Ipsos-Eureka
Social Research Institute

Consumer Awareness, Attitudes and Behaviours to Fortified Foods

Prepared for Food Standards Australia New Zealand

Ipsos-Eureka Project 09-003975-01

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EXECUTIVE SUMMARY

The *Australia New Zealand Food Standards Code* currently allows for the voluntary addition of various vitamins and minerals to food products and the mandatory addition of thiamin to wheat flour for making bread in Australia. From September 2009, the *Code* will require wheat flour for making bread in Australia to be fortified with folic acid. Bread products are also required to be fortified with iodine in the form of iodised salt in both Australia and New Zealand from October 2009.

The objectives of the current research were to investigate a range of issues around public awareness, attitudes and behaviours towards fortified foods in Australia and New Zealand. Specific information about consumers' awareness and understanding of folic acid and iodine were also sought. Finally, the research also investigated understanding of food regulations in both countries, and how mandating fortification of some products may be received in these communities.

To address these objectives, qualitative research was conducted in Australia and New Zealand consisting of 10 group discussions and eight accompanied shopping trips. The group discussions provided an efficient way to explore awareness, attitudes and behaviours relating to food fortification with a small group of participants. The group context also facilitated tasks such as examining product packaging. The accompanied shopping trips combined qualitative questioning with ethnographic-style observation in the supermarket context. Conducting research in this environment provided crucial data on whether and to what extent participants considered fortification when making food choices in the supermarket, and how they interpret fortification information on product packaging. Participants in the research came from both metropolitan and non-metropolitan locations and a range of age groups, family backgrounds and levels of interest in health issues.

A key finding of the research indicates a risk that fortification may be viewed as a form of artificial processing, which was generally perceived as reducing the health benefits of foods. Voluntary fortifications (i.e. products that a food manufacturer has chosen to add a permitted fortificant) were particularly susceptible to this perception, as some participants viewed the inclusion of vitamins and minerals as a 'marketing strategy' rather than an attempt to enhance

the health value of the product. Information about the efficacy and safety of vitamins and minerals added to foods may help to alleviate this concern, along with reassurance that regulations originate with an independent Government body and not with food manufacturers.

It should be noted that the majority of participants were aware of the concept of adding vitamins and minerals to foods, but were unaware of mandatory fortification. Thus, no real distinction between products fortified voluntarily and those fortified under mandatory regulations was made unless pointed out by the moderator. In general, fortification was referred to as 'adding vitamins and minerals' by both moderators and participants.

Another notable finding is the importance of price in driving food purchasing decisions among Australians and New Zealanders. A common perception amongst participants was that foods that are voluntarily fortified by food manufacturers tend to be more expensive. This made some participants curious as to whether mandatory fortification would lead to a price increase in bread products.

Changing information and recommendations regarding health and nutrition have eroded some participants' trust. For some, this has led to a rejection of new health information disseminated through the media. Evidence of robust testing of fortification ingredients may go some way to alleviating these concerns, but should be bolstered with information about the safe and effective use of fortified foods over a longer time period.

A strong objection to mandatory fortification was raised on the grounds of restricting choice. Most participants were uncomfortable with the concept of being unable to choose a non-fortified product, especially in as common a food category as bread. As organic breads are not generally considered a viable alternative (due to their higher price) this concern may be difficult to overcome. Information demonstrating the careful assessment of fortification with folic acid and iodine before instigating mandatory regulations may assist in reassuring the public.

Finally, a particularly strong finding of the research was that participants generally begin the discussion of fortification with relatively mild views, even indifference. However, engaging in this discussion tended to encourage more intense negative opinions to arise, particularly as the discussion moved from consideration of voluntarily fortified foods to mandatory fortification. This trend was observed among almost all participants in both Australia and New Zealand. Providing front of package or point of sale information may be a better approach to introducing consumers to mandatory fortification. These communications should be combined with a strategy to deal with a negative public reaction should this arise.

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This section outlines the background to the project, and specifies the research objectives

RESEARCH CONTEXT

2.1 Background

The nutritional fortification[1] of foods to achieve population health benefits is a long established practice, with many fortification programs first being introduced in the United Kingdom and the United States between 1920 and 1940. The first Australian fortification program was introduced in 1956, when iodine was added to bread in Canberra to prevent goitre and cretinism, and Tasmania followed in 1966 through to 19742. New Zealand first introduced fortification in 1924 with voluntary fortification of salt with iodine at a low level[3].

Following the early periods of government introduction of fortification, Australian food regulations permitted the voluntary addition of iodine to table salt and later mandated addition of thiamin to bread-making flour, and vitamins A and D to margarine. Industry voluntary fortification, based on the requirements of the Food Standards Code, has also increased the array of fortified food products available on the market. These fortified products have been useful in improving the population's intake of the nutrients used as fortificants in the foods, as well as a range of national health promotion programs to educate the Australian and New Zealand population about the importance of healthy eating to improve nutritional health.

While some particular fortifications have been subject to objections, particularly the fortification of drinking water with fluoride, the progressive introduction of essential micronutrients into processed foods to improve public health and nutrition has generally been considered successful, and has continued to this day.

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[1] Throughout this document, 'fortification' is used to refer to the addition of vitamins and minerals to food products. Foods which have nutritional benefits due to addition of naturally-occurring elements (such as live cultures in yoghurt) or have had other biologically active substances (such as Omega-3 fatty acid) are not included in this definition.
[2] Kamien, M. (2006). The repeating history of objections to the fortification of bread and alcohol: from iron filings to folic acid. *The Medical Journal of Australia* **184**(12); 638-640.
[3] Aitken, E. (2001). Iodine status in New Zealand: Is history repeating itself? *Journal of the New Zealand Dietetic Association* **55;** 4-5.

A policy guideline was adopted by the Australian and New Zealand Food Regulation Ministerial Council in May 2004 and provides guidance on both mandatory and voluntary addition of vitamins and minerals to foods. The policy states that fortification may only occur if there is evidence of health benefits and no potential risks.[4] Studies of consumer attitudes to claims about the benefits of voluntary fortification have found a general acceptance of fortification, with much of the credibility of the claims resting on the underlying credibility of the brand name or fortification vehicle chosen.[5]

Despite the increased use of and familiarity with fortified foods and dietary supplements, repeated studies have shown that some sections of the Australian and New Zealand populations are not obtaining adequate levels of essential micronutrients from their diets. This has been particularly highlighted by the case of iodine, where recent studies have shown inadequate levels of intake among children of school-going age in Australia and New Zealand, and therefore a return to a status of 'general mild deficiency' noted more than half a century earlier.[6] Other studies have also shown that the intake of dietary folate by pregnant women did not meet the recommended levels required to minimise the risks of Neural Tube Defects (NTDs) such as spina bifida in new pregnancies. Compounding the problem of inadequate intake is the critical need for higher levels of folic acid immediately before and during the first trimester of pregnancy. This means intervention with nutritional supplements or dietary changes often cannot be implemented in time to support unplanned pregnancies.[7]

The observed lack of consumer familiarity with some essential micronutrients has been determined to be partially due to a lack of public education, as is the case with regard to the benefits of iodine in iodised salt.[8] Additionally, marketing data suggests that consumers are generally unaware of the difference between regular table salt and iodised salt.[9] Where media coverage of the benefits of iodine fortified salt (iodised salt) in combating iodine deficiency disorders (IDD) was given in 2005, estimated to be seen by roughly a quarter of Australian households, research found the uptake of iodine fortified salt increased by 5.2%. The result suggests that consumers are capable of being persuaded of the benefits of fortified foods. Similarly, a study completed in the United States found considerably increased levels of

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[4] http://www.health.gov.au/internet/main/Publishing.nsf/Content/2087CDEAEE7C703CCA256F190003AF4B/$File/vitamins-minerals.pdf

[5] Williams, P., Ridges, L., Batterham, M., Ripper, B., Hung, M. C., (2008). Australian consumer attitudes to health claim – food product compatibility for functional foods. University of Wollongong. Available online: http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1109&context=hbspapers

[6] Li, M., Eastman, C.J., Waite, K.V., et al. (2006). Are Australian children iodine deficient? Results of the Australian National Iodine Nutrition Study. *Medical Journal of Australia* **184;** 165-169.

