and the vegetable figure lower.

Graph 5: Consumed two or more fruit servings per day



Graph 6: Consumed three or more vegetable servings per day – comparison with NZHS



The reduction in consumption of fruit may also reflect a seasonal influence, due to the availability, seasonal price differences, and freshness of fruit in the winter months. It may also be that people are more inclined to want to eat fruit in warmer weather and eat more hot foods in winter.

The fact that vegetable consumption had not decreased despite the seasonal influences may be an indicator that there has effectively been some improvement in this area. The proportion eating at least two fruit and three vegetables also did not decrease despite the seasonal influences.

Increasing knowledge of recommended five plus

As noted in the benchmark report, the relatively low proportion who are able to correctly recall the recommended five plus servings of fruit and vegetables is a potential starting point for improving nutritional knowledge.

DISCUSSION

Difficult to disentangle seasonal and economic effects

The Consumer Price Index (CPI) for the June 2009 quarter shows that nationally, over the previous twelve months fruit prices had increased 18 percent compared with a two percent increase for vegetables. This suggests that the differing results between fruit and vegetables in this LBD may well be related to cost.

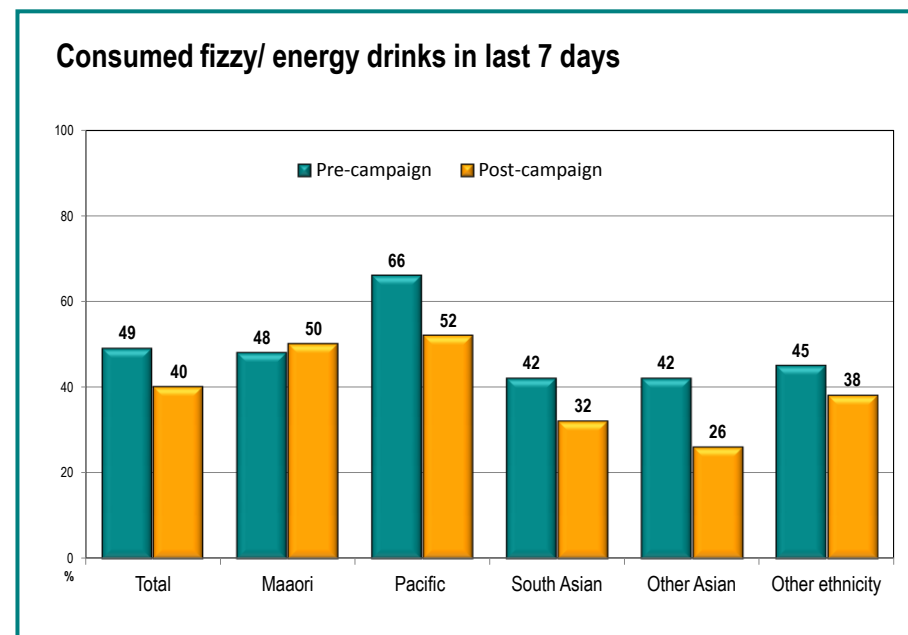
4.4.1 OTHER EATING BEHAVIOURS

Respondents were asked how many times in the last seven days they adopted various eating/drinking habits.

The **consumption of fizzy or energy drinks** was asked as an indicative measure of sugar consumption and this showed one of the largest decreases recorded between the surveys with a nine percent decrease in having consumed in the last seven days (down 9% to 40%*). Those who were drinking also reported drinking on fewer days (down from 3.0 to 2.6*).

The decrease in the proportion consuming fizzy/energy drinks was particularly evident for Pacific people (down 14% to 52%*), and Other Asians (down 16% to 26%*), but also for South Asians (down 10% to 32%*) and Other ethnic groupings (down 7% to 38%*). The same groups also showed decreases in the mean number of days they were drinking fizzy/energy drinks (based on those who were drinking it). Pacific people decreased from 3.1 to 2.6 days*, South Asians from 3.0 to 2.3*, Other ethnic groupings from 3.1 to 2.5* and Other Asians from 2.9 to 2.2.

Graph 7: Consumed fizzy/energy drinks in last 7 days

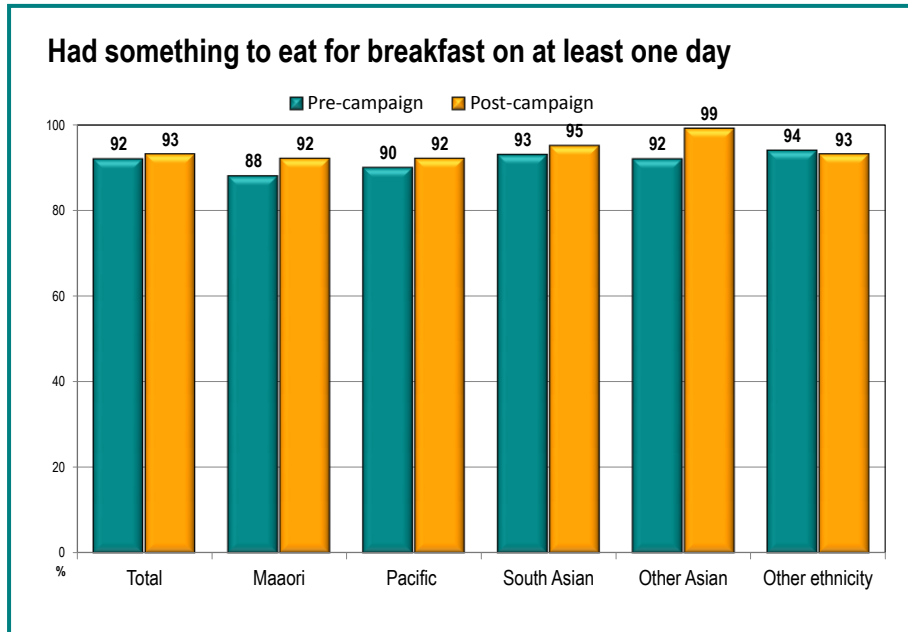


Eating more than needed remained at the same level as previously, with six in every ten reporting having done so in the last week. South Asians did show a decrease (by 9% to 43%). The mean number of days on which these people had eaten more than they needed also remained at similar levels to previously, except for Maaori who reported an increased number of days (up from 3.2 to 3.8*).

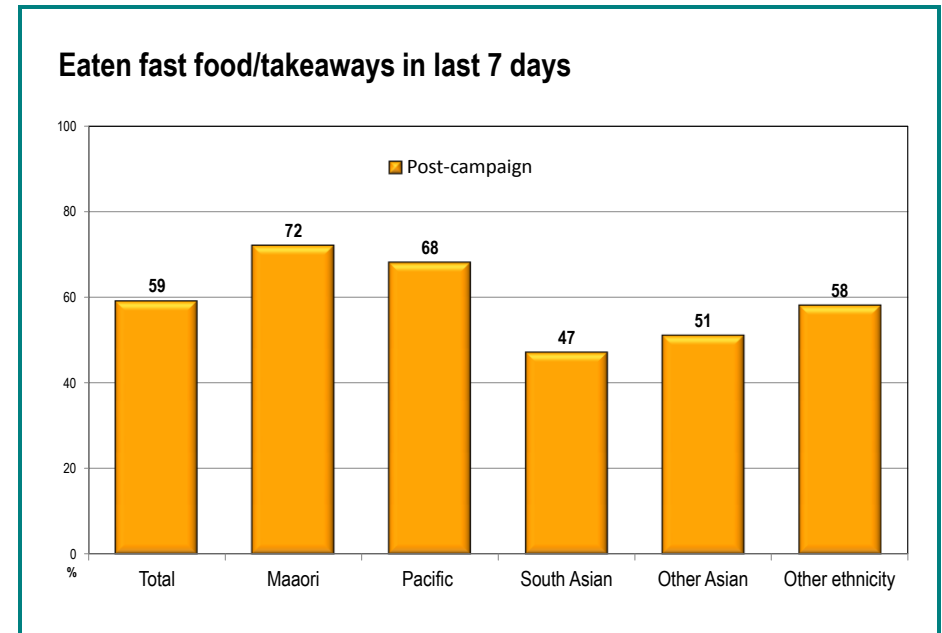
Most people **had something to eat for breakfast** in the previous seven days (93%), which was similar to previously, and they did so on an average of 6.2 days per week (up from 6.1*). Other Asians reported an increased proportion who were eating breakfast (up 7% to 99%*), while Pacific people

who were eating breakfast were now doing so on more days of the week (up from 5.1 to 5.7).

Graph 8: Had something to eat for breakfast on at least one day



Graph 9: Eaten fast food/takeaways in last 7 days



A new question in the current survey asked how many days people had **eaten "fast food or takeaways"** from places like McDonalds, KFC, Burger King, Pizza shops or fish and chip shops". The briefing to the interviewers also instructed them to include Subway and ethnic take-aways if specifically asked about these. Six-in-ten had done so (59%), this level being at 72 percent for Maaori and 68 percent for Pacific people. Among those who were consuming takeaways, the average person did so 1.7 days per week, but this figure was at 2.1 for both Maaori and Pacific people.

Table 14: Other eating behaviours

| PROPORTION DOING THIS IN LAST 7 DAYS | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Drink fizzy/ energy drinks, not including diet or no-sugar versions | 49 | 40▼▼ | 48 | 50↑↑ | 66↑↑ | 52↑↑▼▼ | 42↓ | 32↓↓▼▼ | 42↓ | 26↓↓▼▼ | 45 | 38▼▼ |
| Eat MORE than you needed | 60 | 60 | 64 | 63 | 70↑↑ | 71↑↑ | 52↓↓ | 43↓↓▼ | 48↓↓ | 42↓↓ | 59 | 60 |
| Had something to eat for breakfast | 92 | 93 | 88↓↓ | 92 | 90↓ | 92 | 93 | 95 | 92 | 99↑↑▲▲ | 94 | 93 |
| Eat fast food/takeaways | NA | 59 | NA | 72↑↑ | NA | 68↑↑ | NA | 47↓↓ | NA | 51↓ | NA | 58 |
| MEAN NUMBER OF DAYS IN LAST 7 | | | | | | | | | | | | |
| Drink fizzy/energy drinks, not including diet or zero sugar versions | | | | | | | | | | | | |
| Those who did on at least one day | 3 | 2.6▼▼ | 2.9 | 2.9↑ | 3.1 | 2.6▼▼ | 3 | 2.3▼▼ | 2.9 | 2.2▼ | 3.1 | 2.5▼▼ |
| Based on total sample | 1.5 | 1▼▼ | 1.4 | 1.4↑↑ | 2↑↑ | 1.4↑↑▼▼ | 1.3 | 0.7↓↓▼▼ | 1.2↓ | 0.6↓↓▼▼ | 1.4 | 1▼ |
| Eat MORE than you needed | | | | | | | | | | | | |
| Those who did on at least one day | 3.1 | 3 | 3.2 | 3.8↑↑▲▲ | 3.1 | 2.9 | 2.4↓↓ | 2.3↓↓ | 2.8 | 2.5↓ | 3.3 | 3.1 |
| Based on total sample | 1.9 | 1.9 | 2.1 | 2.4↑↑ | 2.2↑↑ | 2.1 | 1.2↓↓ | 1↓↓▼ | 1.4↓↓ | 1.1↓↓ | 2 | 1.9 |
| Had something to eat for breakfast | | | | | | | | | | | | |
| Those who did on at least one day | 6.1 | 6.2▲▲ | 5.8↓↓ | 5.9↓↓ | 5.1↓↓ | 5.7↓↓▲▲ | 6.2 | 6.3 | 6.3↑ | 6.3 | 6.3↑↑ | 6.4↑↑ |
| Based on total sample | 5.6 | 5.8▲ | 5.2 | 5.4↓↓ | 4.6↓↓ | 5.3↓↓ | 5.8 | 6↑ | 5.8 | 6.2↑↑ | 5.9 | 5.9 |
| Eat fast food/takeaways | | | | | | | | | | | | |
| Those who did on at least one day | NA | 1.7 | NA | 2.1↑↑ | NA | 2.1↑↑ | NA | 1.6 | NA | 1.6 | NA | 1.5↓↓ |
| Based on total sample | NA | 1.0 | NA | 1.5↑↑ | NA | 1.4↑↑ | NA | 0.7↓↓ | NA | 0.8↓ | NA | 0.9↓↓ |

NA = Not asked

Fizzy/energy drinks

Other Changes Since Previous Survey

The *decrease* in the **proportion who drank fizzy/energy drinks** at least once in the last seven days was evident among many groups, including:

- Samoan people (down 13% to 60%*)
- Cook Island Maaori (down 20% to 53%*)
- Tongan people (down 12% to 46%)
- Those who were in the at-risk group (down 8% to 43%*)
- Those who a doctor would describe as overweight (down 6% to 45%)
- Those with a family history of diabetes (down 14% to 41%*)
- Those who had diabetes (down 12% to 19%*)
- Those who were main meal preparers (down 4% to 36%*)
- Those who were household shoppers (down 7% to 36%*)
- Those in the low deprivation level (down 11% to 32%*)
- Those in the medium deprivation level (down 10% to 35%*)
- Those in the high deprivation level (down 4% to 50%)
- Males aged 16 to 24 years (down 8% to 76%)
- Males aged 25 to 44 years (down 14% to 58%*)
- Males aged 45 and over (down 16% to 29%*)
- Those who were responsible for any children (down 8% to 48%*)
- Those who were responsible for three or more children (down 18% to 44%*)
- Those who were interested in healthy eating (down 6% to 46%*)
- Those who were interested in being more active (down 6% to 45%*)

Among those who consumed **fizzy drinks** in the last seven days, the *decrease* in the **mean number of days of consumption** was present among:

- Samoan people (from 3.1 to 2.5)
- Cook Island Maaori (from 3.4 to 2.7)
- 'Other' Pacific people (from 3.5 to 2.4)
- Those in the at-risk group (from 2.9 to 2.7)
- People with diabetes (from 3.3 to 2.3)
- Main meal preparers (from 2.9 to 2.4*)
- Main household shoppers (from 2.8 to 2.4*)
- People living in low deprivation areas (from 2.9 to 2.5) and medium deprivation areas (from 3.2 to 2.5*), plus high deprivation areas (from 3.1 to 2.7*)
- Males aged 25 to 44 years (from 3.2 to 2.5*)
- Males aged 45 years and over (from 3.2 to 2.5)
- Those responsible for any children (from 2.9 to 2.7)
- Those who were interested in eating more healthily (from 3.0 to 2.6*)
- Those who were interested in being more active (from 2.9 to 2.6*)

Differences within current survey

The proportion who had **consumed fizzy drink** in the previous seven days was *higher* among:

- Those interested in eating more healthily (46% vs 40% for total sample*)
- Those interested in being more physically active (45%*)
- People living in areas of high deprivation (50%*)
- Males aged 16 to 24 years (76%*) and 25 to 44 years (58%*)
- Females aged 16 to 24 years (69%*)
- People who were responsible for any children (48%*)

- Samoan people (60%*)
- Cook Island Maaori (53%*)
- Niuean people (73%*)
- 'Other' Pacific people (62%*)
- People who were obese (51%*)

Consumption of fizzy drink was *less* prevalent among:

- Main meal preparers (36%*)
- Household shoppers (36%)
- People living in areas of low deprivation (32%*) and medium deprivation (35%)
- Males aged 45 years or older (29%*)
- Females aged 45 years or older (21%*)
- People with diabetes (19%*)

Among those who **consumed fizzy drinks** in last 7 day, the mean number of days was *higher* for:

- Males aged 16 to 24 years (3.6 vs 2.6*)
- Tongan people (3.3*)
- Females aged 16 to 24 years (2.9)
- People with a family history of diabetes (2.9)

The mean number of days was *lower* among:

- Females aged 45 years or older (2.1*)

Portion size

Other Changes Since Previous Survey

There was an *increase* in the **proportion who ate more than they needed** in the last seven days among:

- Males aged 16 to 24 years (up 20% to 74%*)

There was a *decrease* among:

- Those who a doctor would describe as obese (by 8% to 74%)
- Males aged 25 to 44 years (down 8% to 58%)
- Those responsible for three or more children (down 9% to 62%)

Among those who ate more than they needed to in the last seven days, a *increase* in the **mean number of days** was present among:

- Males aged 16 to 24 years (from 2.8 to 3.7*)

There was an *decrease* in the mean number of days of eating more among:

- Those with a family history of diabetes (from 3.4 to 3.1)
- People who were sedentary (from 4.2 to 3.4*)
- Males 45 years and over (from 3.6 to 2.8*)
- Those who were responsible for three or more children (from 3.4 to 2.7*)
- Those who were interested in eating more healthily (from 3.2 to 3.0)

Differences within current survey

The proportion who ate more than they needed on any of the last seven days was *higher* among:

- Those interested in eating more healthily (69% vs 60% for total sample*)

- Those interested in being more active (66%*)
- People from areas of high deprivation (65%)
- Males aged 16 to 24 years (74%*)
- Females aged 16 to 24 years (70%*) and 25 to 44 years (68%*)
- People who were responsible for any children (64%)
- Samoan people (76%*)
- Tongan people (76%*)
- People in the at-risk group (64%)
- People who were obese (72%*)

It was *lower* among:

- People in areas of medium deprivation (54%*)
- Males aged 45 or older (52%*)
- People who were sedentary (53%)

Among those who **ate more than they needed**, the mean number of days was *higher* among:

- Males aged 16 to 24 years (3.7 vs 3.0*)
- Niuean people (4.2*)
- People who were obese (3.5*)
- People who were sedentary (3.4)

It was *lower* among:

- People who were responsible for three or more children (2.7)

Eating breakfast

Other Changes Since Previous Survey

There has been an *increase* in the **proportion who had something to eat for breakfast** in the last seven days among the following:

- Those in low deprivation areas (up 3% to 97%*)
- Males aged 45 and over (up 4% to 97%)

There was a *decrease* in the proportion who had something to eat for breakfast among:

- Those who a doctor would describe as obese (down 5% to 89%)
- Females aged 25 to 44 years (down 7% to 88%*)
- Those who were responsible for any children (down 3% to 90%*)

Among those who ate breakfast in the last seven days, an *increase* in the **mean number of days** was present among:

- Samoan people (from 4.9 to 5.4 breakfasts per 7 days*)
- Tongan people (from 5.3 to 5.9*)
- Those who a doctor would say were overweight (from 5.9 to 6.0)
- People who were sedentary (from 5.5 to 5.9)
- Main meal preparers (from 6.2 to 6.4 *)
- Main household shoppers (from 6.2 to 6.3*)
- People from high deprivation areas (from 5.8 to 6.0)
- Males 45 years and over (from 6.2 to 6.7*)

There was a *decrease* among:

- Males aged 16 to 24 years (from 5.6 to 5.1)
- Females aged 25 to 44 years (from 6.2 to 6.0)

Differences within current survey

The proportion **eating breakfast** on any of the last seven days was *higher* among:

- People from areas of low deprivation (97% vs 93% for total sample*)
- Males aged 45 years or older (97%*)
- Females aged 45 years or older (97%*)
- People who were overweight (95%)

It was *lower* among:

- People from areas of high deprivation (89%*)
- Males aged 16 to 24 years (86%*)
- Females aged 16 to 24 years (88%*) and 25 to 44 years (88%*)
- People who were responsible for any children (90%*) and three or more children (88%*)
- Tongan people (87%)
- People who were sedentary (89%)

Among those who were **eating breakfast**, the mean number of days was *higher* among:

- Main meal preparers (6.4 vs 6.2*)
- Household shoppers (6.3)
- People in areas of low deprivation (6.5*)
- Males aged 45 years and older (6.7*)

- Females aged 45 or older (6.6*)
- People with diabetes (6.6*)
- People who were overweight (6.5*)

It was *lower* among:

- People in areas of high deprivation (6.0*)
- Males aged 16 to 24 years (5.1*) and 25 to 44 years (6.0*)
- Females aged 16 to 24 years (5.2*) and 25 to 44 years (6.0*)
- Those responsible for any children (6.0*) or three or more (5.7*)
- Samoan people (5.4*)
- Cook Island Maaori (5.7*)
- Tongan people (5.9)
- Niuean people (5.7)
- 'Other' Pacific people (5.2*)
- People in the at-risk group (6.0*)
- People who were obese (5.8*)
- People with a family history of diabetes (5.9*)
- People who were sedentary (5.9*)
- Those interested in eating more healthily (6.0*)
- Those interested in being more active (6.1*)

Eating takeaways

Differences within current survey

The proportion who had **any fast food or takeaways** in the last seven days was *higher* among:

- Those interested in being more active (65% vs 59% for total sample*)
- Those interested in eating more healthily (63%)
- People from areas of high deprivation (68%*)
- Males aged 16 to 24 years (82%*) and 25 to 44 years (71%*)
- Females aged 16 to 24 years (78%*) and 25 to 44 years (68%*)
- People who were responsible for any children (66%*) and three or more children (70%*)
- Samoan people (72%*)
- Cook Island Maaori (78%*)
- Niuean people (74%)
- People with a family history of diabetes (65%*)

It was *lower* among:

- People in areas of low deprivation (50%*)
- Males aged 45 years or older (43%*)
- Females aged 45 years or older (47%*)
- People with diabetes (44%*)

Among those who were **eating takeaways/fast food**, the mean number of days was *higher* among:

- People in areas of high deprivation (1.9 vs 1.7*)
- Males aged 16 to 24 years (2.5 *)
- Females aged 16 to 24 years (2.3*)

- Samoan people (2.2*)
- Cook Island Maaori (2.2*)
- Tongan people (2.1*)
- Niuean people (2.3*)
- People in the at-risk group (1.8)
- People who were obese (2.0*)
- People with a family history of diabetes (1.9)
- People who were sedentary (2.1*)

The mean number of days was *lower* among:

- People in areas of low deprivation (1.5*)
- People in areas of medium deprivation (1.5*)
- Males aged 45 or older (1.4*)
- Females ages 45 or older (1.5)
- People with diabetes (1.4)
- People who were overweight (1.5*)

DISCUSSION

Seasonal factors again likely to be influential

The seasonal variation in the timing of the surveys again makes it difficult to know to what extent the reduced proportion consuming fizzy and energy drinks was due to this possibly being a more prevalent activity in hotter weather. However, this was one of the most promoted messages in the LBD social marketing campaign, featuring in both the first and second campaigns. There was also media coverage of the LBD initiated move by McDonalds to swap one of their high sugar drinks for a zero sugar option.

This decrease in reported consumption of fizzy drinks is particularly relevant given Counties Manukau children had the highest reported rate of frequent consumption of fizzy drinks in the New Zealand Health Survey.

Lack of impact on portion size

The lack of progress in addressing portion size is again reflected in these findings. However, given the lack of increase in awareness in the earlier question, it would have been surprising to see any other result in terms of behaviour change. It takes a lot more to achieve behaviour change than increased awareness.

Some possibly positive indicators around breakfast behaviours

The increased proportion of Other Asian peoples eating any breakfasts and the increased number of days that Pacific people were eating breakfasts were changes in the right direction. However, it is also possible that people might feel more inclined to eat breakfast in the winter.

4.4.2 LOW FAT COOKING BEHAVIOURS

Almost three-fifths (58%) of main meal preparers reported that they 'never' **cook meat or vegetables in butter or lard**²², followed by one-third who said 'sometimes' and one-in-ten (9%) who said they 'usually' do. These results were similar to the previous survey. South Asians did report a decrease in 'usually' cooking in this way (down 11% to 12%*). The opposite trend was

apparent for Other Asians who reported a reduction in the 'never' category (down 13% to 49%).

There was an increase in the proportion of meal preparers who said they 'usually' **cook meat (including corned beef) with the fat removed or drained off** (up 10% to 61%) – see graph which follows. This increase was also evident for South Asians (up 18% to 60%*) and Other ethnic groupings (up 14% to 69%). The opposite trend was evident for Pacific meal preparers, where there was a six percent increase (to 17%) in those who said they 'never' cooked in this way.

There was an increase in the proportion of meal preparers who said they 'usually' **cook chicken with the skin on** (up 5% to 36%). This increase was evident for Other ethnic groupings (up 7% to 33%*) and Maaori (up 9% to 60%). Other Asians had increased mention of 'sometimes' cooking in this manner (up 14% to 50%) and a non-significant 10% decrease in 'usually' doing so.

²² If the respondent asked, they were told that this included ghee.

Graph 10: Cook meat with fat removed or drained off

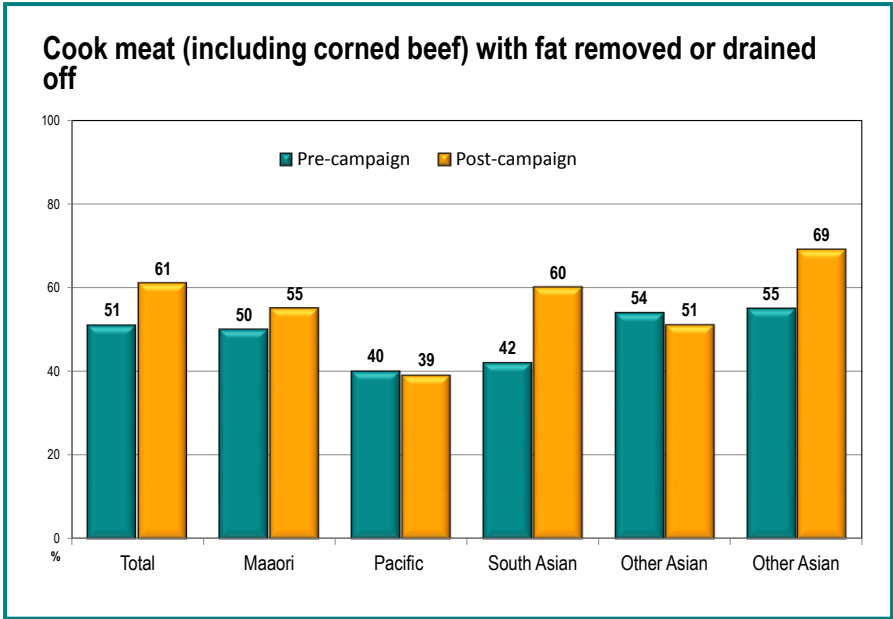


Table 15: Frequency cook food in various ways

| FREQUENCY COOK FOOD IN VARIOUS WAYS | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|--------------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1,550 | 1,401 | 384 | 388 | 377 | 320 | 157 | 211 | 163 | 112 | 701 | 579 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Cook food in butter or lard | | | | | | | | | | | | |
| Usually | 9 | 9 | 12 | 13↑ | 19↑↑ | 15↑↑ | 23↑↑ | 12▼▼ | 10 | 12 | 5↓↓ | 7 |
| Sometimes | 30 | 33 | 43↑↑ | 37 | 49↑↑ | 49↑↑ | 25 | 30 | 27 | 38 | 24↓↓ | 27↓ |
| Never | 61 | 58 | 45↓↓ | 50↓↓ | 32↓↓ | 35↓↓ | 51↓ | 58 | 62 | 49▼ | 71↑↑ | 66↑↑ |
| Cook meat (including corned beef) with fat removed or drained off | | | | | | | | | | | | |
| Usually | 58 | 61 | 52↓ | 55 | 41↓↓ | 39↓↓ | 42↓↓ | 60▲▲ | 55 | 51 | 66↑↑ | 69↑↑ |
| Sometimes | 26 | 24 | 32↑ | 24▼ | 46↑↑ | 43↑↑ | 24 | 14↓↓▼ | 23 | 35↑↑▲ | 20↓↓ | 17↓↓ |
| Never | 15 | 14 | 16 | 20↑↑ | 12 | 17▲ | 17 | 14 | 20 | 11▼ | 14 | 12 |
| Do not cook meat - vegetarian | 2 | 2 | 0↓ | 1 | 2 | 0↓↓▼ | 17↑↑ | 12↑↑ | 1 | 3 | 0↓ | 2▲ |
| Cook chicken with the skin on | | | | | | | | | | | | |
| Usually | 35 | 36 | 53↑↑ | 60↑↑▲ | 45↑↑ | 45↑↑ | 7↓↓ | 11↓↓ | 36 | 25↓ | 31 | 33 |
| Sometimes | 33 | 36 | 28 | 23↓↓ | 34 | 33 | 17↓↓ | 11↓↓ | 37 | 50↑↑▲ | 36 | 40 |
| Never | 28 | 25 | 17↓↓ | 14↓↓ | 17↓↓ | 20 | 62↑↑ | 68↑↑ | 26 | 21 | 29 | 25 |
| Do not cook meat – vegetarian | 2 | 2 | 0↓ | 1 | 2 | 0↓▼ | 17↑↑ | 12↑↑ | 1 | 3 | 0↓ | 2▲ |
| Don't cook chicken | 3 | 2▼ | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 1 | 4 | 2 |

Cook meat or vegetables in butter or lard

Other Changes Since Previous Survey

There was a *decrease* in those saying that they 'usually' use butter or lard in their cooking among:

- People with diabetes (down 6% to 3%)

- People from low deprivation areas (down 4% to 3%)

There was an *increase* in those saying that they 'sometimes' cook with butter or lard among:

- Females aged 45 years and over (up 7% to 32%)

- Those in medium deprivation areas (up 12% to 40%*), who also had a *decrease* in saying that they '**never**' cook in this manner (down 11% to 54%*)
- Females aged 16 to 24 years (up 18% to 56%), who also had a *decrease* in saying 'never' (down 19% to 29%)

For Tongan people there was an *increase* in the proportion saying they '**usually**' with cook with butter or lard (up 14% to 23%).

Differences Within Current Survey

Those who 'usually' **cook their meat or vegetables in butter or lard** were *more* prevalent among:

- People from high deprivation areas (16% vs 9% for all persons answering)

Those who 'sometimes' do were *more* prevalent among:

- Females aged 16 to 24 years (56% vs 33% for all persons answering)
- Males aged 25 to 44 years (43%)
- People from medium deprivation areas (40%)

Those who 'never' do were *more* prevalent among:

- People from low deprivation areas (75% vs 58% for all persons answering)

Cook meat (including corned beef) with the fat removed or drained off

Other Changes Since Previous Survey

There was an *increase* in the proportion saying they '**never**' cook meat with the fat removed or drained off among:

- Samoan people (up 9% to 15%)
- People with a family history of diabetes (up 6% to 16%)

For males aged 45 years and over, there was an *increase* in those who said they 'usually' cook with fat drained or removed (up 12% to 59%).

For those who were responsible for three or more children there was a *decrease* in the proportion who said they 'usually' do (down 12% to 47%).

Differences Within Current Survey

Those who 'never' **cook meat with the fat removed or drained** were more prevalent among:

- Males aged 24 to 44 years (27% vs 14% for all persons answering)
- Sedentary persons (21%)

Those who 'sometimes' cook meat with the fat removed or drained were more prevalent among those with responsibility for three or more children (37% vs 24% for all persons answering).

Cook chicken with the skin on

Other Changes Since Previous Survey

There was an *increase* in the proportion who said they '**never**' cook chicken with the skin on, among:

- People with a family history of diabetes (up 8% to 31%)
- Those who were responsible for three or more children (up 8% to 27%)

Other changes were:

- Among males aged 45 years and over there was an *increase* in the proportion saying they 'usually' do (up 12% to 48%)
- Among males aged 25-44 years there was a *decrease* in the proportion saying they 'usually' do (down 11% to 30%)

Differences Within Current Survey

Those who '**usually**' cook chicken with the skin on were more likely to be in the following groups:

- Males aged 16 to 24 years (63% vs 36% for all persons answering)
- Obese persons (50%)
- Males aged 45 years and over (48%)

Those who 'never' cooked chicken with the skin on were more likely to be from one of the 'Other' Pacific nations (43% vs 26% for all persons answering)

DISCUSSION

Mixed results

The marked increase in removing fat while cooking is obviously a positive finding, especially as it is not likely to be a result of seasonal variations. The other positive finding was the reduction in cooking in butter or lard by South Asian people. However, these findings were somewhat countered by the worsening situation in terms of people 'usually' cooking chicken with the skin on.

Still an opportunity to address Pacific people's and Maaori cooking patterns

The benchmark survey report noted that while the messages about cooking in ways that reduce the fat intake had gained some acceptance, there was still room for improvement, especially in terms of removing skin from chicken. It also noted that both Pacific people and Maaori were relatively high for cooking patterns that were likely to contribute to diabetes. This situation has not changed, so it is still appropriate to conclude that Pacific people and Maaori should be encouraged and supported to change these patterns.

4.4.3 SUPPORT TO EAT HEALTHILY

The ability of people to successfully adopt healthy eating patterns is likely to be influenced by the support they receive from people in their immediate environment. Therefore respondents were read a list and asked: "Which of these people encourage or do things to make it easier for you to eat healthily?" Some of the options only applied to some respondents; for example if, when asked about support from their employers, they said they were not employed, they have been excluded from the base of people for whom the results are reported. In such cases, there is a second line of data included which shows the percentages based on the total sample. Taking 'people at your church or place of worship' as an example, there were over half (55%) of those who did regularly attend church who reported feeling supported by others who attended. However because only a limited proportion of the total sample attended church regularly, when based on the total sample the figure was only one-fifth (21%).

As can be seen from the table which follows, there was increased support reported from other adults in the household (up 3% to 73%), wider family/whaanau and close friends (up 5% to 59%*) and doctors/medical centre staff (up 4% to 60%). There was a three percent decrease in support from employers, when the data was based on the total sample. However there was not a significant decrease in employer support based on those who were employed, which suggests the total sample change was due to a reduction in the proportion employed.

For this reason any changes reported for total sample on any of the measures in this table should be interpreted with caution. However, it is still useful to report total sample levels, as it allows for comparison with the other measures to see which sources offer the most support.

Among Maaori who had used a marae in the region, 53 percent (25% of all Maaori) said they had received support from people at the marae. No

comparison is made with the previous survey because of the different questions.

The increased total sample support from other adults in the household was also present for South Asians (up 6% to 85%). The increased support from family/whaanau and close friends was present among Maaori (up 9% to 59%*) and Pacific people (up 5% to 72%). Pacific people (up 7% to 84%), South Asians (up 7% to 76%) and Other Asians (up 9% to 61%) all reported increased support from their doctors or other staff at their health centre. There was increased mention of support from children in the household by South Asians (up 12% to 66%*), while Maaori reported increased support from work colleagues (up 10% to 50%*).

Table 16: Sources of support to eat healthily

| SOURCES OF SUPPORT TO EAT HEALTHILY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|----------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Other adults in your household | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 70 | 73▲ | 62↓↓ | 63↓↓ | 75↑ | 77↑ | 79↑↑ | 85↑↑▲ | 73 | 76 | 69 | 71 |
| Children in your household* | 1,442 | 1,207 | 365 | 312 | 521 | 412 | 191 | 258 | 168 | 97 | 416 | 320 |
| Yes | 54 | 55 | 53 | 51 | 65↑↑ | 65↑↑ | 54 | 66↑↑▲▲ | 57 | 50 | 49 | 48↓ |
| Children in your household (Total sample) | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 29 | 27 | 34↑ | 26▼▼ | 48↑↑ | 45 | 34 | 36↑↑ | 31 | 22▼ | 22↓↓ | 20↓↓ |
| Your wider family/whaanau and close friends | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 54 | 59▲▲ | 50 | 59▲▲ | 67↑↑ | 72↑↑▲ | 66↑ | 69↑↑ | 69↑↑ | 74↑↑ | 49↓↓ | 52↓↓ |
| Your employer** | 1,931 | 1,610 | 477 | 434 | 576 | 407 | 247 | 334 | 256 | 151 | 681 | 535 |
| Yes | 34 | 33 | 34 | 36 | 58↑↑ | 55↑↑ | 40↑ | 46↑↑ | 34 | 37 | 24↓ | 24↓↓ |
| Your employer (Total sample) | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 25 | 22▼ | 27 | 26↑ | 46↑↑ | 36↑↑▼▼ | 34↑↑ | 36↑↑ | 28 | 26 | 17↓↓ | 16↓↓ |
| People you work with*** | 1,999 | 1,663 | 487 | 445 | 592 | 412 | 254 | 349 | 259 | 157 | 718 | 558 |
| Yes | 41 | 43 | 40 | 50↑↑▲▲ | 64↑↑ | 66↑↑ | 53↑↑ | 61↑↑ | 47 | 49 | 30↓↓ | 32↓↓ |
| People you work with (Total sample) | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 32 | 30 | 32 | 37↑↑ | 53↑↑ | 44↑↑▼▼ | 45↑↑ | 49↑↑ | 40↑↑ | 36 | 22↓↓ | 22↓↓ |
| | 1,029 | 1,011 | 134 | 156 | 475 | 402 | 164 | 241 | 131 | 98 | 238 | 235 |

| SOURCES OF SUPPORT TO EAT HEALTHILY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| People at your church or place of worship**** | | | | | | | | | | | | |
| Yes | 54 | 55 | 60 | 55 | 69↑↑ | 66↑↑ | 57 | 60 | 50 | 55 | 39↓↓ | 43↓↓ |
| People at your church or place of worship (Total sample) | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 20 | 21 | 13↓↓ | 15↓↓ | 51↑↑ | 50↑↑ | 31↑↑ | 33↑↑ | 23 | 26 | 10↓↓ | 11↓↓ |
| People at your marae in Counties Manukau***** | | | | 235 | | | | | | | | |
| Yes | | | | 53 | | | | | | | | |
| People at your marae in Counties Manukau (Total sample) | | | | 606 | | | | | | | | |
| Yes | | | | 25 | | | | | | | | |
| Doctor/ medical centre staff | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 56 | 60▲▲ | 60↑ | 65↑ | 77↑↑ | 84↑↑▲▲ | 69↑↑ | 76↑↑▲ | 52 | 61▲ | 47↓↓ | 50↓↓ |

* This is only asked of those who are responsible for their children

** The base excludes people who were not in employment or who felt the question was not applicable (presumably mostly because they were employers)

*** This base excludes people who were not in employment

**** This is only asked of those who regularly attended church or a place of worship

***** This is only asked of Maaori who have a marae in the region which they attend

Other adults in household

Other Changes Since Previous Survey

Increased support from other adults in the household was reported by:

- People from low deprivation areas (up 6% to 77%*)
- Males aged 16 to 24 years (up 10% to 88%*)
- Those who were interested in being more active (up 3% to 76%)

Differences Within Current Survey

Those who said that other adults in the same household encourage them or make it easier for them to eat healthily were *more* prevalent among:

- People interested in being more physically active (76% vs 73%*)
- People in areas of low deprivation (77%)
- Males aged 16 to 24 years (88%*)
- Males aged 25 to 44 years (80%*)
- Males aged 45 years or older (*78%)
- Females aged 16 to 24 years (82%*)
- Samoan people (83%*)
- Tongan people (83%*)
- 'Other' Pacific people (85%)
- People with diabetes (80%)

Support from other adults in the household was *less* prevalent among:

- Meal preparers (64%*)
- Household shoppers (67%*)
- Females aged 45 years or older (57%*)

- Cook Island Maaori (63%)
- People who were sedentary (58%*)

Children in household

Other Changes Since Previous Survey

Those reporting *increased* support from children in the household were:

- People with diabetes (up 18% to 78%)
- Males aged 45 years and over (up 17% to 63%*)

Those reporting *decreased* support from children in the household were:

- Those with a family history of diabetes (down 10% to 49%*)

Differences Within Current Survey

Support from children was *more* likely among:

- Females aged 25 to 44 years (62% vs 55%*)
- Samoan people (70%*)
- Tongan people (67%)
- People with diabetes (78%*)

It was *less* likely among:

- Males aged 16 to 24 years (42%)
- Males aged 25 to 44 years (45%*)

Wider family/whaanau and close friends

Other Changes Since Previous Survey

Those reporting *increased* support from wider family/whaanau and close friends were:

- Samoan people (up 10% to 64%)
- 'Other' Pacific people (up 21% to 81%)
- Those in the at-risk group (up 4% to 57%)
- Those who a doctor would describe as overweight (up 7% to 58%*)
- People with diabetes (up 12% to 71%)
- Main meal preparers (up 5% to 58%*)
- People from low deprivation areas (up 5% to 57%)
- Main household shoppers (up 6% to 60%*)
- Males aged 25 to 44 years (up 16% to 66%*)
- Those responsible for any children (up 6% to 63%*)
- Those who were interested in eating more healthily (up 4% to 65%)
- Those who were interested in being more active (up 3% to 60%)

Differences Within Current Survey

Those getting support from their wider family/whaanau and close friends were *more* prevalent among:

- People interested in eating more healthily (65% vs 59%*)
- People interested in being more physically active (63%*)
- Males aged 25 to 44 years(66%*)
- Females aged 16 to 24 years (71%*)
- Females aged 25 to 44 years (63%)

- People who were responsible for any children (63%*) or three or more children (70%*)
- Samoan people (74%*)
- Cook Island Maaori (68%)
- Tongan people (68%)
- 'Other' Pacific people (81%*)
- People who were obese (62%)
- People with diabetes (71%*)

It was *less* likely among:

- Males aged 45 years or older (45%*)

Employer

Other Changes Since Previous Survey

There was an *increase* in employer support recorded by:

- Those in medium deprivation areas (up 7% to 35%)

There was a *decrease* in employer support recorded by:

- Household shoppers (down 4% to 33%)

Differences Within Current Survey

Those saying it was their **employer** were *more* prevalent among:

- People who were interested in eating more healthily (38% vs 33%*)
- People who were interested in being more active (38%)
- People in areas of high deprivation (39%)

- People who were responsible for any children (38%) or three or more children (43%*)
- Samoan people (60%*)
- Cook Island Maaori (45%)
- Tongan people (53%*)
- 'Other' Pacific people (66%*)
- People with a family history of diabetes (41%*)

It was *less* likely among:

- People in areas of low deprivation (25%*)
- Males aged 45 and older (25%*)

People work with

Other Changes Since Previous Survey

There was *increased* support from fellow employees among the following groups:

- Main meal preparers (up 5% to 46%)
- People in medium deprivation areas (up 8% to 44%)
- Females aged 25 to 44 years (up 9% to 54%*)
- Those responsible for three or more children (up 10% to 58%)
- Those who were interested in eating more healthily (up 5% to 49%)
- Those who were interested in being more active (up 5% to 48%)

There was *decreased* support among:

Differences Within Current Survey

Those saying it was the people they worked with who were supportive of their healthy eating were *more* prevalent among:

- People who were interested in eating more healthily (49% vs 43%*)
- People who were interested in being more physically active (48%*)
- People from areas of high deprivation (51%*)
- Females aged 25 to 44 years (54%*)
- People who were responsible for three or more children (58%*)
- Samoan people (71%*)
- Cook Island Maaori (57%*)
- Tongan people (63%*)
- 'Other' Pacific people (76%*)
- People with diabetes (60%*)
- People who were obese (50%*)

It was *less* likely among:

- People from low deprivation areas (32%*)
- Males aged 45 years or older (30%*)

Church or place of worship

Other Changes Since Previous Survey

There was *increased* support from the church or place of worship among:

- Main meal preparers (up 6% to 54%)
- Females aged 25 to 44 years (up 12% to 59%*)
- Those interested in eating more healthily (up 5% to 59%)

Differences Within Current Survey

Those who said it was the people at their **church or place of worship** were *more* prevalent among:

- People who were interested in eating more healthily (59% vs 55%)
- People who were interested in being more physically active (58%)
- People from areas of high deprivation (61%*)
- Females aged 16 to 24 years (66%)
- People who were responsible for any children (59%) or three or more children (64%*)
- Samoan people (69%*)

They were *less* prevalent among:

- People from areas of low deprivation (40%*) or medium deprivation (46%)
- Males aged 45 years or older (41%*)
- People who were sedentary (43%)
- People who were overweight (45%)

Doctors/medical centre staff

Other Changes Since Previous Survey

Increased support from primary care was reported by:

- Samoan people (up 8% to 85%)
- Cook Island Maaori (up 11% to 80%)
- People who were sedentary (up 11% to 63%)
- Main meal preparers (up 6% to 58%*)
- Household shoppers (up 4% to 58%)
- People in low deprivation areas (up 7% to 54%*)

- People in high deprivation areas (up 5% to 67%)
- Males aged 16 to 24 years (up 12% to 67%)
- Females aged 25 to 44 years (up 8% to 58%*)
- Those who were responsible for any children (up 8% to 66%*) and three or more children (up 13% to 75%*)
- Those interested in eating more healthily (up 5% to 67%)
- Those interested in being more active (up 5% to 66%*)

Differences Within Current Survey

Those saying it was their **doctors/medical centre staff** who were *more* prevalent among:

- People who were interested in eating more healthily (67% vs 60%*)
- People who were interested in being more physically active (66%*)
- People from areas of high deprivation (67%*)
- Males aged 16 to 24 years (69%)
- People who were responsible for any children (66%*) or three or more children (75%*)
- Samoan people (85%*)
- Cook Island Maaori (80%*)
- Tongan people (84%*)
- 'Other' Pacific people (82%*)
- People who were obese (72%*)
- People with diabetes (86%*)

They were *less* prevalent among:

- People from areas of low deprivation (54%*) or high deprivation (55%)

DISCUSSION

Some evidence of effects of campaign emphasis on supporting others

The campaign has included a focus on involving others in the change process and not just expecting individuals to change by themselves.