[7] McNulty, H. (1996). Folate requirements for health in women. *Nutrition Society Plenary Symposium on 'Nutritional issues for women'.* Available online: http://journals.cambridge.org/download.php?file=%2FPNS%2FPNS56_1B%2FS0029665197001055a.pdf&code=3f3803c99c8c27187fc0936b8a4b398c (accessed Feb 2009)

[8] Li, M., Chapman, S., Agho, K., Eastman, C. (2008). Can even minimal news coverage influence consumer health-related behaviour? *Health Education Research* **23**(3); 543-548.

[9] Ibid.

multivitamin use among young women following an education program delivered through health clinics[10].

Research into awareness of the link between the intake of folic acid both before and during pregnancy and a reduction in the risk of NTDs suggests a similar story. A study undertaken in New Zealand in 2000[11] found that while there was greater support for the general practice of fortifying foods, respondents were unsure as to whether bread should be fortified with folic acid or not, and that the percentage of respondents aware of the relationship between folic acid and NTDs was 32.7%.[12] The researchers acknowledged that this latter finding was likely to be higher than the true reflection of awareness due to the limitations of the research.

The lack of awareness surrounding these specific nutrient deficiencies and their implications for health is exacerbated by consumers' distrust of the promoted health benefits of fortified foods. While voluntary fortification itself has, as noted, found general acceptance among Australian consumers, research into consumer perceptions worldwide indicates that approximately one third of consumers do not believe that foods claiming to have health advantages actually contain ingredients that bring about the promoted benefits.[13] This distrust of voluntary fortified foods and evidence that some critical groups of the population (such as young children and pregnant women) are not achieving the recommended dietary intake of essential vitamins and minerals could create situations of nutritional deficiencies of public health concern. Mandatory fortification sometimes becomes necessary to prevent these vitamin and mineral deficiencies from developing into national population health problems, particularly where there is a demonstrated significant population health need taking into account both the severity and the prevalence of the health problem to be addressed.

The two specific micronutrient deficiencies described (folic acid and iodine) are being targeted through the introduction of mandatory folic acid fortification of wheat flour for making bread (Australia only) and mandatory use of iodised salt (replacement of non-iodised salt) for making bread (Australia and New Zealand). The mandatory folic acid fortification of wheat flour in Australia came into effect in September 2009 and is required of all bread with the exception of breads represented to consumers as 'organic'. The use of iodised salt became effective in October 2009 and bread manufacturers in both Australia and New Zealand are required to fortify with iodine using iodised salt. Bread has been selected as the food vehicle for mandatory fortification due to its wide consumption, particularly within the target group of

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[10] Chacko, M.R., Anding, R., Kozinetz, C.A., Grover, J.L., Smith, P.B. (2003). Neural Tube Defects: Knowledge and preconceptional prevention practices in minority young women. *Pediatrics* **112**(3); 536-542.
[11] Bourn, D.M., and Newton, R. (2000). Estimated dietary folate intakes and consumer attitudes to folate fortification of cereal products in New Zealand. *Australian Journal of Nutrition and Dietetics* **57**(1); 10-17.
[12] Ibid.
[13] ACNielsen online survey, Functional Food & Organics, November 2005

pregnant women. It is also a practical option particularly in Australia, where thiamin is already mandatorily added to flour for making bread[14].

The New Zealand government has delayed its commencement date for mandatory folic acid fortification of bread until May 2012, but maintains voluntary folic acid fortification of bread until then.

Similar mandatory folic acid fortification programs introduced in a some developed countries such as the US and Canada have demonstrated positive health benefits while easing concerns about possible health risks. Prior to implementation there were concerns expressed in these countries about the less extensively studied folic acid fortification, in particular the retention of unmetabolised folic acid by older persons, and that folic acid could mask warning symptoms of chronic deficiency of Vitamin B12. However, present research does not appear to show an increase in the incidence of B12-deficiency conditions progressing to more serious levels than previously occurred[15].

In developing the mandatory fortification Standard, FSANZ assessed the possible benefits and risks of adding iodine and folic acid to bread to public health and safety, and concluded that based on currently available scientific evidence, and at the levels of fortification stated in the Standard it is safe for the population. It has been predicted that enforcing mandatory folic acid fortification will lead to a 14 to 18 percent decrease in neural tube defects in Australia. The incidence of NTDs in both the United States and Canada, for example, has declined significantly since the introduction of mandatory folic acid fortification16. Reported cases of neural tube defects have dropped by 19 percent in the United States, with the occurrence of spina bifida also decreasing by 23%.17 Decreases have also occurred in Canada, with the rate of neural tube defects falling from 1.13 per 1,000 pregnancies to 0.58 per 1,000 pregnancies.18

Most of the research about increasing the iodine content of the food supply to reduce the incidence of iodine deficiency disorders, has involved the use of iodised salt in processed foods rather than direct addition of iodine in its various forms to food. Internationally, iodised salt has been extensively used as a vehicle for iodine fortification and a number of developed countries have implemented a range of iodine fortification programs to address iodine

[14] Food Standards Australia New Zealand (2006). Draft assessment report of Proposal P295: Consideration of mandatory fortification with folic acid. Available online: http://www.foodstandards.gov.au/_srcfiles/P295%20Folic%20Acid%20fortification%20DAR+%20Attach%201-6.pdf#search=%22voluntary%20fortification%22

[15] Liu, S., West, R., Randell, E., et. al. (2004). A comprehensive evaluation of food fortification with folic acid for the primary prevention of neural tube defects. *BMC Pregnancy and Childbirth* **4**(20) Available online: http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=524178 (accessed Feb 2009)

[16] McNulty, H. (2001). Increasing evidence in favour of mandatory fortification with folic acid. *British Journal of Nutrition* **86**; 425-426.

[17] Honein, M.A., Paulozzi, L.J., Matthews, T.J., Erickson, J.D., and Wong, L.Y. (2001). Impact of folic acid fortification of the US food supply on the occurrence of neural tube defects *Journal of the American Medical Association* **285**; 2981–2986.

[18] Ray, J.G., Meier, C., Vermeulen, M.J., Boss, S., Wyatt, P.R., and Cole, D.E.C. (2002) Association of neural tube defects and folic acid food fortification in Canada. *Lancet* **360**; 2047–2048.

deficiency at the population level. These countries which include the United States, Canada, Denmark, the Netherlands and Germany, have promoted the use of iodised salt through voluntary or mandatory regulations. Iodised salt was generally used in making bread or in other processed foods and in addition, the consumption of other iodine-rich foods by the population was encouraged. Where the consumption of these iodine fortified foods had increased, there have been noted improvements in the iodine status of the populations[19].

A concern raised about the use of salt as a fortification vehicle, is the implied presentation of salt as a healthy food option given the well documented negative health effects of the 'vehicle' product[20] if consumed in excess. This is mitigated somewhat by the specific requirement of the Standard to use iodised salt for baking bread rather than a general increase in the use of iodised salt.

While some food products such as bread seem ubiquitous in the Australian and New Zealand diet, there are differences in the frequency of consumption and the amounts of a food product which a given individual will consume. Bread, the fortification vehicle for both iodine and folic acid, is not exempt from this differentiation. In particular, it has been noted that the diets of various ethnic communities in Australia and New Zealand differ from predominant dietary habits, with existing impacts on iodine deficiency levels noted by Hamrosi, Wallace and Riley in 2005[21]. It is for this reason that public health nutrition education programs will continue to be important components of the national governments' strategies to improve the nutritional status of all Australians and New Zealanders.

Cultural diet preferences and personal food choices are likely to have a long-term impact on the outcomes of iodine and folic acid mandatory food fortification. Similarly, public perceptions of fortification and the possibility of deliberate avoidance of fortified food products by some consumers are likely to shape the effectiveness and sustainability of the mandatory fortification program. Research to identify the current significance of these personal dimensions to food consumption will allow FSANZ to advise the States/Territories and New Zealand in implementing mandatory iodine and folic acid fortification with the greatest population health reach and effectiveness.