The levels of support reported in the benchmark survey were already quite high for many of the sources, particularly the immediate and wider family networks, which is where most of the food is consumed. Therefore it is even more noteworthy that significant improvements have been achieved in these immediate and wider family networks, plus primary care. The improved support from primary care is reinforced by other findings, as reported in the later section on primary care.

Children do have influence

As was noted in the benchmark report, it is interesting to note that more than half of those with children felt supported by the children, with this level being particularly high among Pacific people and South Asians (both two-thirds). This finding tends to support anecdotal reports of children bringing home health messages from school and using these to advise their parents about what behaviours they should adopt.

Not able to examine support in detail

The question asked did not ascertain the extent of support, so it could be that some of those who were already receiving support in the benchmark survey are now receiving greater levels of support that cannot be identified. (The constraints on interview duration did not allow for more extensive questioning.)

Clear ethnic differences

There were some clear ethnic patterns, with Pacific and South Asian peoples being more likely than others to feel they were receiving support from most sources, whereas people from Other ethnic groupings were less likely. This may in part reflect ethnic differences in being open to receiving support, as much as actual differences in the level of support that has been provided.

4.4.4 CHILDREN'S EATING

SUPPORT GIVEN TO CHILDREN TO EAT HEALTHILY

Those who were responsible for children in their household aged under 16 years were asked: "How much support do you give to the children in your

household to eat healthily?" They were read the answer options listed in the table which follows.

There was a decrease in the proportion who said they gave 'a lot' of support to their children to eat healthily (down 6% to 71%*). This decrease was also evident for Pacific people (down 10% to 67%*).

Table 17: Support given to children to eat healthily

| AMOUNT OF SUPPORT GIVEN TO CHILDREN TO EAT HEALTHILY | THOSE RESPONSIBLE FOR CHILDREN | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|------------------------------------------------------|--------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1,442 | 1,207 | 365 | 312 | 521 | 412 | 191 | 258 | 168 | 97 | 416 | 320 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| A lot | 77 | 71▼▼ | 72 | 67 | 77 | 67▼▼ | 83 | 84↑↑ | 69↓ | 71 | 77 | 72 |
| Some | 17 | 22▲▲ | 18 | 23 | 14 | 23▲▲ | 11↓ | 11↓↓ | 20 | 23 | 20 | 23 |
| A little | 4 | 4 | 7↑↑ | 5 | 7↑↑ | 7↑↑ | 4 | 2 | 10↑↑ | 1▼ | 1↓↓ | 2 |
| None | 2 | 3▲ | 2 | 4 | 2 | 3 | 1 | 2 | 1 | 5 | 1 | 2 |
| Don't know | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |

Other Changes Since Previous Survey

The *decrease* in providing 'a lot' of support was present among:

- Tongan people (down 14% to 70%)
- Main meal preparers (down 7% to 77%*)
- Main household shoppers (down 5% to 78%)
- People from high deprivation areas (down 9% to 65%*)
- Females aged 24 to 44 years (down 5% to 78%)
- Those responsible for any children (down 4% to 71%)

- Those responsible for three or more children (down 13% to 64%*)
- Those who were interested in eating more healthily (down 5% to 68%)

Differences Within Current Survey

Those who gave their children 'a lot' of support were *more* prevalent among:

- Females aged 45 and over (85% vs 71% for those responsible for children)
- Household shoppers (78%)

- Meal preparers (77%)
- Females aged 25 to 44 years (78%)
- Those from low deprivation areas (81%)

Giving 'a lot' of support was less prevalent among 16 to 24 year olds responsible for children, for both males (30%) and females (56%), which may well reflect them having infants, for whom they may feel the concept of giving support for healthy eating is not appropriate.

PERCEIVED HEALTHINESS OF FOOD CHILDREN EAT

Those responsible for children were asked: "And which of the following best describes how you feel about the overall type and amount of food they eat?" They were read the answer options shown in the table which follows.

One-in-five felt it could be 'a lot' healthier. The most common response was from two-fifths (41%) who felt it could be 'a bit healthier', whilst another two-fifths (39%) felt it was 'healthy enough'. These levels were similar to the previous survey.

Other Asians were now more likely to feel their children's food could be 'a bit healthier' (up 19% to 50%*), with a corresponding decrease for feeling it could be 'a lot healthier' (down 10% to 11%) or that it is 'healthy enough' (down a non-significant 9%). Maaori parents were now less likely to feel their children's diet was 'healthy enough' (down 9% to 26%).

Table 18: How felt about children's food

| HOW FELT ABOUT CHILDREN'S FOOD | THOSE RESPONSIBLE FOR CHILDREN | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------------|--------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1,442 | 1,207 | 365 | 312 | 521 | 412 | 191 | 258 | 168 | 97 | 416 | 320 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| It could be a lot healthier | 19 | 20 | 22 | 27↑↑ | 33↑↑ | 32↑↑ | 22 | 26↑ | 21 | 11↓▼ | 10↓↓ | 10↓↓ |
| It could be a bit healthier | 43 | 41 | 42 | 46 | 35↓↓ | 30↓↓ | 30↓↓ | 31↓↓ | 31↓↓ | 50▲▲ | 52↑↑ | 49↑ |
| It is healthy enough | 37 | 39 | 35 | 26↓↓▼ | 32↓ | 38 | 46↑ | 43 | 48↑↑ | 39 | 37 | 41 |
| Don't know/ refused/ not relevant | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 |

Other Changes Since Previous Survey

Those reporting an *increased* perception that their children's eating **could be 'a lot healthier'** were:

- People from high deprivation areas (up 8% to 31%*)
- Females aged 16 to 24 years (up 15% to 29%*)
- Those who were interested in eating more healthily (up 3% to 24%)

Other changes included:

- For Males aged 16 to 24 years there was a *decrease* in those who felt their children's meals were healthy enough (down 17% to 33%)
- For females aged 25 to 44 years there was a *decrease* in those who said that their children's eating could be 'a bit' healthier (down 9% to 37%*), while there was an *increase* in those who felt their eating was healthy enough (up 7 percentage points to 43%)

- Among those in medium deprivation areas (down 6% to 12%) there was a *decrease* in the perception that their children's eating could be 'a lot' healthier.

Differences Within Current Survey

Those who thought it **could be 'a lot' healthier** were *more* prevalent among:

- Those with diabetes (41% vs 20% of those who answered)
- People from high deprivation areas (31%)
- Obese persons (28%)

LINK WITH SUPPORT GIVEN TO CHILDREN

As shown in the table which follows, those who thought their children's eating was healthy enough were above average in feeling they gave their children 'a

lot' of support to eat healthily (83% compared with 71% for the total sample). Those who thought their children's eating could be 'a bit' healthier were below average for giving 'a lot' of support (64%), as were those who felt their children's eating could be 'a lot' healthier (62%).

Table 19: Support given to children to eat healthily compared with felt about children's food

| SUPPORT GIVEN TO CHILDREN TO EAT HEALTHILY BY HOW FELT ABOUT CHILDREN'S FOOD | HOW FELT ABOUT CHILDREN'S FOOD | | | |
|------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|----------------------|
| | Those responsible for children | It could be a lot healthier | It could be a bit healthier | It is healthy enough |
| | 1,207 | 258 | 480 | 463 |
| | % | % | % | % |
| A lot | 71 | 62↓↓ | 64↓↓ | 83↑↑ |
| Some | 22 | 28 | 31↑↑ | 10↓↓ |
| A little | 4 | 7↑ | 3 | 3 |
| None | 3 | 3 | 2 | 3 |
| Don't know | 0 | 0 | 0 | 0 |
| Refused | 0 | 0 | 0 | 0 |

DISCUSSION

Decrease in parents giving 'a lot' of support

The decrease in parents saying they were giving 'a lot' of support to their children to eat healthily may again be influenced by economic factors; not being able to afford to give them the food they feel they need. This change could also possibly reflect an increased understanding about their children's eating needs, resulting in less confidence that they are in fact giving their children 'a lot' of support.

Parents already feel they are giving a lot of support to their children's eating

High proportions of caregivers reported providing 'a lot' of support to their children to eat healthily, which appears to be a very positive result. However, if there are questions that are likely to result in some people giving socially desirable responses, this one on support given to children is a likely candidate, as parents probably want to be seen to be doing what's considered best for their children.

Parents will need convincing that their children's diets need to be healthier

While over half felt their children's eating could be healthier, many of these people thought it only needed to be 'a bit' healthier. Therefore efforts to encourage parents to get their children to eat more healthily may face some resistance because of the perceived lack of need for change. However, these results may also reflect some parents not being aware of how healthy or unhealthy their children's eating actually is and, if this perception can be changed, there may be more desire to improve their children's diets.

More acknowledgement of need for change among some key groups

It should be noted that those who thought their children's eating could be 'a lot' healthier were more prevalent among three key groups, who should therefore be more receptive to social marketing initiatives: obese persons, Pacific persons and those from high deprivation areas.

Difficulties in interpreting change over time

It may be challenging interpreting change in this measure over time because, if parents become more aware of what is unhealthy eating, this will move the results in the direction of parents saying that their children's food could be 'a lot healthier'. However, if the parents perceive that the children have changed to eating healthier food, this will move the result in the opposite direction. It could well be that both changes occur at the same time.

4.4.5 INTEREST AND DIFFICULTY IN EATING MORE HEALTHILY

INTEREST IN EATING MORE HEALTHILY

Just under two-thirds (63 %) were interested in eating more healthily than they currently do, a level that was unchanged since the previous survey. However there were increases for both Maaori (up 7% to 72%) and Pacific people (up 8% to 85%*).

Graph 11: Interest in eating more healthily

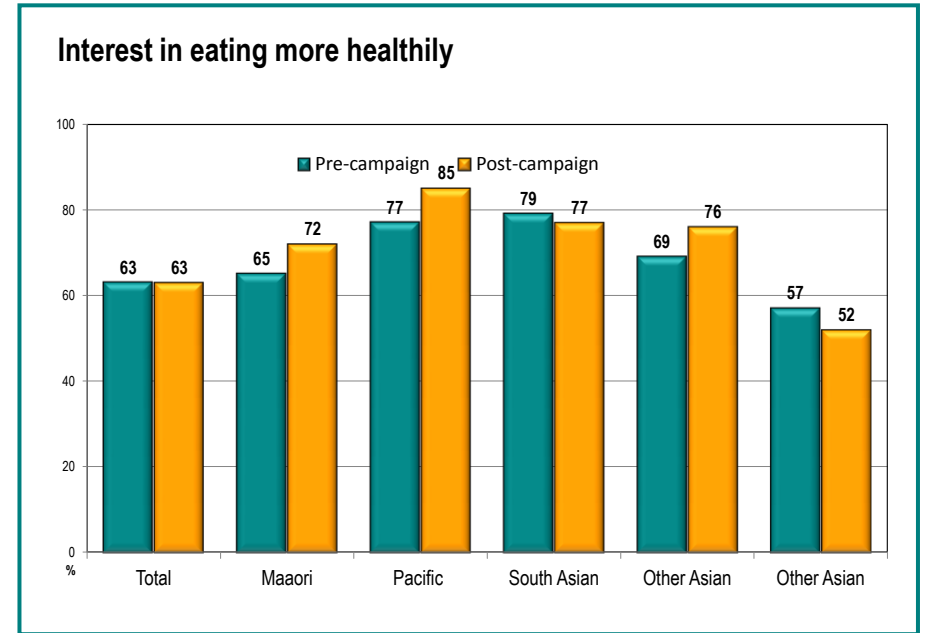


Table 20: Interest in eating more healthily

| INTEREST IN EATING MORE HEALTHILY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Yes | 63 | 63 | 65 | 72↑↑▲ | 77↑↑ | 85↑↑▲▲ | 79↑↑ | 77↑↑ | 69↑ | 76↑↑ | 57↓↓ | 52↓↓ |
| No | 36 | 37 | 35 | 28↓↓▼ | 23↓↓ | 14↓↓▼▼ | 19↓↓ | 23↓↓ | 30↓ | 24↓↓ | 43↑↑ | 47↑↑ |
| Don't know/refused | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |

Other Changes Since Previous Survey

Those reporting an *increased* interest in eating more healthily were:

- Samoan people (up 8% to 88%)
- People from high deprivation areas (up 5% to 72%)

Those reporting a *decreased* interest in eating more healthily were:

- People from medium deprivation areas (down 8% to 56%*)

There was *increased* mention in *not* being interested in eating more healthily by:

- Males aged 25 to 44 years (up 7% to 35%)

Differences Within Current Survey

Those interested in eating more healthily than they currently do were *more* prevalent among:

- Obese persons (76% vs 63% of total sample)
- Those interested in being more physically active (76%)
- Those responsible for three or more children (74%)
- Females aged 25 to 44 years (73%)
- Those responsible for children (72%)
- People from high deprivation areas (72%)
- Females aged 16 to 24 years (71%)
- Those at risk of diabetes (70%)
- Those with a family history of diabetes (70%)

And *less* prevalent among:

- Males aged 45 years and over (52%)
- People from low deprivation areas (54%)

- Those from medium deprivation areas (56%)

DIFFICULTY IN EATING MORE HEALTHILY

Those who said they were interested in eating more healthily were asked how difficult they found it to do so. The first table below shows two sets of data. The first is based on those who answered this question; those who were interested in eating more healthily. The second is the same data based on the total sample. For example, the first column of data shows that two-fifths (39%) of those who were interested in eating more healthily didn't find it difficult to do so. This represented a quarter of the total sample; this being the proportion of people who were interested in eating more healthily and didn't have any difficulty doing so.

It can be seen that most of those who were interested in eating more healthily either didn't find it difficult or found it only 'a little' difficult.

The only change over time was a four percent increase in those who were interested and found it 'somewhat' difficult, although this only translated to a two percent non-significant increase when based on the total sample. This increase was evident among Maaori (up 6% to 28%) and Other ethnic groupings (up 6% to 26%). Pacific people reported an increase in being interested but finding it 'very' difficult (up 4% to 14%).

Table 21: Difficulty in eating more healthily

| DIFFICULTY IN EATING MORE HEALTHILY | SAMPLE INTERESTED IN EATING MORE HEALTHILY | | TOTAL SAMPLE | |
|-----------------------------------------------------------------------------|--------------------------------------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1,694 | 1,615 | 2,520 | 2,363 |
| | % | % | % | % |
| Interested, don't find it difficult | 41 | 39 | 26 | 25 |
| Interested, find it a little difficult | 33 | 32 | 21 | 20 |
| Interested, find it somewhat difficult | 18 | 22▲ | 12 | 14 |
| Interested, find it very difficult | 7 | 7 | 5 | 5 |
| Not interested in eating more healthily (so didn't get asked this question) | - | - | 36 | 37 |

Table 22: Difficulty in eating more healthily, by ethnicity

| DIFFICULTY IN EATING MORE HEALTHILY | SAMPLE INTERESTED IN EATING MORE HEALTHILY | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|----------------------------------------|--------------------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1,694 | 1,615 | 386 | 413 | 561 | 482 | 236 | 339 | 209 | 153 | 548 | 473 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Interested, don't find it difficult | 41 | 39 | 37 | 32↓↓ | 45 | 46↑↑ | 47↑ | 54↑↑ | 51↑↑ | 58↑↑ | 37 | 32↓↓ |
| Interested, find it a little difficult | 33 | 32 | 29 | 25↓ | 29 | 24↓↓ | 27 | 27 | 30 | 29 | 37 | 38↑ |
| Interested, find it somewhat difficult | 18 | 22 | 22 | 28↑↑▲ | 16 | 15↑↑ | 20 | 17 | 11↓ | 9↓↓ | 20 | 26↑▲ |
| Interested, find it very difficult | 7 | 7 | 12↑↑ | 14↑↑ | 10 | 14↑↑▲ | 5 | 2↓↓ | 8▲▲ | 3↓ | 5 | 4↓ |
| Don't know | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

Other Changes Since Previous Survey

There were *increases* in those who were interested and found it '**very difficult**' among:

- Samoan people (up 8% to 17%)
- Niuean people (up 17% to 21%)
- People who a doctor would describe as obese (up 10% to 25%).
- For Cook Island Maaori people there was a *decrease* in the proportion who said it was not difficult (down 16% to 35%*)

The *increase* in those who were interested and found it '**somewhat difficult**' was evident among:

- People living in medium deprivation areas (up 7% to 22%*)
- Males aged 16 to 24 years (up 12% to 28%), although this group also had increased mention of finding it 'very' difficult (up 9% to 12%)
- Females aged 16 to 24 years (up 12% to 24%*)), although this group also had increased mention of finding it 'very' difficult (up 5% to 8%)

There were *decreases* in reporting it as '**not difficult**' among:

- Main meal preparers (down 5 percentage points to 36%*)
- Females aged 25 to 44 years (down 8 percentage points to 28%)

Differences Within Current Survey

Being interested in eating more healthily and finding it '**very difficult**' was *more* prevalent among:

- Obese persons (16% vs 7% of those answering)
- Those in high deprivation areas (12%)

Being interested in eating more healthily and finding it '**somewhat difficult**' was *more* prevalent among:

- Obese persons (29% vs 22% of those answering)
- Sedentary persons (29%)

Being interested in eating more healthily and **not finding it difficult** was *more* prevalent among:

- Males aged 45 years and over (48% vs 39% of those answering)

LINK BETWEEN DIFFICULTY IN CHANGING AND REPORTED BEHAVIOURS

This analysis identifies that the more difficulty people reported in changing their current eating behaviours, the less healthy were their eating behaviours. On most measures there was a clear trend.

Those who found it '**very difficult**' to change were eating the least healthily, which was consistent with their reported difficulties in changing. They were:

- Below average in fruit consumption (1.9 servings per day vs 2.2 for the total sample; 41% eating two or more servings per day vs 51% for the total sample)
- Below average in vegetable consumption (1.9 servings per day vs 2.2 for the total sample)
- Above average in the number of days they consumed fizzy/energy drink (2.0 vs 1.0 for the total sample)
- There was a particularly marked difference for eating more than needed (3.6 vs 1.9)
- Above average in the number of days they ate takeaways (2.1 vs 1.0)
- Below average in the number of days they had breakfast (4.8 vs 5.8)

- More likely to 'usually' cook meat or vegetables in butter or lard (20% vs 10%)
- They were particularly likely to 'usually' cook chicken with the skin on (60% vs 36%)

Those who found it **'somewhat difficult'** also showed some indications of less healthy eating, although they were not as pronounced. These included:

- Below average in fruit consumption (1.9 servings per day vs 2.2 for the total sample; 44% eating two or more servings per day vs 51% for the total sample)
- Below average in vegetable consumption (1.9 servings per day vs 2.2 for the total sample; 26% eating three or more vegetable servings per day vs 33% for the total sample)
- Above average in the number of days they consumed fizzy/energy drink (1.6 vs 1.0 for the total sample) and ate more than needed (2.6 vs 1.9)
- Above average in the number of days they ate takeaways 1.4 vs 1.0)
- Below average in the number of days they had breakfast (5.4 vs 5.8)
- More likely to 'usually' cook chicken with the skin on (48% vs 36%)

FEELINGS ABOUT CURRENT DIET

Those who said they were *not* interested in eating more healthily than they currently did were asked, "Which of the following best describes how you feel about your current diet?" They were read the three options shown in the table below. The first set of data shows that two-thirds of those answering this question felt their diet was already healthy enough, which was an eight percent increase on the previous survey. When converted to a total sample base, this equated with a quarter of the total sample who were not interested in eating more healthily because they felt their diet was already healthy enough.

This increased perception that their diet was already healthy enough (based on those not interested in eating more healthily) was predominantly evident among the Other ethnic groupings (up 11% to 70%*). There were also indications of an increase for Pacific people (up 6% to 64%), but this was not a significant change. South Asians showed the opposite pattern, with a decrease in the proportion who thought their diet was already healthy enough (down 19% to 50%*), and Other Asians also showed signs of a similar trend (a non-significant 9% decrease to 53%). Maaori had a 7% increase in saying that their diet could be 'a lot healthier' (up to 12%), remembering that these were people who were not interested in eating more healthily.

Table 23: Feelings about current diet

| FEELINGS ABOUT CURRENT DIET | SAMPLE NOT INTERESTED IN EATING MORE HEALTHILY | | TOTAL SAMPLE | |
|-----------------------------------------------------------------------------|------------------------------------------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 826 | 748 | 2,520 | 2,363 |
| | % | % | % | % |
| It is healthy enough | 59 | 67▲▲ | 22 | 25 |
| It could be a bit healthier | 35 | 29▼ | 13 | 11 |
| It could be a lot healthier | 4 | 3 | 2 | 1 |
| Are interested in eating more healthily (so didn't get asked this question) | - | - | 63 | 63 |
| Don't know | 1 | 0 | 0 | 0 |

Table 24: Feelings about current diet, by ethnicity

| FEELINGS ABOUT CURRENT DIET | SAMPLE NOT INTERESTED IN EATING MORE HEALTHILY | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------|------------------------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 826 | 748 | 208 | 193 | 151 | 112 | 63 | 91 | 97 | 61 | 450 | 395 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| It is healthy enough | 59 | 67▲▲ | 56 | 51↓↓ | 58 | 64 | 69 | 50↓↓▼ | 62 | 53↓ | 59 | 70▲▲ |
| It could be a bit healthier | 35 | 29▼ | 39 | 34 | 27 | 21 | 19↓ | 44↑↑▲▲ | 31 | 36 | 38 | 29▼▼ |
| It could be a lot healthier | 4 | 3 | 5 | 12↑↑▲ | 15↑↑ | 13↑↑ | 11↑↑ | 6 | 6 | 3 | 2↓ | 1↓ |
| Don't know | 1 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 1 | 7 | 1 | 0 |

Other Changes Since Previous Survey

Those who reported in *increases* in thinking that their diet was **'already healthy enough'** were:

- People with diabetes (up 19% to 75%)
- Main meal preparers (up 7% to 69%)
- Household shoppers (up 9% to 69%)
- People from medium deprivation areas (up 15% to 73%*)
- Males aged 25 to 44 years (up 21% to 67%*)
- Those who were responsible for any children (up 10% to 65%*)

Other changes included:

- For females aged 25 to 44 years there was an *increase* for those who said it could be 'a lot' healthier (up 6 % to 7%)

Differences Within Current Survey

Those saying that their diet **'could be a bit healthier'** were *more* prevalent among:

- Females aged 16 to 24 years (53% vs 29% for all persons answering)
- Males aged 16 to 24 years (47%)
- Those with a family history of diabetes (44%)
- Those at risk of diabetes (42%)

LINK BETWEEN FEELINGS ABOUT CURRENT DIET AND REPORTED BEHAVIOURS

Those who were not interested in eating more healthily because they thought their diet was *'already healthy enough'* were in fact eating more healthily than others, as reflected in the results shown below:

- Above average for consumption of vegetables (2.6 servings per day versus 2.2 for total sample; 46% two or more servings per day vs 33%) and fruit (2.5 servings per day vs 2.2; 56% two or more servings per day vs 51%)
- Below average on number of days drink fizzy/energy drink (0.7 vs 1.0), and eating more than needed (1.3 vs 1.9)
- Above average for number of days eat breakfast (6.2 vs 5.8)
- Below average for number of days eat takeaways (0.7 vs 1.0)
- More likely to 'never' cook meat or vegetables in butter or lard (68% vs 58%)
- More likely to 'usually' cook meat with the fat removed or drained off (66% vs 60%)

Those who were not interested in eating more healthily but acknowledged that their diet could be 'a lot healthier' were eating less healthily than others:

- Below average for consumption of vegetables (1.5 vs 2.2 servings per day for the total sample; 11% vs 33% for three or more servings per day) and fruit (1.7 servings per day vs 2.2; 23% vs 51% two or more servings per day)
- Above average on number of days drink fizzy/energy drink (1.9 vs 1.0)
- Below average for number of days eat breakfast (5.0 vs 5.8)
- Above average for number of days eat takeaways (2.1 vs 1.0)
- Less likely to 'usually' cook meat with the fat removed or drained off (33% vs 60%)

Those who were not interested in eating more healthily but acknowledged that their diet could be 'a bit' healthier were in between these other two groups in terms of their eating and cooking behaviours.

DISCUSSION

High interest in eating more healthily

As noted in the previous report, it is a very positive finding that almost two-thirds of respondents were interested in eating more healthily. This provides a large population who should potentially be receptive to the 'Let's Beat Diabetes' social marketing initiatives. There were in fact increases for both Maori and Pacific people since the benchmark survey.

It is also a positive finding that the most at risk group, obese persons, were the most interested in eating more healthily, with three-quarters of them expressing this desire.

Large group reporting few or any difficulties in changing

A little under half the total sample were interested in eating more healthily and either said they didn't find it difficult or found it only 'a little' difficult to eat more healthily. This suggests that change should be relatively easy to achieve with this large group, although it does raise the question as to why they haven't changed already if they find it this easy.

Almost two-in-ten (18%) of the total sample found it 'somewhat' or 'very' difficult to eat more healthily; for obese persons this proportion was one-third (34%), so there are more challenges with this group.

Only a small group who need to change and are resistant

Most of those who were not interested in changing already felt they were healthy enough and their reported behaviours indicated that this was the case. There were therefore only a small group who need to change but were resistant. There is no point in the social marketing campaign trying to address these people; the effort needs to go into working with those who are open to change.

POSSIBLE BARRIERS TO HEALTHY EATING

Those who reported that they had some difficulty in eating more healthily (N=962 respondents in the current survey), were asked to respond to three agree/disagree statements relating to possible barriers to eating more healthily. While there were a number of different possible barriers that could have been asked about, the three selected (cost, knowledge and access) were factors on which it was felt the Let's Beat Diabetes programme could possibly have some influence.

The effect of the recession appeared to be evident in a 10 percent increase in the proportion who agreed that they **can't afford the cost of healthier types of food**²³ (see graph which follows). Because of the smaller numbers answering this question, it was more difficult to obtain significant changes. The indications were that the increased concern with cost was greater among Maori (a non-significant increase of 7% to 46%) and Pacific people (a non-significant increase of 8% to 42%).

²³ The proportion who agree/disagree in this question are the people who strongly agreed/disagreed or agreed/disagreed with the statement of interest on a 7 point scale. The "Agree" and "Disagree" figures do not include those that "agreed a little" or "disagreed a little".

One-sixth (14%) agreed that they **don't have enough knowledge about which foods are healthy for them**, while well over half (56%) disagreed with this. These total sample levels were similar to previously, but Maaori did show a decrease in disagreeing with this statement (down 13% to 44%*). As there was only a three percent increase for Maaori who agreed with the statement, the change must have happened in the more neutral responses. Other Asians reported a 17 percent increase (up to 56%) in disagreeing with the statement.

One-in-eight (13%) agreed that there is **not enough healthy food available in the places where I eat or shop**. While this was a similar level to last time, there was a six percent decrease in the proportion who disagreed with this statement (down to 60%).

There were just under half (45%) who **agreed with at least one of these three statements** relating to barriers to purchasing and eating more healthy foods. This was an increase of seven percent* on the previous survey. There were one-in-five (19%) who **disagreed with all three statements**, which reduced six percent* from the benchmark survey.

Graph 12: Agree that can't afford the cost of healthier types of food

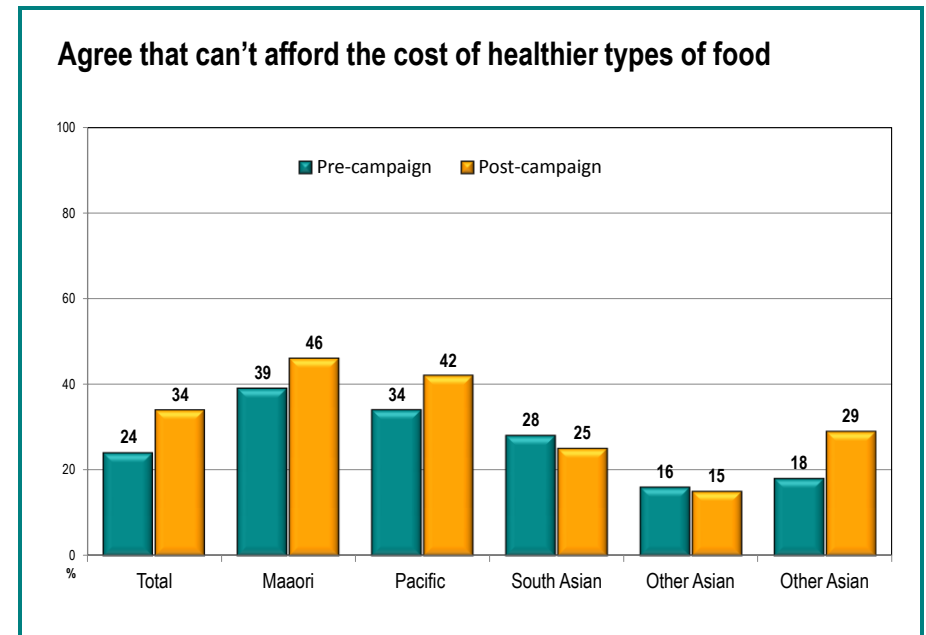


Table 25: Possible barriers to more healthy eating (among those who had difficulty)

| POSSIBLE BARRIERS TO MORE HEALTHY EATING | SAMPLE WHO HAD DIFFICULTY IN EATING MORE HEALTHILY | | | | | | | | | | | |
|-------------------------------------------------------------------------------------|----------------------------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 979 | 962 | 253 | 278 | 315 | 288 | 127 | 180 | 99 | 74 | 342 | 315 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Can't afford the cost of healthier types of food | | | | | | | | | | | | |
| Agree | 24 | 34▲▲ | 39↑↑ | 46↑↑ | 34↑↑ | 42↑ | 28 | 25↓ | 16 | 15↓↓ | 18↓ | 29 |
| Disagree | 44 | 33▼▼ | 35↓ | 25↓▼ | 31↓↓ | 25↑ | 46 | 39 | 47 | 42 | 49 | 36 |
| I don't know enough about which foods are healthy for you | | | | | | | | | | | | |
| Agree | 15 | 14 | 18 | 21↑ | 24↑↑ | 19 | 19 | 14 | 18 | 20 | 9↓↓ | 11 |
| Disagree | 59 | 56 | 57 | 44▼▼ | 50↓↓ | 46↓↓ | 49↓ | 52 | 39↓↓ | 56▲ | 66↑ | 64↑ |
| There is not enough healthy food available in the places where I eat or shop | | | | | | | | | | | | |
| Agree | 11 | 13 | 12 | 20↑↑▲▲ | 20↑↑ | 18↑ | 18 | 17 | 13 | 6 | 7↓ | 9 |
| Disagree | 66 | 60▼▼ | 68 | 58▼ | 53↓↓ | 50↓↓ | 55↓ | 56 | 50↓↓ | 53 | 72 | 66 |
| Agree with at least one statement | 38 | 45▲▲ | 52 | 61▲ | 51 | 57 | 43 | 43 | 41 | 33 | 29 | 38▲ |
| Agree with all three statements | 25 | 19▼▼ | 20 | 11▼▼ | 19 | 10▼▼ | 18 | 19 | 17 | 16 | 30 | 23 |

Can't afford the cost of healthier types of food

Other Changes Since Previous Survey

Those who had *increased agreement* that they can't afford the costs of healthier types of food, were:

- Those in the at-risk group (up 10% to 35%*)
- Those who a doctor would describe as overweight (up 8% to 35%*)
- Those who a doctor would describe as obese (up 16% to 46%*)

- Those who were sedentary (up 15% to 40%)
- Main meal preparers (up 6% to 32%)
- Main household shoppers (up 8% to 34%*)
- People living in low deprivation areas (up 12% to 32%*)
- People living in high deprivation areas (up 7% to 36%)
- Males aged 16 to 24 years (up 15% to 30%)
- Males aged 25 to 44 (up 18% to 41%*)
- Females aged 16 to 24 years (up 25% to 41%*)

- Those who were responsible for any children (up 13% to 38%)
- Those who were interested in eating more healthily (up 10% to 34%*)
- Those who were interested in being more active (up 10% to 35%*)

Other changes included:

- Among those with a family history of diabetes there was a *decrease* in those who *disagreed* (down 12% to 33%*), as was the case for females aged 45 years and over (down 13% to 29%*)
- For those living in medium deprivation areas, there was a *decrease* in those who *disagreed* that they can't afford the cost of healthier foods (down 20% to 30%*)

Differences Within Current Survey

Those who *agreed* that they can't afford the cost of healthier types of food were *more* prevalent among:

- Cook Island Maaori (53% vs 34%)
- Those responsible for three or more children (44%)

Those who *disagreed* were *more* prevalent among:

- Males aged 45 years and over (50% vs 33% of those answering)
- People living in low deprivation areas (40%)

Don't know enough about which foods are healthy for you

Other Changes Since Previous Survey

The only changes were as follows:

- For males aged 25 to 44 years, there was an *increase* in those who *agreed* (up 9% to 23%)
- For males aged 45 years and over there was a *decrease* in those who *agreed* (down 11% to 11%*)

Differences Within Current Survey

Those who *disagreed* that they don't know enough about which foods are healthy for you were *more* prevalent among:

- Those in low deprivation areas (69% vs 56% for all persons answering)

Not enough healthy food available in the places where eat or shop

Other Changes Since Previous Survey

Those with *increased agreement* with this statement were:

- Those who a doctor would describe as obese (up 9% to 20%)
- Main meal preparers (up 4% to 14%)
- Males aged 25 to 44 years (up 10% to 14%*),

Those with *decreased disagreement* (but not increased agreement) were:

- Those who were interested in eating more healthily (down 6% to 61%*)
- Main household shoppers (down 7% to 62%*)

- Those who were responsible for any children (down 7% to 59%)
- Those who were interested in being more active (down 7% to 58%*)
- People living in high deprivation areas (down 12% to 53%*)

Those with *decreased agreement* were:

- Females aged 45 years and over (down 8% to 11%)

Differences Within Current Survey

Those who *agreed* there is not enough healthy food available in the place where they eat or shop were *more* prevalent among:

- Females aged 16 to 24 years (23% vs 13% of those answering*)
- Tongan people (32%*)
- Those in high deprivation areas (19%)
- People from areas of high deprivation (19%*)

And those who *disagreed* were *more* prevalent among:

- Those in low deprivation areas (74% vs 60% of those answering)
- Cook Island Maaori (70%)
- Overweight persons (70%)
- People who were sedentary (72%)

- Males aged 45 years and over (72%)
- People from areas of low deprivation (74%*)

DISCUSSION

Economic impacts likely to reflect on other findings

The ten percent increase in finding the costs of healthier types of foods a barrier provides some tangible evidence of the impact of the recession. It is interesting to note while there was a seven percent increase in concern with cost among those in the high deprivation areas, there was an even larger increase (12%) among those in low deprivation areas.

It is highly likely that the effects of the recession are impacting in various ways on the different measures in this survey. However, it is not possible to know the extent and nature of that influence.

Obese persons particularly impacted by costs

Almost one-in-two obese people agreed they can't afford the cost of healthier types of food, which was well above the average level. They also showed one of the largest increases in concern about costs since the previous survey.

4.5 PHYSICAL ACTIVITY

Issues addressed in this section are:

- Comparison of level of activity with recommended minimum levels
- Reported levels of physical activity
- Sources of support to be more physically active
- Support given to children to be more physically active and perceptions of children's physical activity levels
- Interest in being more physically active
- Possible barriers to being more physically active

4.5.1 COMPARISON WITH RECOMMENDED MINIMUM LEVELS OF ACTIVITY

Respondents were asked to compare the amounts of physical activity they do with the recommended levels of physical or vigorous activity (which were not specified to them).

Over half (55%) said they were doing less than the recommended minimum levels of activity, up 7 percent* from the pre-campaign measurement. A quarter (24%) thought they were doing the same or about the same amounts of activity as the recommended minimum (down 3% from the pre-campaign level), while a smaller proportion said they were doing more (14%, down 5%* from pre-campaign).

The increases in people saying they were doing less at the time of the current survey compared with in the pre-campaign survey, were most marked among Pacific people (up 15% to 56%*) and Other ethnic groupings (up 7% to 55%*).

Graph 13: Comparison with recommended minimum levels of activity

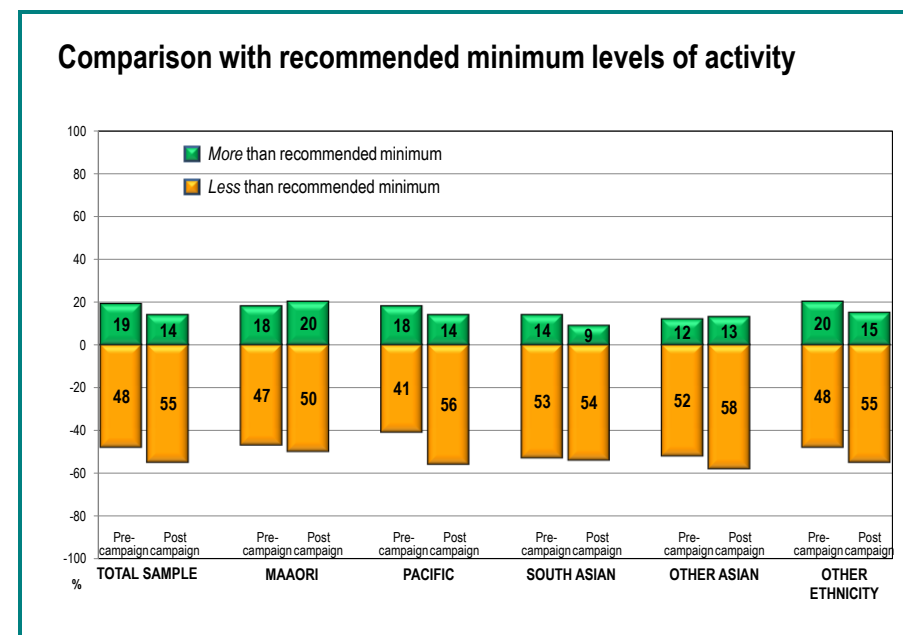


Table 26: Comparison with recommended minimum levels of activity

| COMPARISON WITH RECOMMENDED MINIMUM LEVELS OF ACTIVITY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|--------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Less than recommended minimum | 48 | 55▲▲ | 47 | 50↓ | 41↓↓ | 56▲▲ | 53 | 54 | 52 | 58 | 48 | 55▲▲ |
| More | 19 | 14▼▼ | 18 | 20↑↑ | 18 | 14 | 14 | 9↓↓▼ | 12↓↓ | 13 | 20 | 15▼▼ |
| Same/ about the recommended level | 27 | 24▼ | 25 | 22 | 37↑↑ | 26▼▼ | 27 | 31↑↑ | 27 | 22 | 24 | 21 |
| Don't know | 7 | 7 | 10↑ | 8 | 5↓ | 4↓↓ | 6 | 6 | 9 | 7 | 8 | 9 |

Other Changes Since Previous Survey

People who were now *more* likely to report doing **less than the recommended minimum levels of activity**, compared with the pre-campaign measurements, were:

- Samoan people (up 10% to 54%)
- Tongan people (up 22% to 55%*)
- People in the at-risk group (up 10% to 64%*)
- People who a doctor would describe as overweight (up 11% to 69%*)
- People who a doctor would describe as obese (up 18% to 77%*)
- People with a family history of diabetes (up 9% to 58%*)
- Main meal preparers (up 7% points to 54%*)
- Main household shoppers (up 7% to 55%*)
- People from high deprivation areas (up 10% to 55%*)
- Females aged 45 years and over (up 13% to 60%*)
- Males aged 25 to 44 years (up 8% to 56%)

- Those responsible for any children (up 7% to 58%*) and those responsible for three or more children (up 10% to 57%*)
- Those interested in eating more healthily (up 8% to 61%*)
- Those interested in being more active (up 6% to 68%*)

There were no significant increases in the proportions of people reporting doing *more* than the recommended minimum levels of activity, compared with the pre-campaign measurements, for any of the groups.