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[19] www.who.int/entity/nutrition/publications/micronutrients/FNBvol29N3sep08.pdf
[20] Australian division of World Action on Salt and Health (AWASH), Submission to FSANZ on Proposal P230 – Consideration of Mandatory Fortification with Iodine, June 2007. Available online: http://www.awash.org.au/AWASH_PositionStatements_P230_Submission_Food_Iodisation.html (accessed Feb 2009)
[21] Hamrosi, M., Wallace, E., and Riley, M. (2005). Iodine status in pregnant women living in Melbourne differs by ethnic group. *Asia Pacific Journal of Clinical Nutrition* **14**(1). Available online: http://www.ncbi.nlm.nih.gov/pubmed/15734705?dopt=Abstract (accessed Feb 2009)

2.2 Research objectives

General objectives of the research were as follows:

- To determine consumers' awareness, attitudes and behaviours towards fortified foods.
- To determine consumers understanding of foods labelled as 'fortified' and to provide examples they know.
- To explore how important fortification is to consumers when they are choosing foods.
- To gather consumers' views on fortified foods and explore how they perceive fortified foods.
- To determine which vitamins and minerals consumers focus on having an adequate intake of, and the strategies they use for doing this. In particular, do consumers purchase fortified foods as a way of ensuring adequate intake of vitamins and minerals.
- To identify key issues that influence consumers purchase and consumption of fortified foods.
- To explore the foods that consumers consider appropriate to fortify or would want fortified.
- To determine consumers understanding of the reasons for food fortification.
- To determine whether consumers' attitudes towards fortified foods are influenced by the fortification being mandatory or voluntary.
- To explore whether consumers feel that mandatory fortification restricts their choice of food products.
- To gauge consumers' levels of awareness and understanding of regulations regarding substances (vitamins and minerals) added to foods, and the amounts added.
- To explore areas of confusion and concern in consumers understanding of why foods are fortified.
- To explore their understanding of the impact of fortification on non-target groups.
- To identify differences between groups within the Australian and New Zealand populations in relation to these issues.
- To make recommendations for a future quantitative study.

Objectives specific to understanding fortifications with iodine and folic acid were as follows:

- To determine consumers' awareness, attitudes and behaviours towards folic acid and iodine fortified foods.

- To determine consumers' understanding of foods labelled as 'fortified with folic acid and/ or iodine'.
- To determine consumers understanding of the reasons for folic acid and iodine fortified foods.
- To gauge consumers knowledge about folic acid and iodine and their importance to the development and health of infants.
- To gather consumers' views on folic acid and iodine fortified foods.
- To identify key issues that influence consumers purchase and consumption of folic acid and/or iodine fortified foods.
- To assess consumers' current understanding and awareness of the link between pregnancy, neural tube defects and folate/folic acid intake; and benefits and risks of consuming folic acid fortified foods or taking folic acid supplements.
- To assess consumers' understanding and awareness of the importance of adequate intake of iodine, especially for pregnant women and young children.

The research program undertaken to meet the research objectives and explore these issues of interest is outlined in the following section

3

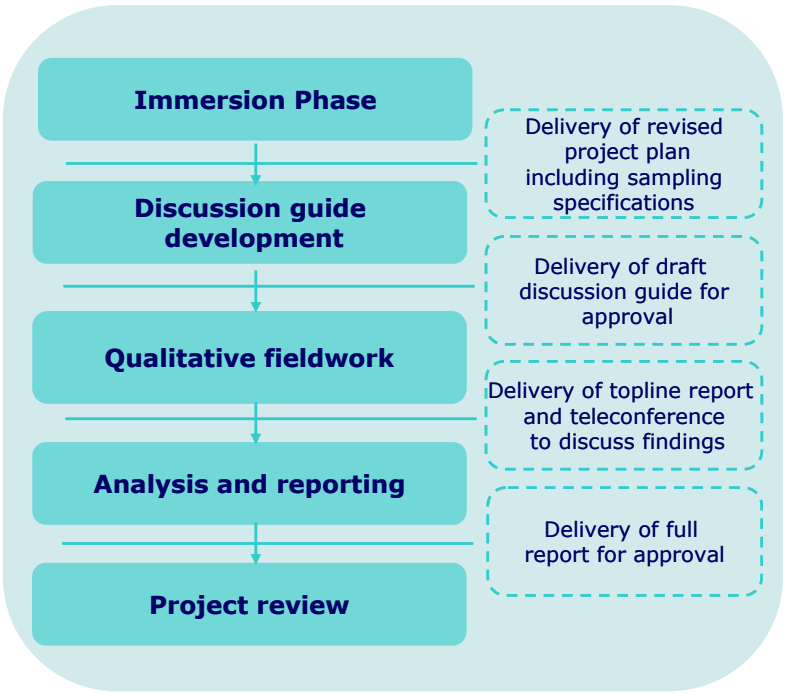
This section provides details of the research methodology employed

RESEARCH DESIGN

3.1 Methodology

Figure 1 outlines the various stages of the methodology used for this project.

Figure 1: Methodology



3.1.1 Immersion phase

The immersion phase allowed our consultants to fully understand all the issues pertinent to the research task at hand by opening a dialogue with FSANZ. Given the specialized knowledge involved in this project it was crucial that our consultants fully understood all contextual issues prior to undertaking the research activities.

Review of existing information

FSANZ provided a range of relevant materials for review prior to the project commencing. The materials assisted the research consultants to gain a full understanding of the research context.

The following materials were provided and reviewed:

- "Interim evaluation of the voluntary folate fortification policy", Australian Food and Nutrition Monitoring Unit, 2001.
- "Policy guideline: Fortification of food with vitamins and minerals", available from: http://www.health.gov.au/internet/main/publishing.nsf/Content/2087CDEAEE7C703CCA256F190003AF4B/$File/vitamins-minerals.pdf.
- "Functional foods and organics", ACNielsen, 2005.
- "Knowledge, attitudes toward functional foods among adults working in the National Research Centre", S. A. Wahba et al, Journal of Applied Sciences Research, 2(1), 2006.
- "Can even minimal news coverage influence consumer health-related behaviour? A case study of iodised salt sales, Australia", M. Li et al, Health Education Research Advance Access, 2007.
- "Neural tube defects: Knowledge and preconceptional prevention practices in minority young women", M. R. Chacko et al, Pediatrics, 112, 2007.
- "Estimated dietary folate intakes and consumer attitudes to folate fortificdation of cereal products in New Zealand", D. M. Bourn and R. Newton, Australian Journal of Nutrition and Dietetics, 51(1), 2000.

Inception meeting

Prior to commencing work on the project, FSANZ staff and consultants met to build on the contextual understanding gained through review of the materials provided. The following agenda items were included in the discussion during this meeting:

1. Issues raised by the project team with regard to the approach and methodology selected and methodology refinement.
2. Development of the study tools - discussion guides and focus group materials.
3. Key deliverables and milestones for the study.
4. FSANZ's expectations for each major phase of the study.
5. Project risks and strategies to address them.
6. Processes for updates and frequency of liaison between the two organisations.
7. Roles and responsibilities of FSANZ and of Ipsos-Eureka.
8. Provision of relevant materials to assist Ipsos-Eureka with full understanding of the study context.
9. Other Issues.

Following this meeting between Ipsos-Eureka consultants and FSANZ staff, Ipsos-Eureka provided FSANZ with documentation of the outcomes agreed during these initial discussions. This initial document formed the basis for the control book (discussed below) that was utilised throughout the duration of this contract. The control book was circulated to all attendees for verification and final agreement in terms of key decisions taken before proceeding.

Control book

The control book documents all phases of the research and was updated following key milestones.

3.1.2 Discussion guide development

In consultation with FSANZ, Ipsos-Eureka developed a discussion guide for groups, a pre-group task asking respondents to note down grocery products they purchased recently and packaging recall, and an interview guide for the accompanied shopping trips. The guide is an important tool in qualitative research to reinforce consistency of questioning between group discussions and interviews (especially when conducted by multiple facilitators), and to ensure all relevant topics are covered.

All materials used during the research are contained in the appendices to this report (see Appendix A and B).

3.1.3 Qualitative group discussions

The qualitative phase of the project included ten group discussions conducted in Australia and New Zealand. The structure of these groups is displayed in Figure 2.

Figure 2. Qualitative research structure

	Qualitative group discussions	Accompanied shopping trips
Sydney (metro AU)	2 groups (18-35 years and 36+ years)	2 trips
Hobart (metro AU)	2 groups (18-35 years and 36+ years)	1 trip
Ballarat (non-metro AU)	2 groups (18-35 years and 36+ years)	1 trip
Auckland (metro NZ)	2 groups (18+ years)	2 trips
Wellington (metro NZ)	1 group (18+ years)	1 trip
Balclutha (non-metro NZ)	1 group (18+ years)	1 trip

Timing

The dates and times for each group discussion are displayed in the table below.

Location	Date	Group composition	Number of participants
Sydney	2 June	Aged 18-35	10 participants
Sydney	3 June	Aged 36+	10 participants
Auckland	3 June	Aged 18+	9 participants
Wellington	8 June	Aged 18+	9 participants
Ballarat	9 June	Aged 18-35	10 participants
Ballarat	9 June	Aged 36+	10 participants
Hobart	11 June	Aged 18-35	9 participants
Hobart	11 June	Aged 36+	10 participants
Balclutha	24 June	Aged 18+	9 participants
Auckland	30 June	Aged 18+, Maori	9 participants

Sampling and recruitment

Recruitment was conducted by professional recruiters in Australia and New Zealand, using a recruitment screener that specified the following participant specifications:

- Each group discussion included only participants in the specified age range (18-35 years or 36 years or more).
- Each group discussion included both male and female participants.
- Across all group discussions, at least 30 participants with children were included in the research.
- Across all group discussions, participants from diverse cultural and linguistic backgrounds were included where encountered.
- All participants were asked to provide their highest level of education and household income (within a nominated range). Recruitment ensured that participants with both high and low education levels and household income were included in the research.
- All participants were also asked to rate their 'health consciousness' on the following scale: "Using a scale from 0 to 10, where 0 is "not at all health conscious" and 10 is "extremely health conscious", how health conscious are you?" Participants with both high, moderate and low responses were included in the research.

The recruitment screeners for both group discussions and interviews are included at Appendix C.

Locations

The following locations were chosen to provide coverage of Australian and New Zealand populations in both metropolitan and regional locations, including both North and South Islands in New Zealand:

- Sydney (metropolitan Australia);
- Hobart (metropolitan Australia);
- Ballarat (non-metropolitan Australia);
- Auckland (metropolitan New Zealand, North Island);
- Wellington (metropolitan New Zealand, North Island); and
- Balclutha (non-metropolitan New Zealand, South Island).

Of the 108 individuals who were recruited to participate in a group discussion or accompanied shopping trip, 103 individuals participated. This represents 98% of recruited individuals participating in Australia and 91% in New Zealand.

Stimulus materials

The following stimulus materials were used in the group discussions:

- A summary of fortified and non-fortified products purchased by group participants see Appendix E). This list was generated using supermarket receipts requested from participants before each group discussion, and the pre-group task (Appendix D).

  These lists were used to assess participants' understanding of which foods they currently buy are fortified, and which vitamins and minerals have been added. This exercise also contributed to the discussion of the importance of fortification to participants when choosing various products.

- Products and product packaging was used as examples of locally-available fortified and non-fortified foods in various product categories. Please see Appendix F for images of the products used.

  Sample products were produced for participants to examine after the discussion of product lists. Sample products were used to further illuminate participants' understanding of which foods are and are not fortified, and to assess their knowledge and understanding of how to read product labelling to determine if a product is fortified.

Duration and incentives

All group discussions were approximately two hours in duration and participants received a monetary incentive of $60 to encourage participation (provided in local currency).

Composition of group discussions

	Auckland	Balclutha	Ballarat	Hobart	Sydney	Wellington
Gender						
• Male	8	4	10	8	6	4
• Female	10	5	10	11	14	5
Respondents with children <15	8	4	7	8	9	5
Aboriginal, Torres Strait Islander and/or Māori	9	0	0	N/A	0	1

	Auckland	Balclutha	Ballarat	Hobart	Sydney	Wellington
Education						
• University degree or higher	6	1	5	1	9	3
• Diploma or Associate Diploma	5	0	2	1	3	1
• Certificate or trade qualification	2	2	0	5	2	0
• Highest level of Secondary school	2	3	8	7	6	3
• Didn't complete Secondary school	3	3	4	5	0	2
• Never attended	0	0	0	0	0	0
• Refused	0	0	0	0	0	0
Income						
• Less than $26,000	3	2	5	4	2	2
• $26,000 to $51,999	3	0	3	6	8	3
• $52,000 to $87,999	3	2	8	8	5	2
• $88,000 or more	9	5	4	1	5	2
Health consciousness						
• 0 (not at all health conscious)	0	0	0	0	0	0
• 1	0	0	0	0	0	0
• 2	0	0	1	1	0	0
• 3	0	0	0	0	0	0
• 4	0	0	0	0	0	0
• 5	2	1	2	2	1	2
• 6	3	0	3	0	4	1
• 7	7	5	5	8	6	1
• 8	4	2	5	6	7	3
• 9	2	1	0	2	2	1
• 10 (extremely health conscious)	0	0	1	0	0	1
• Refused/not answered	0	0	3	0	0	0

3.1.4 Qualitative accompanied shops

Accompanied shopping trips combine qualitative questioning with ethnographic-style observation in a common environment in which participants undertake food product selection (the supermarket). Conducting research in this environment provided crucial data on whether and to what extent participants considered fortification when making food choices in the supermarket, and how they interpret fortification information on product packaging. During accompanied shopping trips, the interviewer observed the participant's behaviours, stopping to ask questions or clarify actions where required. An interview session was also held with the participant at the end of the shopping activity. This session lasted between 30 and 60 minutes.

Shopping trips are more time- and cost-intensive to conduct relative to the number of participants who are involved. Furthermore, the information obtained from the shops is supplementary to the information from group discussions. Thus, fewer accompanied shopping trips were conducted.

Eight accompanied shopping trips were conducted in Australian and New Zealand locations, as described above and displayed in Figure 2. One participant was included in each accompanied shopping trip.

Timing

The dates and times for each accompanied shopping trip are displayed in the table below.

Location	Date	Age	Sex	No of children
Sydney	2 June	34	Female	1 child
Sydney	3 June	38	Female	3 children
Auckland	3 June	31	Male	2 children
Ballarat	10 June	61	Female	None
Wellington	10 June	56	Female	None
Hobart	11 June	43	Female	2 children
Balclutha	16 June	39	Female	4 children
Auckland	1 July	35	Female	2 children

Duration and incentives

As accompanied shopping trips were participant-led, they ranged in time from one to two hours. Participants were provided a monetary incentive of $80 (provided in local currency).

3.1.5 Analysis techniques

Following each group discussion or interview, the moderator made a written record of their impressions of the key themes, issues, patterns and points of contention that arose during the

course of the discussion. This was done as soon as possible to ensure the maximum detail was captured, and to facilitate learning and hypotheses from one discussion being synthesised before beginning the next.

All group discussions and the interview component of accompanied shopping trips were audio or video recorded. Following the qualitative fieldwork, transcriptions of all audio and video recordings were made.

On completion of the fieldwork, a thematic analysis of all the transcripts was conducted, which involved immersion in the data to isolate key themes, points of view, trends and patterns in what participants said. The project team then developed top-line findings which were communicated to FSANZ via teleconference. These findings were subsequently 'fleshed out' in consultation with notes and transcripts to create a comprehensive draft report. Verbatim quotes have been used to demonstrate key points throughout the report.

3.2 Aid to interpretation

Qualitative research techniques allow the researcher to explore in depth pertinent issues using a participant's own language. As the research reported herein was qualitative, the individuals who participated were selected to indicate the range of views on the topics of interest and to come from diverse regions in Australia and New Zealand. They were not selected randomly and cannot be considered a representative sample of the Australian and/or New Zealand populations. The views and opinions provided in this report should not be considered representative of the entire population and may not capture the full range of views. This report does not indicate the prevalence of any particular view.

Given the scope of the research (including 116 participants in total) results should be interpreted with caution. Views and opinions which exist in the population may not have been reflected in the groups and accompanied shopping trips convened for this research.