The only significant increases in the proportions of people reporting doing the *same* or *about the same* as the recommended minimum levels of activity, compared with the pre-campaign measurements, were for:

- People with diabetes (up 19% to 30%*)
- Males aged 45 and over (up 7% to 30%)

Differences Within Current Survey

Those who reported doing *less* than the **recommended minimum levels** were *more* prevalent among:

- Those interested in being more physically active (68% vs 55% of the total sample)
- Sedentary people (81%)
- Those interested in eating more healthily (61%)
- Those who are obese (61%)
- Those who are at risk of diabetes (64%)
- Males aged 45 years and over (43%)

Those who reported doing *more* than the **recommended minimum levels** were *more* prevalent among:

- Males aged 16 to 24 years (23% vs 14% of total sample)

Those doing the *same/about* the **recommended minimum levels** were *more* prevalent among:

- Males aged 45 years and over (30% vs 24% of total sample)

4.5.2 LEVELS OF PHYSICAL ACTIVITY

Respondents were categorised into one of four different activity levels, as described below. The first three were designed to match classifications used in the 2002/03 New Zealand Health Survey, and the fourth accounts for all those who did not fit into one of the other three groups.

- **Physically active**²⁴: At least two and a half hours physical activity in the last week, with exercise accumulated on one or more days of the week.
- **Minimally physically active**: Did between half an hour and two and a half hours physical activity in total during the last 7 days.
- **Sedentary**²⁵: Did less than half an hour's physical activity in the last week.
- **Regularly physically active**: At least two and a half hours physical activity in the last week, comprising at least 30 minutes of physical activity per day on five or more days of the last week was the definition used in the New Zealand Health Survey. The current study did not ask number of days on which people did at least 30 minutes activity, so a person was defined as being in this group if they were active on five or more days and **averaged** 30 minutes over those days.

There was a nine percent decrease in the proportion who were physically active*, which may be due at least in part to the current survey being in Winter and the previous survey being in early Summer. There was a corresponding drop in the proportion who were regularly physically active (down 10% to 38%*) and an increase in those who were sedentary (now one-in-six, up 6%* from pre-campaign). The proportion who were minimally active has stayed relatively constant at close to one-quarter.

The patterns applying to the total sample, of *reduced* proportions being both physically active and regularly physically active, offset by *increased* proportions being sedentary, applied to all ethnic groups, the only exception being that South Asian people showed these trends but not strongly enough to be statistically significant.

The best estimate available for the proportion of the sample reaching the **recommended level of physical activity** was 39 percent, which was a 10 percent decrease from the benchmark survey. The recommended level of physical activity is 30 minutes moderate or 15 minutes vigorous activity each day. As noted above, the best estimate available from this survey for those

²⁴ Matches classification used in 2002/03 New Zealand Health Survey

²⁵ Ibid

doing 30 minutes moderate activity for at least five days a week (those defined as 'regularly physically active') was 38 percent. There were 14 percent (down from 17%) who did vigorous activity for at least five days and averaged at least 15 minutes. Almost all of this group were also in the 'regularly physically active' group, so there were a total of 39 percent who were in either group. This analysis would exclude people who were sometimes doing the 30 minutes moderate and sometimes the 15 minutes vigorous in the previous week, so it could be an under-representation. However the averaging of the hours over the week may have allowed some people who did one or a few long periods of activity over the week to be included when they were not doing the necessary amount each day.

Graph 14: Physical activity levels

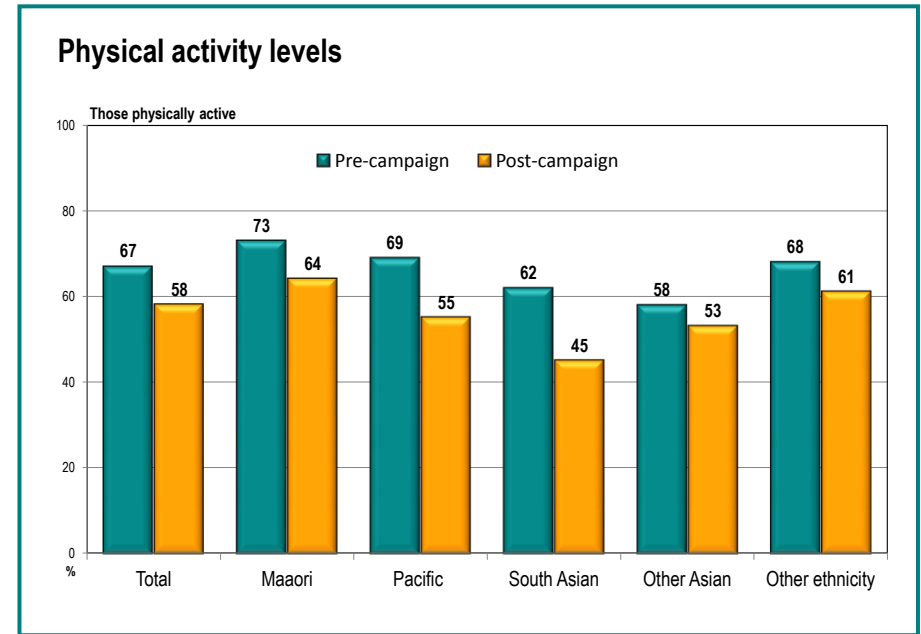


Table 27: Physical activity levels

| PHYSICAL ACTIVITY LEVELS | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Physically active | 67 | 58▼▼ | 73↑↑ | 64↑↑▼▼ | 69 | 55▼▼ | 62 | 45 | 58↓↓ | 53▼▼ | 68↑↑ | 61▼▼ |
| Sedentary | 10 | 16▲▲ | 11 | 17▲▲ | 9 | 17▲▲ | 10 | 17 | 10 | 13▲▲ | 9 | 14▲▲ |
| Minimally active | 22 | 25 | 15↓↓ | 18↓↓ | 21 | 26▲ | 27↑ | 35 | 30↑↑ | 32▲ | 22↓↓ | 23 |
| Don't know/ refused | 1 | 2▲▲ | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 2▲ |
| Regularly physically active | 48 | 38▼▼ | 53↑ | 48↑↑▼ | 48 | 31▼▼ | 47 | 32 | 41↓ | 30▼▼ | 49↑↑ | 41▼▼ |

Other Changes Since Previous Survey

Decreases in being **physically active**, compared with the pre-campaign measurements, were most pronounced in the following groups. These decreases were generally also reflected in corresponding decreases in being regularly physically active, and increases in being sedentary or minimally active:

- Samoan people (down 24% to 50%*)
- Tongan people (down 18% to 57%*)
- Niuean people (down 24% to 48%*)
- People in the at-risk group (down 14% to 49%*)
- People who a doctor would describe as overweight (down 9% to 54%*)
- People who a doctor would describe as obese (down 9% to 51%)
- People who had a family history of diabetes (down 15% to 55%*)
- Meal preparers (down 12% to 57%*)
- Household shoppers (down 10% to 58%*)
- People from medium and high deprivation areas (down 7% to 58%* and down 14% to 57%* respectively)
- Females aged 45 years and over (down 14% to 51%*)
- Females aged 25 to 44 years (down 12% to 50%*)
- Males aged 16 to 24 years (down 11% to 67%*)
- Those responsible for any children (down 10% to 55%*)
- Those responsible for three or more children (down 10% to 60%*)
- Those interested in eating more healthily (down 11% to 53%*)
- Those interested in being more active (down 10% to 51%*)

Differences Within Current Survey

Those classed as **physically active** were *more* prevalent among:

- Males aged 16 to 24 years (67% vs 58% of total sample)
- Males aged 25 to 44 years (65%)
- Males aged 45 years and over (67%*)
- People who were overweight (66%*)

And *less* prevalent among:

- Those interested in eating more healthily (53%*)
- Those interested in being more physically active (51%*)
- Females aged 25 to 44 years (50%*)
- Females aged 45 years or older (51%*)
- People in the at-risk group (49%*)

Those classed as **minimally physically active** were *more* prevalent among:

- Females aged 25 to 44 years (32% vs 25% of total sample*)
- Those interested in being more physically active (31%*)
- Those interested in eating more healthily (29%*)
- Those responsible for children (29%*)

And *less* prevalent among:

- Males aged 16 to 24 years (17%)
- Cook Island Maori (15%)

Sedentary persons were *more* prevalent among:

- Females aged 45 years and over (24% vs 16% of total sample)
- People in the at-risk group (26%*)

And *less* prevalent among:

- Males aged 45 years or older (11%)
- Females aged 16 to 24 years (7%*)
- People who were responsible for three or more children (11%)
- People who were overweight (11%)

Those classed as **regularly physically active** were *more* prevalent among:

- Males aged 45 years and over (47% vs 38% for total sample)
- Males aged 16 to 24 years (47%)
- Females aged 16 to 24 years (47%)
- People who were overweight (43%)

And *less* prevalent among:

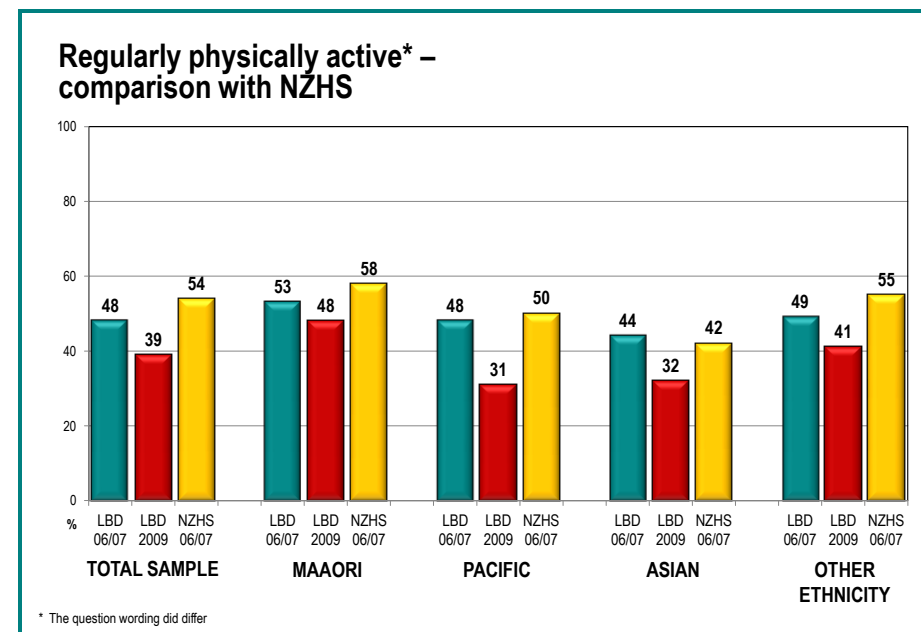
- People who were interested in eating more healthily (30%*)
- People who were interested in being more physically active (29%*)
- Females aged 45 years or older (29%*)
- People in the at-risk group (29%*)

NZHS COMPARISON

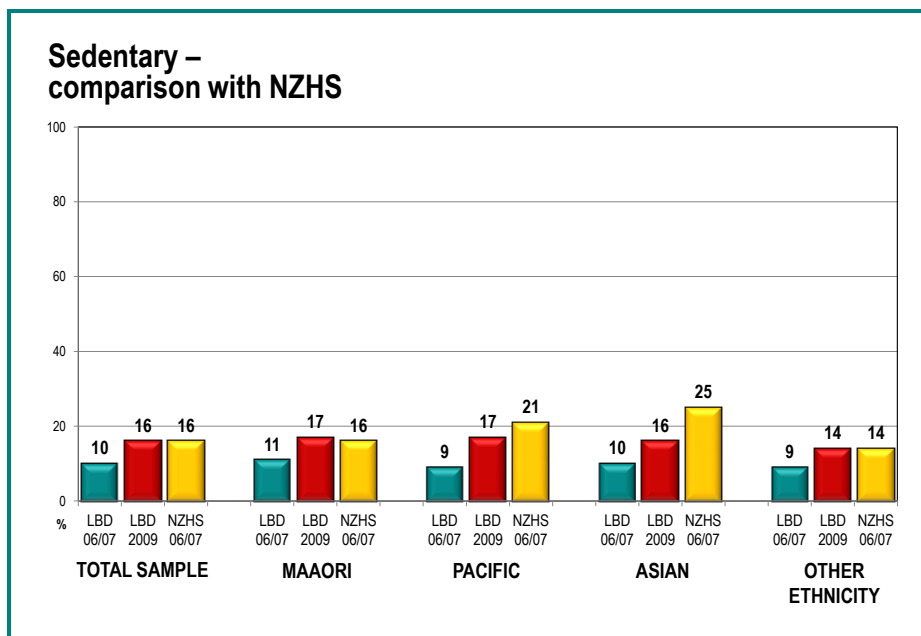
As shown in the graph below, the levels of being regularly physically active in the 2006/07 NZHS survey were slightly higher than in the 2006/07 LBD survey. As noted above, the question wording in the two surveys did differ a little.

The proportion classified as sedentary in the NZHS was similar to the current LBD survey, except for Asian people (see second graph which follows).

Graph 15: Regularly physically active – comparison with NZHS



Graph 16: Sedentary – comparison with NZHS



NUMBER OF DAYS DID TEN MINUTES ACTIVITY IN LAST SEVEN DAYS

Respondents were asked on how many of the last seven days they did at least ten minutes physical activity, which was defined as "activity which increases

your heart rate or breathing". Examples were given of "brisk walking, gardening, dancing, golf, tennis, through to activities that require more effort - activities like heavy lifting, digging, jogging, rugby and netball". They were asked to think about "activities at work, school, or home, getting from place to place, and any activities you did for exercise, sport or recreation".

Just under nine-in-ten (87%) did this level of activity on at least one day in the seven day period, down from the 93 percent pre-campaign. The incidence of people doing no physical activity in the seven day period doubled since the pre-campaign measurement, from one-in-fourteen to one-in-seven.

The people who had done physical activity on at least one day averaged 5.3 days, which equated to 4.0 days for the total sample. These results were both lower than pre-campaign, when these averages were 5.6 days and 4.6 days per week respectively.

The patterns of reduced levels of physical activity (reduced percentages active six or more days a week, increased percentages having no days active, and reduced average numbers of days active) held across all ethnic groups with the exception of Other Asians, where the changes over time were in the same direction as for the others, but their differences were mostly not large enough to be statistically significant.

Table 28: Number of days did 10 minutes activity out of last seven

| NUMBER OF DAYS DID 10 MINUTES ACTIVITY OUT OF LAST 7 | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|---------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|----------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| None | 7 | 14▲▲ | 10↑ | 16▲▲ | 7 | 16▲▲ | 7 | 15▲▲ | 8 | 12 | 7 | 11▲▲ |
| 1 to 2 days | 14 | 16 | 8↓↓ | 11↓↓ | 15 | 15 | 15 | 14 | 22↑↑ | 20 | 13 | 17▲ |
| 3 to 4 days | 23 | 26 | 21 | 20↓↓ | 23 | 31↑▲▲ | 22 | 24 | 21 | 30▲ | 24 | 26 |
| 5 days | 12 | 14 | 11 | 15▲ | 14 | 13 | 16 | 16 | 11 | 8↓ | 12 | 14 |
| 6 or more days | 42 | 31 | 49↑↑ | 37↑↑▼▼ | 40↓↓ | 25↓↓▼▼ | 41 | 30▼▼ | 36 | 29 | 44 | 32▼▼ |
| Don't know/ not sure | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean number of days – among those doing activity | 5.6 | 5.3▼▼ | 5.8 | 5.5↑↑▼ | 5.4↓ | 4.9↓↓▼▼ | 5.7 | 5.4▼ | 5.5 | 5.1 | 5.7 | 5.3▼▼ |
| Mean number of days – total sample | 4.6 | 4 | 4.8↑ | 4.1▼▼ | 4.4 | 3.7↓↓▼▼ | 4.6 | 3.9▼▼ | 4.2↓ | 3.8▼ | 4.7 | 4.1▼▼ |

DURATION OF PHYSICAL ACTIVITY

Respondents were asked how much time in total they were physically active over the last seven days. Those who were physically active (i.e. all those who did not answer 'None' to the question about number of hours active) averaged 12 hours, which equated with 7.4 hours for the total sample. Those reporting high numbers of hours were mostly probably working in jobs that require a lot of physical activity.

As with days active, the measure of activity levels based on hours showed a marked decline since the pre-campaign survey. This was evident both in the average hours active (down from 9.8 to 7.4* on a total sample basis), and in terms of percentages active for eight or more hours a week. As with the

reductions in days active, the reductions in hours active were spread across most of the ethnic groups, Other Asians being a notable exception.

Graph 17: Hours of physical activity in last 7 days

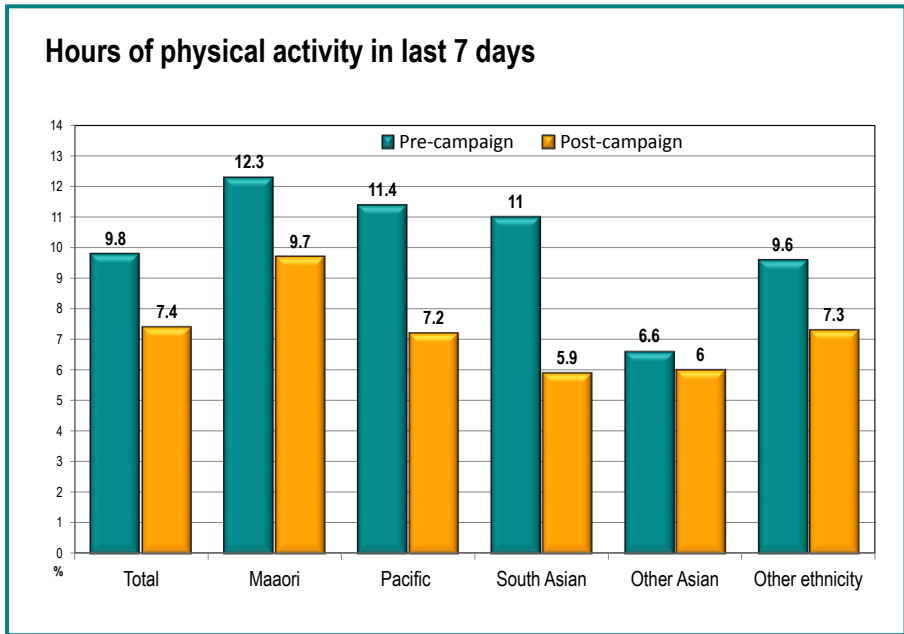


Table 29: Hours of physical activity in last 7 days

| HOURS OF PHYSICAL ACTIVITY IN LAST SEVEN DAYS | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|------------------------------------------------------------------------------------------|--------------|---------------|---------------|----------------|---------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| None | 7 | 14▲▲ | 10↑ | 16▲▲ | 7 | 16▲▲ | 7 | 15▲▲ | 8 | 12 | 7 | 11▲▲ |
| Less than 1 hour | 8 | 8 | 4↑↑ | 5↓ | 9 | 7 | 10 | 11 | 6 | 4 | 8 | 9 |
| One but less than 2 hours | 10 | 12 | 7↓ | 8↓ | 9 | 14▲ | 10 | 17↑↑▲ | 14↑ | 18↑↑ | 10 | 11 |
| Two but less than 3 hours | 9 | 9 | 6↓ | 7 | 8 | 8 | 15↑↑ | 14↑↑ | 14↑↑ | 16↑↑ | 9 | 9 |
| Three but less than 4 hours | 10 | 10 | 10 | 8 | 7↓ | 13↑▲▲ | 10 | 8 | 11 | 9 | 11 | 9 |
| Four but less than 6 hours | 13 | 12 | 11 | 13 | 13 | 9↓▼ | 13 | 10 | 14 | 17↑ | 13 | 13 |
| Six but less than 8 hours | 10 | 10 | 11 | 10 | 7↓ | 8 | 8 | 7 | 9 | 7 | 10 | 11 |
| Eight but less than 30 hours | 22 | 17▼▼ | 24 | 21↑ | 26↑ | 16▼▼ | 11↓↓ | 11↓ | 18 | 10↓↓▼ | 22 | 18▼▼ |
| Thirty or more hours | 10 | 7▼▼ | 15↑↑ | 10↑▼ | 12 | 8▼▼ | 15↑↑ | 6▼▼ | 4↓↓ | 6 | 9 | 7 |
| Don't Know | 1 | 2▲▲ | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 2▲ |
| Mean number of hours of physical activity – among those who are physically active | 10.6 | 8.5▼▼ | 13.6↑↑ | 11.6↑↑▼ | 12.3↑↑ | 8.7▼▼ | 11.8 | 7.0↓▼▼ | 7.2↓↓ | 6.8 | 10.3 | 8.3▼▼ |
| Mean number of hours of physical activity – based on total sample | 9.8 | 7.4▼▼ | 12.3↑↑ | 9.7↑↑▼▼ | 11.4↑↑ | 7.2▼▼ | 11 | 5.9↓▼▼ | 6.6↓↓ | 6 | 9.6 | 7.3▼▼ |

Other Changes Since Previous Survey

There was a *decrease* in the mean number of hours (over last 7 days) spent on physical activity among the following:

- Maaori (from 12.3 hours a week to 9.7* hours a week)
- Pacific people (from 11.4 to 7.2*)
- South Asians (from 11 to 5.9*)
- Other ethnic groupings (from 9.6 to 7.3*)
- Samoan people (from 14.2 to 6.3*)
- Tongan people (from 11.5 to 7.3*)
- People in the at-risk group (from 9.1 to 5.6*)
- People who a doctor would describe as overweight (from 8.5 to 5.8*)
- People who a doctor would describe as obese (from 9.5 to 5.5*)
- People with a family history of diabetes (from 11.6 to 6.6*)
- Main meal preparers (from 9.6 to 7.2*)
- Household shoppers (from 9.5 to 7.2*)
- Those in low deprivation areas (from 7.5 to 6.1*)
- Those in high deprivation areas (from 11.7 to 8.2)
- Males aged 16 to 24 years (from 13.4 to 8.8*)
- Males aged 25 to 44 years (from 11.9 to 9.6)
- Males aged 45 years or older (from 11.4 to 9.2)
- Females aged 45 years and over (from 8.7 to 5.6*)
- People responsible for any children (from 9.2 to 7.4*)
- People interested in healthy eating (from 8.8 to 5.9*)
- People interested in being more active (from 7.7 to 5.6*)

Differences Within Current Survey

The following groupings reported mean hours of physical activity that were *higher* than average:

- Males aged 25 to 44 years (9.6 vs 7.4 for total sample *)
- Males aged 45 years or more (9.2*)

And *lower* than average:

- Those interested in healthy eating (5.9*)
- Those interested in being more physically active (5.6*)
- People in areas of low deprivation (6.1*)
- Females aged 25 to 44 year (5.9*)
- Females aged 45 years or older (5.6*)
- People in the at-risk group (5.6*)

NUMBER OF DAYS DID VIGOROUS ACTIVITY

Respondents were then asked on how many days out of the last seven days they did 'vigorous activity'. This was described as 'activity that makes you breathe A LOT HARDER than normal ('huff and puff') – like heavy lifting, aerobics, jogging, rugby, netball'. Just over half (56%) of the total sample reported doing this level of activity on at least one day in the previous week, down five percent from 61 percent pre-campaign*. Those who reported doing such activity in the seven day period averaged 3.3 days, which equated to 1.8 days for the total sample (down from an average of 2.1 days pre-campaign*).

The table below shows that some of the largest movements have been in reductions among those doing six or more days, particularly among Maaori and Pacific. There have been corresponding increases in those doing no days. These changes at the extremes (there was only minimal change in the range

of one to five days) will have had a lot of impact on the mean numbers of days reported.

The reductions in days doing vigorous activity were evident across all ethnic groups, as with the reductions discussed above in days and hours active (i.e. without regard to whether the activity was vigorous).

Table 30: Vigorous activity in last seven days

| VIGOROUS ACTIVITY IN LAST SEVEN DAYS | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|----------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| None | 38 | 45▲▲ | 27↓↓ | 39↓▲▲ | 36 | 44▲ | 47↑↑ | 57↑↑▲▲ | 50↑↑ | 52↑ | 37 | 42 |
| 1 to 2 days | 25 | 25 | 24 | 24 | 27 | 28 | 24 | 17↓↓▼ | 25 | 25 | 25 | 25 |
| 3 to 4 days | 18 | 16▼ | 22↑ | 17▼ | 19 | 17 | 14 | 14 | 12↓ | 15 | 18 | 16 |
| 5 days | 6 | 6 | 6 | 8↑ | 5 | 6 | 6 | 6 | 4 | 2↓ | 7 | 6 |
| 6 or more days | 12 | 9▼▼ | 20↑↑ | 10▼▼ | 12 | 4↓↓▼▼ | 9 | 6 | 7↓↓ | 5 | 12 | 10 |
| Don't know/ not sure | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1↑ | 1 | 0 | 0 |
| Mean number of days of vigorous activity – among those undertaking such activity | 3.4 | 3.3▼ | 3.8↑↑ | 3.4▼▼ | 3.3 | 2.9↓↓▼▼ | 3.3 | 3.3 | 3.0↓ | 2.7↓↓ | 3.5 | 3.4 |
| Mean number of days of vigorous activity – among total sample | 2.1 | 1.8▼▼ | 2.8↑↑ | 2.0↑▼▼ | 2.1 | 1.6↓▼▼ | 1.8↓ | 1.4↓↓▼ | 1.5↓↓ | 1.3↓↓ | 2.2 | 2.0▼ |

DURATION OF VIGOROUS ACTIVITY

Those undertaking vigorous activity did so for an average of 4.2 hours a week, down markedly from the 5.2 hours a week average pre-campaign*. These averages equated to 2.3 hours a week in the current survey for the total sample, down markedly from the average of 3.2 hours pre-campaign*.

The reductions in hours doing vigorous activity were evident across all ethnic groups, with each of the main ethnic groupings showing significant decreases since the pre-campaign survey by at least one of the measures of hours active (increases in those doing no vigorous active hours a week, reductions in those doing high hours, or the averages). This pattern of reductions in hours of vigorous activity per week was similar to the reductions discussed above by the ethnic groupings, in days and hours active (i.e. without regard to whether the activity was vigorous), and days doing vigorous activity.

Graph 18: Hours of vigorous activity in last 7 days

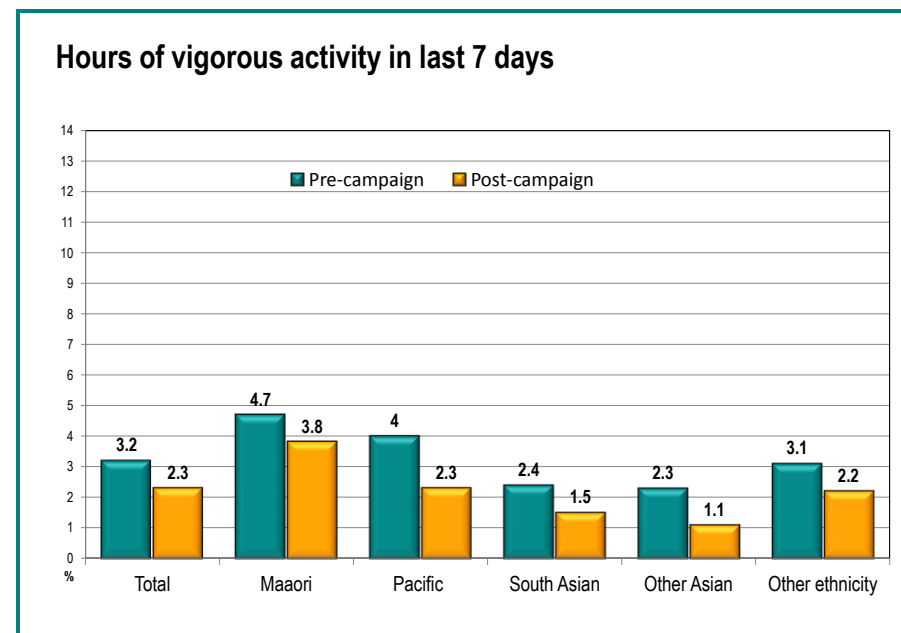


Table 31: Hours of vigorous activity

| HOURS OF VIGOROUS ACTIVITY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|------------------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| None | 38 | 45▲▲ | 27↓↓ | 39↓▲▲ | 36 | 44▲▲ | 47↑↑ | 57↑↑▲▲ | 50↑↑ | 52↓ | 37 | 42▲ |
| Less than 1 hour | 12 | 12 | 10 | 11 | 12 | 15↑ | 13 | 11 | 9 | 12 | 12 | 12 |
| One but less than 2 hours | 10 | 11 | 12 | 12 | 14↑ | 12 | 10 | 9 | 10 | 15 | 9 | 11 |
| Two but less than 3 hours | 10 | 8 | 11 | 7▼ | 6↓↓ | 7 | 10 | 6 | 11 | 6▼ | 11 | 9 |
| Three but less than 7 hours | 17 | 14▼ | 21↑ | 14▼▼ | 14 | 12 | 12↓ | 11 | 12↓ | 9↓ | 18 | 16 |
| Seven or more hours | 12 | 9▼▼ | 17↑↑ | 15↑↑ | 18↑↑ | 9▼▼ | 8↓ | 4↓↓ | 6↓↓ | 3↓↓ | 12 | 9▼ |
| Don't Know | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 3↑ | 0 | 1 |
| Mean number of hours of vigorous activity – among those engaged in it | 5.2 | 4.2▼▼ | 6.7↑↑ | 6.4↑↑ | 6.4↑ | 4.1▼▼ | 4.5 | 3.5 | 4.8 | 2.5↓▼ | 5.1 | 3.9▼ |
| Mean number of hours of vigorous activity – among total sample | 3.2 | 2.3▼▼ | 4.7 | 3.8↑↑ | 4 | 2.3 | 2.4 | 1.5↓↓ | 2.3 | 1.1↓↓ | 3.1 | 2.2↓ |

Other Changes Since Previous Survey

There was a *decrease* in the mean number of hours (over last 7 days) spent doing vigorous activity among the following:

- Samoan people (from 5.3 to 2.0*)
- Tongan people (from 4.8 to 2.8)
- People in the at-risk group (from 3.1 to 1.8*)
- People who a doctor would describe as overweight (from 3.0 to 1.7*)
- People who a doctor would describe as obese (from 3.7 to 1.7*)
- People with a family history of diabetes (from 3.8 to 2.1*)
- Main meal preparers (from 3.1 to 2.2*)
- Main household shoppers (from 3.0 to 2.1)
- People responsible for any children (from 3.3 to 2.3*)
- People responsible for three or more children (from 3.7 to 2.5)
- People interested in eating more healthily (from 2.9 to 2.0*)
- People interested in being more active (from 2.3 to 1.6*)

Differences Within Current Survey

The following groupings reported mean hours of vigorous activity that were *higher* than average:

- Males aged 16 to 24 years (3.4 vs 2.3 for total sample*)
- Males aged 25 to 44 years (3.0)

And *lower* than average:

- Those interested in being more physically active (1.6*)
- Females aged 45 years or older (1.3*)
- People in the at-risk group (1.8*)

MATCH BETWEEN ACTIVITY AND RECOMMENDED LEVELS

People achieving the minimum recommended activity level based on their actual activity (days and hours active), dropped from 49 percent in the pre-campaign measurement to 39 percent* post-campaign.

Of those who believed they were doing *more* than the recommended minimum level of activity (they were not told what the recommended minimum level was), in the post-campaign survey three-quarters reported behaviour that indicated they were doing at least the minimum amount, compared with 80 percent previously (the provisos regarding measurement of the minimum level, as noted previously, apply).

Of those who thought they were doing *about* the recommended minimum level, just over half (54%) were estimated to have done the recommended level or above, compared with 61 percent previously.

Among those who felt they were doing *less* than the minimum, four-in-five (79%) were estimated to be doing less than the minimum. The equivalent proportion in the pre-campaign measurement was 74 percent*.

It must be remembered that the previous week's physical activity may not have been typical for all respondents. Allowing for this, it would seem that the people who are the primary audience for social marketing messages, those who are below the recommended level, were generally aware that they were below this level.

DISCUSSION

Seasonal factors most likely explanation of decreases

The marked decreases in levels of physical activity are most likely explained by the seasonal differences in survey timing. People are probably less likely to get outside and do active things if the weather is wet and cold.

It would be interesting to see if there are any other surveys that track change in physical activity over time, which might be able to assist in determining how much influence seasonal factors might have.

4.5.3 SUPPORT TO BE PHYSICALLY ACTIVE

Respondents were asked whether each of eight different types of people encouraged them or did things to make it easier for them to become physically active. In the table which follows, levels of support are shown based on the total sample, but where appropriate, also among those to whom the question applied. For example, children encouraged or supported respondents being physically active in 64 percent of households where there were children, which equated to 32 percent of the total sample.

As with the previous section on eating healthily, the percentages based on the total sample may be the most useful when comparing the different forms of support. Conversely, the percentages based on those for whom the question was relevant, are most useful for examining trends over time.

There were a number of sources of support that received increased mentions compared with the previous survey. These included:

- Wider family/wahaanau and close friends (up 4% to 58%*)
- Doctor or medical centre staff (up 5% to 55%*)
- Employers (up 9% to 48%* , however with the sharp reduction in the number of people in Counties Manukau working (as shown in the table), these increases did not apply to the total sample results)
- People worked with (up 4% to 52%*)

There was a three percent decrease in mention of support from children in the household (down to 32%).

Among Maaori who had used a marae in Counties Manukau in the previous year, just under half (49%) found people on marae to be supportive of physical activity. No comparisons are made with the previous survey because of the change in question wording.

Pacific people with children showed a reduction in receiving support to be active from their children (down 7% to 68%), while South Asian people showed an increase in support from their children (up 11% to 78%*).

While support from people worked with held up for Pacific people between the two surveys, with less Pacific people employed in the post-campaign survey, support from co-workers reduced on a total sample basis. South Asians who were working and people from the Other ethnic groupings who were working, showed increases in support from their co-workers.

Maaori who attended church or a place of worship were less likely in the post-campaign survey than before to find co-worshippers supportive. However in the post-campaign survey more Maaori attended churches/places of worship, so that across all Maaori (not just those attending places of worship), there was no corresponding decline.

Two of the main ethnic groupings found their doctor or medical centre staff more supportive in the post-campaign survey than pre-campaign: Maaori (up 8% to 59%*) and South Asians (up 8% to 71%).

Table 32: Sources of support to be physically active

| SOURCES OF SUPPORT TO BE PHYSICALLY ACTIVE | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|----------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Other adults in your household | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 60 | 60 | 58 | 54↓ | 64↑ | 65↑ | 71↑↑ | 79↑↑ | 62 | 60 | 57 | 56 |
| Children in your household* | 1,442 | 1,207 | 365 | 312 | 521 | 412 | 191 | 258 | 168 | 97 | 416 | 320 |
| Yes | 65 | 64 | 65 | 62 | 75↑↑ | 68▼ | 67 | 78↑↑▲▲ | 57 | 58 | 59↓ | 60 |
| Children in your household (Total sample) | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 35 | 32▼ | 42↑↑ | 32▼▼ | 56↑↑ | 47↑↑▼▼ | 42↑ | 43↑↑ | 32 | 26 | 27↓↓ | 26↓↓ |
| Your wider family/whaanau and close friends | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 54 | 58▲▲ | 57 | 59 | 67↑↑ | 72↑↑ | 61↑ | 65↑↑ | 64↑↑ | 62 | 49↓↓ | 53↓↓ |
| Your employer** | 1,970 | 1,627 | 482 | 437 | 581 | 411 | 253 | 337 | 259 | 155 | 704 | 542 |
| Yes | 39 | 48▲▲ | 43 | 46 | 51↑↑ | 59↑↑▲▲ | 43 | 52▲ | 39 | 43 | 33↓↓ | 44▲▲ |
| Your employer (Total sample) | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 30 | 32 | 34 | 34 | 41↑↑ | 38↑↑ | 37↑ | 40↑↑ | 33 | 31 | 24↓↓ | 29▲ |
| People you work with*** | 2,000 | 1,673 | 488 | 447 | 591 | 415 | 255 | 350 | 259 | 157 | 721 | 566 |
| Yes | 48 | 52▲▲ | 53↑ | 55 | 65↑↑ | 70↑↑ | 55↑ | 65↑↑▲ | 47 | 46 | 39↓↓ | 45↓↓▲ |
| People you work with (Total sample) | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 37 | 37 | 43↑ | 41 | 54↑↑ | 46↑↑▼▼ | 46↑↑ | 53↑↑ | 40 | 34 | 29↓↓ | 32↓↓ |
| | 1,029 | 1,011 | 134 | 156 | 475 | 402 | 164 | 241 | 131 | 98 | 238 | 235 |

| SOURCES OF SUPPORT TO BE PHYSICALLY ACTIVE | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| People at your church or place of worship**** | | | | | | | | | | | | |
| Yes | 60 | 62 | 73↑↑ | 55▼▼ | 78↑↑ | 75↑↑ | 55 | 56 | 53 | 61 | 45↓↓ | 54↓▲ |
| People at your church or place of worship (Total sample) | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 22 | 24 | 16↓↓ | 15↓ | 58↑↑ | 57↑↑ | 30↑↑ | 31↑↑ | 24 | 29 | 11↓↓ | 13↓↓ |
| People at your marae in Counties Manukau***** | | | | 235 | | | | | | | | |
| Yes | | | | 49 | | | | | | | | |
| People at your marae in Counties Manukau (Total sample) | | | | 606 | | | | | | | | |
| Yes | | | | 23 | | | | | | | | |
| Doctor/ medical centre staff | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| Yes | 50 | 55▲▲ | 51 | 59↑▲▲ | 74↑↑ | 77↑↑ | 63↑↑ | 71↑▲ | 47 | 53 | 41↓↓ | 45↓↓ |

* This is only asked of those who are responsible for their children

** The base excludes people who were not in employment or who felt the question was not applicable (presumably mostly because they were employers)

*** This base excludes people who were not in employment

**** This is only asked of those who regularly attended church or a place of worship

***** This is only asked of Maaori who have a marae in the region which they attend

Other adults in the same household

Other Changes Since Previous Survey

Those reporting *increased* proportions saying that other adults in the same household had encouraged them or made it easier for them to be physically active were:

- People who were sedentary (up 14% to 53%*)
- People with diabetes (up 11% to 71%)

There was *decreased* support received by:

- Males aged 25 to 44 years (down 9% to 51%)

Differences Within Current Survey

Those who said that **other adults in the same household** encourage them or make it easier for them to be physically active were *more* prevalent among:

- People interested in healthy eating (63% vs 60% for total sample)
- People interested in being more physically active (63%)
- People who were responsible for any children (65%*)
- People who were responsible for three or more children (67%*)
- 16-24 year old males (69%*)
- 16-24 year old females (67%)
- 25-44 year old females (68%*)
- Samoan people (66%)
- Tongan people (68%)
- 'Other' Pacific people (78%*)
- People with diabetes (71%*)

And *less* prevalent among:

- People who were the main meal preparer (55%)
- 25-44 year old males (51%*)
- Females aged 45 years and older (53%)

Children in household

Other Changes Since Previous Survey

Those saying it was their children who encouraged them to be physically active have become *more* prevalent since the pre-campaign survey among:

- People with diabetes (up 15% to 83%)

And *less* prevalent among:

- Samoan people (down 11% to 71%)
- Niuean people (down 25% to 57%)
- Females aged 45 years and over (down 14% to 56%)
- Those responsible for three or more children (down 9% to 69%*)

Differences Within Current Survey

Those saying their **children** encouraged them were *more* prevalent among:

- People in areas of high deprivation (69% vs 64% for total sample)
- People with diabetes (83% vs 64% for total sample*)

And *less* prevalent among:

- People in areas of low deprivation (57%)
- 16-24 year old males (51%)
- People who were overweight (58%)

Wider family/whaanau and close friends

Other Changes Since Previous Survey

Those who said that their wider family/whaanau and close friends encouraged them or made it easier for them to be physically active have become *more* prevalent since the pre-campaign survey among:

- Males aged 25 to 44 years (up 16% to 68%*)
- Those responsible for any children (up 6% to 61%*)
- Those responsible for three or more children (up 7% to 68%)
- Those interested in eating more healthily (up 4% to 62%)
- Those interested in being more active (up 4% to 62%)

Differences Within Current Survey

Those saying their **wider family/whaanau and close friends** were *more* prevalent among:

- People who were interested in eating more healthily (62% vs 58% for total sample*)
- People who were interested in being more physically active (62%*)
- People in areas of high deprivation (61%)
- 16-24 year old males (75%*)
- 25-44 year old males (68%*)
- 16-24 year old females (79%)
- People who were responsible for any children (61%)
- People who were responsible for three or more children (68%*)
- Samoan people (75%*)
- Cook Island Maaori people (69%*)
- Tongan people (72%*)

- Niuean people (78%*)
- 'Other' Pacific people (75%*)
- People with diabetes (64%)

And *less* prevalent among:

- People in areas of low deprivation (51%*)
- Males aged 45 and older (43%*)
- Females aged 45 years and older (52%)
- People who were sedentary (49%*)
- People who were overweight (52%)

Employer

Other Changes Since Previous Survey

Those who said that their employer encouraged them or made it easier for them to be physically active have become *more* prevalent since the pre-campaign survey among:

- People who were interested in eating more healthily (up 8% to 47%*)
- People who were interested in being more physically active (up 10% to 48%*)
- People who were main meal preparers (up 11% to 50%*)
- For people who were main household shoppers (up 7% to 47%*)
- People in medium deprivation areas (up 15% to 51%*)
- People in high deprivation areas (up 14% to 59%*)
- 25-44 year old males, there was an increase in proportion saying Yes (up 9% to 56%)
- 16-24 year old females, there was an increase in proportion saying Yes (up 11% to 41%)

- 25-44 year old females, there was an increase in proportion saying Yes (up 17% to 54%*)
- People who were responsible for any children (up 10% to 48%*)
- People responsible for three or more children (up 14% to 58%*)
- People in the at-risk group (up 5% to 44%)
- People who were sedentary (up 12% to 41%)

Differences Within Current Survey

Those saying it was their **employer** were *more* prevalent among:

- People in areas of high deprivation (59% vs 48% for total sample*)
- 25-44 year old males (56%*)
- 25-44 year old females (54%)
- People who were responsible for three or more children (58%*)
- Samoan people (66%*)
- Tongan people (61%)
- 'Other' Pacific people (74%*)
- And *less* prevalent among:
- People in areas of low deprivation (29%*)
- 16-24 year old males (35%*)
- Males aged 45 years and older (39%)
- Females aged 45 years and older (41%)
- Cook Island Maaori people (37%)

Fellow employees

Other Changes Since Previous Survey

Those who said that people they worked with encouraged them or made it easier for them to be physically active have become *more* prevalent since the pre-campaign survey among:

- Main meal preparers (up 8% to 54%*)
- People from medium deprivation areas (up 10% to 56%*)
- People from high deprivation areas (up 9% to 61%*)
- Females aged 25 to 44 years (up 12% to 62%*)
- People responsible for any children (up 9% to 54%*)
- People who were sedentary (up 14% to 50%)
- People interested in being more physically active (up 6% to 54%*)

Differences Within Current Survey

Those saying support from the **people they worked with** was *more* prevalent among:

- People in areas of high deprivation (61% vs 52% for total sample*)
- People who were responsible for three or more children (64%*)
- Samoan people (76%*)
- Tongan people (66%*)
- 'Other' Pacific people (74%*)

And *less* prevalent among:

- People in areas of low deprivation (35%*)
- Males aged 45 years and older (35%*)

People at church or place of worship

Other Changes Since Previous Survey

Those who said that people at their church or place of worship encouraged them or made it easier for them to be physically active have become *more* prevalent since the pre-campaign survey among:

- People from medium deprivation areas (up 10% to 54%)

Differences Within Current Survey

Those who said it was the **people at their church or place of worship** were *more* prevalent among:

- People who were interested in being more physically active (65% vs 62% for total sample)
- People in areas of high deprivation (67%)
- 16-24 year old females (72%)
- People who were responsible for three or more children (69%)
- Samoan people (78%*)
- Cook Island Maaori people (73%)

And *less* prevalent among:

- People in areas of low deprivation (49%*) or medium deprivation (54%)
- People who were overweight (52%)

Doctor or other medical centre staff

Other Changes Since Previous Survey

Those who said that their doctor or other medical centre staff encouraged them or made it easier for them to be physically active have become *more* prevalent since the pre-campaign survey among:

- People in the at-risk group (up 6% to 58%*)
- People who a doctor would describe as overweight (up 6% to 60%*)
- People who were sedentary (up 13% to 58%*)
- Main meal preparers (up 6% to 54%*)
- Main household shoppers (up 7% to 55%*)
- People from medium deprivation areas (up 9% to 53%*)
- People from high deprivation areas (up 7% to 63%*)
- Males aged 45 years or more (up 8% to 59%)
- Females aged 25 to 44 years (up 6% to 51%)
- Those interested in eating more healthily (up 5% to 60%*)
- Those interested in being more physically active (up 4% to 59%*)

Differences Within Current Survey

Those saying their **doctors/medical centre staff** were *more* prevalent among:

- People who were interested in eating more healthily (60% vs 55% for total sample*)
- People who were interested in being more physically active (59%*)
- People in areas of high deprivation (63%*)
- Samoan people (83%*)
- Cook Island Maaori people (69%*)

- Tongan people (75%*)
- 'Other' Pacific people (70%)
- People with diabetes (81%*)
- People who were obese (66%*)

And *less* prevalent among:

- People in areas of low deprivation (44%*)
- 16-24 year old males (43%*)

There were insufficient Maori using local **marae** to comment on differences across groups.