3.3 Contribution of group discussions and accompanied shopping trips

The rationale for selecting a methodology combining both group discussions and accompanied shopping trips was to gain views from a wide range of participants (as can best be achieved via group discussions) and directly observe shopping behaviour as it relates to fortified foods (during the accompanied shopping trips). These methods combined to provide detailed data on participants' shopping habits, views, opinions and beliefs regarding fortified foods.

Some other differences between the information from the group discussions and that obtained from accompanied shopping trips were also observed:

- As is often the case, participants in the group discussions reacted to and may have been influenced by the views and opinions of other group discussion participants. This is likely to have contributed to the observed trend of increasing negativity towards the concept of both voluntary and mandatory food fortification during each group discussion. While increasing concern and suspicion regarding mandatory fortification was also observed during accompanied shopping trips, the trend was less dramatic and resulted in less critical opinions.

- A disparity between participants' reported shopping habits and their actual purchases was detected during the accompanied shopping trips. While many participants reported buying predominantly 'fresh', 'unprocessed' and 'healthy' products, in reality a number of packaged and processed goods (such as frozen meals and breakfast cereals) were purchased. In some cases these purchases were explained to the researcher as 'treats', while in other cases no explanation of their inclusion was given.

  It was also common for group discussion participants to question the quality of fresh fruits and vegetables available from supermarkets, and to state a preference for purchasing these products from greengrocers or markets. Despite also stating these preferences, almost all participants in the accompanied shopping trips did purchase at least some fresh fruits and vegetables from the supermarket. When questioned regarding this apparent disparity between their preferences and their behaviour, most cited convenience as the reason for buying supermarket produce.

- Another disparity between reported and observed behaviours was noted in terms of the extent to which participants read nutritional and other information on product packaging. A large proportion of participants indicated that they commonly read information on food packaging, and indeed, during the groups all participants spent at least some time on this task. However, when observed during the accompanied shopping trips, participants actually read very little packaging information, except when prompted to do so, or when their attention was drawn to a product not previously purchased.

4

This section reports the findings from the research

RESEARCH FINDINGS

Findings from the qualitative research are presented under the following headings:

- Food purchasing behaviour – drivers of food choices and assessment of healthy foods.
- Vitamins and minerals – awareness and understanding of which vitamins and minerals are important to obtain, methods of obtaining vitamins and minerals, populations for whom specific vitamins and minerals are important.
- Food fortification – awareness and understanding of fortified foods, perceptions of food fortification, reasons for fortification, perceived cost of fortification, labelling of fortified foods.
- Folate and folic acid – awareness and understanding, uses of folate, consumption of folate during pregnancy.
- Iodine – awareness and understanding, uses of iodine.
- Food regulations – awareness and understanding of food regulation.
- Mandatory fortification – reactions to the concept of mandatory fortification, exclusion of organic products.
- Communicating mandatory fortification – considerations in planning the communication of mandatory fortification.

4.1 Food purchasing behaviour

Key findings

- Participants indicated a strong preference for fresh, unprocessed foods.
- The most important drivers of food purchasing behaviour as reported by participants were price, taste, known or trusted brands, children's preference, local production and health value.
- Most indicated they attempt to purchase healthy foods, although this can mean different things to different participants.
- Minimising fat, salt, sugar and 'non-natural' elements such as preservatives were important in identifying which foods are healthy.
- Vitamin and mineral content of foods were not 'top of mind' when considering health value of foods.
- The media, especially current affairs programmes, can have a strong effect on perceptions of healthy foods.
- Some participants purchased organic foods, believing them to be healthier. However, most considered these products to be too expensive.

Supermarket shopping was common amongst group discussion participants, with a small number also visiting fruit and vegetable markets and specialty stores (such as bakeries and delicatessens). While perceptions of supermarkets were generally not positive among participants, most continue to use them due to their convenience, and due to participants' familiarity with that method of grocery shopping. Some participants, including one accompanied shop participant, mentioned visiting a range of different supermarket-type stores, including some discount supermarkets. However, the majority visited just one supermarket.

Strong positive perceptions of fresh foods were apparent amongst participants, especially among females and older people (aged 36 years or older), often accompanied by negative perceptions of processed or packaged foods. However, positive perceptions did not extend to fresh foods purchased from the supermarket, which were generally viewed with scepticism due to notions of high preservative or chemical use in their production, and long periods in storage. Indeed, as the quotations below demonstrate, scepticism extended even to greengrocers among some participants.

"I'm sick of all these preservatives in food, there's no fresh food any more … they're all looking for the longevity of things." - Ballarat, Aged 36+

"I tend to buy a lot of frozen vegetables because I know if it's frozen the nutritional content is still there. If I buy vegetables from the supermarket I am far less sure. And now I'm becoming less sure of my local veggie supplier." - Hobart, Aged 36+

It should be noted that there was a disparity between perceptions of supermarket fruits and vegetables as expressed in the group discussions, and the purchasing behaviour of participants in the accompanied shopping trips. Despite asserting that supermarket produce is less 'fresh' (and thus less 'healthy'), almost all accompanied shop participants did purchase at least some produce from the supermarket during the research. If questioned about this disparity, convenience was often provided as the reason for purchasing these products. Some participants also began to de-emphasise the differences between supermarket and greengrocer products at this stage.

Similarly, despite many participants' assertion that they prefer fresh (i.e. unprocessed) foods, all participants in the accompanied shopping trips purchased at least some packaged and processed goods (such as frozen meals and breakfast cereals). Some explained the difference between their stated preferences and observed behaviour by characterising these products as 'treats', while others gave no explanation.

There were also perceptions that the quality of food available in Australia and New Zealand has deteriorated, with a number of participants indicating that foods contained fewer additives or tasted better "in my childhood". Some participants were convinced that 'modern' farming practices, storage and transport have degraded the quality (including the vitamin and mineral content) of fresh foods.

4.1.1 Drivers of food choices

The most common drivers of food purchasing decisions among participants were:

- **Price.** The cost of food was the most commonly mentioned driver in purchasing decisions, and was observed in both Australia and New Zealand, and across age groups. Indeed, participants in accompanied shopping trips were observed to regularly compare prices of various items when making product choices. Partially fuelled by current economic conditions, "value for money" was cited as the single most important factor by many participants (particularly those with children), and as at least a secondary factor by others.

"I've got four kids, myself and my wife so we're always price driven. It's got to be at the right price." - Ballarat, Aged 36+

"I tend to go for home brand. I look more to specials and just the cheaper things." - Sydney, Aged 36+

In some cases, all other important factors were sacrificed for cost, as illustrated by the following quotation:

"I don't like that bread but it was the best of a bad bunch and it was on special so I got four loaves of that." - Balclutha, Aged 18+

- **Taste.** While price was often the most important factor, most participants also expected to enjoy the foods they purchase.

"I like bread for taste, not what vitamins are in it. I buy food for taste." - Sydney, Aged 36+

- **Known or trusted brand.** A number of participants mentioned preferring to purchase products in brands they know or trust. In particular, brands that participants "grew up with" or knew from their childhood were commonly mentioned.

- **Children's preference.** Among participants with children, taking into account the products children prefer was a strong driver of purchasing decisions. One mentioned buying "whatever the kids grab off the shelves" which, while somewhat facetious, does illustrate the importance of children's preference in food purchasing decisions. Furthermore, some participants had children with food sensitivities or allergies, which also exerted significant influence on purchasing decisions.

- **Locally produced.** Among Australian participants, Australian-made products are still preferred, albeit only when other important aspects (such as price and taste) do not differentiate products. Participants in New Zealand also prefer locally-produced products, especially among fresh foods.

"I just check to see if it's Australian." - Hobart, Aged 18-35

- **Healthy.** Some participants, especially females, mentioned 'healthiness' as an important factor in food purchasing decisions. However, as noted under heading 4.1.2, assessing how healthy a food product is can be difficult for participants, especially as there is significant scepticism regarding claims on food labelling (for example, 'low in fat', 'low GI', etc.).