Comparison with support to eat healthily

The table which follows indicates that children, workplace colleagues and employers tended to be more supportive of physical activity than healthy eating. The converse applied for other adults in the household and doctors, who were more supportive of healthy eating. Although there have been several increases in the percentages who find other people supportive between the pre-campaign and post-campaign surveys, these trends have remained.

Table 33: Sources of support for healthy eating and physical activity

| SOURCES OF SUPPORT FOR HEALTHY EATING AND PHYSICAL ACTIVITY | EAT HEALTHILY | | BE PHYSICALLY ACTIVE | |
|-------------------------------------------------------------|---------------|---------------|----------------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | % | % | % | % |
| Other adults in your household | 70 | 73▲ | 60 | 60 |
| Children in your household* | 54 | 55 | 65 | 64 |
| Your wider family/ whaanau and close friends | 54 | 59▲▲ | 54 | 58▲▲ |
| Your employer** | 34 | 33 | 39 | 48▲▲ |
| People you work with*** | 41 | 43 | 48 | 52▲▲ |
| People at your church or place of worship**** | 54 | 55 | 60 | 62 |
| People at your marae in Counties Manukau***** | | 53 | | 49 |
| Doctor/medical centre staff | 56 | 60▲▲ | 50 | 55▲▲ |

* This is only asked of those who are responsible for their children

** The base excludes people who were not in employment or who felt the question was not applicable (presumably mostly because they were employers)

*** This base excludes people who were not in employment

**** This is only asked of those who regularly attended church or a place of worship

***** This is only asked of Maori who have a marae in the region which they attend

DISCUSSION

Further evidence of possible campaign impacts on support given to others

The increase in reported support from several sources was consistent with that reported for support for healthy eating. It provides further evidence of the

campaign possibly having created an environment in which people feel more inclined to support and encourage others to adopt more healthy practices.

4.5.4 CHILDREN'S PHYSICAL ACTIVITY

Support given to children to be physically active

Two-thirds of those responsible for children or young people said they gave them 'a lot' of support to be physically active, whilst one-quarter gave them 'some' support. While the total who gave either of these two answers remained constant since the pre-campaign survey, there was a reduction (by 5%*) in the proportion of respondents who said they give 'a lot' of support and a corresponding increase (4%*) in the proportion who said they give 'some' support.

Pacific people changed their levels of claimed support for children to be physically active between the pre- and post-campaign surveys, with significant changes towards only moderate levels of support rather than 'a lot' of support. Post-campaign 63 percent said they were giving 'a lot' of support to children (down 14% from pre-campaign*). This was largely a result of increases in Pacific people saying they were now giving 'some support' (up 8% to 23%*) or 'a little support' (up 4% to 9%*) to children to be physically active.

Maaori showed a similar but less pronounced pattern, with increased proportions giving 'some support' (up 8% to 22%*) and some drift away from giving 'a lot' of support to children (down 7% to 67%, not statistically significant, but clearly related to the increase in 'some support').

Table 34: Support given to children to be physically active

| SUPPORT GIVEN TO CHILDREN TO BE PHYSICALLY ACTIVE | THOSE RESPONSIBLE FOR CHILDREN | | | | | | | | | | | |
|---------------------------------------------------|--------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1,442 | 1,207 | 365 | 312 | 521 | 412 | 191 | 258 | 168 | 97 | 416 | 320 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| A lot | 72 | 67▼▼ | 74 | 67 | 77↑ | 63▼▼ | 73 | 73 | 59↓↓ | 55↓ | 70 | 69 |
| Some | 20 | 24▲ | 14↓↓ | 22▲▲ | 15↓ | 23▲▲ | 19 | 20 | 23 | 23 | 23 | 24 |
| A little | 5 | 6 | 7 | 7 | 5 | 9↑▲▲ | 6 | 5 | 15↑↑ | 20↑↑ | 3 | 4 |
| None | 3 | 3 | 4 | 4 | 3 | 5 | 1 | 1 | 2 | 2 | 3 | 3 |
| Don't know | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |

Other Changes Since Previous Survey

The proportion who said they **gave their children/young people 'a lot' of support to be physically active** *decreased* since the pre-campaign survey for:

- Samoan people (down 15% to 61%*)
- Tongan people (down 26% to 56%*)
- Those in the at risk group (down 9% to 65%*)
- Those who a doctor would describe as overweight (down 9% to 65%*)
- People who a doctor would describe as obese (down 13% to 58%)
- Those with a family history of diabetes (down 7% to 69%)
- Main meal preparers (down 5% to 72%)
- People from high deprivation areas (down 7% to 64%)
- Those responsible for any children (down 5% to 66%)
- Those interested in eating more healthily (down 6% to 65%*)

The proportion who said they **gave their children/young people 'some' support** to be physically active *increased* for:

- Main meal preparers (up 4% to 21%)
- Those interested in eating more healthily (up 4% to 25%)

Differences Within Current Survey

Those who gave their children/young people **'a lot' of support** were *more* prevalent among:

- Females 45 years and over (82% vs 67% for all persons answering)
- Females aged 25 to 44 years (73%)
- Meal preparers (72%)

- Household shoppers (73%)

And **less** prevalent among:

- Males aged 16 to 24 years (42%)
- Females aged 16 to 24 years (35%)

Comparison with support given to children to eat healthily

Compared with the pre-campaign survey, results from the post-campaign survey for support of children have moved from 'a lot' of support to 'some' support, for supporting both being physically active and eating healthily. Support for children remains similar for physical activity and eating healthily.

Table 35: Comparison Of support given to children for healthy eating and physical activity

| COMPARISON OF SUPPORT GIVEN TO CHILDREN TO EAT HEALTHILY AND BE PHYSICALLY ACTIVE | BE PHYSICALLY ACTIVE | | EAT HEALTHILY | |
|-----------------------------------------------------------------------------------|----------------------|---------------|---------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1442 | 1207 | 1442 | 1207 |
| | % | % | % | % |
| A lot | 72 | 67▼▼ | 77 | 71▼▼ |
| Some | 20 | 24▲ | 17 | 22▲▲ |
| A little | 5 | 6 | 4 | 4 |
| None | 3 | 3 | 2 | 3▲ |
| Don't know | 1 | 0 | 1 | 0 |

Perceptions of children's activity levels

Just over one-in-ten (11%) thought their children would need to do 'a lot more' physical activity to be healthy. This was a significant decrease since the pre-campaign survey (although by just 3%).

The majority (59%) thought their children were doing enough physical activity to be healthy.

The only significant change from the pre-campaign survey for the main ethnic groups was a reduction in the proportion of people from Other ethnic groupings thinking their children would need to do 'a lot' more physical activity to be healthy (2%, down from 5% pre-campaign*).

Table 36: How felt about children's physical activity levels

| HOW FELT ABOUT CHILDREN'S PHYSICAL ACTIVITY LEVELS | THOSE RESPONSIBLE FOR CHILDREN | | | | | | | | | | | |
|----------------------------------------------------|--------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1,442 | 1,207 | 365 | 312 | 521 | 412 | 191 | 258 | 168 | 97 | 416 | 320 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| They would need to do a lot more | 13 | 11▼ | 13 | 15↑ | 29↑↑ | 23↑↑ | 15 | 17↑↑ | 16 | 9 | 5↓↓ | 2↓↓▼ |
| They would need to do a bit more | 28 | 27 | 30 | 29 | 28 | 29 | 33 | 31 | 37↑↑ | 39↑↑ | 26 | 23 |
| They are doing enough to be healthy | 57 | 61 | 55 | 55 | 43↓↓ | 47↓↓ | 50 | 51↓↓ | 47↓↓ | 50↓ | 67↑ | 73↑↑ |
| Don't know/ don't care/ not relevant to me | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 2 | 2 | 2 |

Other Changes Since Previous Survey

The proportion who **thought their children needed to do 'a lot more' physical activity** to be healthy *decreased* among:

- People from low deprivation areas (down 3% to 4%)
- Females aged 45 years and over (down 12% to 14%)

- Those responsible for three or more children (down 6% to 11%)

The proportion who **thought their children needed to do 'a bit' more physical activity** to be healthy *increased* among:

- Females aged 45 years and over (up 10% to 33%)

The proportion who thought their children are **doing enough physical activity to be healthy** *increased* among:

- People from low deprivation areas (up 8% to 70%)

Differences Within Current Survey

Those who thought their children needed to do **'a lot more'** physical activity to be healthy were *more* prevalent among:

- People from high deprivation areas (18% vs 11% for all persons answering)
- Those with diabetes (25%)
- Obese persons (23%)

Those who thought their children needed to do **'a bit more'** were *more* prevalent among:

- Males aged 16 to 24 years (44% vs 28% for all persons answering)

Those who thought their children were **doing enough** were *more* prevalent among:

- Those from low deprivation areas (70% vs 59% of all persons answering)

Link with support given to children

The table which follows shows that those who thought their children were doing enough were a little more likely to be giving their children 'a lot' of support (72% vs 67% for total sample). However, there was no strong

pattern of support being linked to how much activity they felt their children were doing.

Table 37: Support for children's activity and feelings about children's activity levels

| SUPPORT GIVEN TO CHILDREN TO BE PHYSICALLY ACTIVE | HOW FELT ABOUT CHILDREN'S PHYSICAL ACTIVITY LEVELS | | | |
|---------------------------------------------------|----------------------------------------------------|-----------------------|-----------------------|------------------|
| | Those responsible for children | Need to do a lot more | Need to do a bit more | Are doing enough |
| | 1,207 | 168 | 377 | 649 |
| | % | % | % | % |
| A lot | 67 | 64 | 57↓↓ | 72↑ |
| Some | 24 | 20 | 33↑↑ | 22 |
| A little | 6 | 11↑ | 7 | 4 |
| None | 3 | 6 | 3 | 2 |
| Don't know | 0 | 0 | 0 | 0 |

DISCUSSION

Limited concern with children's activity levels

Even more so than with eating, parents tended to see their children's activity levels as being healthy enough (61% compared with 39% for eating). It is worth noting that parents can probably rely on schools to provide some physical activity for their children, whereas eating is an area for which parents have to take greater responsibility.

Possible reasons for reduced support

While noting the above, it is still a negative result that there was a reduction in the proportion who said they give 'a lot' of support to their children to be physically active and particularly the large decrease among Pacific parents.

Once again, it may be that some or all of this change was due to seasonal factors, with parents being less inclined to encourage their children to be physically active when the weather is colder or wet.

Impacting obese persons may also impact their children

Impacting obese persons will not only improve their health, it may also improve the health of their children, as obese persons currently are above average for feeling that their children need to do 'a lot' more activity to be healthy.

4.5.5 INTEREST IN BEING MORE PHYSICALLY ACTIVE

Two-thirds of survey participants were interested in being more physically active than they currently were. This result was unchanged since the pre-campaign survey.

Graph 19: Interested in being more physically active

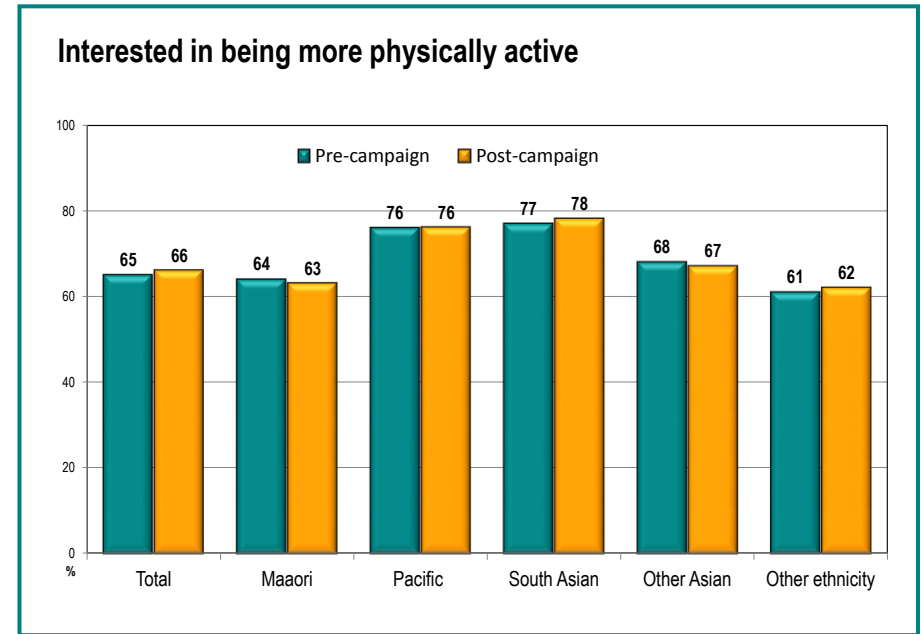


Table 38: Interested in being more physically active

| INTERESTED IN BEING MORE PHYSICALLY ACTIVE | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|--------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2520 | 2363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Yes | 65 | 66 | 64 | 63 | 76↑↑ | 76↑↑ | 77↑↑ | 78↑↑ | 68 | 67 | 61↓ | 62↓ |
| No | 34 | 34 | 35 | 36 | 23↓↓ | 23↓↓ | 22↓↓ | 22↓↓ | 31 | 32 | 38↑ | 38↑ |
| Don't know | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |

Other changes since previous survey

There was a change in interest of being more physically active shown by a *decrease* in the proportion who said they were *not interested*, among people from low deprivation areas (down 5% to 35%).

Differences Within Current Survey

Those interested in being more physically active were *more* prevalent among:

- Obese persons (73% vs 66% for total sample*)
- Females aged 16 to 24 years (81%*)
- Those interested in eating more healthily (79%*)
- Males aged 16 to 24 years (74%*)
- Females aged 25 to 44 years (73%*)
- Males aged 25 to 44 years (72%*)
- Those with a family history of diabetes (73%*)
- Those responsible for children (72%*)
- Those at risk of diabetes (72%*)

And *less* prevalent among:

- Males aged 45 years and over (48%*)

DIFFICULTY IN BEING MORE PHYSICALLY ACTIVE

Those who said they were interested in being more physically active were asked how difficult they found it to do so. The table below shows results from both this question and an equivalent question on the perceived difficulty of eating more healthily (the right-hand four columns of the table).

The first two columns of the table show results from the pre then post-campaign surveys, with results shown on a total sample base, i.e. with those who had answered 'not interested in changing' to the previous question included. The third and fourth columns are the same results, but based just on those who did express an interest in being more physically active. The other columns present the results on eating more healthily in the same way.

One-in-six respondents wanted to be more physically active and did not find it difficult to do so (16%, consistent between the pre- and post-campaign surveys). This equated to one-in-four of the respondents who were interested in being more physically active (which was again consistent between the two surveys).

In total there were three-quarters of those who were interested in being more physically active who had some difficulty in doing so, a result that was also very consistent with the pre-campaign result.

The comparisons in the table with eating healthily show that people found it more difficult to be more physically active than they did to eat more healthily.

Table 39: Difficulty in being more active vs eating healthily

| DIFFICULTY IN BEING MORE ACTIVE VS EATING HEALTHILY | DIFFICULTY IN BEING MORE ACTIVE | | | | DIFFICULTY IN EATING HEALTHILY | | | |
|-----------------------------------------------------|---------------------------------|---------------|---------------------------------------------|---------------|--------------------------------|---------------|------------------------------------|---------------|
| | TOTAL | | THOSE INTERESTED IN BEING PHYSICALLY ACTIVE | | TOTAL | | THOSE INTERESTED IN HEALTHY EATING | |
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 1,723 | 1,622 | 2,520 | 2,363 | 1,694 | 1,615 |
| | % | % | % | % | % | % | % | % |
| Not difficult | 16 | 16 | 25 | 25 | 26 | 25 | 41 | 39 |
| A little difficult | 21 | 22 | 32 | 33 | 21 | 20 | 33 | 32 |
| Somewhat difficult | 19 | 16 | 29 | 24 | 12 | 14 | 18 | 22 |
| Very difficult | 9 | 12 | 14 | 18 | 5 | 5 | 7 | 7 |
| Not interested in changing | 34 | 34 | - | - | 36 | 37 | - | - |

Amongst those interested in being more physically active, there was an increase in the proportion finding it 'very difficult' to do so (up 4% to 18%*). There was an associated decrease in people finding it 'somewhat difficult' (down 5% to 24%*). There were no significant trends in these results by ethnicity, except in that people of Other ethnic groupings had switched even more strongly than the total sample from indicating this is 'somewhat difficult' to 'very difficult'.

Graph 20: Difficulty in being more physically active

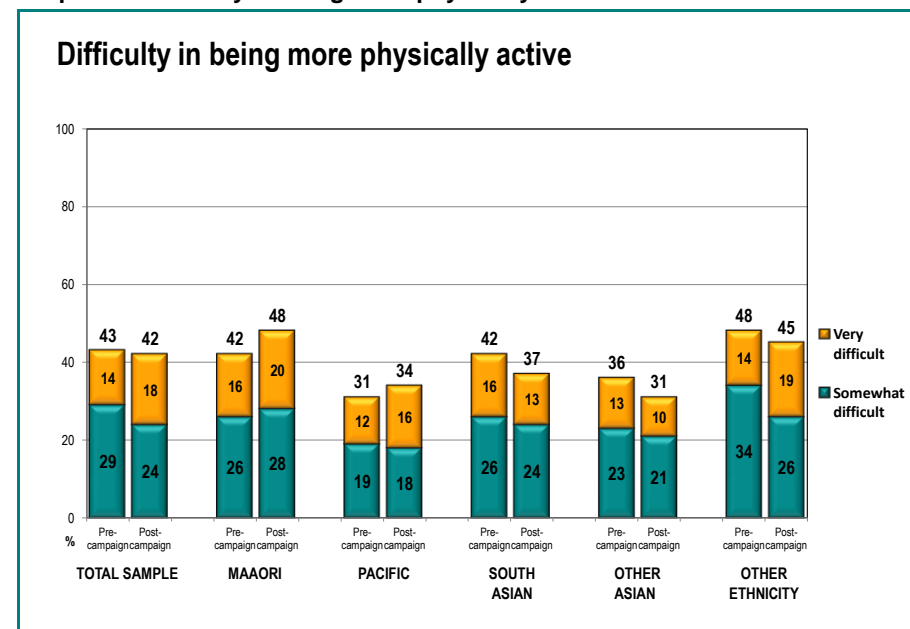


Table 40: Difficulty In being more physically active

| DIFFICULTY IN BEING MORE PHYSICALLY ACTIVE | SAMPLE INTERESTED IN BEING MORE PHYSICALLY ACTIVE | | | | | | | | | | | |
|--------------------------------------------|---------------------------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1,723 | 1,622 | 386 | 402 | 544 | 453 | 234 | 339 | 215 | 145 | 605 | 535 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Not difficult | 25 | 25 | 24 | 21 | 35↑↑ | 34↑↑ | 28 | 28 | 30 | 29 | 20↓ | 21 |
| A little difficult | 32 | 33 | 33 | 31 | 33 | 32 | 30 | 36 | 34 | 40 | 31 | 34 |
| Somewhat difficult | 29 | 24▼▼ | 26 | 28 | 19↓↓ | 18↓↓ | 26 | 24 | 23 | 21 | 34↑ | 26▼▼ |
| Very difficult | 14 | 18▲▲ | 16 | 20 | 12 | 16 | 16 | 13↓ | 13 | 10↓ | 14 | 19▲ |
| Don't know | 0 | 0 | 1↑ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Other Changes Since Previous Survey

The proportion who found it '**a little difficult**' to be more physically active *increased* among:

- Females aged 16 to 24 years (up 13% to 51%)

The proportion who found it '**very difficult**' *increased* among:

- Those in the at-risk group (up 5% to 21%*)
- People who a doctor would describe as overweight (up 5% to 22%)
- Main meal preparers (up 5% to 21%*)
- Main household shoppers (up 5% to 20%*)
- People from high deprivation areas (up 4% to 18%)
- Females aged 25 to 44 years (up 7% to 24%*)

- Those interested in eating more healthily (up 4% to 18%*)
- Those interested in being more active (up 4% to 18%*)

Differences Within Current Survey

Not finding it difficult was *more* mentioned by:

- Males aged 25 to 44 years (34% vs 25% for all persons answering)

Finding it '**a little difficult**' was *more* mentioned by:

- Females aged 16 to 24 years (51% vs 34% for all persons answering)

Finding it '**somewhat difficult**' was *more* mentioned by:

- Those of 'Other' Pacific Island groupings (43% vs 24% for all personal answering)

Finding it **'very difficult'** was *more* mentioned by:

- Females aged 25 to 44 years (24% vs 18% for all persons answering*)
- Obese persons (29%*)
- Sedentary persons (29%*)

LINK BETWEEN DIFFICULTY IN CHANGING AND REPORTED BEHAVIOURS

Those who expressed some difficulty with being more physically active were above average in feeling they were doing less than the recommended amount of activity. The proportion who felt this way was two-thirds among those who found it 'a little' difficult, while being almost four-fifths (78%) among those who found it 'very difficult'. In comparison, the level was just 57 percent for those who didn't find it difficult.

The reported levels of physical activity and vigorous activity were consistent with the above findings. People reported lower amounts of these activities when the level of perceived difficulty with being active was higher. For example:

- The number of days people were physically active was 3.8 a week among those who found it 'a little' difficult, while among those who found it 'very difficult' it was 2.9 (this compared with 4.1 days for those who found it 'not difficult')
- The number of days people did vigorous activity was 1.7 among those who found it 'a little' difficult, while being as low as 1.1 among those who found it 'very difficult'

FEELINGS ABOUT CURRENT LEVEL OF ACTIVITY

Those who said they were not interested in being more physically active than currently, were asked, "Which of the following best describes how you feel about your current level of physical activity?" They were read the three options shown in the table below. The first column of data shows that a quarter (24%) of the total sample felt they were already doing enough physical activity to be healthy. This equated to seven-out-of-ten (69%) of those answering this question. The changes in these results since the pre-campaign survey were minimal.

The comparison with healthy eating in the table shows that people were about equally likely to feel that their current level of activity was sufficiently healthy as was the case with their eating. (On a total sample base, those thinking their level of activity was sufficiently healthy were 24%, which compared with 25% for eating. On the reduced basis of just those asked this question, those thinking their level of activity was sufficiently healthy were 69%, which compared with 67% for eating.)

There was a marked decrease in the proportion of Pacific people who thought they were doing 'enough' to be physically healthy (down 21% to 59%*), and a corresponding strong increase in the proportion who thought 'I would need to do a lot more to be physically healthy' (up 13% to 14%*). There has also been a moderate increase in the proportion of Maori thinking 'I would need to do a lot more to be physically healthy' (up 6% to 10%).

Table 41: Feelings about current level of activity compared with current diet

| FEELINGS ABOUT CURRENT LEVEL OF ACTIVITY COMPARED WITH FEELINGS ABOUT CURRENT DIET | FEELINGS ABOUT CURRENT LEVEL OF ACTIVITY | | | | FEELINGS ABOUT CURRENT DIET | | | |
|---------------------------------------------------------------------------------------|---------------------------------------------|------------------|----------------------------------------------------------|------------------|-----------------------------|------------------|----------------------------------------------|------------------|
| | TOTAL | | THOSE NOT INTERESTED IN BEING PHYSICALLY ACTIVE | | TOTAL | | THOSE NOT INTERESTED IN HEALTHY EATING | |
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 797 | 741 | 2,520 | 2,363 | 826 | 748 |
| | % | % | % | % | % | % | % | |
| I am doing enough to be healthy/ it is healthy enough | 25 | 24 | 73 | 69 | 22 | 25 | 59 | 67 |
| I would need to do a bit more to | 8 | 8 | 23 | 23 | 13 | 11 | 35 | 29 |
| I would need to do a lot more to | 1 | 2 | 4 | 7 | 2 | 1 | 4 | 3 |
| Are interested in changing (so didn't get asked this question) | 65 | 66 | - | - | 63 | 63 | - | - |
| Don't know | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

Graph 21: Feelings about current level of activity

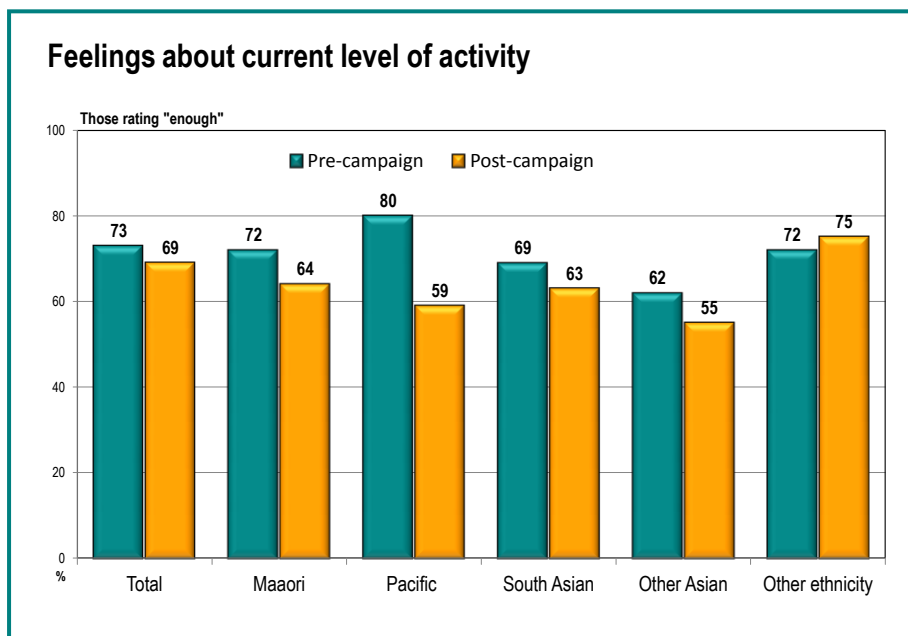


Table 42: Feelings about current level of activity, by ethnicity

| FEELINGS ABOUT CURRENT LEVEL OF ACTIVITY | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|---------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 797 | 741 | 208 | 204 | 168 | 141 | 65 | 91 | 91 | 69 | 393 | 333 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| I am doing enough to be healthy | 73 | 69 | 72 | 64 | 80 | 59↓▼▼ | 69 | 63 | 62↓ | 55↓ | 72 | 75 |
| I would need to do a bit more to be healthy | 23 | 23 | 23 | 25 | 18 | 26 | 30 | 32 | 26 | 29 | 23 | 21 |
| I would need to do a lot more to be healthy | 4 | 7▲ | 4 | 10▲ | 1 | 14↑↑▲▲ | 1 | 5 | 10↑ | 15↓ | 4 | 5 |
| Don't know | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 |

Other Changes Since Previous Survey

The proportion of those thinking they **would need to do 'a bit more' to be healthy** *increased* among:

- Males aged 45 years and over (up 9% to 26%)

The proportion of those thinking they **would need to do 'a lot more' to be healthy** *increased* among:

- Samoan people (up 19% to 22%*)
- Cook Island Maaori (up 12% to 13%)
- Tongan people (up 14% to 15%)
- People in the at-risk group (up 5% to 11%)
- People who a doctor would describe as obese (up 22% to 32%)
- People with a family history of diabetes (up 7% to 9%*)
- Main meal preparers (up 5% to 7%*)
- Main household shoppers (up 5% to 7%*)
- People from high deprivation areas (up 7% to 9%*)
- Females 25 to 44 years (up 10% to 13%)
- Females 45 years and over (up 5% to 8%)
- People responsible for any children (up 4% to 9%)
- Those interested in eating more healthily (up 6% to 12%*)

Differences Within Current Survey

Not being interested in keeping physically active because they were **already healthy enough** was *more* mentioned by:

- Those interested in eating more healthily (56% vs 69% for all persons answering)

'**Could do a bit more to be healthy**' was *more* mentioned by:

- Obese persons (36% vs 23% for all persons answering)
- Those who were at risk of diabetes (32%)
- Those interested in eating more healthily (32%)

'**Could do a lot more to be healthy**' was *more* mentioned by:

- Sedentary persons (17% vs 7% for all persons answering)
- Samoan people (22%*)
- Those who were at risk of diabetes (11%)
- Those interested in eating more healthily (12%*)
- Females aged 25-44 years (13%)
- Obese persons (13%)

LINK BETWEEN FEELINGS ABOUT CURRENT LEVEL OF ACTIVITY AND REPORTED BEHAVIOURS

Those who were **not interested in changing because they felt they were healthy enough** were more likely to feel they were doing the recommended amount of activity or more (69% vs 59% for total sample), and their reported levels of activity showed them to be clearly the most active group:

- Did at least 10 minutes activity on 5 days (versus 4.7 average) and vigorous activity on 2.8 days (vs 2.4)

- Did 12.9 hours physical activity (vs 11.1) and 4.5 hours of vigorous activity (vs 3.6)

DISCUSSION

High interest in being more active

As with eating more healthily, there was a high level of interest in being more active. However the difficulty is in transferring that interest into action, which was reflected in three-quarters of this group having some difficulty in being more active.

There were a lot of the same people who were interested in eating more healthily and being more active, which should contribute to some efficiencies with efforts to try and change behaviours.

High interest from obese persons

It was again a positive finding that the most at risk group, obese persons, were the most interested in being more physically active, with almost three-quarters (73%) being interested in such change.

Activity change more difficult than diet change

The findings indicate that it may be easier to get people to eat more healthily than it will be to get them to be more physically active; this is certainly how respondents perceived things.

4.5.6 POSSIBLE BARRIERS TO BEING MORE PHYSICALLY ACTIVE

Respondents who had difficulty with being more physically active (N=1209 respondents) were asked to rate two attitude statements relating to possible barriers. While there were a number of different possible barriers that could have been asked about, the two selected (cost and access) were factors on which it was felt the Let's Beat Diabetes programme could possibly have some influence.

A third (32%) agreed that they **can't afford the cost of things they would need "such as babysitters, clothes, equipment and gym membership"**, which was a five percent increase (up to 27%*).

The same proportion as in the pre-campaign survey, one-in-eight, agreed that there **weren't enough places in their area for them to go or join, such as parks, walking groups or sports clubs**.

Just over one-third (36%) **mentioned at least one of these two barriers**, with the level being at almost a half for both Pacific people (49%) and South Asians (47%). The level for Maaori was also over four-in-ten (43%), and for Other ethnicities were more than one-quarter (27%).

There were a third (31%) who **disagreed with both of these two barriers**, with the level being higher for Other ethnicities at 38 percent. The level was lower and close to one-quarter for all other main ethnic groups: 24 percent for Maaori (down 8%* since pre-campaign), 22 percent for Pacific people, 23 percent for South Asians and 24 percent for Other Asians.

Table 43: Possible barriers to being more physically active ((among those who had difficulty)

| POSSIBLE BARRIERS TO BEING MORE PHYSICALLY ACTIVE | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-----------------------------------------------------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 1,266 | 1,209 | 298 | 316 | 363 | 306 | 177 | 244 | 149 | 112 | 481 | 429 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Can't afford cost of things I would need such as babysitters, clothes, equipment, gym membership | | | | | | | | | | | | |
| Agree | 27 | 32▲▲ | 33↑ | 38↑ | 36↑↑ | 42↑↑ | 41↑↑ | 40↑ | 26 | 32 | 22↓ | 27↓ |
| Disagree | 44 | 39▼ | 44 | 30↓↓▼▼ | 27↓↓ | 27↓↓ | 31↓↓ | 31↓ | 36 | 31 | 51↑↑ | 46↑↑ |
| There aren't enough places in my area for me to go or join such as parks, walking groups or sports clubs | | | | | | | | | | | | |
| Agree | 13 | 12 | 12 | 14 | 18↑ | 21↑↑ | 22↑↑ | 23↑↑ | 23↑↑ | 17 | 9↓ | 5↓↓▼ |
| Disagree | 65 | 63 | 58↓ | 61 | 58↓↓ | 53↓↓ | 51↓↓ | 51↓↓ | 48↓↓ | 47↓↓ | 71↑ | 70↑↑ |
| Agree with at least one | 32 | 36 | 37 | 43↑ | 43↑↑ | 49↑↑ | 49↑↑ | 47↑↑ | 41↑ | 38 | 26↓↓ | 27↓↓ |
| Disagree with both | 35 | 31 | 32 | 24↓▼ | 23↓↓ | 22↓↓ | 25↓↓ | 23↓ | 24↓↓ | 24 | 42↑ | 38↑ |

Can't afford the cost of things they would need

The proportions of those *agreeing* that they can't afford the cost of things they would need such as babysitters, clothes, equipment and gym membership, *increased* among:

- People from medium deprivation areas (up 10% to 35%*)
- People from high deprivation areas (up 8% to 37%)
- Males aged 25 to 44 years (up 15% to 37%*)
- Females aged 16 to 24 years (up 18% to 42%*)
- Those responsible for any children (up 8% to 38%*)
- Those responsible for three or more children (up 15% to 42%*)
- Those interested in eating more healthily (up 6% to 35%*)
- Those interested in being more active (up 5% to 32%*)

Differences Within Current Survey

Agreement that **cost issues** were creating difficulty was *more* prevalent among:

- Those responsible for three or more children (42% vs 32% of those answering*)
- Those responsible for any children (38%*)
- Females 16 to 24 years (42%)
- People with diabetes (42%)

And *less* prevalent among:

- People from low deprivation areas (24%)
- Males aged 45 years and over (19%)

Aren't enough places to go or join

Other Changes Since Previous Survey

The proportions of those *agreeing* that there aren't enough places in my area for me to go or join such as parks, walking groups or sports clubs, *decreased* among:

- People from low deprivation areas (down 4% to 6%)
- Males aged 16 to 24 years (down 9% to 8%)

Differences Within Current Survey

People with availability concerns were *more* prevalent among:

- Those from high deprivation areas (17% vs 12% of those answering)
- Samoan people (22%*)
- Tongan people (21%)

And *less* prevalent among:

- Those from low deprivation areas (6%)

DISCUSSION

Further evidence of impact of recession

The increased mentions of cost of exercising being a barrier was further evidence of the impact of the recession. People in both medium and high deprivation areas had increased mention of costs.

4.6 LINKS BETWEEN HEALTHY EATING AND PHYSICAL ACTIVITY

As these surveys have focussed on both healthy eating and physical activity, there is benefit in examining the links between the two areas.

INTEREST IN CHANGE

The table which follows shows the relationship between the responses for interest/difficulty in eating more healthily and being more physically active. Unlike most of the tables in this report, the table has been prepared so that the percentages in all the cells total 100 percent²⁶. It shows that there is a strong relationship between the response given for both eating and activity. If people did not give the same response, they often gave one in the next category (e.g. moving from 'a little difficult' to 'somewhat difficult').

²⁶ On the table they total 96% because of rounding.

Table 44: Interest/difficulty in being active and eating healthily

| INTEREST/ DIFFICULTY IN BEING ACTIVE | INTERESTED/ DIFFICULTY IN EATING HEALTHILY | | | | | | | TOTAL |
|-------------------------------------------|--------------------------------------------|-----------------------------------------|-----------------------------------------|-------------------------------------|---------------------------------|-------------------------------------|-------------------------------------------|------------|
| | Interested – don't find it difficult | Interested – find it a little difficult | Interested – find it somewhat difficult | Interested – find it very difficult | Not interested – healthy enough | Not interested – could be healthier | Not interested – could be a lot healthier | |
| | % | % | % | % | % | % | % | |
| Interested – don't find it difficult | 7 | 2 | 1 | 0 | 4 | 1 | 0 | 16 |
| Interested – find it a little difficult | 6 | 9 | 2 | 1 | 3 | 2 | 0 | 22 |
| Interested – find it somewhat difficult | 3 | 4 | 5 | 1 | 1 | 2 | 0 | 15 |
| Interested – find it very difficult | 2 | 2 | 3 | 2 | 2 | 1 | 0 | 12 |
| Not interested – healthy enough | 4 | 2 | 1 | 0 | 13 | 3 | 0 | 24 |
| Not interested – could be healthier | 2 | 1 | 1 | 0 | 2 | 2 | 0 | 9 |
| Not interested – could be a lot healthier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| TOTAL | 24 | 20 | 13 | 5 | 25 | 11 | 1 | 100 |

NB: Numbers don't add to the totals shown because of rounding.

BEHAVIOURS

There were some links between eating and activity behaviours:

- Those who were more active tended to eat more healthily:
 - ♦ Those who were 'regularly active' were higher for consumption of fruit (2.4 servings per day vs 2.2 for the total sample) and the combined fruit and vegetables (4.8 vs 4.4)
 - ♦ Those who were 'sedentary' were below average for consumption of fruit (2.0 vs 2.2), vegetables (1.9 vs 2.2) and the combined fruit and vegetables (3.8 vs 4.4)
- There were no differences for mean number of days on which fizzy or energy drinks were consumed by any of the activity groupings, except in that those

who were regularly physically active drank these on more days than average (3.0 vs 2.6)

- Sedentary persons more frequently ate larger portions than they needed (3.4 days per week vs 3.0) and breakfast on fewer days (6.0 vs 6.2)
- There were few significant differences across the different activity levels for healthy/less healthy cooking behaviours. Exceptions were those who were 'sedentary' were more inclined to:
 - ♦ 'Usually' cook meat or vegetables in butter (19% vs 10% for total sample)
 - ♦ Cook meat, including corned beef, with the fat removed or drained off, only 'sometimes' or 'never' (30% vs 23%)

BARRIERS

Those who mentioned barriers for activity were also above average for mentioning barriers for eating. Although it appeared that all barriers are correlated, the strongest correlation appeared to be between cost as a barrier to eating better food, and cost as a barrier to more physical activity.

DISCUSSION

This analysis identifies that there is some overlap between healthy eating and physical activity. This is perhaps not surprising given both are promoted as important for one's health. However what is perhaps more surprising is that

there is not more overlap and even stronger relationships. This suggests the possibility of a strategy that encouraged active people to take the same care with their body when it comes to eating as they do in keeping active and fit. Likewise those who eat healthily, but are not so active, could be encouraged to see the logic in also looking after their body by being more active.

4.7 ROLE OF PRIMARY CARE

This section considers the role of primary care in addressing healthy eating, activity, obesity and diabetes and also links back to the findings relating to levels of support provided by doctors and nurses. This section also includes information on the prevalence of smoking.

CONTACT WITH DOCTOR/NURSE

Seven-in-ten said they had spoken to a doctor or nurse in the last twelve months about their own personal health. This has increased since the pre-campaign survey (up 4%*). The increases were particularly notable for Maaori (up 8% to 71%*), South Asians (up 14% to 77%*) and Other Asians (up 11% to 63%).

Graph 22: Contact with doctor/nurse in last 12 months

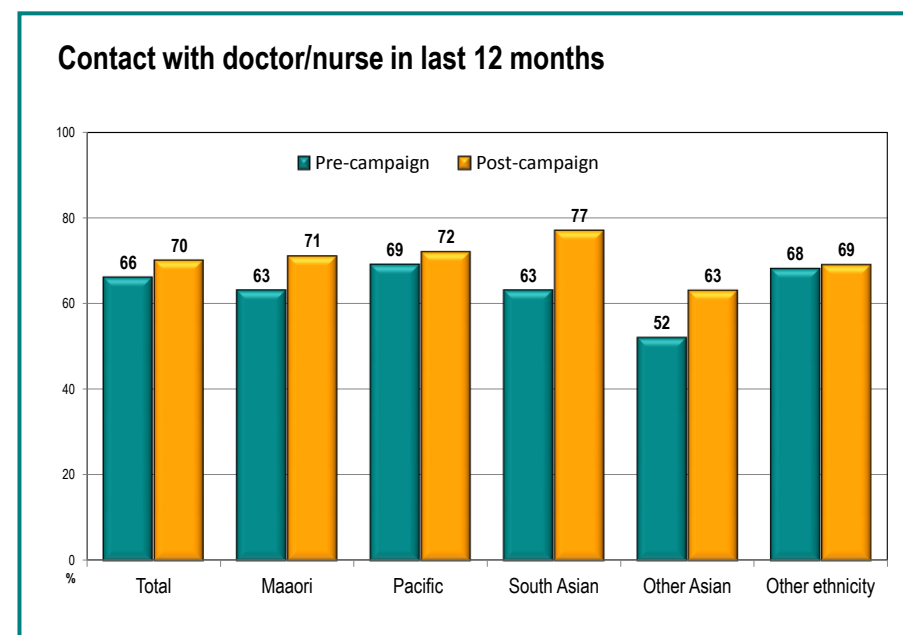


Table 45: Contact with doctor/nurse in last 12 months

| WHETHER CONTACT WITH DOCTOR/NURSE IN LAST 12 MONTHS FOR PERSONAL HEALTH | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-------------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Yes | 66 | 70 | 63 | 71▲▲ | 69 | 72 | 63 | 77↑↑▲▲ | 52↓↓ | 63↓▲ | 68 | 69 |
| No | 33 | 30 | 37 | 29▼▼ | 31 | 28 | 37 | 23↓↓▼▼ | 48↑ | 36↑▼ | 32 | 31 |
| Don't know | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

Other Changes Since Previous Survey

Increases in the proportions who had **spoken to a doctor or nurse** were found among:

- Main household shoppers (up 5% to 73%*)
- People from low and medium deprivation areas (up 5% to 70% and up 4% to 71% respectively)
- Males and females aged 45 years and over (up 8% to 81%* and up 7% to 85%* respectively)
- Those interested in eating more healthily (up 3% to 70%)
- Those interested in being more active (up 4% to 71%)

Differences Within Current Survey

Those who had **spoken with a doctor/nurse** in the last twelve months were *more* prevalent among:

- Those with diabetes (97% vs 70% for total sample)
- Females aged 45 and over (85%)
- Males aged 45 and over (81%)

Those who **had not spoken with a doctor/nurse** in the last twelve months were *more* prevalent among:

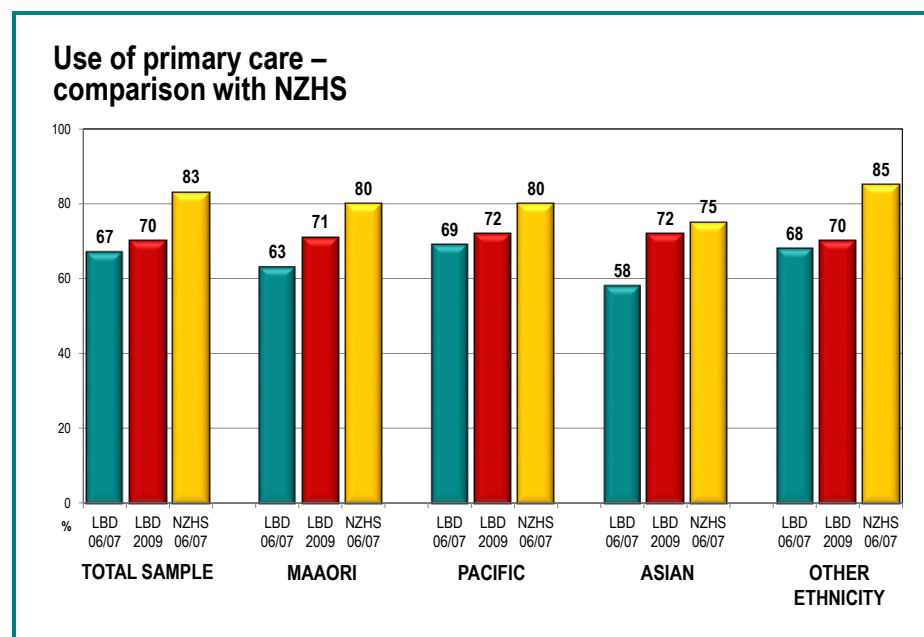
- Males aged 16 to 24 years (53% vs 30% for total sample)
- Females aged 16 to 24 years (52%)
- Males aged 25 to 44 years (42%)
- Those responsible for three or more children (41%)
- Females 25 to 44 years (37%)

- Those responsible for any children (36%)

Comparison with NZHS

The rates of using primary care were reported as being higher in the NZHS. The questioning in that survey asked people firstly to name their usual doctor and their address and then asked which types of health professionals they had seen at that location in the previous 12 months. This greater level of prompting may account for the differences in reported usage.

Graph 23: Use of primary care – comparison with NZHS



HEALTH CHECKS/ ADVICE

Persons who had spoken with a doctor or nurse about their own health in the previous twelve months were read a list of items and asked to indicate which they had received during their visits to doctors or nurses over that period. The figures shown in the last two columns in the table which follows are the results for this sub-sample who visited the doctor or nurse. The first two columns are the same results presented for the total sample. So, for example, nearly nine-in-ten (89%) of all the people who had contact with a doctor or nurse received a blood pressure test and this equated with just over three-fifths (63%) of the total sample. The figures reported in the rest of this section are all based on the total sample.

In terms of tests, just under a third (63%) of the total sample reported having had a blood pressure test, just under three-fifths (58%) reported having their weight measured, followed by just under half (47%) who had a cholesterol test and over four-in-ten (43%) a diabetes test. These proportions have all increased markedly since the pre-campaign survey. Clearly these "total sample" increases are in part due to the increased incidence of people speaking to a doctor or nurse, but importantly, the second pair of columns shows that there have been marked increases in these specific tests even just among those who have spoken to a doctor or nurse. In other words, the results show that doctors and nurses have increased the extent to which they apply these tests, over and above people speaking to them more often.

Two-fifths (41%) were talked to about their exercise or physical activity, up 4%* from the pre-campaign result. This was followed by a similar proportion (38%) who were talked to about healthy eating or weight, up 5%* from the pre-campaign result. Over a third (36%) were talked to about their risk of diabetes or heart disease, again an increase from the pre-campaign survey (up 5%*).

Half (49%) mentioned any one of these three, up 4 percent* from the pre-campaign survey. This increase was evident for Maaori (up 10% to 56%*), Pacific people (up 8% to 67%*), South Asians (up 10% to 61%*) and Other Asians (up 16% to 47%*).

Mention of any one of these three was well over nine-in-ten for those with diabetes (94%). There was an increase for those who a doctor would describe as overweight (up 5% to 54%) and those with a family history of diabetes (up 5% to 50%). There was also a similar but non-significant increase for those who a doctor would describe as obese (up 5% to 64%).

Nearly one-fifth (18%) were spoken to about stopping smoking. Among smokers, this level was at one-half (50%). One-in-eight were given a green prescription. These proportions were unchanged since the pre-campaign survey.

However, there were one-in-ten (10%) people who said they were not currently smokers who also said the doctor or nurse had talked to them about stopping smoking. This is the exact same proportion as in the pre-campaign survey. It seems unlikely that all of these people had stopped smoking since the doctor talked to them, so these findings may be indicative of under-reported smoking behaviour (see smoking section later in this chapter).

As shown in the second of the following tables, Maaori showed increases from the pre-campaign results for all health checks and advice covered by the survey. All these increases were statistically significant, with the biggest increases being for being given a diabetes test and being talked to about their

risk of diabetes or heart disease (both these increased by 13% between the surveys).

Pacific people were more often given blood tests in the current survey than pre-campaign (up 5% to 67%), and were more often talked to about healthy eating or weight (up 8% to 63%*), risk of diabetes or heart disease (up 6% to 59%), and about exercise or physical activity (up 6% to 62%).

South Asians and Other Asians showed increases in all checks and advice being given, except for being given green prescriptions, which remained relatively constant since pre-campaign.

Table 46: Health checks/consultation in previous 12 months

| HEALTH CHECKS/ CONSULTATION RECEIVED IN PREVIOUS 12 MONTHS | TOTAL | | BEEN TO DOCTOR | |
|------------------------------------------------------------|--------------|---------------|----------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | % | % | % | % |
| Given you a blood pressure test | 60 | 63▲ | 90 | 89 |
| Given you a cholesterol test | 41 | 47▲▲ | 62 | 67▲▲ |
| Given you a diabetes test | 37 | 43▲▲ | 56 | 60▲ |
| Measured your weight | 53 | 58▲▲ | 79 | 83▲▲ |
| Talked to you about stopping smoking (all persons) | 18 | 18 | 28 | 26 |
| Talked to you about stopping smoking (current smokers) * | 52 | 50 | 84 | 86 |
| Talked to you about healthy eating or weight | 33 | 38▲▲ | 50 | 54▲ |
| Talked to you about your risk of diabetes or heart disease | 31 | 36▲▲ | 46 | 50▲ |
| Talked to you about exercise or physical activity | 37 | 41▲▲ | 56 | 59 |
| Given a green prescription | 11 | 13 | 17 | 19 |

* There were 454 current smokers

Graph 24: Were talked to about any health issues

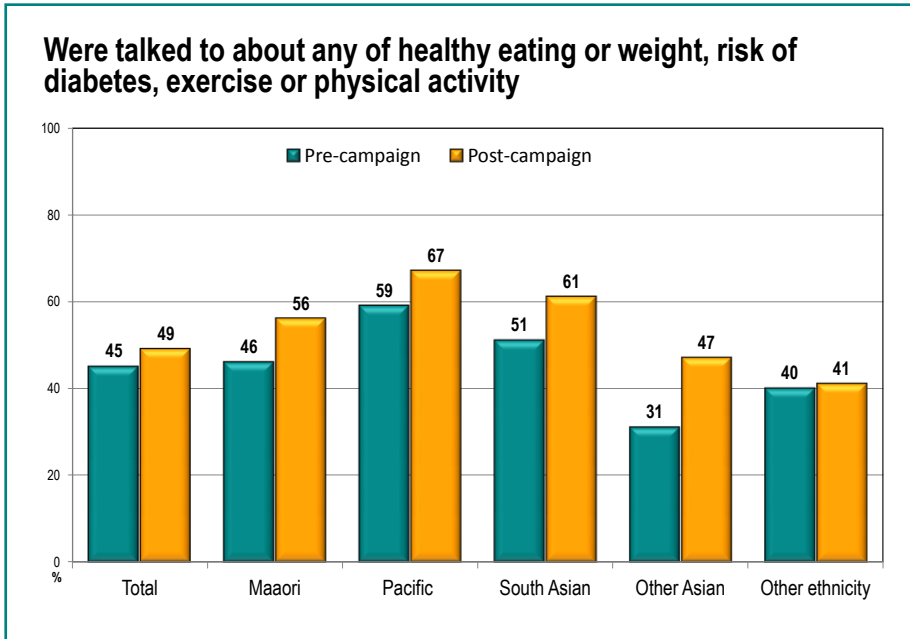


Table 47: Health checks/advice received in previous 12 months

| HEALTH CHECKS/ ADVICE RECEIVED IN PREVIOUS 12 MONTHS | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|---------------------------------------------------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Given you a blood pressure test | 60 | 63▲▲ | 55 | 65▲▲▲ | 62 | 67↑▲ | 55 | 70↑▲▲ | 41↓↓ | 57▲▲ | 62 | 61 |
| Given you a cholesterol test | 41 | 47▲▲ | 40 | 47▲ | 47↑ | 52↑ | 43 | 58↑▲▲ | 28↓↓ | 47▲▲ | 41 | 44 |
| Given you a diabetes test | 37 | 43▲▲ | 35 | 48↑▲▲ | 50↑↑ | 54↑↑ | 44↑ | 53↑↑▲ | 23↓↓ | 42▲▲ | 35 | 37↓↓ |
| Measured your weight | 53 | 58▲▲ | 51 | 60▲▲ | 61↑↑ | 66↑↑ | 53 | 69↑▲▲ | 36↓↓ | 52▲▲ | 52 | 55 |
| Talked to you about stopping smoking (all persons) | 18 | 18 | 24↑↑ | 30↑↑▲ | 42↑↑ | 35↑↑▼▼ | 17 | 19 | 12↓ | 12↓ | 11↓↓ | 12↓↓ |
| Talked to you about stopping smoking (smokers) | 52 | 50 | 51 | 60↑↑ | 63 | 70↑↑ | 47 | 73↑↑▲ | 38 | 67▲ | 50 | 38↓▼ |
| *Talked to you about healthy eating or weight | 33 | 38▲▲ | 37 | 48↑▲▲ | 55↑↑ | 63↑▲▲ | 43↑↑ | 51↑↑▲ | 23↓↓ | 35▲▲ | 26↓↓ | 27↓↓ |
| *Talked to you about your risk of diabetes or heart disease | 31 | 36▲▲ | 33 | 46↑▲▲ | 53↑↑ | 59↑↑▲ | 37↑ | 47↑↑▲ | 19↓↓ | 32▲▲ | 24↓↓ | 25↓↓ |
| *Talked to you about exercise or physical activity | 37 | 41▲▲ | 41 | 46↑▲ | 56↑↑ | 62↑↑▲ | 43 | 55↑▲▲ | 25↓↓ | 37▲▲ | 32↓↓ | 33↓↓ |
| Given a green prescription | 11 | 13 | 12 | 19↑▲▲ | 28↑↑ | 32↑↑ | 17↑↑ | 18↑ | 12 | 12 | 6↓ | 6↓ |
| At least one of those marked * | 45 | 49▲▲ | 46 | 56↑▲▲ | 59↑↑ | 67↑▲▲ | 51↑ | 61↑▲▲ | 31↓↓ | 47▲▲ | 40↓ | 41↓↓ |

Table 48: Health checks/advice by 'at risk' groups

| HEALTH CHECKS/ ADVICE BY 'AT RISK' GROUPS | TOTAL | | THOSE WITH DIABETES | | OVERWEIGHT | | OBESE | | THOSE WITH FAMILY HISTORY | | SEDENTARY | |
|--------------------------------------------------|--------------|---------------|---------------------|---------------|--------------|--------------|---------------|--------------|---------------------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Pre campaign | Post campaign | Pre campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 169 | 216 | 943 | 840 | 273 | 275 | 683 | 657 | 210 | 329 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Give blood pressure test | 59 | 63▲ | 91↑↑ | 96↑↑▲ | 59 | 62 | 62 | 68 | 58 | 63 | 59 | 59 |
| Give cholesterol test | 41 | 47▲▲ | 85↑↑ | 91↑↑ | 41 | 47▲ | 50↑↑ | 52 | 43 | 47 | 45 | 42 |
| Give a diabetes test | 37 | 42▲▲ | 89↑↑ | 96↑↑▲ | 38 | 41 | 51↑↑ | 53↑↑ | 40 | 44 | 39 | 39 |
| Measure your weight | 52 | 58▲▲ | 84↑↑ | 96↑↑▲▲ | 54 | 57 | 60↑ | 67↑↑ | 53 | 55 | 50 | 51↓ |
| Talk to you about stopping smoking (all persons) | 18 | 18 | 39↑↑ | 27↑↑▼ | 19 | 20 | 29↑↑ | 30↑↑ | 20 | 20 | 18 | 18 |
| Talk to you about stopping smoking (smokers) | 52 | 50 | 86 | 98↑↑ | 51 | 50 | 59 | 69↑↑ | 53 | 56 | 51 | 46 |
| *Talk to you about healthy eating | 32 | 36▲▲ | 75↑↑ | 79↑↑ | 40↑↑ | 45↑↑▲ | 54↑↑ | 58↑↑ | 36 | 38 | 36 | 28↓↓ |
| *Talk about risk of diabetes/ heart disease | 30 | 34▲▲ | 84↑↑ | 91↑↑ | 35↑↑ | 36 | 53↑↑ | 53↑↑ | 34↑ | 38 | 28 | 28↓ |
| *Talk to you about exercise/physical activity | 36 | 40▲▲ | 84↑↑ | 83↑↑ | 43↑↑ | 47↑↑ | 55↑↑ | 56↑↑ | 37 | 40 | 36 | 36 |
| Given a green prescription | 11 | 12 | 40↑↑ | 44↑↑ | 13 | 15 | 23↑↑ | 22↑↑ | 12 | 10 | 8 | 10 |
| Have not been to a doctor/nurse | 34 | 30▼▼ | 7↓↓ | 3 | 35 | 33 | 31 | 26 | 33 | 31 | 35 | 36↑ |
| At least one marked * | 44 | 48▲▲ | 89↑↑ | 94↑↑ | 49↑↑ | 54↑▲ | 59↑↑ | 64↑↑ | 45 | 50▲ | 46 | 42↓ |

Blood pressure test

Other Changes Since Previous Survey

Increases in the proportions who had **received a blood pressure test** in the previous twelve months were found among:

- Main household shoppers (up 5% to 67%*)
- People from high deprivation areas (up 5% to 64%)

- 'Other' Pacific peoples (up 33% to 72%*)
- Those at risk of diabetes (up 4% to 62%)
- People with diabetes (up 5% to 96%)
- Males aged 45 years and over (up 8% to 79%)
- Females aged 45 years and over (up 5% to 80%)

Decreases in the proportions who had received a blood pressure test in the previous twelve months were found among:

- Females aged 16 to 24 years (down 12% to 33%)

Differences Within Current Survey

Those who received a **blood pressure test** in the previous twelve months were *more* prevalent among:

- Household shoppers (67% vs 63% for total sample*)
- Main meal preparer (66%)
- Males aged 45 years or older (79%*)
- Females aged 45 years or older (80%*)
- People who were overweight (67%)
- People who were obese (68%)
- People with diabetes (96%*)

And *less* prevalent among:

- Males aged 16 to 24 years (19%*)
- Males aged 25 to 44 years (48%*)
- Females aged 16 to 24 years (33%*)
- Females aged 25 to 44 years (55%*)
- People who were responsible for any children (54%*) or three or more children (49%*)
- Niuean people (44%*)

Cholesterol test

Other Changes Since Previous Survey

Increases in the proportions who had received a **cholesterol test** in the previous twelve months were found among:

- People who a doctor would describe as overweight (up 6% to 47%)
- Main meal preparers (up 4% to 47%)
- Household main shoppers (up 5% to 50%*)
- People from high deprivation areas (up 6% to 47%*)
- Males aged 25 to 44 years (up 10% to 41%*)
- Those interested in eating more healthily (up 6% to 47%*)
- Those interested in being more active (up 7% to 47%*)

Decrease in the proportion of those who had not received a cholesterol test in the previous twelve months was found among:

- Niuean people (down 27% to 18%*)

Differences Within Current Survey

Those who received a **cholesterol test** were *more* prevalent among:

- Males aged 45 years or older (67% vs 47% for total sample*)
- Females aged 45 years or older (64%*)
- People with diabetes (91%*)
- People who were obese (53%*)

And *less* prevalent among:

- Males aged 16 to 24 years (9%*)
- Females aged 16 to 24 years (41%)
- Males aged 25 to 44 years (41%*)

- Females aged 25 to 44 years (28%*)
- People who were responsible for any children (40%*) or three or more children (35%*)
- Niuean people (18%*)

Diabetes test

Other Changes Since Previous Survey

Increases in the proportions who had received a diabetes test in the previous twelve months were found among:

- Main meal preparers (up 4% to 43%)
- Main household shoppers (up 5% to 44%*)
- People from high deprivation areas (up 6% to 46%)
- Males aged 25 – 44 years (up 7% to 35%)
- Those interested in eating more healthily (up 6% to 44%*)
- Those interested in being more active (up 5% to 43%*)

Decreases in the proportions who had received a diabetes test in the previous twelve months were found among:

- Males aged 16 to 24 years (down 7% to 7%*)

Differences Within Current Survey

Those who received a diabetes test were *more* prevalent among:

- People in areas of high deprivation (46% vs 42% for total sample)
- Males aged 45 years or older (57%*)
- Females aged 45 years or older (58%*)
- Samoan people (53%*)
- People with diabetes (96%*)

- People who were obese (52%*)

And *less* prevalent among:

- People in areas of low deprivation (35%*)
- Males aged 16 to 24 years (7%*)
- Males aged 25 to 44 years (35%)
- Females aged 16 to 24 years (11%*)
- Females aged 25 to 44 years (29%*)
- People who were responsible for any children (37%) or three or more children (35%)
- Niuean people (24%*)

Had weight measured

Other Changes Since Previous Survey

Increases in the proportions of those who had had their weight measured in the previous twelve months were found among:

- People with diabetes (up 12% to 96%*)
- People interested in eating more healthily (up 6% to 59%*)
- People interested in being more physically active (up 5% to 58%*)
- Main meal preparers (up 3% to 59%)
- Household shoppers (up 8% to 61%*)
- Males aged 45 years and over (up 13% to 72%*)
- People in areas of both low deprivation (up 5% to 54%) and high deprivation (up 8% to 61%*)
- Those who were responsible for any children (up 5% to 53%)

Differences Within Current Survey

Those who had their weight measured were *more* prevalent among:

- Males aged 45 years or older (72% vs 58% for total sample*)
- Females aged 45 years or older (68%*)
- Samoan people (68%*)
- 'Other' Pacific people (73%)
- People with diabetes (96%*)
- People who were obese (65%*)

And *less* prevalent among:

- Males 16 to 24 years (30%*)
- Males 25 to 44 years (47%*)
- Female 16 to 24 years (35%*)
- Females 25 to 44 years (52%)
- People who were responsible for any children (53%*)
- People who were responsible for three or more children (49%*)
- Niuean people (42%)
- People who were sedentary (51%)

Talked to about stopping smoking (all persons)

Other Changes Since Previous Survey

No *increases* in the proportions who were talked to about **stopping smoking** were found among the groups analysed.

Decreases in the proportions who were talked to about stopping smoking were found among:

- Samoan people (down 9% to 33%*)

- People with diabetes (down 12% to 27%*)

Differences Within Current Survey

Those who were talked to about **stopping smoking** were *more* prevalent among:

- People who were interested in eating more healthily (21% vs 18% for total sample*)
- People in areas of high deprivation (25%*)
- People who were responsible for any children (22%*)
- Samoan people (33%*)
- Cook Island Maaori (36%*)
- Tongan people (36%*)
- Niuean people (31%)
- 'Other' Pacific people (29%)
- People with diabetes (27%*)
- People who were obese (26%*)

And *less* prevalent among:

- People in areas of low deprivation (11%*)
- Males 16 to 24 years (12%)
- Females 16 to 24 years (8%*)

Talked to about stopping smoking (smokers)

Other Changes Since Previous Survey

An *increase* in the proportion of smokers who had been talked to about **stopping smoking** was found among:

- Males aged 16 to 24 years (up 22% to 42%)

Differences Within Current Survey

Smokers who were talked to about **stopping smoking** were *more* prevalent among:

- People with diabetes (98% vs 50% for total sample*)
- Males aged 45 years and over (70%*)

And *less* prevalent among:

- Males aged 25 to 44 years (38%)
- Females aged 16 to 24 (28%*)

Talked to about healthy eating or weight

Other Changes Since Previous Survey

Increases in the proportions who were talked to about **healthy eating or weight** were found among:

- Samoan people (up 16% to 67%*)
- 'Other' Pacific peoples (up 27% to 61%*)
- People who a doctor would describe as overweight (up 5% to 45%)
- People who were interested in eating more healthily (up 5% to 42%*)
- Main household shoppers (up 5% to 37%*)
- Males aged 45 years and over (up 10% to 46%*)
- People in areas of high deprivation (up 6% to 44%*)
- People who were responsible for any children (up 4% to 38%)

Differences Within Current Survey

Those who were talked to about **healthy eating or weight** were *more* prevalent among:

- People who were interested in eating more healthily (42% vs 36% for total sample*)
- People in areas of high deprivation (44%*)
- Males aged 45 years or older (46%*)
- Samoan people (67%*)
- Cook Island Maaori (55%*)
- Tongan people (55%*)
- 'Other' Pacific people (61%*)
- People with diabetes (79%*)
- People who were obese (56%*)

And *less* prevalent among:

- People in areas of low deprivation (30%*)
- People in areas of medium deprivation (32%)
- Males 16 to 24 years (21%*)
- Females 16 to 24 years (18%*)
- People who were sedentary (28%*)

Talked to about their risk of diabetes or heart disease

Other Changes Since Previous Survey

Increases in the proportions who were talked to about their **risk of diabetes or heart disease** were found among:

- Samoan people (up 10% to 59%)
- 'Other' Pacific peoples (up 38% to 64%*)
- People interested in eating more healthily (up 6% to 39%*)
- Main meal preparers (up 5% to 35%*)

- Household shoppers (up 5% to 36%*)
- Males aged 45 years and over (up 8% to 47%)
- Females aged 45 years and over (up 6% to 41%)
- Those in areas of both medium deprivation (up 6% to 32%) and high deprivation (up 7% to 43%*)

Differences Within Current Survey

Those who were talked to about the **risk of diabetes or heart disease** were *more* prevalent among:

- People who were interested in eating more healthily (39% vs 34% for total sample*)
- People living in areas of high deprivation (43%*)
- Males aged 45 years or older (47%*)
- Females aged 45 years or older (41%*)
- Samoan people (59%*)
- Cook Island Maaori (54%*)
- Tongan people (51%*)
- 'Other' Pacific people (64%*)
- People with diabetes (91%*)
- People who were obese (51%*)

And *less* prevalent among:

- People living in areas of low deprivation (26%*)
- Males 16 to 24 years (16%*)
- Females 16 to 24 years (12%*)
- Females 25 to 44 years (25%*)
- People who were sedentary (28%)

Talked to about exercise or physical activity

Other Changes Since Previous Survey

Increases in the proportions who were talked to about **exercise or physical activity** were found among:

- Samoan people (up 17% to 67%*)
- 'Other' Pacific peoples (up 30% to 66%*)
- Those who were at risk of diabetes (up 4% to 42%)
- Those interested in eating more healthily (up 4% to 44%)
- Household shoppers (up 5% to 41%*)
- Males aged 45 years and over (up 10% to 52%*)
- People in areas of high deprivation (up 7% to 47%*)

Differences Within Current Survey

Those who were talked to about **exercise or physical activity** were *more* prevalent among:

- People who were interested in healthy eating (44% vs 40% for total sample)
- People who were in areas of high deprivation (47%*)
- Males aged 45 years or older (52%*)
- Females aged 45 years or older (46%)
- Samoan people (67%*)
- Cook Island Maaori (52%*)
- Tongan people (52%*)
- 'Other' Pacific people (66%*)
- People with diabetes (83%*)
- People who were obese (56%*)

And *less* prevalent among:

- People who were in areas of low deprivation (33%*)
- Males 16 to 24 years (23%*)
- Females 16 to 24 years (21%*)
- Females 25 to 44 years (32%*)

Given a green prescription

Other Changes Since Previous Survey

Increases in the proportions who were given a **green prescription** were found among:

- Those interested in eating more healthily (up 3% to 16%*)
- Main meal preparers (up 2% to 13%)
- Household shoppers (up 3% to 13%)
- People from areas of high deprivation (up 4% to 19%*)

Differences Within Current Survey

Those who said they were given a **green prescription** were *more* prevalent among:

- People who were interested in eating more healthily (16% vs 12% for total sample*)
- People in areas of high deprivation (19%*)

- Males aged 45 years or older (17%*)
- Females aged 45 years or older (16%*)
- Samoan people (34%*)
- Cook Island Maaori (24%*)
- Tongan people (29%*)
- People with diabetes (44%*)
- People who were obese (20%*)

And *less* prevalent among:

- People in areas of low deprivation (5%*)
- People in areas of medium deprivation (9%)
- Males 16 to 24 years (3%*)
- Females 16 to 24 years (4%*)
- Females 25 to 44 years (9%)

SMOKERS

One-fifth identified as smokers, an identical proportion to the pre-campaign result. This was ascertained by simply asking "Do you smoke?"

The incidence of smoking has remained relatively constant across the ethnic groups since the pre-campaign survey, with the one exception that Pacific people have shown a decrease (from 28% smoking down to 23%*).

Table 49: Smoker

| SMOKER | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|--------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Yes | 20 | 20 | 36↑↑ | 39↑↑ | 28↑↑ | 23▼ | 8↓↓ | 9↓↓ | 12↓↓ | 8↓↓ | 17↓ | 19 |
| No | 80 | 80 | 64↓↓ | 61↓↓ | 72↓↓ | 77▲ | 92↑↑ | 91↑↑ | 88↑↑ | 92↑↑ | 83↑ | 81 |

Other Changes Since Previous Survey

Increases in the proportions **who smoke** were found among:

- Niuean people (up 20% to 43%)
- People who were sedentary (up 8% to 28%)
- Females aged 25 to 44 years (up 6% to 26%*)
- Those interested in being more active (up 3% to 21%)

Decreases in the proportions who smoke were found among:

- People with diabetes (down 14% to 12%*)
- People from low deprivation areas (down 4% to 12%)
- Those responsible for three or more children (down 7% to 23%)

Differences Within Current Survey

Those who smoked were *more* prevalent among:

- Males aged 25 to 44 years (32% vs 20% for total sample)
- People from high deprivation areas (28%)
- Females aged 25 to 44 years (26%)
- Those responsible for children (25%)

- Sedentary persons (28%)
- Obese persons (27%)

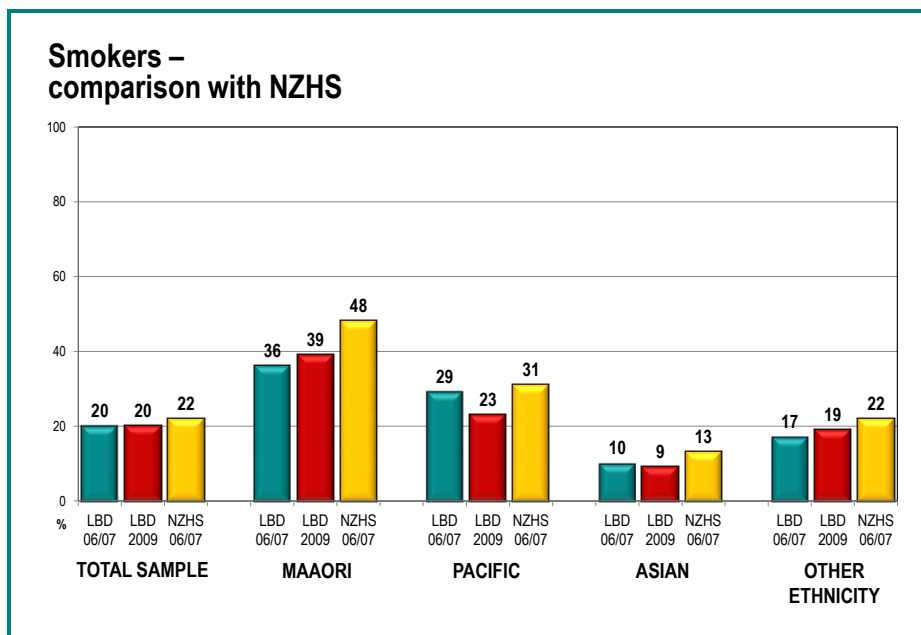
And **less** prevalent among:

- Males aged 45 years and over (14%)
- People from low deprivation areas (12%)
- Females aged 45 and over (11%)
- Those with diabetes (12%)
- Overweight persons (14%)

Comparison with NZHS

Despite the NZHS survey adding a proviso that people had to have smoked at least 100 cigarettes in their lifetime, the level of current smokers was similar to the LBD surveys for the total sample. When making comparison with the 2006/07 LBD survey, the NZHS had a higher rate for Maaori and people of Other ethnic groupings.

Graph 25: Smokers – comparison with NZHS



risk groups: those who a doctor would describe as overweight, those with a family history of diabetes and a non-significant increase for those who a doctor would describe as obese.

DISCUSSION

Positive results with primary care

LBD has sought to work with primary care to increase appropriate advice giving and the survey shows that this has taken place. The improvements were more marked across the more at risk ethnic groups, so that makes the results even more positive. There were also improvements for most of the at

4.8 AWARENESS AND UNDERSTANDING OF DIABETES

While the previous sections have been primarily about factors that contribute to diabetes, this section specifically addresses diabetes, including:

- Awareness of how to prevent diabetes
- Awareness of problems resulting from diabetes
- Knowledge of diabetes, including ability to correctly answer key questions
- Concern about getting diabetes
- Contact with people with diabetes

AWARENESS OF HOW TO PREVENT DIABETES

At the end of the survey respondents were asked, "What can be done to prevent diabetes?" The unprompted responses were grouped into categories after the interviewing.

There was increased mention of eating fruit and/or vegetables (up 7% to 37%*) and there was also increased mention of reducing fat (up 4% to 30%). Despite the increased mention of reducing fat, there were still more respondents in the current survey who mentioned reducing sugar (45%) than mentioned reducing fat (30%).

There was a marked increase in other nutrition related comments that have been grouped together (up 19% to 55%). Included within this category were: watch what you eat/have a healthy diet (up 29% to 39%), eat a balanced diet (8%), drink water/ so many glasses per day (7%), eat foods high in fibre (6%), eat fish/seafood (4%), eat red meat (4%), eat less meat (3%), reduce salt/sodium (3%), eat protein (3%), follow the food pyramid (2%) and eat regular meals (2%).

There was also an increase in mention of lifestyle related comments (up 4% to 13%*), which included: don't smoke (6%), lead a healthy lifestyle (5%), and look after your health (4%).

Over half (56%) mentioned keeping fit or active, which showed no change since pre-campaign.

There were no significant changes for reducing weight (21%), reducing takeaways/junk food (12%) and reducing portion size (12%).

Almost one-in-five (18%) mentioned obtaining professional advice/education/assistance, which included: information/education (9%), having regular health checks (down 4% to 8%*) and education on diet/diet control (up from nil to 4%).

The one-in-ten (11%, very similar to the pre-campaign result) who are listed in the table as 'nothing' were those who in the previous question had said it was 'true' that "there is nothing you can do to prevent diabetes getting diabetes".

Table 50: What can be done to prevent diabetes

| WHAT CAN BE DONE TO PREVENT DIABETES | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Physical activity | 57 | 56 | 48↓↓ | 51 | 49↓↓ | 45↓↓ | 63↑ | 61 | 58 | 56 | 60 | 59 |
| Nutrition - general | 36 | 55▲▲ | 32 | 47↓↓▲▲ | 33 | 42↓↓▲▲ | 34 | 47↓↓▲▲ | 32 | 42↓↓▲ | 37 | 64↑↑▲▲ |
| Reduce sugar | 45 | 45 | 40↓ | 39↓↓ | 42 | 38↓↓ | 56↑↑ | 56↑↑ | 52↑ | 46 | 45 | 47 |
| Eat fruit and vegetables | 30 | 37▲▲ | 28 | 41▲▲ | 33 | 34 | 30 | 36 | 35 | 35 | 28 | 39▲▲ |
| Reduce fat | 26 | 30▲▲ | 29 | 32 | 31↑↑ | 30 | 25 | 28 | 24 | 20↓↓ | 25 | 31▲▲ |
| Reduce weight | 20 | 21 | 13↓↓ | 11↓↓ | 7↓↓ | 9↓↓ | 15 | 18 | 15 | 19 | 26↑↑ | 27↑↑ |
| Professional advice/ education/assistance | 18 | 18 | 17 | 19 | 13↓↓ | 14↓ | 22 | 21 | 17 | 22 | 20 | 20 |
| Lifestyle general | 9 | 13▲▲ | 8 | 13▲ | 8 | 10↓ | 8 | 10↓ | 6 | 14▲▲ | 10 | 16▲▲ |
| Reduce takeaways/ junk food | 12 | 12 | 10 | 13 | 11 | 10 | 16 | 16↑ | 11 | 18↑▲ | 13 | 12 |
| Reduce portion size | 12 | 12 | 10 | 13 | 14 | 12 | 10 | 10 | 10 | 10 | 13 | 13 |
| Reduce alcohol | 6 | 8 | 8 | 9 | 2↓ | 3↓↓ | 6 | 7 | 5 | 8 | 8 | 9 |
| Nothing | 10 | 11 | 12 | 8↓▼ | 19↑↑ | 19↑↑ | 13 | 13 | 7 | 7 | 7↓ | 9 |
| Don't know | 10 | 11▲ | 13↑ | 16↑↑ | 12 | 14↑ | 4↓↓ | 8▲ | 12 | 18↑↑ | 9 | 9 |

Other Changes Since Previous Survey

There were no other changes between surveys in mention of **physical activity**.