The vitamin and mineral content of foods was not volunteered as a driver of purchasing decisions when discussing 'healthy' foods, nor was it a consideration mentioned by participants

during the accompanied shopping trips. No participants in the accompanied shopping trips were observed checking for vitamin and mineral content, nor was this volunteered as an aspect of interest. While some participants were interested in the vitamin and mineral content of foods, obtaining these via fortification was not mentioned by any participants without prompting.

When prompted, some group and accompanied shop participants did mention an interest in the naturally occurring vitamin and mineral content of foods, but this was generally a secondary consideration behind other health aspects such as fat, salt or sugar content. In no case were added vitamins and minerals mentioned as a deciding factor in product selection, either in the group discussions or accompanied shops.

4.1.2 Buying healthy foods

The majority of participants were concerned about the health value of foods, particularly females, participants with children and those who live in metropolitan areas. Particularly in New Zealand, males and participants in rural areas were less concerned with buying 'healthy' foods, and more concerned with price.

While most participants expressed confidence in their ability to identify which foods are healthy, there were notable differences between participants as to what 'healthy' might mean. For some participants, ensuring low levels of 'unhealthy' ingredients, such as fat, salt and sugar, was the most important factor. In order to avoid these constituents of foods, many participants indicated using the Nutritional Information panels on foods.

> *"I tend to look at the nutrition panel, particularly if I'm buying something like yoghurt. I'll look at the price and go 'ok those two are similar' then I'll go down to the fat content and see how many kilojoules and things like that. Have a look at the sugar content…" - Ballarat, Aged 36+*

> *"I look for fat content and normally the fat content, that's the main thing I look for. I probably should check sodium, but I don't, I look for the fat content." - Wellington, Aged 18+*

Group participants' assertion that they do regularly check Nutritional Information panels was somewhat supported by observational data from the accompanied shopping trips, but only for new or unfamiliar products (including variations of a known product). This was, however, more common when food products were being purchased for children.

Other participants, however, expressed scepticism regarding products marketed as lower in fat or sugar. This was mainly due to a perception that manufacturers attempt to improve the flavour of products marketed as low in fat or sugar by increasing the amount of other

'unhealthy' ingredients. A common example provided by participants was that products that are 'low fat' often contain additional sugar to enhance their flavour.

> *"When I read the package I look at salt, sugar and iron, and fat as well. If something is really low in sugar it's high in salt, if something is low in salt it's usually high in sugar. It's really hard to find a product that is going to be low in fat, as well as low in salt and sugar." - Sydney, Aged 36+*

> *"One of the things that I have noticed is when they're 97% fat free, they've upped the sugars. Or where they're sugar free they've upped the fats." - Ballarat, Aged 36+*

Some participants also expressed scepticism regarding the health value of 'diet' foods due to the presence of artificial elements such as flavour improvers. Indeed, non-natural ingredients were generally viewed with suspicion, with a number of participants believing that all are unhealthy and should be avoided. Artificial sweeteners, monosodium glutamate (MSG) and other artificial flavours were generally included in this category of 'unhealthy' food additives.

> *"If you look at a lot of these prepared sauces and flavourings you would think 'what on earth am I going to eat?'. They are all chemicals. If you go back to the traditional English food, there was very little like that – there's more natural ingredients." - Hobart, Aged 36+*

Rejection of non-natural ingredients was common among participants in both Australia and New Zealand. The term 'processed' when applied to foods provoked strong reactions among a number of participants, who felt that the term implied adulteration of the 'natural' food, and the addition of unhealthy man-made ingredients. Some of these participants indicated attempting to buy and prepare foods 'from scratch' as often as possible to avoid unhealthy additives, and some even grow a significant proportion of the vegetables and herbs in their diet.

> *"You're better off not buying things in boxes – they're all processed. Anything you can buy not packaged, they're probably good." - Hobart, Aged 36+*

There was, however, an exception made for frozen foods, especially frozen vegetables. Freezing tends to be perceived as a 'healthy' method of preserving foods, and is not included in the category of 'processes' to which participants object. This was particularly noticeable among accompanied shop participants, who tended to justify purchasing frozen vegetables by reference to health claims about the retention of 'goodness' in these products.

It should be noted that, despite the assertion of participants in both group discussions and accompanied shopping trips that they prefer unprocessed foods, all accompanied shop

participants purchased a range of packaged goods. Some justified these purchases as 'treats', while others gave no explanation.

While vitamins and minerals which occur naturally in foods are accepted, a number of participants include the vitamin and mineral additives in fortified foods in the category of 'unnatural' substances. Thus, fortified foods are likely to be rejected by this participant group.

> *"I don't know, even with milk, like high calcium milk and all they've done is like take everything out of it and then stick some calcium in it. So you just get like liquid water with a label on it saying it's got heaps of calcium in it. I don't actually think that can actually be better for you than natural calcium that's actually already in the product, but I am not a scientist." - Balclutha, Aged 18+*

One participant, when examining the label of a fortified product, asked:

> *"'No artificial preservatives', does that include the minerals that they've added to it?" - Sydney, Aged 36+*

This quotation illustrates the perception among some participants that vitamins and minerals included in foods are (or at least could be) among the 'artificial' ingredients which many attempt to avoid.

4.1.3 Effect of the media on food knowledge

There were multiple sources of information that participants used in relation to foods, including teaching from parents during childhood, discussion with friends, food advertising and articles in the media. A powerful source of information cited by a number of participants in both Australia and New Zealand was current affairs programmes. When discussing food information in the media, one participant stated that:

> *"… Today Tonight are really big on doing it. There's a story at least once a week on some sort of food." - Hobart, Aged 18-35*

The current affairs programmes about food most commonly recalled by participants were generally negative, providing surprising – sometimes alarming – information about processes or additives that may be unhealthy or harmful. The significant effect this reporting had on the food choices of some participants is evidence of the powerful influence of the media.

4.1.4 Organic foods

Organic foods were purchased by some participants, generally because they are considered healthier or superior in flavour. The perceived freedom from non-natural additives or

preservatives is a strong influence on the extent to which organic foods are perceived as healthier.

> *"I suppose I try to look at the organic concept, that organic must be healthy." - Sydney, Aged 18-35*

For many participants, organic foods are perceived as considerably more expensive than non-organic foods. Some participants indicated a preference for organic foods, and a desire to purchase more organic products, but were unable to afford them.

> *"If I could, I would start buying more organic food, but it's too expensive. It's cost, I cut my costs all the time. I'd try to be healthier and buy better food if I had the money." - Ballarat, Aged 36+*

Scepticism regarding food claims extended even to organic foods among some participants. Concerns that foods labelled 'organic' may not truly be free from chemical additives caused some participants to avoid organic foods.

> *"The main thing about organic food is that you have to trust the people that say it's organic. A lot of it actually is, but there are some operators that claim it is when it's not." - Hobart, Aged 36+*

4.2 Vitamins and minerals

Key findings

- Awareness of the importance of vitamins and minerals was reasonably high among participants.
- Vitamins C, B-group, and D, as well as calcium and iron were the most commonly mentioned vitamins and minerals that participants considered important to consume.
- Fresh foods, including fruits, vegetables, dairy products, cereals and meats were considered the best source of vitamins and minerals.
- Consuming sufficient vitamins and minerals was considered important for everyone, but especially babies and children, those susceptible to illness, pregnant women and highly active people.
- While levels of knowledge about sensitivity or toxicity are low, most participants believed that it is possible to consume an unhealthy amount of vitamins and minerals.

While not initially mentioned as a key factor in food purchasing decisions, most participants did recognise the importance of obtaining sufficient vitamins and minerals in their diet. General perceptions of vitamins and minerals as 'healthy', and as assisting in preventing illness were common, but participants generally had little understanding of the roles of specific vitamins and minerals in a healthy diet.

> *"I don't know how to answer that, what is a vitamin and mineral. It's just something that you know about and you know you need but I've never really thought about what it actually is." - Auckland (Maori), Aged 18+*

> *"Our awareness at this point in time is, you look at your main things, fat content, that sort of stuff, but vitamins … there's no awareness out there." - Sydney, Aged 36+*

4.2.1 Important vitamins and minerals to consume

The most commonly mentioned vitamins and minerals were:

- vitamin C;
- B-group vitamins;
- iron;
- vitamin D; and
- calcium.