Increases in the proportions who made **general nutrition** comments about how to prevent diabetes were found among:

- Cook Island Maaori (up 17% to 46%*)

- Tongan people (up 20% to 39%*)
- People in the at-risk group (up 17% to 54%*)
- People who a doctor would describe as overweight (up 20% to 55%*)
- People with a family history of diabetes (up 10% to 54%*)
- People who were sedentary (up 18% to 49%*)
- People with diabetes (up 19% to 48%*)

- Main meal preparers (up 20% to 57%*)
- Main household shoppers (up 18% to 57%*)
- People from low deprivation areas (up 27% to 60%*)
- People from medium deprivation areas (up 16% to 55%*)
- People from high deprivation areas (up 15% to 50%*)
- Males aged 16 to 24 years (up 32% to 48%*)
- Males aged 25 to 44 years (up 20% to 55%*)
- Males aged 45 years or older (up 15% to 49%*)
- Females aged 16 to 24 years (up 14% to 44%*)
- Females aged 25 to 44 years (up 20% to 59%*)
- Females aged 45 years or older (up 18% to 58%*)
- Those responsible for any children (up 22% to 55%*)
- Those responsible for three or more children (up 22% to 59%*)
- Those interested in eating more healthily (up 20% to 57%*)
- Those interested in being more physically active (up 19% to 56%*)

Increases in the proportions who made comments about **sugar reduction** for preventing diabetes were found among:

- People from medium deprivation areas (up 8% to 48%*)

Decreases in the proportions who made comments about **sugar reduction** for preventing diabetes were found among:

- People who a doctor would describe as obese (down 9% to 36%)
- People from low deprivation areas (down 7% to 43%*)
- Females aged 25 to 44 years (down 6% to 47%)

Increases in the proportions who made comments about **eating fruit and vegetables** for preventing diabetes were found among:

- People in the at-risk group (up 5% to 35%)
- People who a doctor would describe as overweight (up 6% to 35%*)
- People with a family history of diabetes (up 7% to 41%*)
- People with diabetes (up 20% to 36%*)
- Main meal preparers (up 9% to 38%*)
- Main household shoppers (up 6% to 37%*)
- People from low deprivation areas (up 9% to 34%*)
- People from high deprivation areas (up 8% to 37%*)
- Females aged 25 to 44 years (up 12% to 46%*)
- Females aged 45 or older (up 9% to 36%*)
- Those responsible for any children (up 8% to 39%*)
- Those responsible for three or more children (up 7% to 42%)
- Those interested in eating more healthily (up 5% to 37%*)
- Those interested in being more physically active (up 9% to 39%*)

Increases in the proportions who made comments about **fat reduction** for preventing diabetes were found among:

- People who a doctor would describe as obese (up 8% to 32%)
- People with diabetes (up 15% to 40%*)
- Main meal preparers (up 6% to 33%*)
- Main household shoppers (up 5% to 33%*)
- People from medium deprivation areas (up 13% to 34%*)
- Females aged 25 to 44 years (up 7% to 40%)
- Those responsible for any children (up 5% to 32%*)

- Those responsible for three or more children (up 11% to 33%*)
- Those interested in eating more healthily (up 3% to 31%)
- Those interested in being more physically active (up 4% to 33%)

Increases in the proportions who made comments about **weight reduction** for preventing diabetes were found among:

- People from low deprivation areas (up 5% to 29%)
- Males aged 16 to 24 years (up 5% to 10%)

An *increase* in the proportion who made comments about **professional advice/education/assistance** for preventing diabetes were found among:

- People who were sedentary (up 10% to 18%*)

A *decrease* in the proportions who made comments about **professional advice/education/assistance** for preventing diabetes were found among:

- Females aged 25 to 44 years (down 5% to 18%)

Increases in the proportions who made comments about **reducing takeaways and junk food** for preventing diabetes were found among:

- People from high deprivation areas (up 4% to 15%)
- People with diabetes (up 8% to 21%)

A *decrease* in the proportion who made comments about **reducing takeaways and junk food** for preventing diabetes were found among:

- People from medium deprivation areas (down 6% to 10%*)

Increases in the proportions who made comments about **reducing portion size** for preventing diabetes were found among:

- Males aged 16 to 24 years (up 10% to 12%*)

Decreases in the proportions who made comments about **reducing portion size** for preventing diabetes were found among:

- People in the at-risk group (down 3% to 12%)
- People who a doctor would describe as obese (down 9% to 14%*)
- People with a family history of diabetes (down 7% to 10%*)

Increases in the proportions who made **general lifestyle** comments about preventing diabetes were found among:

- People in the at-risk group (up 6% to 14%*)
- People who a doctor would describe as overweight (up 10% to 16%*)
- People who were sedentary (up 5% to 10%)
- Main meal preparers (up 6% to 15%*)
- Main household shoppers (up 4% to 14%*)
- People from low deprivation areas (up 6% to 16%*)
- People from high deprivation areas (up 4% to 12%*)
- Males aged 25 to 44 years (up 6% to 13%*)
- Females aged 25 to 44 years (up 5% to 16%*)
- Females aged 45 years or older (up 4% to 12%)
- People responsible for any children (up 5% to 13%*)
- People responsible for three or more children (up 9% to 16%*)
- Those interested in eating more healthily (up 4% to 13%*)
- Those interested in being more physically active (up 3% to 11%*)

Increases in the proportions who made comments about **reducing alcohol** for preventing diabetes were found among:

- People in the at-risk group (up 3% to 9%*)
- People who a doctor would describe as overweight (up 3% to 9%*)
- People with a family history of diabetes (up 3% to 9%)
- People with diabetes (up 6% to 7%*)
- People from medium deprivation areas (up 4% to 10%*)
- Males aged 45 years or older (up 4% to 8%*)

Differences Within Current Survey

Those who said **physical activity** were *more* prevalent among:

- Females aged 25 to 44 years (61% vs 56% of total sample*)
- Those with a family history of diabetes (61%*)

And *less* prevalent among:

- Males aged 45 years and over (46%*)
- Samoan people (43%*)
- Tongan people (42%*)
- Cook Island Maaori (42%*)

Those who said **nutrition in general** were *more* prevalent among:

- Those from low deprivation areas (60% vs 55% of total sample*)

And *less* prevalent among:

- Females aged 16 to 24 years (44%*)
- Samoan people (39%*)
- Tongan people (39%*)

Those who said **reduce sugar** were *more* prevalent among:

- Those interested in being more active (47% vs 45% of total sample*)

And *less* prevalent among:

- Males aged 45 years and over (36%*)
- Those responsible for three or more children (36%*)

Those who said **eat fruit and vegetables** were *more* prevalent among:

- Females aged 25 to 44 years (46% vs 37% of total sample*)

And *less* prevalent among:

- Sedentary persons (23%*)

Those who said **reduce fat** were *more* prevalent among:

- Those with diabetes (40% vs 30% of total sample*)
- Females aged 25 to 44 years (40%*)

And *less* prevalent among:

- Those from low deprivation areas (25%*)
- Males aged 25 to 44 years (23%*)
- Sedentary persons (20%*)
- Males aged 16 to 24 years (14%*)

Those who said **reduce weight** were *more* prevalent among:

- Those from low deprivation areas (29% vs 21% of total sample*)

And *less* prevalent among:

- Those from high deprivation areas (14%*)
- Those with diabetes (13%*)
- Samoan people (12%*)
- Males aged 16 to 24 years (10%*)
- Females aged 16 to 24 years (9%*)
- Tongan people (9%*)
- Cook Island Maaori (6%*)
- 'Other' Pacific people (3%*)

Those who said **professional advice/ education/ assistance** were *more* prevalent among:

- Females aged 45 years and over (24% vs 18% of total sample*)

And *less* prevalent among:

- Samoan people (11%*)

Those who said **reduce takeaways/ junk food** were *more* prevalent among:

- Those with diabetes (21% vs 13% of total sample*)

Those who said **lifestyle in general** were *less* prevalent among:

- Males aged 16 to 24 years (3% vs 12% of total sample*)

Those who said **reduce alcohol** were *more* prevalent among:

- Those from medium deprivation areas (10% vs 8% of total sample*)

And *less* prevalent among:

- Females aged 16 to 24 years (2%*)
- Cook Island Maaori (1%*)

Those who said **don't know** were *more* prevalent among:

- Males aged 16 to 24 years (21% v 11% of total sample)

And *less* prevalent among:

- Females aged 25 to 44 years (8%)

AWARENESS OF PROBLEMS RESULTING FROM DIABETES

A new question in the current survey asked: "What types of problems can happen to people who get diabetes?" and the answers were recorded unprompted. The most common responses related to having heart attacks (35%), losing limbs/legs (29%) and going blind (27%). There were 17 percent who did not know of any problems.

Table 51: Types of problems people with diabetes have

| TYPES OF PROBLEMS PEOPLE WITH DIABETES HAVE | Total | Maaori | Pacific | South Asian | Other Asian | Other |
|---------------------------------------------|------------|----------|----------|-------------|-------------|----------|
| | 2,363 % | 606 % | 594 % | 430 % | 214 % | 868 % |
| Have heart attack | 35 | 28↓↓ | 27↓↓ | 50↑↑ | 37 | 35 |
| Lose limbs/ legs | 29 | 31 | 20↓↓ | 28 | 24 | 33 |
| Go blind | 27 | 25 | 21↓↓ | 31 | 26 | 28 |
| Sugar/insulin level regulation | 11 | 7↓ | 8 | 5↓↓ | 11 | 13 |
| Tiredness/ low energy | 11 | 12 | 11 | 8 | 9 | 11 |
| Eye/eyesight problems/ glaucoma | 10 | 6↓↓ | 10 | 16↑↑ | 12 | 9 |
| Fainting/ blackouts/ dizziness | 9 | 11 | 7 | 6↓ | 7 | 11 |
| Death | 9 | 13↑↑ | 8 | 6 | 3↓↓ | 10 |
| Circulation problems/ feet/ hands | 9 | 9 | 2↓↓ | 3↓↓ | 5 | 12↑↑ |
| Weight problems/ obesity | 9 | 8 | 8 | 13↑↑ | 7 | 8 |
| Healing problems/ wounds/ ulcers | 8 | 5↓↓ | 10 | 22↑↑ | 17↑↑ | 5↓↓ |
| Renal/ kidney problems/ infections | 8 | 7 | 7 | 15↑↑ | 15↑↑ | 6 |
| High blood pressure | 7 | 6 | 6 | 15↑↑ | 10↑ | 5 |
| Infection | 6 | 5 | 6 | 7 | 6 | 7 |
| Need dialysis treatment | 6 | 10↑↑ | 6 | 10↑↑ | 6 | 5 |
| Coma | 6 | 5 | 1↓↓ | 2↓↓ | 2↓ | 9↑↑ |
| Medication/ insulin dependent | 5 | 8↑↑ | 6 | 3 | 6 | 4 |
| Liver problems/ failure | 4 | 3 | 2↓↓ | 6 | 3 | 5 |
| Diet restrictions | 4 | 3 | 4 | 5 | 6 | 4 |
| Poor general health/ unwell | 4 | 2↓ | 4 | 4 | 2 | 5 |
| Stroke | 4 | 6↑ | 6↑ | 11↑↑ | 3 | 2↓↓ |
| Organ failure/ damage (unspec) | 3 | 2 | 1 | 4 | 1 | 3 |
| Don't know | 17 | 18 | 21↑ | 10↓↓ | 19 | 17 |

Other differences within current survey

Those who said **heart attack** were *more* prevalent among:

- Those with diabetes (50% vs 35% of total sample*)

And *less* prevalent among:

- Samoan people (25%*)
- Tongan people(22%*)
- Males aged 16 to 24 years (18%*)

Those who said **lose limbs/legs** were *more* prevalent among:

- Those with diabetes (51% vs 29% of total sample*)
- Those from medium deprivation areas (37%*)
- Females aged 45 years and over (37%*)
- Females aged 25 to 44 years (35%*)
- Main meal preparers (35%*)

And *less* prevalent among:

- Males aged 25 to 44 years (20%*)
- Those from high deprivation areas (24%*)
- Females aged 16 to 24 years (15%*)
- Samoan people (15%*)
- Males aged 16 to 24 years (11%*)
- 'Other' Pacific people (9%*)
- Niuean people (7%*)

Those who said **go blind** were *more* prevalent among:

- Those with diabetes (48% vs 27% of total sample*)
- Females aged 45 years and over (39%*)
- Main meal preparers (31%*)

And *less* prevalent among:

- Samoan people (18%*)
- Males aged 25 to 44 years (16%*)
- Females aged 16 to 24 years (14%*)
- Males aged 16 to 24 years (7%*)

Those who said **don't know** were *more* prevalent among:

- Males aged 16 to 24 years (39% vs 17% of total sample*)
- Females aged 16 to 24 years (31%*)

And *less* prevalent among:

- Main meal preparers (14%*)
- Household shoppers (13%*)
- Females aged 45 years and over (12%*)
- Those with a family history of diabetes (12%*)
- Those with diabetes (2%*)

Those who said **sugar/insulin regulation** were *more* prevalent among:

- Those responsible for three or more children (18% vs 11% of total sample*)

And *less* prevalent among:

- Males aged 45 years and over (6%*)
- Those with diabetes (6%*)

Those who said **eyesight/eye problems/glaucoma** were *more* prevalent among:

- Those with diabetes (18% vs 10% of total sample*)
- Females aged 45 years and over (17%*)

And *less* prevalent among:

- Females aged 16 to 24 years (3%*)
- Males aged 25 to 44 years (3%*)
- Males aged 16 to 24 years (1%*)

Those who said **tiredness/lower energy** were *more* prevalent among:

- Males aged 25 to 44 years (18% vs 11% of total sample*)
- Those responsible for three or more children (16%*)

And *less* prevalent among:

- Those at risk for diabetes (7%*)
- Those from low deprivation areas (7%*)

Those who said **fainting/black outs** were *more* prevalent among:

- Those from medium deprivation areas (15% vs 9% of total sample*)
- Those responsible for three or more children (15%*)
- Males aged 25 to 44 years (14%*)

And *less* prevalent among:

- Females aged 16 to 24 years (4%*)
- Those with diabetes (3%*)

Those who said **circulation problems/feet/hands** were *more* prevalent among:

- Females aged 45 years and over (15% vs 9% of total sample*)
- Those with a family history of diabetes (13%*)

And *less* prevalent among:

- Those from high deprivation areas (5%*)
- Females aged 16 to 24 years (3%*)
- Samoan people (3%*)
- Cook Island Maaori (2%*)
- Tongan people (1%*)
- Males aged 16 to 24 years (0%*)

Those who said **death** were *more* prevalent among:

- Those from medium deprivation areas (14% vs 9% of total sample*)

Those who said **renal/kidney problems** were *more* prevalent among:

- Those with diabetes (20% vs 8% of total sample*)

And *less* prevalent among:

- Males aged 16 to 24 years (2%*)
- Females aged 16 to 24 years (1%*)

Those who said **healing problems** were *less* prevalent among:

- Females aged 16 to 24 years (2% vs 8% of total sample*)
- Males aged 16 to 24 years (1%*)

Those who said **infections** were *more* prevalent among:

- Females aged 45 years and over (12% vs 6% of total sample*)
- Meal preparers (9%*)

And *less* prevalent among:

- Those responsible for three or more children (3%*)
- Males aged 16 to 24 years (1%*)

Those who said **coma** were *more* prevalent among:

- Females aged 45 years and over (10% vs 6% of total sample*)
- Overweight persons (9%*)

And *less* prevalent among:

- Samoan people (1%*)
- Tongan people (0%*)

Those who said **medicine/insulin dependent** were *less* prevalent among:

- Those with diabetes (1% vs 5% of total sample*)

Those who said **diet restrictions** were *more* prevalent among:

- Females aged 16 to 24 years (8% vs 5% of total sample*)

And *less* prevalent among:

- Overweight persons (2%*)

Those who said **poor general health** were *more* prevalent among:

- Overweight persons (7% vs 4% of total sample*)

Those who said **stroke** were *more* prevalent among:

- Those with diabetes (9% vs 4% of total sample*)
- Samoan people (8%*)

KNOWLEDGE OF DIABETES

Respondents were asked to rate their knowledge of diabetes from 'poor' to 'very good', using options read out to them. Four-in-ten (42%) thought their knowledge was either 'good' or 'very good'. One-in-five (21%) thought it was 'poor', whilst over a third (36%) rated it in between at 'fair'.

The proportion who thought their knowledge was 'good' decreased five percent since the pre-campaign survey, which was matched by a four percent increase in those rating their knowledge as 'fair'. This was mainly due to changes among people of Other ethnic groupings ('Good' was down 7% to 20%* and 'Fair' was up 5% to 40%). Going against the general trend, South Asians had a reduced proportion rating their knowledge of diabetes as 'Poor' (down 6% to 11%).

Graph 26: Knowledge of diabetes overall

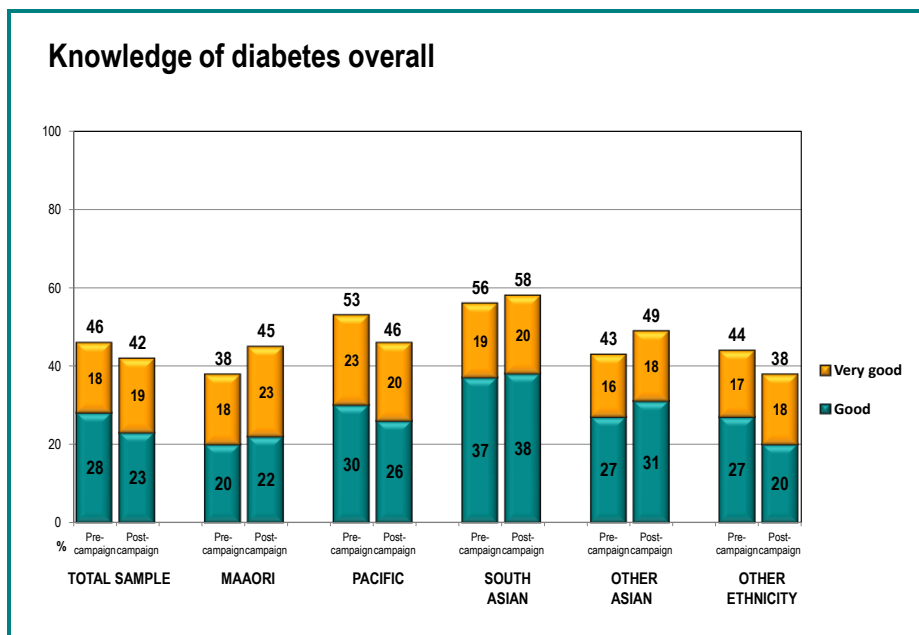


Table 52: Knowledge of diabetes overall

| KNOWLEDGE OF DIABETES OVERALL | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|-------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,316* | 2,363 | 568 | 606 | 709 | 594 | 294 | 430 | 301 | 214 | 818 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Poor | 21 | 21 | 29↑↑ | 25↑ | 21 | 24 | 17 | 11↓↓▼ | 24 | 17 | 20 | 22 |
| Fair | 32 | 36▲▲ | 32 | 29↓↓ | 26↓↓ | 30↓↓ | 27 | 30↓ | 32 | 34 | 35 | 40▲ |
| Good | 28 | 23▼▼ | 20↓↓ | 22 | 30 | 26 | 37↑↑ | 38↑↑ | 27 | 31↑ | 27 | 20▼▼ |
| Very good | 18 | 19 | 18 | 23 | 23↑ | 20 | 19 | 20 | 16 | 18 | 17 | 18 |
| Don't know | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |

* In the Pre-campaign survey, this question was added after the survey began, so the sample size is a little lower

Other Changes Since Previous Survey

Increases in people thinking their **knowledge of diabetes was 'poor'** were found among:

- Those in areas of low deprivation (up 3% to 21%*)
- Females aged 25 to 44 years (up 9% to 24%*)
- Females aged 45 years and over (up 4% to 14%*)
- Those who were the main meal preparer (up 1% to 18%*)
- People who were responsible for three or more children (up 5% to 26%)
- Those interested in eating more healthily (up 3% to 23%)

Increases in people thinking their **knowledge of diabetes was 'fair'** were found among:

- Those in the at-risk group (up 5% to 35%*)
- Those interested in being more physically active (up 3% to 35%*)
- Those who were the main meal preparer (up 3% to 36%*)
- Those with a family history of diabetes (up 6% to 34%*)
- Main household shoppers (up 3% to 35%*)
- Males aged 25 to 44 years (up 16% to 48%*)
- Males aged 45 years and over (up 7% to 36%)
- People responsible for any children (up 8% to 37%*)
- Tongan people (up 11% to 26%)
- Those who would be described by their doctor as obese (up 8% to 30%)

Increases in people thinking their **knowledge of diabetes was 'very good'** were found among:

- People from medium deprivation areas (up 4% to 19%*)

- Females aged 16 to 24 years (up 8% to 16%)
- Females aged 45 years and older (up 3% to 28%*)
- People responsible for three or more children (up 7% to 22%)

Differences Within Current Survey

Those thinking their knowledge was **'poor'** were *more* prevalent among:

- Males aged 16 to 24 years (43% vs 21% for all persons answering*)
- Females aged 16 to 24 years (33%*)
- People who were sedentary (27%)

Those thinking their knowledge was **'fair'** were *more* prevalent among:

- Males aged 25 to 44 years (48% vs 36% for all persons answering*)

Those thinking their knowledge was **'good'** were *more* prevalent among:

- Those with diabetes (39% vs 23% for all persons answering*)
- Those with a family history of diabetes (29%)
- Obese persons (29%*)
- Females aged 45 and over (28%*)

Those thinking their knowledge was **'very good'** were *more* prevalent among:

- Females aged 45 and over (28%*)
- Those with a family history of diabetes (23%)
- Those with diabetes (39%*)

Knowledge of specific information about diabetes

Knowledge of diabetes was also ascertained by asking respondents to rate some statements as either true or false. The proportion who thought it was true that it is mainly people who eat a lot of sugar who get diabetes (44%) was slightly lower than those who thought it was false (46%), the balance being those who were unsure.

An overwhelming proportion said that it was false that diabetes doesn't affect young people (89%), while fewer than one-in-ten (7%) thought this was true.

An even larger proportion thought it was true that it is possible that you can have diabetes and not realise it (91%), while one-in-twenty (4%) thought this was false.

More than eight-in-ten (81%) said it was true that diabetes increases your risk of developing heart disease (82%), whereas very few (2%) thought this was false.

Over four-fifths (85%) thought it false that there is nothing you can do to prevent getting diabetes, whilst one-in-ten (9%) thought this was true.

A new question in the current survey identified that there was a lack of knowledge about the benefits of breastfeeding in terms of lowering the risk of becoming obese and developing diabetes. Four-in-ten knew this to be true, while almost as many (36%) were unsure and a quarter thought it was false. Pacific people (46%) and South Asian people (47%) were the most likely to say it was true.

All these results were similar to the results from the pre-campaign survey. There were also very few notable changes by the main ethnic groupings. Pacific people were less inclined than in the pre-campaign survey to say that diabetes does not affect young people (down 5% to 14%), and less inclined to say it is false that you can have diabetes and not realise it (down 6% to 7%*). Like Pacific people, South Asian peoples were less inclined than in the pre-campaign survey to say that diabetes does not affect young people (down 7% to 7%*).

Table 53: How much know about diabetes

| HOW MUCH KNOW ABOUT DIABETES | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|--------------------------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,501 | 2,363 | 591 | 606 | 712 | 594 | 298 | 430 | 305 | 214 | 982 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| It is mainly people who eat a lot of sugar who get diabetes | | | | | | | | | | | | |
| True | 44 | 44 | 47 | 48 | 55↑↑ | 58↑↑ | 59↑↑ | 56↑↑ | 63↑↑ | 56↑↑ | 37↓↓ | 37↓↓ |
| False | 48 | 46 | 44 | 40↓↓ | 36↓↓ | 34↓↓ | 37↓↓ | 37↓↓ | 34↓↓ | 40 | 54↑↑ | 52↑↑ |
| Don't know | 8 | 10 | 8 | 12 | 9 | 8 | 4 | 7 | 4 | 4 | 9 | 11 |
| Diabetes doesn't affect young people | | | | | | | | | | | | |
| True | 9 | 7 | 9 | 8 | 19↑↑ | 14↑↑▼ | 14↑↑ | 7▼▼ | 11 | 7 | 5↓↓ | 5↓ |
| False | 89 | 89 | 87 | 86 | 77↓↓ | 80↓↓ | 85 | 88 | 86 | 90 | 93↑↑ | 93↑↑ |
| Don't know | 3 | 3 | 5 | 6 | 4 | 6 | 1 | 5 | 3 | 3 | 2 | 2 |
| You can have diabetes and not realise it | | | | | | | | | | | | |
| True | 92 | 91 | 93 | 93 | 85↓↓ | 86↓↓ | 86↓↓ | 85↓↓ | 89 | 90 | 95↑↑ | 93↑ |
| False | 5 | 4 | 2↓↓ | 3 | 13↑↑ | 7↑▼▼ | 11↑↑ | 9↑↑ | 7 | 6 | 3↓↓ | 3↓ |
| Don't know | 3 | 5 | 5 | 4 | 3 | 7 | 3 | 6 | 4 | 4 | 2 | 4 |
| Having diabetes increases your risk of developing heart disease | | | | | | | | | | | | |
| True | 81 | 82 | 79 | 79 | 85↑ | 82 | 89↑↑ | 88↑↑ | 86↑ | 86 | 79 | 82 |
| False | 5 | 2 | 4 | 3 | 5 | 3 | 3 | 4 | 4 | 2 | 5 | 2↓↓ |
| Don't know | 14 | 15 | 17 | 18 | 10 | 15 | 7 | 9 | 10 | 12 | 16 | 17 |
| There is nothing you can do to prevent getting diabetes | | | | | | | | | | | | |
| True | 10 | 9 | 12 | 7▼ | 19↑↑ | 18↑↑ | 12 | 13↑ | 7 | 7 | 7↓ | 6↓↓ |
| False | 84 | 85 | 80 | 84 | 75↓↓ | 72↓↓ | 85 | 82 | 87 | 84 | 86↑ | 90↑↑▲ |
| Don't know | 6 | 6 | 8 | 9 | 6 | 10 | 2 | 5 | 6 | 9 | 6 | 4 |
| Breast fed babies have a lower risk of becoming obese and developing diabetes | | | | | | | | | | | | |
| True | nm | 40 | nm | 32↓↓ | nm | 46↑↑ | nm | 47↑↑ | nm | 41 | nm | 38 |
| False | nm | 25 | nm | 27 | nm | 27 | nm | 23 | nm | 22 | nm | 24 |
| Don't know | nm | 36 | nm | 40↑ | nm | 27↓↓ | nm | 31↓ | nm | 37 | nm | 38 |

nm = Not measured

Mainly people who eat a lot of sugar

Other Changes Since Previous Survey

Increases in people thinking that it is mainly people who eat a lot of sugar who get diabetes were not found among any sub-groups analysed.

Differences Within Current Survey

Those who thought it was **true** that it's mainly people who eat a lot of sugar who get diabetes were *more* prevalent among:

- Males aged 16 to 24 years (64% vs 44% for total sample*)
- Females aged 16 to 24 years (56%*)
- People from high deprivation areas (50%*)

Those who thought that it was **false** were *more* prevalent among:

- Those from low deprivation areas (53% vs 46% for total sample*)
- Females aged 45 and over (54%*)

Doesn't affect young people

Other Changes Since Previous Survey

Increases in people thinking that it is **true** that diabetes doesn't affect young people were found among:

- Females aged 16 to 24 years (up 6% to 7%)
- People who were sedentary (up 5% to 10%*)

Increases in people thinking it is **false** that diabetes doesn't affect young people were found among:

- People from low deprivation areas (up 4% to 95%*)
- Males aged 25 to 44 years (up 5% to 90%)

Differences Within Current Survey

Those who thought it was **false** that diabetes doesn't affect young people were *more* prevalent among:

- Those from low deprivation areas (95% vs 89% for total sample*)

Those who thought it was **true** were *more* prevalent among:

- People from high deprivation areas (11% vs 7% for total sample*)

Can have diabetes and not realise it

Other Changes Since Previous Survey

There were no other statistical changes note.

Differences Within Current Survey

Those who thought it was **true** that you can have diabetes and not realise it were *more* prevalent among:

- Females aged 45 and over (95% vs 91% for total sample*)
- Those from medium deprivation areas (94%*)
- Overweight persons (95%*)

Increases the risk of developing heart disease

Other Changes Since Previous Survey

Increases in people thinking that having diabetes increases the risk of developing heart disease were found among:

- Those interested in being more active (up 3% to 85%)

Differences Within Current Survey

Those who thought it **true** that having diabetes increases your risk of developing heart disease were *more* prevalent among:

- Those interested in being more active (85% vs 82% for total sample*)
- Those with diabetes (91%*)

Nothing you can do to prevent getting diabetes

Other Changes Since Previous Survey

Increases in people thinking it is *false* that there is nothing you can do to prevent getting diabetes were found among:

- Main meal preparers (up 3% to 86%)
- People from medium deprivation areas (up 7% to 88%*)
- Females aged 16 to 24 years (up 9% to 86%)

Differences Within Current Survey

Those who thought it was *true* were *more* prevalent among:

- People from high deprivation areas (13% vs 9% for total sample*)
- Those with diabetes (20%*)

Breastfed babies have a lower risk of becoming obese and developing diabetes

Differences Within Current Survey

People *more* likely to say *true* were:

- Tongan people (51% vs 40% for total sample*)

And *less* likely to say *true* were:

- Males aged 16 to 24 years (26%*)
- Females aged 16 to 24 years (26%*)

CONCERN ABOUT GETTING DIABETES

Respondents were asked to respond to the following statement on a seven point agree-disagree scale: "I am worried that I or someone in my family has diabetes or may get it". If the person already had diabetes they responded to a statement that read: "I am worried that someone in my family has diabetes or may get it". A third (35%, up 4%* from pre-campaign) agreed that they were worried that they/someone in their family may have diabetes or may get it, whereas over two-fifths (43%) disagreed²⁷. There were no significant variations by the main ethnic groupings.

When considered in conjunction with the previously reported data for concern about them or someone in their family having or getting health problems because of being overweight, there were half (51%) who agreed with at least one of these two statements. There were increases for Maori (up 12% to 73%*) and South Asian people (up 11% to 68%*). The other ethnic groups remained at similar levels to previously (Pacific people 75%, Other Asians 49% and 38% for people of Other ethnic groupings. In the current survey the level was also higher for people with diabetes (68%), those with a family history of diabetes (67%) and those who are obese (67%).

²⁷ As with the presentation of results from all the agree/disagree scales, the 'agree' figures are for those who 'agreed' and 'strongly agreed' with the statement of interest.

Graph 27: Concern about getting diabetes

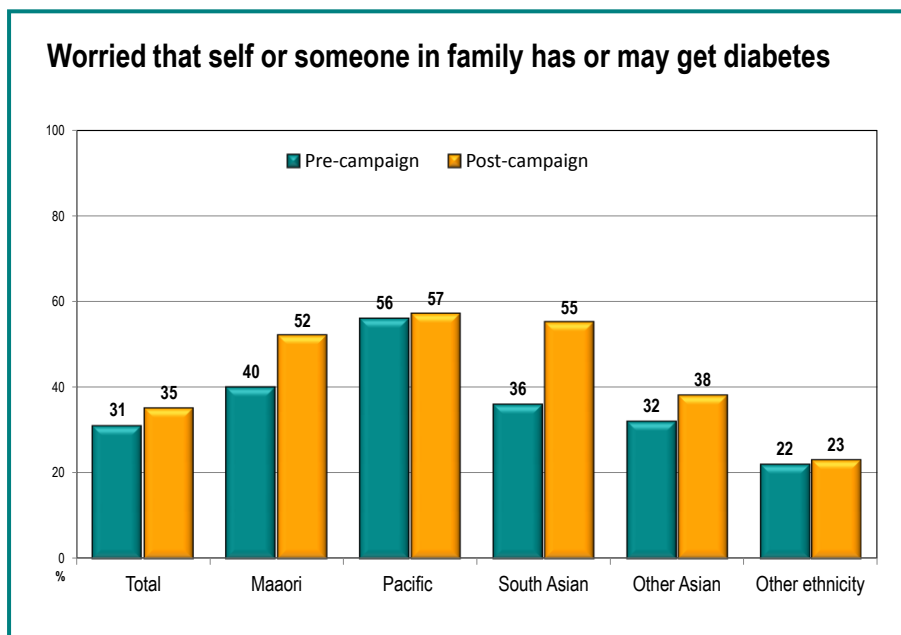


Table 54: Concern about getting diabetes

| CONCERN THAT I OR SOMEONE IN FAMILY HAS/COULD GET DIABETES | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Agree | 31 | 35▲▲ | 40↑↑ | 52↑↑▲ | 56↑↑ | 57↑↑ | 36 | 55↑↑▲ | 32 | 38 | 22↓↓ | 23↓↓ |
| Disagree | 46 | 43 | 34↓↓ | 25↓↓▼ | 25↓↓ | 24↓↓ | 40↓ | 26↓↓▼ | 42 | 37 | 55↑↑ | 55↑↑ |
| Those who <i>either</i> AGREE that I/someone in family has or may get diabetes; and/or AGREE that I/someone in family has or may get health problems due to being overweight | 48 | 51▲ | 61↑↑ | 73↑↑▲ | 74↑↑ | 75↑↑ | 57↑↑ | 68↑↑▲ | 47 | 49 | 38↓↓ | 38↓↓ |

Other Changes Since Previous Survey

Increases in people *agreeing* that they were worried that they or someone in their family has diabetes or may get it were found among:

- Females aged 16 to 24 years (up 12% to 48%)
- Those interested in eating more healthily (up 6% to 42%*)
- Those interested in being more active (up 3% to 39%)

Differences Within Current Survey

Agreeing that they were worried that they or someone in their family has diabetes or may get it was *more* mentioned by:

- Females aged 16 to 24 years (48% vs 35% of total sample)
- People from high deprivation areas (45%)
- Those interested in eating more healthily (42%)
- Those interested in being more active (39%)
- Those at risk of diabetes (39%)
- Those with a family history of diabetes (55%)
- Those with diabetes (62%)

- Obese persons (48%)

Disagreement with this statement was *more* prevalent among:

- People from low deprivation areas (55% vs 43% of total sample)

CONTACT WITH PEOPLE WITH DIABETES

A new question was included in the current survey asking those who did not have diabetes or a family member with diabetes, whether they know anyone else with diabetes. A quarter (26%) were in this category and overall there were three-quarters (74%) who had some contact with someone with diabetes.

The rate of knowing someone with diabetes was higher for Maaori (87% vs 74% total sample*) and South Asian people (80%). The rate was lowest among people of Other ethnic groupings, but even they were still at 72 percent.

Table 55: Contact with persons with diabetes

| CONTACT WITH PERSONS WITH DIABETES | Total 2,363 % | Maaori 606 % | Pacific 594 % | South Asian 430 % | Other Asian 214 % | Other 868 % |
|------------------------------------|---------------------|--------------------|---------------------|-------------------------|-------------------------|-------------------|
| Ever had diabetes themselves | 10 | 16↑↑ | 18↑↑ | 16↑↑ | 9 | 6↓↓ |
| Have family members with diabetes* | 29 | 40↑↑ | 38↑↑ | 46↑↑ | 30 | 22↓↓ |
| Know someone else with diabetes** | 44 | 45 | 35↓↓ | 32↓↓ | 41 | 49↑↑ |
| Don't know anyone with diabetes | 26 | 13↓↓ | 25 | 20↓ | 26 | 28 |
| Know someone with diabetes | 74 | 87↑↑ | 75 | 80↑ | 74 | 72 |

* Can include persons with diabetes

** Only asked of those not in above two categories

People *more* likely to know anyone with diabetes were:

- Females aged 45 years or older (84% vs 75% for total sample*)
- People in the at-risk group (81%*)
- People who were obese (80%*)

And *less* likely were:

- Males aged 16 to 24 years (62%*)

DISCUSSION

Reflections on campaign impacts

The question on how to prevent diabetes is possibly the most important one in the survey, as it indicates the extent to which the messages being communicated in the LBD advertising have impacted. The easiest thing to achieve with social marketing advertising is to increase awareness and

knowledge, so this is where the greatest changes should be expected. It is positive that there have been a number of changes, however on initial consideration the level of change may seem disappointing. This is especially when it is considered that other national campaigns/programmes, particularly the Ministry of Health 'Feeding Our Futures' and 'Fruit in Schools' are likely to have had some impact on the findings. Television programmes about losing weight and healthy eating will also have contributed.

However, it is important to consider the nature and content of the LBD campaign. As noted previously, the initial campaign focussed on reducing obesity and did not mention diabetes directly. It is also likely that there would be little residual impact from this campaign, given how long ago it ran and the change of direction following it. The next campaign highlighted the negative consequences of getting diabetes. It was not until the most recent campaign that there has been specific messages about what to do to prevent diabetes. Given this campaign had only been running for a short time prior to and during the survey, it would be unrealistic to expect overly large impacts at such an early stage. Social marketing campaigns do need to be seen as long term strategies.

The social marketing monitoring surveys, undertaken by Phoenix Research separately from this survey, did show that the advertising was being seen, that over half had discussed the ads with others and that large proportions said the ads had made them more motivated to eat more healthily and be more active. Apart from the awareness/knowledge questions, the current survey was designed primarily to measure behaviour change, so it is not picking up on any improved motivations/intentions and few attitudes; that was left to the social marketing monitor surveys.

It should be noted that the most recent LBD campaign was seeking to deliver multiple messages. In hindsight more impact might have been achieved had there been a focus on only one or two key messages. This was reflected in the dominant message being recalled in the social marketing monitor being the relatively generic message of 'watch what you eat/eat healthy'. This was mentioned by half, whereas the highest mentioned specific message apart from 'exercise' (20%) was 'reduce sweet food/sugary food' at 11 percent.

Moderate awareness of consequences of diabetes

Unfortunately there was no benchmark measure to ascertain how much impact the campaign had on achieving the current levels of awareness of the consequences of getting diabetes. With three key consequences each having between a quarter and just over a third recall and more than four-in-five able to recall at least one consequence, this would seem to indicate that there is moderate awareness of the negative consequences of diabetes.

Increased concern with diabetes also an important indicator

Given the second phase of the campaign was on promoting the consequences of diabetes, it would be expected that this would have generated an increased concern with getting diabetes. There was some evidence that this has been achieved, with the four percent increase. Given the campaign has been targeted at specific ethnic groups, the greater increases among Maaori (up 12%) and South Asians (up 19%) are a better indication of campaign impacts. While Pacific people did not increase, they were already the most concerned and their current level was still slightly higher than any of the other ethnic groups.

However it was disappointing that obese persons did not show an increase, as there were only one-in-two who were concerned.

Perceived knowledge of diabetes

The reduction in those who felt their knowledge of diabetes was 'good' may reflect a perception of decreased knowledge. However, it could also be due to them now having enough understanding of diabetes to be more aware that there are likely to be things they don't know.

Personal contact with persons with diabetes

The fact that three-quarters and up to almost nine-in-ten in some groups know someone with diabetes does show that this is likely to be an issue of relevance in their own lives. This should make them more receptive to communications that seek to reduce diabetes or its impacts.

4.9 PREVALENCE OF DIABETES AND AT RISK GROUPS

PREVALENCE OF DIABETES

The study confirms that diabetes is a major problem in CMDHB, with nine percent of the sample reporting **having diabetes**, but large increases in the more at risk ethnic groups.

Figures are presented for both the crude and age standardised rates. The crude rate is based on the weighting that accurately reflects the CMDHB population, including the age distribution. The age standardised rate is based on the age standardised weighting, which has the ages within each ethnic grouping being similar, to remove ethnic group differences that are due to some ethnic groups being younger (almost all the tables shown in this report are based on age standardised data, as they are showing ethnic group differences). It can be seen that both weightings produce a rate of diabetes that rounds up or down to nine percent.

Overall there has been a two percent increase in the reported rate of diabetes since the benchmark survey*. The age standardised rate for Maaori more than doubled to 15 percent*. It was noted in the pre-campaign survey report that Maaori under-representation in high deprivation areas may have resulted in the Maaori diabetes rates being a little lower than they should have been, however the re-weighting prior to the current analyses should have corrected for that. The South Asian rate doubled, to 16 percent*, and the Other Asian rate also doubled, to eight percent. The Pacific people's rate increased by three percent, but this was not large enough to be significant. However, Pacific people still had the highest rate at 17 percent. The rate changed very little among people from Other ethnic groupings (primarily New Zealand Europeans), which accounts for the increase among the total sample only being two percent, while other ethnic groups showed much more dramatic increases.

These rates differ from other data sources used by Counties Manukau DHB and the DHB will be doing more analysis on this.

The age standardised rates for the separate Pacific groups were:

- 20 percent for Samoan people (up 12%*)
- 20 percent for Cook Island Maaori (down 7% but not a significant change)
- 15 percent for Tongan people (up non-significantly by 7%)
- 13 percent for Niuean (up non-significantly by 2%)
- 7 percent for 'Other' Pacific people (down non-significantly by 6%)²⁸.

The nine percent with diabetes consisted of 1.2 percent with Type 1 (down from 1.7), 5.8 percent with Type 2 (up from 3.7) and 3.3 percent who did not know what type they had (up from 2.3), none of these changes being significant.

²⁸ The numbers in the Niuean and Other Pacific sub-samples were relatively small and therefore these findings need to be interpreted with some caution.

Table 56: Prevalence of diabetes

| PREVALENCE OF DIABETES | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| Crude rate | 6.5 | 8.6▲▲ | 5.1 | 11.3↑▲▲ | 10.7↑↑ | 13.7↑↑ | 6.4 | 12.4↑▲▲ | 3.2↓ | 6.9 | 5.2 | 5.7↓↓ |
| Age standardised | 7.0 | 9.4▲▲ | 6.7 | 14.5↑↑▲▲ | 13.9↑↑ | 17.3↑↑ | 7.5 | 15.5↑↑▲▲ | 3.6↓ | 7.8▲ | 4.7↓ | 5.1↓↓ |

Other changes since previous survey

Other groups in the current study where diabetes was now *more* prevalent were:

- Males aged 45 years or older (up 8% to 18%*)
- People living in high deprivation areas (up 6% to 13%*)
- Those interested in eating more healthily (up 2% to 9%)

Differences within current survey

Within the current survey, people with diabetes were *more* prevalent among:

- Males aged 45 years and over (18% vs 9% of total sample)
- Samoan people (17%)
- Obese persons (16%)
- Cook Island Maaori (16%)
- Females aged 45 years and over (13%)
- Those from high deprivation areas (13%)

And *less* prevalent among:

- Those responsible for children (6%)
- Those in low deprivation areas (5%)

- Females aged 25 to 44 years (3%)
- Males aged 25 to 44 years (2%)
- Females aged 16 to 24 years (1%)
- Males aged 16 to 24 years (1%)

PERSONS AT RISK OF DIABETES

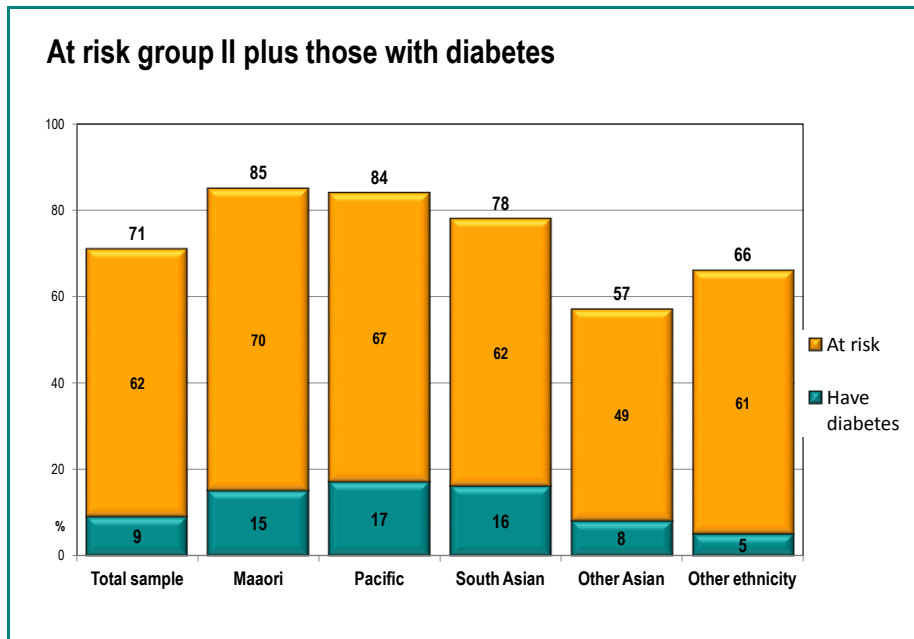
In addition to the nine percent who already had diabetes, two 'At risk' groups have also been identified. These included persons who were obese, overweight, had a family history of diabetes, had diabetes during pregnancy but no longer had it, and were classified as 'sedentary', which was defined as doing less than half an hour's physical activity in the last week. In the previous survey the overweight and obese persons were based on those who thought a doctor would say they were obese or overweight. This 'At risk' group has been used to make comparisons between the two surveys. However, as the current survey added BMI, a new 'At risk II' group has been created, to give a more accurate measure of the numbers at risk.

Using the former definition there were just over half (53%) who were at risk, while the new 'At Risk II' definition identified that there were over six-in-ten

(62%) at risk. The first graph which follows shows the 'At risk II' levels coupled with those who already had diabetes. It can be seen that the combined levels were very high for Maaori (85%), Pacific (84%) and South Asians (78%), but even among the other two ethnic groups almost half were at risk.

The second graph is based on the 'At risk' grouping that uses people's perceptions as to whether a doctor would say they were overweight or obese. While there were indications of reductions in the proportion who were 'At risk' for Maaori (down 6% to 60%) and Pacific people (down 5% to 58%), neither change was significant.

Graph 28: At risk group II plus those with diabetes



Graph 29: At risk group plus those with diabetes

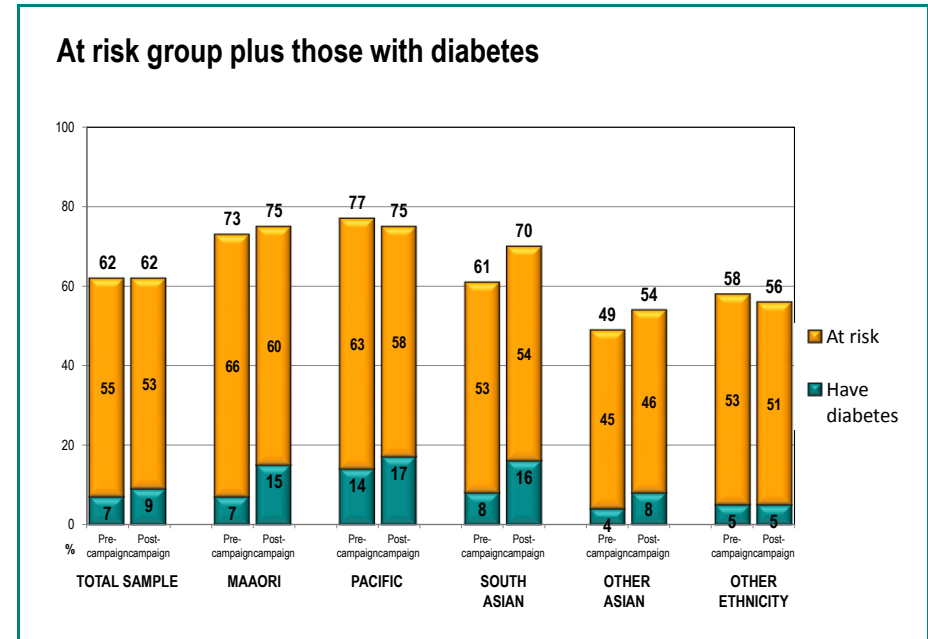


Table 57: 'At Risk' Groups

| 'AT RISK' GROUPS (excluding persons with diabetes) | TOTAL | | MAAORI | | PACIFIC | | SOUTH ASIAN | | OTHER ASIAN | | OTHER | |
|---------------------------------------------------------------------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 2,520 | 2,363 | 594 | 606 | 712 | 594 | 299 | 430 | 306 | 214 | 998 | 868 |
| | % | % | % | % | % | % | % | % | % | % | % | % |
| Obese | 11 | 10 | 17↑↑ | 20↑↑ | 25↑↑ | 21↑↑ | 12 | 7▼ | 3↓↓ | 5↓ | 7↓↓ | 6↓↓ |
| Overweight | 29 | 25▼▼ | 31 | 22▼▼ | 25 | 22 | 20↓ | 20↓ | 20↓↓ | 13↓↓▼ | 31 | 27▼ |
| Family history of diabetes | 26 | 24 | 34↑↑ | 31↑↑ | 36↑↑ | 28↑▼▼ | 34↑↑ | 33↑↑ | 26 | 27 | 21↓↓ | 20↓ |
| History of GDM (diabetes during pregnancy, but not currently diabetic) | 1 | 1 | 2↑ | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sedentary | 8 | 14▲▲ | 10 | 14 | 5↓ | 13▲▲ | 9 | 15▲ | 8 | 12 | 8 | 13▲▲ |
| 'At risk' group | 55 | 53 | 66↑↑ | 60↑↑ | 63↑↑ | 58↑ | 53 | 54 | 45↓↓ | 46↓↓ | 53 | 51 |
| 'At risk' group II (based on BMI measures) | NM | 62 | NM | 70↑↑ | NM | 67↑ | NM | 62 | NM | 49↓↓ | NM | 61 |
| Have diabetes | 7 | 9▲▲ | 7 | 14↑↑▲▲ | 14↑↑ | 17↑↑ | 8 | 16↑↑▲▲ | 4↓ | 8▲ | 5↓ | 5↓↓ |

NM = Not measured

Other changes since previous survey

There have been *decreases* in the proportion in the **'At risk'** group since the previous survey among:

- Males aged 45 years and over (down 8% to 45%)
- People in areas of high deprivation (down 7% to 54%*)
- For people who were responsible for three or more children (down 8% to 56%)

There was an *increase* among:

- Males aged 16 to 24 years (up 12% to 50%)

Differences within current survey

'At risk' persons were *more* prevalent among:

- Females aged 25 to 44 years (62%)
- Those interested in eating more healthily (61%)
- Those interested in being more active (60%)
- Those responsible for children (59%)
- Males aged 45 years and over (45%)

DISCUSSION

High proportions 'at risk' of diabetes

This study confirms that diabetes is a major problem in the Counties Manukau DHB region, with nine percent reporting having diabetes and three-quarters either having diabetes or being 'at risk'. The rates were particularly high for Pacific people, Maaori and South Asians.

A fast growing problem

The doubling of the rates of diabetes reported by Maaori, South Asian and Other Asian peoples in the less than three year period is of real concern. While Pacific people have increased at a relatively slower rate, they still had the highest rate overall in the current survey.

Link with deprivation

The study also confirms a link between diabetes and higher levels of deprivation. Therefore the ethnic differences in prevalence of diabetes are likely to be influenced by the higher levels of deprivation experienced by Pacific people and to a lesser extent Maaori. Multivariate analyses of this data at a later date could identify the extent to which the differences exist for ethnic groups after controlling for the effects of deprivation and other possible confounding effects.

In terms of age within gender groups, both males and females aged 45 years and over were predictably higher for prevalence of diabetes, but it was 25 to 44 year old females who were more likely to be 'at risk', so all these age within gender groups need to be included when considering priority audiences for social marketing.

4.10 VEGETABLE GARDENING

Two new questions were added to the current survey to ascertain current levels of vegetable gardening and interest in vegetable gardening. The first question asked: "Does your household have your own vegetable garden or is someone in your household involved with a community vegetable garden?" There were just under half (48%) who said 'Yes' to this question. The others were asked: "Are you interested in getting involved in vegetable gardening in

the next 12 months?" There were just under another quarter (23%) of the total sample who were.

South Asian peoples had the highest rate of currently having gardens or involvement in community gardens (55%) and Pacific people the lowest level, but this was still at 43 percent. Pacific were the most likely to be interested in getting involved in vegetable gardening in the next 12 months (31%).

Table 58: Vegetable gardens

| VEGETABLE GARDENS | Total | Maaori | Pacific | South Asian | Other Asian | Other |
|-------------------------------------------------------|-------|--------|---------|-------------|-------------|-------|
| | 2,363 | 606 | 594 | 430 | 214 | 868 |
| | % | % | % | % | % | % |
| Have own or involved in community garden | 48 | 48 | 43↓ | 55↑↑ | 42 | 49 |
| Interested in getting involved in vegetable gardening | 23 | 24 | 31↑↑ | 20 | 18 | 21 |

Those **with vegetable gardens or involvement with community gardens** were *more* prevalent among:

- Those living in medium deprivation areas (56% vs 48% of total sample)
- Females aged 45 years and over (56%)
- Tongan people (56%)

They were *less* prevalent among:

- Those interested in eating more healthily (44%)
- Males aged 25 to 44 years (38%)
- Samoan people (32%)
- Niuean people (23%)

- Obese persons (40%)
- Sedentary persons (37%)

Those who were **interested in getting involved in gardening** were *more* prevalent among:

- Samoan people (38% vs 24% of total sample)
- Cook Island Maaori (36%)
- Males aged 25 to 44 years (33%)
- Obese persons (32%)
- Those responsible for three or more children (31%)
- Females aged 25 to 44 years (30%)

- Those interested in eating more healthily (28%)
- Those interested in being more active (28%)
- Those responsible for children (27%)

They were *less* prevalent among:

- Females aged 45 years and over (17%)
- Males aged 45 years and over (15%)
- Males aged 16 to 24 years (12%)

DISCUSSION

High interest in vegetable gardening

Vegetable gardening appears to already be well established, but there is still a lot of interest among the half who do not currently have access. The questions did not ascertain any details about the level and quality of the existing vegetable gardens and it is possible that promotion of vegetable gardening may also stimulate improved food yields among the existing vegetable gardeners.

Obese persons were below average on currently having access to a vegetable garden, but above average for being interested.

4.11 COMMUNICATING WITH ETHNIC SPECIFIC AUDIENCES

Questions were included to assist in identifying how best to reach the different ethnic audiences with social marketing communications. The table which follows shows the extent to which the different ethnic groups engaged with various media and other possible vehicles for reaching people, such as marae and churches.

As the findings differed by age, the age breakdowns for each ethnic group are detailed in tables at the end of this section. Also included are the levels for the different Pacific and Asian ethnic groups.

It should be noted that these questions were asked of people based on what they identified as their *main* ethnic group, to avoid those of more than one ethnic group being asked to do more than one set of questions.

Maaori reported a reduction in listening to Maaori radio (down 15% to 39%*), a decrease that was evident across all age groups. They also reported an increase in adding content to blogs (up 9% to 33%). Use of Maaori TV increased overall (up 4% to 90%).

Pacific people reported an increase in having internet access at home (up 10% to 57%*), but still remained lower than other ethnic groups. This internet access increase was present across all Pacific age groups. It was most pronounced among Tongan people (up 17% to 59%*) and Cook Island Maaori (up 16% to 62%*). The youngest age group reported increased use of texting (up 12% to 88%), which also increased among Tongans (up 14% to 64%) and Cook Island Maaori (up 12% to 71%). Samoan people reported increased use of Pacific radio (up 15% to 75%*), Pacific newspapers (up 19%

to 58%*) and Pacific TV programmes (up 16% to 72%*). There was increased use of personal email reported by Cook Island Maaori (up 16% to 56%*) but decreased use of personal email by Samoan people (down 12% to 41%). There was a decrease in the reported use of Pacific radio among Cook Island Maaori (down 17% to 41%*), while among Tongans there was a decrease in reported use of Pacific TV (down 15% to 53%).

Asian peoples reported an increase in those using texts on their mobile phones (up 10% to 79%*). This increase is primarily driven by the younger Asian peoples, the 16 to 24 year olds (up 10% to 96%*) and the 25 to 44 year olds (up 10% to 83%). South Asian people are also driving this increase (up 7% to 78%). Those having internet at home has increased among those from South Asian ethnic groups (up 6% to 91%). There was also an increase in using email for personal reasons amongst the 16 to 24 year olds (up 10% to 89%). There was an overall decrease in the use of ethnic newspapers/magazines (down 6% to 43%), particularly among the 16 to 24 year age group (down 14% to 22%).

People from Other ethnic groupings reported an increase in the use of texting (up 8% to 76%*), which also increased amongst the 25 to 44 year olds (up 14% to 96%*) as well as those 45 years and over (up 7% to 54%). Those adding content or comments to websites or online blogs also increased (up 13% to 32%*). This was most pronounced in the younger age group, the 16 to 24 year olds (up 40% to 83%*), and lesser so amongst the 25 to 44 year olds (up 23% to 41%*). Active members of local groups, clubs or committees increased amongst the 16 to 24 year olds (up 26% to 59%*). Those people attending a local church or a place of worship have increased among 16 to 24 year olds (up 19% to 43%), but have decreased among the 25 to 44 year olds (down 8% to 19%).

Table 59: Engagement with media and community/cultural groups

| ENGAGEMENT WITH MEDIA AND COMMUNITY/ CULTURAL GROUPS | TOTAL MAAORI* | | TOTAL PACIFIC * | | ASIAN * | | TOTAL OTHER ETHNIC GROUPS* | |
|--------------------------------------------------------------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-------------------------------|------------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 489 | 521 | 624 | 517 | 530 | 609 | 882 | 718 |
| | % | % | % | % | % | % | % | % |
| Listen to own ethnic radio stations at least once a week | 54 | 39▼▼ | 62 | 63 | 56 | 56 | 0 | 0 |
| Read own ethnic newspapers/magazines at least once a week | 27 | 22 | 43 | 48 | 49 | 43▼ | 0 | 0 |
| Watch own ethnic TV programmes at least once a week | 86 | 90▲ | 65 | 68 | 0 | 0 | 0 | 0 |
| Text on a mobile phone at least once a week | 74 | 74 | 54 | 60 | 67 | 77▲▲ | 68 | 76▲▲ |
| Have internet access at home | 66 | 66 | 47 | 57▲▲ | 89 | 91 | 84 | 87 |
| Use email for personal use rather than work reasons at least once a week | 57 | 56 | 42 | 42 | 76 | 77 | 66 | 70 |
| Add content/comments to websites or online blogs at least once a month | 24 | 33▲▲ | 25 | 26 | 43 | 41 | 19 | 32▲▲ |
| Am an active member of a local group, club or committee | 49 | 44 | 42 | 43 | 30 | 33 | 45 | 50 |
| Attend a local church or a place of worship regularly | 23 | 28 | 75 | 80 | 52 | 51 | 25 | 24 |

* These results and the ones below have all been run as age standardised weightings

** New question in 2009

Table 60: Maaori engagement with media and community/cultural groups, by age

| MAAORI ENGAGEMENT WITH MEDIA AND COMMUNITY/ CULTURAL GROUPS | TOTAL MAAORI* | | 16 TO 24 YEARS | | 25 TO 44 YEARS | | 45 YEARS AND OVER | |
|--------------------------------------------------------------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|----------------------|------------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 489 | 521 | 82 | 94 | 217 | 193 | 188 | 234 |
| | % | % | % | % | % | % | % | % |
| Listen to own ethnic radio stations at least once a week | 54 | 39▼▼ | 47 | 17↓↓▼▼ | 48 | 35▼▼ | 60 | 48↑↑▼ |
| Read own ethnic newspapers/magazines at least once a week | 27 | 22 | 10 | 15 | 26 | 20 | 30 | 26 |
| Watch own ethnic TV programmes at least once a week | 86 | 90▲ | 78 | 79↓ | 83 | 88 | 89 | 94↑ |
| Text on a mobile phone at least once a week | 74 | 74 | 93 | 95↑↑ | 90 | 90↑↑ | 55 | 57↓↓ |
| Have internet access at home | 66 | 66 | 73 | 71 | 71 | 77↑ | 61 | 56↓↓ |
| Use email for personal use rather than work reasons at least once a week | 57 | 56 | 65 | 70 | 63 | 72↑↑ | 50 | 39↓↓▼ |
| Add content/comments to websites or online blogs at least once a month | 24 | 33▲▲ | 49 | 57↑↑ | 27 | 43▲▲ | 18 | 20↓↓ |
| Am an active member of a local group, club or committee | 49 | 44 | 21 | 28↓↓ | 47 | 44 | 57 | 47▼ |
| Attend a local church or a place of worship regularly | 23 | 28 | 21 | 30 | 23 | 24 | 24 | 30 |

* Maaori people only answering this section (n=489)

* These results and the ones below have all been run as age standardised weightings

** New question in 2009

Table 61: Pacific engagement with media and community/cultural groups, by age

| PACIFIC ENGAGEMENT WITH MEDIA AND COMMUNITY/ CULTURAL GROUPS | TOTAL PACIFIC * | | 16 TO 24 YEARS | | 25 TO 44 YEARS | | 45 YEARS AND OVER | |
|--------------------------------------------------------------------------|-----------------|---------------|----------------|---------------|----------------|---------------|-------------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 624 | 519 | 159 | 145 | 313 | 229 | 150 | 145 |
| | % | % | % | % | % | % | % | % |
| Listen to own ethnic radio stations at least once a week | 62 | 63 | 45 | 45↓↓ | 64 | 61 | 64 | 68 |
| Read own ethnic newspapers/ magazines at least once a week | 43 | 48 | 37 | 33↓↓ | 44 | 43 | 44 | 54 |
| Watch own ethnic TV programmes at least once a week | 65 | 68 | 52 | 56↓ | 68 | 63 | 66 | 75↑ |
| Text on a mobile phone at least once a week | 54 | 60 | 76 | 88↑↑▲ | 75 | 78↑↑ | 29 | 38↓↓ |
| Have internet access at home | 47 | 57▲▲ | 54 | 66▲ | 54 | 64▲ | 38 | 50↓▲ |
| Use email for personal use rather than work reasons at least once a week | 42 | 42 | 54 | 64↑↑ | 53 | 56↑ | 29 | 25↓↓ |
| Add content/ comments to websites or online blogs at least once a month | 25 | 26 | 44 | 47↑↑ | 35 | 34 | 12 | 14↓↓ |
| Am an active member of a local group, club or committee | 42 | 43 | 30 | 40 | 47 | 44 | 39 | 42 |
| Attend a local church or a place of worship regularly | 75 | 80 | 76 | 75 | 70 | 72 | 80 | 88↑ |

* Pacific people only answering this section (n=624)

Table 62: Pacific engagement with media and community/cultural groups, by Pacific ethnic group

| PACIFIC ENGAGEMENT WITH MEDIA AND COMMUNITY/ CULTURAL GROUPS (by Pacific ethnic group) | TOTAL PACIFIC * | | SAMOAN | | TONGAN | | COOK ISLAND MAAORI | | NIUEAN | |
|-------------------------------------------------------------------------------------------|-----------------|---------------|--------------|---------------|--------------|---------------|-----------------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 624 | 517 | 265 | 205 | 159 | 131 | 162 | 129 | 54 | 46 |
| | % | % | % | % | % | % | % | % | % | % |
| Listen to own ethnic radio stations at least once a week | 62 | 63 | 60 | 75↑↑▲▲ | 58 | 41↓↓▼ | 63 | 61 | 71 | 56 |
| Read own ethnic newspapers/ magazines at least once a week | 43 | 48 | 39 | 58↑↑▲▲ | 32 | 26↓ | 61 | 53 | 41 | 26↓ |
| Watch own ethnic TV programmes at least once a week | 65 | 68 | 56 | 72▲▲ | 70 | 70 | 68 | 53↓↓▼ | 71 | 67 |
| Text on a mobile phone at least once a week | 54 | 60 | 65 | 57↓ | 59 | 71▲ | 50 | 64▲ | 77 | 79 |
| Have internet access at home | 47 | 57▲▲ | 51 | 55 | 46 | 62▲▲ | 42 | 59▲▲ | 73 | 59 |
| Use email for personal use rather than work reasons at least once a week | 42 | 42 | 53 | 41▼▼ | 40 | 56↑▲▲ | 37 | 40 | 51 | 48 |
| Add content/ comments to websites or online blogs at least once a month | 25 | 26 | 26 | 30 | 36 | 29 | 26 | 20↓ | 40 | 33 |
| Am an active member of a local group, club or committee | 42 | 43 | 42 | 37 | 42 | 48 | 41 | 45 | 45 | 21↓↓▼ |
| Attend a local church or a place of worship regularly | 75 | 80 | 79 | 88↑↑▲▲ | 65 | 62↓↓ | 88 | 87↑ | 40 | 42↓↓ |

* Pacific people only answering this section (n=624)

Table 63: Other ethnic groups engagement with media and community/cultural groups, by age

| OTHER ETHNIC GROUPS ENGAGEMENT WITH MEDIA AND COMMUNITY/ CULTURAL GROUPS (by age) | TOTAL OTHER ETHNIC GROUPS* | | 16 TO 24 YEARS | | 25 TO 44 YEARS | | 45 YEARS AND OVER | |
|-----------------------------------------------------------------------------------|----------------------------|---------------|----------------|---------------|----------------|---------------|-------------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | % | % | % | % | % | % | % | % |
| Text on a mobile phone at least once a week | 68 | 76▲▲ | 93 | 93↑↑ | 82 | 96↑↑▲▲ | 47 | 54↓↓▲ |
| Have internet access at home | 84 | 87 | 91 | 93 | 91 | 92↑ | 76 | 80↓ |
| Use email for personal use rather than work reasons at least once a week | 66 | 70 | 69 | 74 | 76 | 83↑↑ | 56 | 57↓↓ |
| Add content/ comments to websites or online blogs at least once a month | 19 | 32▲▲ | 43 | 83↑↑▲▲ | 18 | 41↑↑▲▲ | 15 | 14↓↓ |
| Am an active member of a local group, club or committee | 45 | 50 | 33 | 59▲▲ | 41 | 43 | 52 | 53 |
| Attend a local church or a place of worship regularly | 25 | 24 | 24 | 43↑↑▲ | 27 | 19▼ | 23 | 24 |

* People of Other ethnic groups only answering this section (n=882)

Table 64: Asian People engagement with media and community/cultural groups, by age

| ASIANS ENGAGEMENT WITH MEDIA AND COMMUNITY/ CULTURAL GROUPS (by age) | ASIAN * | | 16 TO 24 YEARS | | 25 TO 44 YEARS | | 45 YEARS AND OVER | |
|--------------------------------------------------------------------------|--------------|---------------|----------------|---------------|----------------|---------------|-------------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | 530 | 609 | 101 | 122 | 298 | 319 | 130 | 168 |
| | % | % | % | % | % | % | % | % |
| Listen to own ethnic radio stations at least once a week | 56 | 56 | 44 | 37↓↓ | 57 | 60 | 58 | 55 |
| Read own ethnic newspapers/ magazines at least once a week | 49 | 43▼ | 36 | 22↓↓▼ | 50 | 48 | 49 | 43 |
| Text on a mobile phone at least once a week | 67 | 77▲▲ | 87 | 96↑▲ | 73 | 83▲▲ | 56 | 67↓↓ |
| Have internet access at home | 89 | 91 | 92 | 98↑ | 91 | 92 | 88 | 90 |
| Use email for personal use rather than work reasons at least once a week | 76 | 77 | 79 | 89↑▲ | 81 | 84 | 70 | 67↓↓ |
| Add content/ comments to websites or online blogs at least once a month | 43 | 41 | 55 | 68↑↑ | 47 | 46 | 37 | 30↓↓ |
| Am an active member of a local group, club or committee | 30 | 33 | 29 | 22↓ | 29 | 28 | 32 | 40↑ |
| Attend a local church or a place of worship regularly | 52 | 51 | 41 | 42↓ | 50 | 54 | 57 | 52 |

* Asians only answering this section (n=530)

Table 65: Asian engagement with media and community/cultural groups, by Asian ethnic group

| OTHER ETHNIC GROUPS ENGAGEMENT WITH MEDIA AND COMMUNITY/ CULTURAL GROUPS (by Asian ethnic group) | TOTAL ASIAN * | | SOUTH EAST ASIAN | | SOUTH ASIAN | | NORTH ASIAN | |
|-----------------------------------------------------------------------------------------------------|---------------|---------------|------------------|---------------|--------------|---------------|--------------|---------------|
| | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign | Pre campaign | Post campaign |
| | % | % | % | % | % | % | % | % |
| Listen to own ethnic radio stations at least once a week | 56 | 56 | 14 | 22↓↓ | 74 | 70↑↑ | 46 | 41↓↓ |
| Read own ethnic newspapers/ magazines at least once a week | 49 | 43▼ | 21 | 32 | 51 | 45 | 56 | 50 |
| Text on a mobile phone at least once a week | 67 | 77▲▲ | 70 | 83 | 71 | 78▲ | 70 | 78 |
| Have internet access at home | 89 | 91 | 93 | 89 | 85 | 91▲ | 96 | 93 |
| Use email for personal use rather than work reasons at least once a week | 76 | 77 | 82 | 79 | 73 | 76 | 80 | 85↑ |
| Add content/ comments to websites or online blogs at least once a month | 43 | 41 | 45 | 45 | 41 | 39 | 48 | 51↑ |
| Am an active member of a local group, club or committee | 30 | 33 | 35 | 39 | 30 | 32 | 31 | 33 |
| Attend a local church or a place of worship regularly | 52 | 51 | 60 | 57 | 56 | 57 | 39 | 41↓ |

* Asians only answering this section (n=530)

USE OF MARAE

In response to feedback from Maaori advisors to the DHB, the questions about the use of marae were changed from those asked in the benchmark survey. This means changes from the previous survey aren't able to be reported but the new questions provide more useful information on marae usage by Maaori. The current survey asked: "How often in the last 12 months have you been to a marae in the Counties Manukau area? They were then read the options listed in the table which follows. There were just over half (53%) who had been to a marae, with just under a third (30%) having been three or more times. Attendance was lower among those aged 16 to 24 years (40%).

The benchmark survey had asked Maaori if they had a marae in the Counties Manukau area at which they spent time and there were 28 percent who had done so over the previous 12 months.

Table 66: Frequency of marae visits

| FREQUENCY BEEN TO MARAE IN COUNTIES MANUKAU | Maaori 480 % |
|---------------------------------------------|--------------------|
| Not at all | 47 |
| Once | 10 |
| Twice | 12 |
| 3 to 5 times | 11 |
| 6 or more times | 19 |

REASONS FOR USING MARAE

The table below shows the proportion of Maaori who had used marae in the region for the different purposes they listed. The last column shows the same data based just on those who answered the question. So of those who answered the question, 69 percent mentioned family/social events, which equated with 36 percent for all Maaori. The 'family/social events' category included: tangi (42% of those who had been to a marae); family events/weddings/reunions (36%) and unveilings (5%). The 'course/education' category included: cultural/arts courses (9%), educational courses (6%) and waananga (5%).

There were no differences by age in the types of reasons for attending the marae.

Table 67: Reason for visiting marae

| REASON FOR VISITING MARAE | Maaori | Those who had used marae |
|-------------------------------------|----------|--------------------------|
| | 480 % | 215 % |
| Family/ social events | 36 | 69 |
| Course/ education | 9 | 18 |
| Healthcare or health information | 6 | 11 |
| Community/ social issues discussion | 5 | 9 |
| Political/ fundraising meetings | 3 | 6 |
| Work-related | 3 | 6 |
| Religious functions | 1 | 3 |
| Other | 13 | 25 |
| Don't know | 1 | 1 |

APPENDIX A: RESEARCH METHODS

This appendix provides additional and more detailed information on the research methods, to support the Overview of Research Methods chapter of the report.

QUESTIONNAIRE DEVELOPMENT

Counties Manukau DHB consulted widely within their organisation in the design of the benchmark questionnaire. This included on-going input from the Maaori and Pacific teams. Asian input was obtained via Samson Tse at the School of Population Health. The questionnaire for the current survey was kept very similar to the benchmark survey.

There were difficult choices to make when prioritising questions, to keep to the intended interview duration. Some questions were deemed essential in order to evaluate the project, while others were included with more of a focus on the social marketing. There was a trade off between breadth and depth of questioning on topics. This meant that questions were included that were indicators of wider areas. For example, there was one question on consumption of fizzy drinks, as an indicator of sugar consumption.

Where possible question wording was used that matched questions used in other surveys, against which comparisons might want to be made. However, it was considered more important to ensure that the questions were appropriate for the CMDHB population, many of whom have English as a second or other language. In particular, the questions on physical activity, as used in the New Zealand Health Survey and SPARC surveys, were modified so they were more easily understood. Extensive pre-testing of the questions was undertaken to come up with wording that worked as intended.

SAMPLE SIZE AND ETHNICITY

The target sample size in each survey was 2400, with 600 each for Maaori, Pacific people and Other ethnicities and at least 500 for Asian peoples in the benchmark survey and 600 in the current survey. These proportions were designed to provide larger sub-samples for analysis purposes. .

There were 14 interviews in the benchmark survey and two in the current survey that were excluded because the interviewer considered their responses were "probably mostly inaccurate", based on a rating interviewers had to complete at the end of the survey.

The final sample size in the benchmark survey was larger than planned because the initial calls were inadvertently made from a list of phone numbers that had not been randomised and this resulted in 126 too many numbers being called from some areas. This required additional interviews, and the over-sampling in these areas was adjusted for at the analysis stage. This was achieved by giving each person in the over-sampled regions a lower weighting, so that in the final weighted sample this region accounted for the correct proportion of the population.

DATA COLLECTION

Interviews were completed with 2,363 persons aged 16 years and over living in the Counties Manukau District Health Board region, between 25 June and 23 September, 2009. The benchmark survey included 2,520 persons and was conducted between 31 October 2006 and 8 March 2007. In that survey no interviewing was undertaken between 14 December and 7 January.

Interviews were undertaken primarily in the evenings, from 5pm to 9pm and weekends from 10am to 5pm, extending to 7pm if necessary. There was also some day time interviewing Monday to Friday.

There were three different samples: the general sample; the main booster sample, which selected for Maaori, Pacific persons and Asian persons; and the Pacific booster sample.

The Pacific booster sample interviews were all undertaken by Pacific interviewers. All respondents in the general sample and main booster sample were offered the opportunity to be interviewed by an interviewer from their ethnic group if they were Maaori, Pacific or Chinese.

People were also advised that interviews were able to be done in Samoan and Tongan. Twenty-eight interviews were completed in Samoan (was 45 in the benchmark survey) and 19 in Tongan (previously 28), using translated questionnaires.

The interview durations were as follows: general sample 21 minutes 6 seconds (was 23 minutes 5 seconds in benchmark), main booster sample 23 minutes 18 seconds (was 23 minutes 46 seconds), Pacific booster sample 23 minutes 45 seconds (was 24 minutes 13 seconds), Samoan language interviews 37 minutes 33 seconds (was 31 minutes 33 seconds), and Tongan language interviews 25 minutes 8 seconds (was 25 minutes 37 seconds).

Eligible respondents were all persons aged 16 years and over from the CMDHB region, who normally lived in the household. The most recent birthday method was used to randomly select one person from within each household. If that person refused the interview there was no replacement within the household.

SAMPLE SELECTION

General sample and main booster sample

Both the general sample and main booster sample were randomly selected from electronic versions of the white pages. This sampling frame did not include unlisted numbers or listed mobile phones. It also excluded any second landlines in households, so each household had equal probability of selection.

Meshblock data linked to phone numbers was used to identify which numbers were within the CMDHB region. This meant that a small proportion of numbers were excluded from the sampling frame because they were not matched to meshblocks²⁹.

Pacific booster sample

The Pacific booster sample was drawn from Area Units where Pacific people accounted for a quarter or more of the population. This represented 82 percent (was 74% for benchmark) of the Pacific population in CMDHB, based on Census data.

Telecom provided a random sample of numbers from these Area Units. Pacific interviewers then rang these numbers to ascertain if there were Pacific people living in the households. Within households there was a random selection from qualifying persons. This method did have a bias towards Pacific people who live in areas of high Pacific concentration. However, randomly ringing numbers from all the white pages to find Pacific people was not a cost effective option.

²⁹ The suppliers of this sample appear to be unwilling to specify the exact proportion which is excluded.

SAMPLE STRATIFICATION

Because it was a limited geographical region, the sample was not stratified by region.

QUOTAS

Apart from the targets for each ethnic group, there were no quotas. The gender composition was closely monitored to make sure that the proportion of males was adequate. However, given the focus in part of the questionnaire was on meal preparers, a bias towards females was considered useful. There were 39 percent (was 37% in benchmark) of the general sample who were males, while in the main booster it was 44 percent (was 42%) and in the

Pacific booster it was 40 percent (was 46%). This gave an overall level of 42 percent male, which was similar to the 41 percent in the benchmark survey.

CALL PATTERNS AND CALL BACKS

Because particularly high response rates were required, a minimum of 25 calls was made to each number if necessary to try and obtain an interview.

To enhance the response rate, people were given the option of being called on mobile phones to schedule or conduct the interview, if the household contact identified that this would be the best way of obtaining an interview with the qualifying person.

RESPONSE RATES

The final status of the calls and the response rates are as listed below.

| FINAL STATUS OF CALL | General Sample | Main booster sample | Pacific booster sample | Samoan booster sample | Tongan booster sample | Combined total sample |
|------------------------------------------------------------------------------------------|----------------|---------------------|------------------------|-----------------------|-----------------------|-----------------------|
| A: Completed full phone interview | 825 | 1440 | 53 | 28 | 19 | 2365 |
| B: Refusal (able to establish were qualifiers in household (includes partial interviews) | 408 | | | | | 408 |
| C: Refusal (not able to establish were qualifiers) | | 589 | 21 | 1 | 1 | 612 |
| D: No answer | 30 | 186 | 12 | 2 | 1 | 231 |
| E: Answering machine | 36 | 173 | 13 | | 1 | 223 |
| F: Engaged on last call | 9 | 18 | 1 | | | 28 |
| G: Unable to contact/ill/ absent | 39 | 93 | 6 | 7 | 12 | 157 |
| H: Language barrier | 73 | 264 | 4 | | | 341 |
| I: Disconnected number/Invalid number – business or other non-residential | 141 | 1104 | 101 | | 2 | 1348 |
| J: Fax machine (for 5 consecutive calls) | 6 | 54 | 5 | | | 65 |
| K: Ineligible – no Maaori/Pacific/Asian in household | 28 | 10763 | 1050 | | | 11841 |
| TOTAL | 1595 | 14684 | 1266 | 38 | 36 | 17619 |
| Response rate one | 66.9% | 71.0% | 71.6% | 96.6% | 95.0% | 70.0% |
| Response rate two | 58.3% | 90.2% | 95.1% | 73.7% | 55.9% | 76.9% |

"Response rate one" is 70 percent for the combined total sample, and is calculated simply as:

- $(\text{Number of interviews}) / (\text{number of interviews} + \text{number of refusals})$.

"Response rate two" is a weighted response rate of 77 percent overall, and is calculated in accord with Ministry of Health policy. This takes into account the fact that only some of those who refused and had other outcomes would have qualified for the interview.

This weighted response rate was calculated as:

- $(\text{Number of eligible responding}) / (\text{number of eligible responding} + \text{number of eligible non-responding} + \text{estimated eligibles from the unknowns})$

The 'estimated eligibles from the unknowns' was calculated as:

- $\text{Number of unknowns} * (\text{number of eligible responding} + \text{number of eligible non-responding}) / (\text{number of eligible responding} + \text{number of eligible non-responding} + \text{number of ineligibles})$

Unknowns were those categories labelled C to H above. It should be noted that those classified as fax machines were where a fax was reached on five consecutive occasions and it was therefore deemed to be a dedicated fax line and was not included in the qualifying phone numbers.

The weighted response rates provided an overall average rate of 77 percent. However, **the rate for the General sample of 58 percent is the best indication of response rates.** This is because the booster sample rates were affected by the large proportions who said there were no qualifiers in the household (e.g. on the Pacific booster saying that there are no Pacific persons in the household). It is likely that some of these will have used this as a way

to avoid a direct refusal and this will have led to inappropriately high weighted response rates.

QUALITY ASSURANCE PROCEDURES

Pre-testing

The benchmark survey was pre-tested by interviewers from the different ethnic groups to ensure the questions were understood and working as intended. Once changes were made in response to the pre-testing feedback, further pre-testing was undertaken, until there was confidence that the questions were all working as intended. Researchers who had been involved in in-depth qualitative research for Let's Beat Diabetes were involved in the pre-testing and were able to utilise their greater understanding of the topic when seeking to determine whether the questions were working. The question changes in the current survey were also pre-tested in a similar manner.

IQS Accredited

The Phoenix Research CATI centre is IQS accredited, this being the recognised industry quality standard.

Interviewer briefing and debriefing

Interviewers received a detailed briefing, usually from Dr Allan Wyllie, who had overall responsibility for the project within Phoenix Research. Representatives from the Let's Beat Diabetes team attended the main briefing for both surveys and provided background information on the project. The briefings included going through each question, using a data projector to show the questions on a large screen. Interviewers were also given typed briefing notes. Following

the briefing, interviewers undertook practice interviews among themselves and with friends, until they felt sufficiently familiar and confident with the survey to go live.

The briefing included discussion of response rates and how to maximise these, plus most interviewers received further coaching on improving response rates over the duration of the survey, especially any who were getting higher rates of refusals. If an interviewer had three refusals on a shift they had to advise their supervisor who would put them on to another project or give them more training.

Monitoring of interviewing

One of the main benefits of the CATI system is the ability to monitor all the calls, as they are being undertaken from a central location. The shift supervisor(s) monitored calls during the shift. In addition to this, two 'call catchers' recorded all interviews and these could be monitored at any time following the interview. This allowed for more thorough and systematic monitoring than was possible during interviewing. It also meant that if there were any problems identified with any interviewer, all their interviews could be checked. A minimum of one-in-ten (10%) of each interviewer's work was checked via the call catchers.

WEIGHTING

Adjusting for probability of selection

Weighting was necessary to adjust for people in households with larger numbers of potential qualifying persons having less chance of being selected. Therefore the data were weighted by the number of eligible persons in the household. In the main booster sample, the data were weighted by the

number of qualifying Maori, Pacific or Asian persons in the household. Likewise, the Pacific booster sample was weighted by the number of qualifying Pacific people in the household.

Most households had between one and four eligible persons. To avoid individuals having undue influence on the results, the 186 (8%) from households of more than four eligible persons were treated as four person households for weighting purposes. The equivalent figure from the benchmark survey was 207 (8%).

Post-stratification to obtain a representative sample

It was also necessary to weight the data to ensure that the final sample was as representative as possible to the Counties Manukau DHB population. The weighting variables were:

- Prioritised ethnicity (Maori, Pacific people, Asian peoples, Other)
- Age (16 to 24 years, 25 to 44 years, 45 years and over)
- Gender (male, female)
- NZDep06 (Levels 1-4, 5-8 and 9-10)

As noted previously, the benchmark survey was reweighted prior to the current analysis, so that it could include NZDep06 and more accurate age and gender within ethnicity data, which was not available at the time of the reporting on the benchmark survey.

Age standardisation

Because the different ethnic groups have differing age compositions, all ethnic group analyses were run with age standardised weighting. This meant that each ethnic group was given the same age composition.

All the other analyses by other variables (e.g. age within gender, NZDep06 etc) used the standard weighting. The two weightings did sometimes produce slightly different total sample results. As the findings in the report include tables showing the ethnic group differences, the age standardised total sample figures are used throughout the report for consistency and to avoid confusing readers.

Weighting method

The weights were calculated using the formula below.

The weight assigned to the i th respondent in the h th stratum (or weighting cells) was equal to $w_{hi} = \frac{W_h}{\sum_{\substack{\text{respondents in} \\ \text{stratum } h}} \frac{1}{\pi_{hj}}} \cdot \frac{1}{\pi_{hi}}$, where π_{hi} denoted the

selection probability of that respondent and W_h denoted the proportion of respondents in the h th stratum from the Statistics New Zealand 2001 Census data.

ETHICAL ISSUES

This study received approval from the Northern Region ethics committee.

APPENDIX B: DEMOGRAPHIC COMPOSITION OF SAMPLE

This section provides information on the demographic composition of the sample, including information on: persons mainly responsible for food choices and shopping, main meal preparers, and persons with children aged under 16 for whom they are responsible.

The first two tables which follow present the key demographics and how these varied between the actual percentages interviewed and the percentages after the two weightings. The ethnicity, gender and NZDep and age within gender data shown in the third column was the best available estimate of the CMDHB population, which was used as the basis for the weighting.

ETHNICITY

It is important to remember that persons were included in all ethnic groups to which they belonged. The data shown in the table which follows reflects the fact that Maaori and Pacific were deliberately over-represented in the interviews that were undertaken. For example, it shows that 606 interviews were undertaken with Maaori (as shown in the first column of data), which formed 26 percent of the interviews (as shown in the second column). The third column shows that after weighting the data to represent the best known representation of age within gender within ethnicity with NZDep 06 composition for the CMDHB region, Maaori accounted for 13 percent. This figure remained unchanged (as it should) in the fourth column, which shows the ethnic composition after the weighting was redone to ensure each ethnic group had the same age composition (age standardised).