There was a moderate degree of understanding among participants of the sources of these vitamins and minerals (e.g. vitamin C in citrus fruit) and their effects ("calcium is for your bones").

4.2.2 Methods of consuming vitamins and minerals

The most commonly mentioned, and most highly endorsed, method of consuming vitamins and minerals among participants was to eat fresh foods, particularly fruit and vegetables. Indeed, accompanied shop participants tended to begin their shopping trip in the fruits and vegetables section of the supermarket, as if implying that these foods are more important than others in the supermarket. Some even mentioned that this part of their shopping trip was particularly important. However, it should be noted that the majority of supermarkets visited, and indeed most supermarkets in general, place the fresh food areas close to the front of the store. This may also have influenced participants' choice of where to begin their shopping trip. Many participants believed that consuming vitamins and minerals via fresh foods was superior to any

other method, although most could not exactly enunciate why this may be the case. If questioned as to why fresh foods may be the best method of vitamin and mineral consumption participants generally referred to beliefs that this method is "more natural" or "as nature intended". Again, suspicion of non-natural substances contributed to these beliefs.

> *"I prefer to get my vitamins and minerals naturally, from fruit and veggies." - Hobart, Aged 36+*

> *"I just think that it's unnecessary [to take vitamin tablets] if you're eating a balanced diet. Our bodies were designed to eat properly, cereals and stuff like that. Whether the pill is going to be helpful and add to our body, I don't know … but I just think it's unnecessary." - Ballarat, Aged 36+*

A relatively common belief among participants, especially older people (aged 36 years or older), concerned the decreasing vitamin and mineral content of fresh foods. Due to modern farming methods, storage or use of pesticides, a number of participants believed that fresh foods had become less 'healthy' than in the past. As for other sceptical beliefs, this may have been fuelled by current affairs programs.

> *"I know you can't get everything you need to get from fresh food these days because the fresh food you buy today is not as rich in nutrients as it would have been 60 years ago." - Sydney, Interview*

Younger participants (aged 18-34) were more likely to consume multi-vitamin tablets as part of their diet, and tended to consider these a convenient method of obtaining sufficient vitamins and minerals. While some acknowledge that tablets may not be the best method of consuming vitamins and minerals, they were not considered significantly poorer, and were certainly considered more convenient.

> *"Probably the best way to get it all, the easiest way, is to take your tablets." - Ballarat, Aged 18-35*

Finally, a small number of participants spontaneously mentioned consuming voluntarily fortified products such as drinks containing vitamins and minerals. Similarly to the attitudes towards tablets, the vitamin and mineral content of these fortified foods was considered somewhat inferior to eating fresh foods, but significantly more convenient.

> *"I tend to buy drinks that have vitamins and minerals in them. Like vitamin water and stuff." - Ballarat, Aged 18-35*

4.2.3 Who consumes vitamins and minerals

Many participants acknowledged that 'everyone' in the population required a sufficient intake of vitamins and minerals in order to maintain health and prevent illness. However, vitamins and minerals were considered particularly important for young people who are "still growing" (from babies to teenagers), those who may be susceptible to illness (elderly people and those with chronic illness), pregnant women and individuals who have a high energy consumption (such as sportspeople).

4.2.4 Vitamin and mineral sensitivity and toxicity

When questioned, most participants believed that ingesting a large quantity of a vitamin or mineral could be harmful. However, few possessed any specific information regarding the potential harmful effects. Rather, these beliefs stemmed from a general perception that "too much of anything is not good for you".

> *"Too much of any vitamin is not good for you. Just because you have ten times as much doesn't mean you're going to be extra, extra healthy. Having too much vitamins can be bad for you, can ruin some organs." - Sydney, Aged 36+*

> *"You've just got to be careful sometimes, if you're eating a lot of fortified foods, and you're eating a lot of a vegetable that has that vitamin in it, you might kind of overdose. Sometimes they say too much of a vitamin can be not good for you." - Sydney, Aged 18-35*

The recommended dosages appearing on packaging of vitamin supplements reinforced the belief that a large quantity of a vitamin or mineral could be harmful. As one participant stated:

> *"I mean they have recommended intakes that they tell you on the bottle, it has the dosages on them, so it's there for a reason." - Sydney, Interview*

Other participants challenged the perception of potential vitamin or mineral toxicity, asserting that any elements unneeded by one's body simply pass through without any harmful effects. Vitamin C was often provided as an example of a vitamin which is perceived to pass through the body if not required.

> *"Usually if you have too much of one thing the body pushes it out the other end doesn't it?" - Balclutha, Aged 18+*

4.3 Food fortification

Key findings

- Recognition of the term 'fortification' was very low. However, the concept of adding vitamins and minerals to foods was generally known.
- **Positive aspects** of fortification mentioned were: obtaining vitamins and minerals which may otherwise not be consumed; value for money of purchasing a food with a vitamin or mineral included; providing a palatable vehicle for children to consume vitamins and minerals; and replacing the vitamins or minerals which may have been eliminated from foods due to modern farming or processing of foods.
- **Neutral views** on fortification included: indifference to whether or not a food is fortified; questions about the necessity of purchasing fortified foods; and concerns about the effectiveness of fortification.
- **Negative perceptions** included: scepticism regarding the health value of fortified foods; mistrust in the motivations of food producers in including vitamins and minerals in foods; and fortification used as a technique to market unhealthy foods as healthy.
- Some participants expressed mistrust of all non-natural ingredients in foods, including preservatives, flavourings, colours and artificial sweeteners. Vitamins and minerals added to foods were sometimes included in this category of unhealthy ingredients.
- Fortified foods were generally perceived to be more expensive than non-fortified foods.
- Most participants found labelling confusing in regards to fortification, and were often unable to determine whether vitamins and minerals in foods were added or naturally occurring.

There was almost no understanding of the term 'fortification' among participants, which was interpreted variously as "concentrated", "with added alcohol" (i.e. as in fortified wine) and "pickled", among others. However, participants were generally aware of the existence of foods that have vitamins or minerals added to them. The most commonly recognised examples were breakfast cereals and fruit juices, although some participants had also encountered fortified bread and milk. The recognition of fortified products was generally related to the extent to which advertising emphasised the addition of particular vitamins and minerals.

Throughout the research, the term 'fortified' was used sparingly by group discussion facilitators, and only when it appeared that participants had grasped its meaning. Instead, foods were generally described by the facilitator as having "added vitamins and minerals".

Initial reactions to the concept of fortified foods were generally moderate, ranging from mildly positive through indifferent to somewhat negative. However, as participants discussed the concept and expressed a range of views, opinions of fortification became increasingly negative. Concerns and suspicions regarding the effectiveness and safety of fortified foods were exacerbated, while positive views were questioned and, in many cases, reversed. It should also be noted that Maori participants in New Zealand were generally a little more open to the concept of fortified foods than other respondents. A small number of Maori participants mentioned purchasing fortified dairy products for their children.

While this increasing negativity was perceived during the discussion of voluntarily fortified foods, it noticeably intensified when the concept of mandatory fortification was introduced. Most participants appeared not to have considered that fortification could be mandated (which is perhaps unsurprising given their limited knowledge of food regulations, see heading 4.6), and were thus rather surprised when the concept was introduced. While many participants rejected the idea of choosing fortified foods, they were reassured that they could choose non-fortified alternatives (provided that labelling was sufficiently clear). For these participants, mandatory fortification represented a loss of this choice, exacerbating their dissatisfaction with the concept of fortification in general.

The increasing negativity noted in the groups was also present in the interviews following accompanied shopping trips. However, without the range of negative views expressed in the groups to propel the discussion in this direction, the accompanied shop participants tended to be less vehement in their condemnation of mandatory fortification.

The following sections outline the positive, neutral and negative aspects of fortification identified by participants.

Positive

One of the more common positive aspects of food fortification (whether voluntary or mandatory) mentioned by participants was the potential benefit of consuming vitamins and minerals which may not otherwise be included in their diet, or which may not be included in sufficient quantities. This perception was more common among those participants who were not overly concerned about consuming an excessive amount of a vitamin, and among participants who currently took a vitamin supplement in tablet form.