Table 68: Demographic composition – ethnic group

| DEMOGRAPHIC COMPOSITION | Number interviewed | Percent interviewed % | Percent Standard Weighting % | Percent Age Standardised % |
|-------------------------|--------------------|--------------------------|---------------------------------|-------------------------------|
| Ethnic group | | | | |
| Maaori | 606 | 26 | 13 | 13 |
| Pacific | 594 | 25 | 20 | 20 |
| South Asian | 430 | 18 | 9 | 9 |
| Other Asian | 214 | 9 | 4 | 4 |
| Other ethnic grouping | 868 | 37 | 61 | 61 |

In terms of specific **Pacific ethnic groups**, as a proportion of the standard weighted sample Samoan people accounted for 7.6 percent (were 7.1% in the previous survey), Tongan people 5.0 percent (were 5.0%), Cook Island Maaori 4.9 percent (were 5.3%), Niuean people 1.6 percent (were 1.6%), while Other Pacific groups were 1.9 percent (were 2.4%). The close match in the two surveys ensures valid comparisons at the level of the Pacific ethnic groups.

In terms of specific **South Asian ethnic groups**, there were 8.3 percent Indians including Fijian Indians, which compared with 6.4 percent in the previous survey. A small further proportion of this South Asian group were Sri Lankans (0.4% and were 0.3%). In terms of specific **Other Asian ethnic groups**, there were there were 2.4 percent of the weighted sample who were Chinese compared with 3.7 percent previously. South East Asians accounted for 1.3 percent of the weighted sample compared with 1.9 percent previously.

GENDER AND AGE

Overall 42 percent of those interviewed were males, which varied between 37 percent for Maaori, 43 percent for Pacific people, 41 percent for South Asians, 44 percent for Other Asians and 37 percent for people of Other ethnic groupings.

As shown in the table which follows, the sample interviewed under-represented males aged 25 years and over and over-represented both males and females

aged 16 to 24 years. Females aged 25 years and over were represented in proportions that were a close match to the population.

Any age under or over representation was adjusted for as part of the weighting. As noted previously, because the age composition varied across ethnic groups, the comparisons between ethnic groups have been based on age standardised weightings.

Table 69: Demographic composition - others

| DEMOGRAPHIC COMPOSITION | Number interviewed | Percent interviewed | Percent Standard Weighting | Percent Standardised Age Standardised |
|---------------------------------------------------|--------------------|---------------------|----------------------------|---------------------------------------|
| Gender | | | | |
| Male | 992 | 42% | 48% | 48% |
| Female | 1,371 | 58% | 52% | 52% |
| Age within gender | | | | |
| Males 16 to 24 years | 205 | 9% | 5% | 5% |
| Males 25 to 44 years | 373 | 16% | 20% | 20% |
| Males 45 years or over | 414 | 18% | 23% | 23% |
| Females 16 to 24 years | 229 | 10% | 5% | 5% |
| Females 25 to 44 years | 548 | 23% | 22% | 22% |
| Females 45 years or over | 594 | 25% | 25% | 25% |
| NZDep | | | | |
| Low (1-4) | 780 | 33% | 32% | 32% |
| Medium (4-8) | 781 | 33% | 26% | 25% |
| High (9-10) | 802 | 34% | 42% | 42% |
| Household shopper | 1,611 | 68 | 70 | 70 |
| Meal preparer | 1,401 | 59 | 61 | 61 |
| Have responsibility for children | 1,207 | 51% | 48% | 49% |
| Have responsibility for 3 or more children | 333 | 14% | 14% | 14% |

DEPRIVATION

The following table departs from the convention used throughout the rest of this report, by showing ethnicity as the banner in the table, yet using the standard weighting (i.e. not age-standardised). This is so that the relationship between NZDep level and ethnicity can be seen without standardising the ethnic groups by age, i.e. each ethnic group is compared with the others, with their differing age profiles intact.

The weighting of the survey data included NZDep 06 levels as one of the variables for weighting. As a result, the following table should closely approximate the patterns that also apply in the full CMDHB population.

The table shows that Pacific people were very inclined to come from high deprivation areas (90%* compared with 42% for total sample). All results for Pacific people throughout the report need to be interpreted with that in mind: any trends that appear to be specific to Pacific people may be attributable more to the NZDep 06 levels of the areas these people come from, than their ethnicity.

Similarly Maaori had a strong skew towards coming from high deprivation areas (68%*), which again may underlie any trends for Maaori on other variables.

Conversely, Other Asians (**largely Chinese**) and Other ethnic groupings (largely NZ Europeans) were well above average in coming from low deprivation areas (53%* and 43%* respectively), and again this could be a factor underlying other trends observed by ethnicity.

Table 70: NZ Deprivation by Total Response ethnicity

| NZDep | Total | Maaori | Pacific people | South Asian | Other Asian | Other ethnicity |
|--------------|-------|--------|----------------|-------------|-------------|-----------------|
| | 2363 | 606 | 594 | 430 | 214 | 868 |
| | % | % | % | % | % | % |
| Low (1-3) | 32 | 8↓↓ | 1↓↓ | 34 | 53↑↑ | 43↑↑ |
| Medium (4-8) | 26 | 24 | 8↓↓ | 36↑↑ | 29 | 30↑ |
| High (9-10) | 42 | 68↑↑ | 90↑↑ | 30↓↓ | 18↓↓ | 27↓↓ |

PERSON WHO CHOOSES FOOD AND SHOPS

After weighting, seven-in-ten respondents were involved in choosing or doing the food shopping, although other persons could also be involved. Two-fifths (41%) said their spouse/partner was involved, nearly one-fifth (17%) their parents/step-parents/spouse's partner and less than one-in-ten (4%) their children.

Food shoppers were **more** prevalent among:

- Meal preparers (92%)
- Females (85%), particularly females aged 45 and over (92%) and females aged 25 to 44 years (89%)

And **less** prevalent among:

- Females aged under 25 years (33%)
- Males (53%), with the rates being lowest for males aged 16 to 24 years (17%). For males aged 25 to 44 years, over half (59%) were shoppers, as were the oldest male group (57%)

MAIN MEAL PREPARER

Sixty-one percent of the respondents were the person in the household who made most of the meals³⁰. One-third (36%) said their spouse/partner took this role, one-in-six (16%) their parents/step-parents and one-in-twenty (5%) their children.

Table 71: Main meal preparers

| MAIN MEAL PREPARER | Total | Maaori | Pacific Peoples | South Asian | Other Asian | Other ethnicity |
|---------------------------------------|-------|--------|-----------------|-------------|-------------|-----------------|
| | 2363 | 606 | 594 | 430 | 214 | 868 |
| | % | % | % | % | % | % |
| Me | 61 | 65 | 57 | 52↓↓ | 55 | 63 |
| Spouse/partner | 36 | 29↓↓ | 37 | 42↑ | 27↓ | 36 |
| Mother/stepmother/fat hers partner | 12 | 12 | 12 | 12 | 17↑ | 12 |
| Father/stepfather/mot hers partner | 3 | 3 | 4 | 1 | 4 | 3 |
| Daughter(s) | 3 | 4 | 7↑↑ | 2 | 1 | 1↓ |
| Son(s) | 2 | 2 | 2 | 2 | 2 | 2 |
| Brother(s) | 0 | 2↑↑ | 0 | 0 | 0 | 0 |
| Sister(s) | 1 | 5↑↑ | 3↑ | 1 | 1 | 0↓ |

Main meal preparers were **more** prevalent among:

- Females (80%), particularly females aged 45 and over (88%) and females aged 25 to 44 years (82%)
- Household shoppers (80%)

³⁰ If meal preparation was shared 50:50, both persons were recorded.

And **less** prevalent among:

- Females aged under 25 years (28%)
- Males (40%), with the rates being lower for males aged 16 to 24 years (14%), whilst for males aged 25 to 44 years the rate was 44 percent and for males 45 and over the rate was 42 percent
- South Asians (52%), and among Pacific people, particularly Tongan respondents (43%)

NUMBER OF CHILDREN AGED UNDER 16 IN THE HOUSEHOLD

Close to half (51%) had children aged under 16 years living in the household, whom they helped look after. Under one-fifth (19%) had one child, one-sixth (16%) had two, and one-sixth (14%) had three or more. As shown in the table which follows, Pacific persons were more likely to be responsible for children and also for greater numbers of children.

Table 72: Number of children aged under 16 responsible for in household

| NUMBER CHILDREN | Total | Maaori | Pacific people | South Asian | Other Asian | Other ethnicity |
|-------------------------|-------|--------|----------------|-------------|-------------|-----------------|
| | 2363 | 606 | 594 | 430 | 214 | 868 |
| | % | % | % | % | % | % |
| None | 51 | 48 | 30↓↓ | 45↓ | 55 | 57↑↑ |
| One | 19 | 17 | 17 | 28↑↑ | 21 | 19 |
| Two | 16 | 18 | 22↑↑ | 23↑↑ | 19 | 13↓ |
| Three | 8 | 8 | 13↑↑ | 4↓ | 4↓ | 8 |
| Four | 4 | 4 | 11↑↑ | 1↓ | 1↓ | 2 |
| Five or more | 2 | 4↑↑ | 7↑↑ | 0↓ | 1 | 0↓ |
| Mean number of children | 1.0 | 1.2↑ | 1.8↑↑ | 0.9↓ | 0.8↓↓ | 0.8↓↓ |

APPENDIX C: QUESTIONNAIRE

"COUNTIES MANUKAU LET'S BEAT DIABETES"

ID/PROJECT NO: 4652

Good morning/afternoon/evening. I'm [INTERVIEWER NAME] calling on behalf of your local Counties Manukau District Health Board and I'm from PHOENIX Research.

We're conducting a study with people in the Counties Manukau area and the findings will be used to help improve the health of the local community.

(Have you got a minute now so I can see if there is anyone in your household who may be able to help us?)

If the person does not speak English well enough to do the selection, ask if there is someone else in the household you can explain the study to.

If no one with better English, establish which language they speak. If Samoan or Tongan Code 2, Other languages Code 3_"

1. Continue in English
2. Offer call-back by interviewer who speaks Samoan or Tongan
3. Speak other languages

"Q99NUM. Could you please tell me how many people aged 16 years and over normally live in this household?"

"Q99CH. And would I be able to speak to the person from this group who had their birthday last?"

"Q99REQ. If you are Maori, Pacific or Chinese, we can arrange for you to talk to an interviewer from your ethnic group if you would prefer and we are able to do interviews in Samoan and Tongan languages.

Would you be able to help us with this survey? The interview should take about 15-20 minutes. Do you have time to do it now?

If need to, arrange time to call back.
If necessary set call-back for appropriate type of interviewer.

"Q99CONF. I'd like to reassure you that all your answers are completely confidential. Your answers will be combined with those of other people who take part and there will be nothing reported that could identify you.

For quality control purposes some of my calls may be monitored by my supervisor.

Q1 GENDER
"Q1. _Code gender_
"
WIDTH=1
1. Male
2. Female

Q2 ETHNICITY

"Q2. We need to speak to people from a variety of ethnic backgrounds so can you please tell me which ethnic group or groups you belong to?

Code all mentions
Read only if necessary
"

MR

WIDTH=11

1. NZ European
2. Maori
3. Samoan
4. Cook Island Maori
5. Tongan
6. Niuean
7. Other Pacific Island (specify Q2PAC)
8. Chinese
9. Indian
10. Fijian Indian
11. Korean
12. Other Asian (specify Q2AS)
13. Other (specify Q2OTH)
-
14. **Don't know**
15. **Refused**

ASK IF MORE THAN ONE ETHNIC GROUP CODED

Q3 ETHNIC GROUP MOSTLY IDENTIFY WITH

"Q3. Which ethnic group do you MOST strongly identify with?

Read only if necessary
"

WIDTH=1

1. NZ European
2. Maori

3. Samoan
4. Cook Island Maori
5. Tongan
6. Niuean
7. Other Pacific Island (specify Q2PAC)
8. Chinese
9. Indian
10. Fijian Indian
11. Korean
12. Other Asian (specify Q2AS)
13. Other (specify Q2OTH)
14. **Don't know/not willing to choose one**
15. **Refused**

ASK IF MAIN ETHNIC GROUP IS MAORI

"Q4G. Which of the following apply to you?

"

2. Listen to Maaoriradio stations at least once a week
3. Read Maaorinewspapers or magazines at least once a week
4. Watch MaaoriTV programmes at least once a week
5. Text on a mobile phone at least once a week
6. Have internet access at home
7. Use email for personal rather than work reasons at least once a week
8. Add content or comments to websites or online blogs at least once a month
9. Am an active member of a local group, club or committee
10. Attend a local church or a place of worship regularly

Q4B HOW OFTEN BEEN TO MARAE IN COUNTIES MANUKAU

"Q4B. How often in the last 12 months have you been to a marae in the Counties Manukau area? Is it...

Read
"

- "
- WIDTH=1
1. Not at all
 2. Once
 3. Twice
 4. 3-5 times
 5. 6 or more times
 6. **Don't know**
 7. **Refused**

IF 2-5 IN Q4B GO Q4C, OTHERS GO TO GO Q7

Q4C WHAT BEEN TO MARAE FOR

"Q4C. What have you been to the marae for in the last 12 months?

Do not read, code all mentions

"

MR

WIDTH=10

1. To attend tangi/tangihanga
 2. Family events (e.g. weddings, funerals, birthdays, whaanau reunions)
 3. To receive health care
 4. To obtain or discuss health information/attend health hui
 5. To obtain or discuss information on social services/social issues
 6. To discuss community issues
 7. To attend educational course (eg Maaorilanguage)
 8. To attend cultural/arts/recreational course (eg kapa haka, line dancing)
 9. Poukai
 10. Other (specify)
-
11. **Don't know**
 12. **Refused**

MAAORINOW GO Q7

ASK IF MAIN ETHNIC GROUP IS PACIFIC

"Q5G. Which of the following apply to you?

"

1. Listen to Pacific radio stations at least once a week
2. Read Pacific newspapers or magazines at least once a week
3. Watch Pacific TV programmes at least once a week
4. Text on a mobile phone at least once a week
5. Have internet access at home
6. Use email for personal rather than work reasons at least once a week
7. Add content or comments to websites or online blogs at least once a month
8. Am an active member of a local group, club or committee
9. Attend a local church or a place of worship regularly

PACIFIC NOW GO Q7

ASK IF MAIN ETHNIC GROUP IS ASIAN

"Q6G. Which of the following apply to you?

"

1. Listen to Asian radio stations at least once a week
2. Read Asian newspapers or magazines at least once a week
3. (CHINESE ONLY) Listen to Chinese radio stations at least once a week
4. (CHINESE ONLY) Read Chinese newspapers or magazines at least once a week
5. (KOREAN ONLY) Listen to Korean radio stations at least once a week
6. (KOREAN ONLY) Read Korean newspapers or magazines at least once a week

7. (INDIAN ONLY) Listen to Indian radio stations at least once a week
8. (INDIAN ONLY) Read Indian newspapers or magazines at least once a week
9. Text on a mobile phone at least once a week
10. Have internet access at home
11. Use email for personal rather than work reasons at least once a week
12. Add content or comments to websites or online blogs at least once a month
13. Am an active member of a local group, club or committee
14. Attend a local church or a place of worship regularly

ASIAN NOW GO TO Q7

ASK IF OTHER ETHNICITY IS MAIN ETHNICITY

"Q6BG. Which of the following apply to you?

1. Text on a mobile phone at least once a week
2. Have internet access at home
3. Use email for personal rather than work reasons at least once a week
4. Add content or comments to websites or online blogs at least once a month
5. Am an active member of a local group, club or committee
6. Attend a local church or a place of worship regularly

Q7 NUMBER OF CHILDREN UNDER 16 IN HOUSEHOLD

"Q7. How many, if any, children are there aged UNDER 16 living in this household who you help look after?

Record number

Q8 AGE

"Q8. Which age group are YOU in?

Read unless age offered

"

WIDTH=1

1. 16 to 19 years
2. 20 to 24 years
3. 25 to 34 years
4. 35 to 44 years
5. 45 to 54 years
6. 55 to 64 years
7. 65 to 74 years
8. 75 years and over
9. **Don't know**
10. **Refused**

*AWARENESS OF KEY SOCIAL MARKETING THEMES

Q9 WHAT TO DO FOR A HEALTHY WEIGHT

"Q9. We are now moving on to questions relating to health matters.

If someone wants to have a healthy weight, what can they do?

Probe fully

If mention changing diet/eating properly, probe for details

Do NOT read _Code all mentioned_

1. Control/reduce fat intake
2. Control/reduce sugar intake
3. Control/reduce portion size/ amount of food they eat
4. Be physically active
5. Join a weight loss programme
6. Eat less takeaways
7. Other (specify)

- 8. **Don't know**
9. **Refused**

*FOOD CONSUMPTION

Q10 PERSON WHO CHOOSES FOOD AND SHOPS

"Q10. Who chooses what food gets bought for your household and does the food shopping?

Do NOT read _If shared, code more than one_
Person has to be doing it at least once a month

1. Me
2. Spouse/partner
3. Mother/stepmother/fathers partner
4. Father/stepfather/mothers partner
5. Daughter(s)
6. Son(s)
7. Brother(s)
8. Sister(s)
9. Grandmother
10. Grandfather
11. Flatmate
12. Other (specify)

- 13. **Don't know **
14. **Refused**

Q11 MAIN MEAL PREPARER

"Q11. And who in your household makes MOST of the meals?

Do NOT read _If shared 50:50 - code more than one_

1. Me

2. Spouse/partner
3. Mother/stepmother/fathers partner
4. Father/stepfather/mothers partner
5. Daughter(s)
6. Son(s)
7. Brother(s)
8. Sister(s)
9. Grandmother
10. Grandfather
11. Flatmate
12. Other (specify)

- 13. **Don't know **
14. **Refused**

Q12 NUMBER OF FRUIT SERVINGS PERSONALLY EAT DAILY

"Q12. On average how many, if any, 'servings' of FRUIT (fresh, frozen, canned or stewed) do YOU eat on a typical day?

A serving is what fits into the palm of your hand, like a medium apple, one medium or two small plums. Please do NOT include fruit juice or dried fruit.

Do NOT read

1. Don't eat fruit
2. Less than 1 serving per day (specify)
3. One serving per day
4. Two servings per day
5. Three servings per day
6. Four or more servings per day (specify)
7. **Don't know**
8. **Refused**

Q13 NUMBER OF VEGETABLES PERSONALLY EAT DAILY

"Q13. And on average how many, if any, 'servings' of

VEGETABLES OR SALAD (fresh, frozen, or canned) do YOU eat on a typical day?
One serving of cooked vegetables is what fits into the palm of your hand or it's one cup of salad. Please do not include vegetable juices.

Do NOT read

1. Don't eat vegetables
2. Less than 1 serving per day (specify)
3. One serving per day
4. Two servings per day
5. Three servings per day
6. Four or more servings per day (specify)
7. **Don't know**
8. **Refused**

Q14 MINIMUM NUMBER OF SERVINGS RECOMMENDED PER DAY

"Q14. What is the minimum number of fruit AND vegetable servings that adults are recommended to eat PER DAY to stay healthy?

Do NOT read

If asked: One serving of fruit or vegetables is what fits into the palm of your hand or it's one cup of salad.

Interviewer note: If R asks what the recommended amount is AFTER giving an answer, it is 5 servings a day"

1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven

8. Eight
9. More than eight
10. **Don't know**
11. **Refused**

Q15 NUMBER OF TIMES IN LAST 7 DAYS

Q15. On how many of the LAST SEVEN DAYS did YOU....

1. Drink fizzy or energy drinks, not including diet or zero sugar versions _Interviewer note: If asked, this includes RTDs and soft drinks as mixers_
2. Eat MORE than you needed
3. Have something to eat for breakfast _Interviewer note: If asked, this includes liquid food like 'Up and Go' and smoothies but NOT drinks_
4. Eat fast food or takeaways from places like McDonalds, KFC, Burger King, Pizza shops or fish and chip shops? Think about breakfast, lunch, dinner and snacks

If asked, this includes Subway, Chinese, Indian and other ethnic takeaways, plus pies

1. 1 day
2. 2 days
3. 3 days
4. 4 days
5. 5 days
6. 6 days
7. 7 days
8. **None**
9. **Don't know/Not sure**
10. **Refused**

Q16 WAYS USUALLY COOK

"Q16. How often do you ...

1. Cook meat or vegetables in butter or lard
Interviewer note: If asked, this includes ghee

4. Cook meat, including corned beef, with the fat removed or drained off
5. Cook chicken with the skin on

Read

1. Usually
2. Sometimes
3. Never
4. **Do not cook meat - vegetarian**
7. **Don't cook chicken**
5. **Don't know**
6. **Refused**

Q17 INTEREST IN HEALTHY EATING

"Q17. Are you interested in eating more healthily than you currently do?

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q17 GO Q19

IF 2-4 IN Q17 GO Q18

OTHERS GO Q20

ASKED OF THOSE WHO ARE NOT INTERESTED IN EATING MORE HEALTHILY

Q18 FEELINGS ABOUT CURRENT DIET

"Q18. Which of the following best describes how you feel about your current diet?

Read

1. It is healthy enough
2. It could be a bit healthier
3. It could be a lot healthier

4. **Don't know**
5. **Refused**
6. **Don't care**

GO TO Q20

ASKED OF THOSE WHO ARE INTERESTED IN EATING MORE HEALTHILY

Q19 DIFFICULTY IN EATING HEALTHILY

"Q19. How difficult do you find it to eat more healthily?

Read

"

WIDTH=1

1. Not difficult
2. A little difficult
3. Somewhat difficult
4. Very difficult
5. **Don't know**
6. **Refused**

ASKED OF THOSE WHO HAVE AT LEAST A LITTLE DIFFICULTY Q19PRE

"Q19PRE. Here are some things other people have said. Please tell me how much you agree or disagree with each statement.

The answer options are:

Read

1. Agree strongly
2. Agree
3. Agree a little
4. Neither agree nor disagree
5. Disagree a little
6. Disagree
7. Disagree strongly

1. I can't afford the cost of healthier types of food
2. I don't know enough about which foods are healthy for you
3. There is not enough healthy food available in the places where I eat or shop

*D. ACTIVITY SECTION

Q20 NUMBER OF DAYS DID TEN MINUTES ACTIVITY IN LAST 7

"Q20. Now some questions about physical activity. On how many of the LAST SEVEN DAYS did you do physical activity for at least TEN MINUTES at a time? By physical activity I mean activity that increases your heart rate or breathing for at least TEN MINUTES at a time. This includes things like BRISK walking, gardening, dancing, golf, tennis, through to activities that require more effort - activities like heavy lifting, digging, jogging, rugby, and netball.

Think about activities at work, school, or home, getting from place to place, and any activities you did for exercise, sport or recreation.

So, on how many, if any, of the LAST SEVEN DAYS did you do physical activity for at least TEN MINUTES at a time?

Do not read

1. 1 day
2. 2 days
3. 3 days
4. 4 days
5. 5 days
6. 6 days
7. 7 days

8. **None**
9. **Don't know/Not sure**
10. **Refused**

IF 8-10 IN Q20 GO TO Q29

Q22 TOTAL AMOUNT OF TIME IN PHYSICAL ACTIVITY LAST 7 DAYS

"Q22. Adding up this activity, how much time IN TOTAL were you physically active over these _[DAYS FROM Q20]_?

Interviewer note: Record time in hours or part-hours
For example, enter 15 minutes as 0.25, an hour and three-quarters as 1.75 etc

"Q22CHK. So can I just check that what I have is correct, that when you add up the time you have been active over those _[DAYS FROM Q20]_, it TOTALS _[HOURS FROM Q22]_ hours?

1. Yes
2. No

IF NOT CORRECT, QUESTION IS REASKED

Q22B NUMBER OF DAYS DID VIGOROUS ACTIVITY

"Q22B. On how many of those _[DAYS FROM Q20]_ did you do VIGOROUS activity? This is activity that makes you breathe A LOT HARDER than normal ('huff and puff') - like heavy lifting, aerobics, jogging, rugby, netball.

So, on how many of those [DAYS FROM Q20] did you do VIGOROUS activities for at least 10 minutes?

Do not read

"

WIDTH=1

1. 1 day
2. 2 days
3. 3 days
4. 4 days
5. 5 days
6. 6 days
7. 7 days
8. **None**
9. **Don't know/Not sure**
10. **Refused**

Q22C TOTAL TIME SPENT ON VIGOROUS ACTIVITY

"Q22C. And if you were to add it all up, how much time IN TOTAL did you do this VIGOROUS activity over these [DAYS IN Q22B]?

Interviewer note: Record time in hours or part-hours

For example, enter 15 minutes as 0.25, an hour and three-quarters as 1.75 etc

"Q22CHK. So can I just check that what I have is correct, that when you add up the time you have been vigorously active over those [DAYS IN Q22B], it TOTALS [HOURS IN Q22C] hours?

1. Yes
2. No

IF NOT CORRECT, REASK QUESTION

Q29 COMPARISON WITH RECOMMENDED MINIMUM LEVELS OF ACTIVITY

"Q29. Overall, do you think the amount of physical activity that you are doing is less, about the same, or more than the recommended minimum levels for physical activity?

Do not read

After question answered: If asked, can tell them that recommended minimum level is 30 minutes of moderate activity or 15 minutes of vigorous activity most days of the week

"

1. Less than recommended minimum
2. More
3. Same/ about the recommended level
4. **Don't know/ Don't know what recommended level is**
5. **Refused**

Q30 WHETHER INTERESTED IN BEING MORE PHYSICALLY ACTIVE THAN NOW

FILE

"Q30. Are you interested in being more physically active than you currently are?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q30 GO Q32

IF 2-4 IN Q30 GO Q31

GO Q33PRE

ASKED OF THOSE WHO ARE NOT INTERESTED IN BEING MORE
PHYSICALLY ACTIVE

Q31 FEELINGS ABOUT CURRENT LEVEL OF ACTIVITY

"Q31. Which of the following best describes how you
feel about your current level of physical
activity?

Read

1. I am doing enough to be healthy
2. I would need to do a bit more to be healthy
3. I would need to do a lot more to be healthy
4. **Don't know**
5. **Refused**
6. **Don't care**

GO TO Q33PRE

ASKED OF THOSE INTERESTED IN BEING MORE ACTIVE
Q32 DIFFICULT IN BEING MORE ACTIVE

"Q32. How difficult do you find it to be more
physically active?

Read

"

WIDTH=1

1. Not difficult
2. A little difficult
3. Somewhat difficult
4. Very difficult
5. **Don't know**
6. **Refused**

IF 2-4 IN Q32 GO Q32BPPE

OTHERS GO TO Q33PRE

ASKED OF THOSE HAVING AT LEAST A LITTLE DIFFICULTY

"Q32BPPE. Here are some things other people have said.
Please tell me how much you agree or disagree
with each statement.

_Read if not previously used the scale, or if
appropriate_

The answer options are:

1. Agree strongly
2. Agree
3. Agree a little
4. Neither agree nor disagree
5. Disagree a little
6. Disagree
7. Disagree strongly

1. I can't afford the cost of things I would need such
as babysitters, clothes, equipment, gym
membership
2. There aren't enough places in my area for me to go
or join such as parks, walking groups or sports
clubs

*E. SUPPORTIVE ENVIRONMENT

"Q33G. Which of the following people encourage or
do things to make it easier for you to be
physically active?

"

1. Other adults in your household
2. Children in your household
3. Your wider family/whaanau and close friends
4. Your employer
5. People you work with
6. People at church or place of worship
7. People at a marae in Counties Manukau

8. Your doctor or other medical centre staff

"Q33BG. And which of these people encourage or do things to make it easier for you to EAT HEALTHILY?

"

1. Other adults in your household
2. Children in your household
3. Your wider family/whaanau and close friends
4. Your employer
5. People you work with
6. People at your church or place of worship
7. People at your marae in Counties Manukau
8. Your doctor or other medical centre staff

ASK IF HAVE CHILDREN CARE FOR, OTHERS GO TO Q36

Q34A SUPPORT GIVE CHILDREN TO BE PHYSICALLY ACTIVE

"Q34A. Thinking now about the children or young people that you are responsible for in your household, how much support do YOU give to them to be physically active?

Read

1. A lot
2. Some
3. A little
4. None
5. **Don't know**
6. **Refused**

Q34B SUPPORT GIVE CHILDREN TO EAT HEALTHILY

"Q34B. And how much support do YOU give to the children in your household to eat healthily?

Read

1. A lot
2. Some
3. A little
4. None
5. **Don't know**
6. **Refused**

Q34D HOW FEEL OVERALL ABOUT CHILDRENS FOOD

"Q34D. And which of the following best describes how you feel about the overall type and amount of food THEY eat?

Read

1. It could be a lot healthier
2. It could be a bit healthier
3. It is healthy enough
4. **Don't know**
5. **Refused**
6. **Don't care/ Not relevant to me**

Q34E HOW FEEL OVERALL ABOUT CHILDRENS ACTIVITY LEVELS

"Q34E. Which of the following best describes how you feel about THEIR overall levels of PHYSICAL ACTIVITY?

Read

1. They would need to do a lot more to be healthy
2. They would need to do a bit more to be healthy
3. They are doing enough to be healthy
4. **Don't know**
5. **Refused**
6. **Don't care/ Not relevant to me**

*F. PERCEPTIONS RE. OBESITY AND HEALTH SERVICE ACCESS

Q36 WHETHER CONSULTED A DOCTOR/NURSE IN LAST 12 MONTHS
FILE

"Q36. Have you spoken to a doctor or nurse in the last
12 months about YOUR OWN personal health?

1. Yes
2. No
3. **Don't know**
4. **Refused**

ASK IF YES IN Q36, OTHERS GO TO Q38

"Q37G. And thinking of all the times when you met
with him or her over the past 12 months did they
ever ...?

Note: This is for last 12 months

1. Give you a blood pressure test
2. Give you a cholesterol test
3. Give you a diabetes test, CHINESE ADD that is a
test for Tang niao Bing (Tung ne-ow Bing)?_
4. Measure your weight
5. Talk to you about stopping smoking
6. Talk to you about healthy eating or weight
7. Talk to you about your risk of diabetes or heart
disease
8. Talk to you about exercise or physical activity

Q37B GREEN PRESCRIPTION

"Q37B. Did they give you a 'green prescription'
where they recommend exercise as the treatment?

1. Yes
2. No
3. **Don't know/can't remember**
4. **Refused**

Q38 WHETHER WOULD BE CLASSED AS OVERWEIGHT

"Q38. If a doctor was checking your body shape and
weight today, do you think they would say you
were overweight?

1. Yes
2. No
3. **Don't know**
4. **Refused**

ASK IF OVERWEIGHT

Q39 WHETHER CLASSIFIED AS OBESE

"Q39. And would the doctor be likely to say you were
obese? CHINESE ADD: That is Fei Pang (Fay Pung)?

1. Yes
2. No
3. **Don't know (if would be obese)**
4. **Don't understand term obesity**
5. **Refused**

Q40A HEIGHT

Q40A. Can you please estimate your height?
RECORD IN METRES OR FEET AND INCHES

Q40B. WEIGHT

Q40B. Can you please estimate your current weight?
RECORD IN KILOGRAMS OR STONE AND POUNDS

Q40 WHETHER A SMOKER

"Q40. Do you smoke cigarettes or tobacco?

Interviewer note: Do not include marijuana

1. Yes
2. No
3. **Don't know**
4. **Refused**

*G. DIABETES

Q41 EVER TOLD HAVE DIABETES

"Q41. Have you ever been told that you HAVE DIABETES by either a doctor, a nurse or someone else from a GP clinic or hospital? CHINESE ADD: That is Tang niao Bing (Tung ne-ow Bing)?

If respondent says yes - ask if knows whether it's Type 1 or Type 2 diabetes

1. Yes - Type 1
2. Yes- Type 2
3. Yes - not sure which
4. No
5. **Don't know**
6. **Refused**

ASK IF HAD DIABETES, OTHERS GO TO Q43

Q42A DIABETIC DURING PREGNANCY

"Q42A. Did you have diabetes during any pregnancies?

1. Yes
2. No
3. **Don't know**
4. **Not applicable (i.e. have not been pregnant)**
5. **Refused**

ASK IF 1 IN Q42A, OTHERS GO TO Q43

Q42B STILL HAVE DIABETES

"Q42B. And do you still have diabetes?

"

1. Yes
2. No
3. **Don't know (if have diabetes)**
4. **Refused**

Q43 ANY OTHERS IN FAMILY WITH DIABETES

"Q43. Have any of your parents, children, brothers or sisters ever had diabetes?

1. Yes
2. No
3. **Don't know**
4. **Refused**

ASK IF 2-4 IN Q43, OTHERS GO TO Q44PRE

Q43B KNOW ANYONE ELSE WITH DIABETES

"Q43B. Do you know anyone else with diabetes?

If necessary say: Just answer Yes or No, we do not want people's names

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

Q44PRE

"Q44PRE. Here are some things other people have said. Please tell me how much you agree or disagree with each statement.

Read if not previously used the scale, or if appropriate

The answer options are:

1. Agree strongly
2. Agree
3. Agree a little
4. Neither agree nor disagree
5. Disagree a little
6. Disagree
7. Disagree strongly

2. I know what the recommended weight is for me to be healthy
3. I know what the recommended body shape is for me to be healthy
4. ASK ONLY IF THEY DO NOT HAVE DIABETES I am worried that I or someone in my family has diabetes or may get it
5. ASK ONLY IF THEY HAVE DIABETES I am worried that someone in my family has diabetes or may get it
6. I am worried that I or someone in my family has health problems or may get health problems because of being overweight

Q44B KNOWLEDGE OF DIABETES

"Q44B. How would you rate your knowledge of diabetes?

Read

"

WIDTH=1

1. Poor
2. Fair
3. Good
4. Very good
5. **Don't know**
6. **Refused**

"Q45G. The District Health Board wants to find out which areas people know a lot about and which ones need more public education. I am going to read you some statements about diabetes and for each I would like you to tell me whether it is TRUE or FALSE, or if you DON'T KNOW.

1. It is mainly people who eat a lot of sugar that get diabetes
2. Diabetes doesn't affect young people
3. You can have diabetes and not realise it
4. Having diabetes increases your risk of developing heart disease
5. There is nothing you can do to prevent getting diabetes
6. Breastfed babies have a lower risk of becoming obese and developing diabetes

1. True
2. False
3. **Don't know**
4. **Refused**

SKIP THIS QUESTION IF SAID IN PREVIOUS QUESTION THAT IT IS TRUE THAT THERE IS NOTHING YOU CAN DO TO PREVENT DIABETES

Q46 HOW TO PREVENT DIABETES

"Q46. What can be done to prevent diabetes?

Do NOT read - probe fully

Code all mentioned

"

MR

WIDTH=4

1. Keep fit/active
2. Reduce weight/not get overweight or obese
3. Other (specify)

4. **Don't know**
5. **Refused**

Q46B TYPES OF PROBLEMS PEOPLE CAN GET WITH DIABETES

"Q46B. What types of problems can happen to people who get diabetes?

Do NOT read - probe fully
Code all mentioned

1. Lose limbs/legs
2. Go blind
3. Have heart attack
4. Need dialysis treatment
5. Nerve damage
6. Depression
7. Problems with pregnancy
8. Other (specify)

-
9. **Don't know**
 10. **Refused**

Q47A DOES HOUSEHOLD HAVE VEGETABLE GARDEN

"Q47A. Now on a different topic, does your household have your own vegetable garden or is someone in your household involved with a community vegetable garden?

1. Yes (either have own garden or involved in community garden)
2. No
3. Other (specify)
4. **Don't know**
5. **Refused**

ASK IF 2-5 IN Q47A, OTHERS TO GO TO Q56

Q47B INTERESTED IN GETTING INVOLVED IN VEGETABLE GARDENING

"Q47B. Are you interested in getting involved in vegetable gardening in the next 12 months?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

Q56 WHETHER WOULD LIKE A SUMMARY OF RESULTS

"Q56. That is the end of the survey questions.

Would you like us to send you a summary of the overall results of this study, which will be available early next year?

1. Yes
2. No

Q56B WHETHER WOULD LIKE INFORMATION PACK

"Q56B. Would you like us to send you an information pack about eating healthily and being active in Counties Manukau, plus information on diabetes and how to prevent it?

1. Yes
2. No

ASK IF SAID YES TO EITHER OF THE TWO PREVIOUS QUESTIONS

Q56C DETAILS FOR THOSE WHO WANT INFORMATION

EDIT

"Q56C. Can you please give me your FULL NAME and MAILING ADDRESS so we can send this to you?

Interviewer: Record full name and address details in appropriate space, ask for email address also please enter name and address details as you would see them on an envelope

Interviewer note: Please get R to spell out their name

First Name: [Q56FNAM]
Last Name: [Q56LNAM]
Street/P.O. Box: [Q56STR]
Suburb: [Q56ADR]
Town/City: [Q56CITY]
Email address: [Q56EMAIL]

"Q57. Would you be willing to be contacted again to participate in other Counties Manukau DHB research, if required?

1. Yes, I would be willing to be contacted again
2. No
3. **Don't know**
4. **Refused**

IF WILLING, COLLECT PHONE DETAILS

"Q58A. So that we can contact you, can I please double check your telephone number?

Do you have a mobile number we could call you on?

Interviewer: Record name and phone number in appropriate space
If no mobile number, enter N in mobile space

Phone number: [Q58PH]
Mobile number: [Q58MOB]

Q99END

" Thank you very much for your time we really appreciate it.

Finally, I'd just like to remind you that I'm _[INTERVIEWER NAME]_ from PHOENIX Research. If you have any queries at all about this survey, please feel free to phone PHOENIX Research during office hours on 0800 2 PHOENIX. That is the same as 0800 274 636.

*INTERVIEWER FEEDBACK ON SURVEY

*Need to skip this question if not English version of questionnaire

Q59A ASSISTED RESPONDENT BECAUSE OF LANGUAGE DIFFICULTY

"Q59A. _Interviewer to code if English version of interview_

Respondent assistance because of difficulties with English language?

1. Assisted in own language
2. Assisted in English
3. Assisted in both English and own language
4. Not assisted

Q59B RESPONDENT DIFFICULTY ANSWERING QUESTIONS

"Q59B. _Interviewer to code_

Respondent difficulty understanding questions?

1. None
2. A little
3. Some

4. A lot
5. **Don't know**

Q59C ACCURACY OF RESPONDENT ANSWERS

"Q59C. _Interviewer to code_

 Accuracy of respondent answers?

1. Probably all accurate
2. Probably mostly accurate
3. Probably mostly inaccurate
4. Somewhere in between
5. **Don't know**

Q99IQS IQS STATEMENT

"Q99IQS.

 _Interviewer note: Please answer Yes if you
 agree_

 _with the statement below regarding this
 interview_
 or No if you do not.

I hereby certify that this interview I
administered was conducted in accordance with the
Market Research Society's Code of Practice.

1. Yes
2. No

IF NO

"Q99IQSR. _Interviewer note: Please state why you don't
feel the interview was carried out according to
the Code of Practice and what was the
difficulty/problem with the interview"

APPENDIX D: CHANGES TO QUESTIONNAIRE SINCE BENCHMARK SURVEY

| Overview of Updates to Let's Beat Diabetes 2009 Tracking Survey Questionnaire cf. LBD 2006/07 Benchmark Survey Questionnaire | | |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Question | | Comment |
| Q4G1 | Which of the following apply to you? 1. Have a marae in the Counties Manukau area at which I spend time | <i>Deleted in 09 Questionnaire – replaced with Q4B and Q4C.</i> |
| Q4B | How often in the last 12 months have you been to a marae in the Counties Manukau area? | <i>New question added to explore in more detail <u>extent</u> of marae usage in Counties Manukau area.</i> |
| Q4C | What have you been to the marae for in the last 12 months? | <i>New question added to explore in more detail <u>nature</u> of marae usage in Counties Manukau area.</i> |

| Overview of Updates to Let's Beat Diabetes 2009 Tracking Survey Questionnaire cf. LBD 2006/07 Benchmark Survey Questionnaire | | |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q15-4 | On how many of the LAST SEVEN DAYS did YOU.... 4. Eat fast food or takeaways from places like McDonalds, KFC, Burger King, Pizza shops or fish and chip shops? Think about breakfast, lunch, dinner and snacks | <i>New question added to explore extent of fast food consumption. Same as Q used in MoH Dietary Habits Questionnaire.</i> |
| Q41 | Have you ever been told that you have diabetes by either a doctor, a nurse or someone else from a GP clinic or hospital. | <i>Benchmark question broadened to include situations where a patient could be informed re. results of a diabetes test by practice staff other than their GP, or in secondary care.</i> |

| Overview of Updates to Let's Beat Diabetes 2009 Tracking Survey Questionnaire cf. LBD 2006/07 Benchmark Survey Questionnaire | | |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q43B | Do you know anyone else with diabetes? | <i>New question added and asked to those who don't have any family members with diabetes. Will be used in analysis of questions re. diabetes knowledge, attitudes etc.</i> |
| Q45G6 | I am going to read you some statements about diabetes and for each I would like you to tell me whether it is TRUE or FALSE, or if you DON'T KNOW. 6. Breastfed babies have a lower risk of becoming obese and developing diabetes | <i>New question added to determine awareness of these specific benefits of breastfeeding</i> |
| Q40A | Can you please estimate your height? | <i>New question added to calculate BMI</i> |
| Q40B | Can you please estimate your current weight? | <i>New question added calculate BMI</i> |

| Overview of Updates to Let's Beat Diabetes 2009 Tracking Survey Questionnaire cf. LBD 2006/07 Benchmark Survey Questionnaire | | |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q46B | What types of problems can happen to people who get diabetes? | <i>New question added to determine awareness of complications of diabetes (some of which have been highlighted in recent LBD social marketing activity).</i> |
| Q47A | Now on a different topic, does your household have your own vegetable garden or is someone in your household involved with a community vegetable garden? | <i>New question added to support programme planning.</i> |
| Q47B | Are you interested in getting involved in vegetable gardening in the next 12 months? | <i>New question added to support programme planning.</i> |
| Q56B | Would you like us to send you an information pack about eating healthily and being active in Counties Manukau, plus information on diabetes and how to prevent it? | <i>New question added.</i> |