> *"I think it's better to get too much [vitamins and minerals] than too little." - Hobart, Aged 36+*

> *"I think it's good for those people who don't count their vitamins and minerals, people who just eat normally, to get that little bit extra." - Sydney, Aged 36+*

Some participants also saw the financial benefits of purchasing fortified foods, viewing them as superior 'value for money'. It should be noted, however, that this was an opinion provided by participants when prompted and was not mentioned by group discussion or accompanied shop participants spontaneously. While this was a relatively strong positive perception of fortified foods, it was largely offset by a rather prevalent view that the currently available and voluntarily fortified foods are more expensive (see heading 4.3.1 for a discussion).

> *"It's more value for your money, really, buying something you want to eat and getting this health benefit." - Sydney, Aged 18-35*

Some participants with children also considered fortification a potentially useful way to ensure their children consume sufficient vitamins and minerals. This was especially a consideration for parents whose children have a restricted diet, either through allergies and sensitivities, or restrictive food preferences.

> *"Kids today are fussy. It's better to give kids something that's prepared and has vitamins and minerals added in them than not give them anything at all." - Hobart, Aged 36+*

> *"I think I would buy [bread] with folate in it so there is more goodness in it. Even though [my children] like white fluffy bread, I would get the ones with folate or extra iron." - Hobart, Interview*

In both New Zealand and Tasmania there were strong positive perceptions among participants regarding iodine fortification. A number of participants in each location were aware of the potential for iodine deficiencies in the population, and considered the addition of iodine to salt 'necessary'. This further extended to a more positive perception of iodized salt being added to bread among these participants.

> *"I think Tasmanians have an iodine deficiency. And I think a lot of the breads actually have added it. So I think it's probably a good thing if we need it. It's easily accessible." - Hobart, Aged 18-35*

Lastly, a small number of participants who believed that the vitamin and mineral content of foods is declining (as mentioned under heading 4.2.2), felt positive about fortification as a solution to this problem. It should be noted, however, that these participants would generally prefer the negative effects on the natural vitamin or mineral content of foods to be reversed, rather than compensated by fortification.

"I think it's good because, the processing for what we eat now compared to twenty or thirty years ago, there's a lot less vitamins and minerals so we have to add something more." - Sydney, Aged 18-35

Neutral

A common view among participants at the outset of the discussion about fortification was one of indifference. While these participants did not express positive views about fortified foods, their perceptions were not significantly negative either. For example, one participant stated that fortification of common foods "*Wouldn't worry me as long as it tasted the same."*

Among those expressing generally neutral opinions were those participants who were not opposed to fortification, but questioned the necessity of adding vitamins and minerals to foods. Given the perceived abundance of fresh, healthy foods available in Australia these participants viewed fortified foods as irrelevant or unnecessary. Some considered it "laziness" to obtain vitamins and minerals from a fortified food rather than ensuring a sufficient amount of the correct foods in one's diet to obtain these elements 'naturally'. This opinion extended to the addition of iodine and folic acid in foods, as many considered that these too should be obtainable via foods in which they naturally occur.

"Most Australians eat a very well balanced diet anyway, if you want to add folate to bread or something, take it down to South Africa or India or wherever there are really poor people who really need the nutrition. I really don't think it's for us, we don't need it." - Sydney, Aged 36+

"I just think it's unnecessary. I don't trust the food processing companies to put in the vitamins and minerals that I need. We eat so well in this country we don't need to jam that stuff into the food. We've just got to eat a range of food." - Ballarat, Aged 36+

Some participants questioned whether vitamins and minerals which should have occurred naturally had been 'processed out' of certain foods, thus creating a need to fortify foods with the missing elements. While fortification was considered a reasonable solution in these cases, participants would generally prefer to consume foods for which this process was not necessary. It should be noted that participants did not ascribe this process to the removal (or subsequent addition) of any particular vitamin or mineral, but rather to vitamins and minerals in general.

"I just look at added vitamins and minerals … I guess you ask yourself the question, should they have been in there and they've been taken out and added because there's not enough of it and why is all that there?" - Sydney, Interview

Finally, some participants questioned the efficacy of vitamins and minerals added to foods in comparison to naturally-occurring elements. As noted above (heading 4.2.2) vitamins and

minerals obtained from foods in which they occur naturally are generally considered as more effective than from any other source (including supplements and fortified foods). Similarly, some participants were concerned that the vitamins and minerals added to foods may not be effective if combined with other non-natural ingredients such as preservatives.

> *"I think your body is more likely to be able to use [naturally-occurring vitamins and minerals], whereas if it's added to something it might not be adding the necessary other thing with it that helps you consume it all." - Sydney, Aged 18-35*

> *"How effective are the vitamins in amongst all the other preservatives they put in there?" - Hobart, Aged 36+*

Negative

An influential source of negativity regarding food fortification arose from mistrust in health information disseminated through the media. There was a strong perception among many participants that information from the media and the scientific community regarding healthy foods changes regularly, and that recommendations are often overturned. Furthermore, some participants were angered by the changes in the information they receive about the health benefits of foods, as the sources of this information are not perceived to 'take responsibility' for the repercussions of recommendations that turn out to be incorrect.

These views have led to a level of mistrust among participants in relation to health recommendations, and a high level of scepticism regarding new information. This scepticism was often applied to the concept of food fortification, as illustrated in the following quotations.

> *"They had all those things on TV 'don't eat eggs, don't eat too many eggs' and then a year later 'oh no, you are allowed to eat anything'. You know what it's like, everyone yo-yos all over the place." - Balclutha, Aged 18+*

> *"The concern I think with people now is that they don't actually know what doesn't hurt you and what does hurt you. And it may be that we get all these things added to a particular food or foods and it's not going to bother me a hell of a lot, probably, but in twenty years time some of you younger people could be reading in the paper that too much vitamin K causes your eyeballs to fall out or your hair to go green or God knows what." - Balclutha, Aged 18+*

> *"It's adding a powder or something to food for some ostensible health reason and it's more likely to be an absolute load of rubbish … false statistics, false conclusions, false science, false people, false results and 10 years later they say quietly, 'oh, sorry about that.'" - Wellington, Aged 18+*

"It's a new sort of thing, a new phenomena that we don't have much research on. In another forty years we might find an adverse reaction, so I'm a bit sceptical." - Sydney, Aged 18-35

A high degree of scepticism and mistrust was also attached to food producers and manufacturers in relation to their motivations for fortifying foods. Many participants were convinced that the primary reason for fortifying a food product related to marketing or competitive advantage, without regard to actual health benefits. This led to a belief that the vitamins and minerals added to foods could be ineffective, or even harmful.

"If [the food product] was natural we shouldn't need to put it [vitamins and minerals] in. And do we trust the companies that are putting it in? Absolutely not." - Ballarat, Aged 36+

"It's also a marketing thing. Getting over your competitor … Sometimes the consumer is the last thing to be considered. They just want to sell their products and the shareholders are happy with the end result." - Hobart, Aged 36+

Finally, some participants viewed fortification with vitamins and minerals as an attempt to market an otherwise unhealthy food as somehow beneficial, making "something unhealthy seem healthy". This view was strengthened by examples of fortified foods which some participants could recall, such as breakfast cereals which were perceived to contain a large amount of sugar and other artificial additives (considered unhealthy), as well as some vitamins and minerals.

"Is it worth putting all the other crap in your body just to get some extra vitamins and minerals?" - Ballarat, Aged 18-35

"If [the food is] already bad and they have put vitamins and minerals in it to make it sound good, I don't know if I'd want to buy it. I don't think it will be worth it because of the crap you end up having." - Ballarat, Aged 18-35

4.3.1 Cost of fortified foods

A large proportion of participants expressed concern that fortified foods would be more expensive than non-fortified foods. This was mainly driven by known examples of voluntarily fortified products, which were understood to be more expensive than their non-fortified equivalents. Similarly, the fortified products that participants recalled tended to be made by brands which were perceived as more expensive.

"Usually it's the more expensive brands that have more of the added stuff than the cheaper brands." - Sydney, Aged 18-35

"I've never seen 'no-name' or 'no-brand' have a label saying 'added vitamins'."
- Sydney, Aged 18-35

Given the powerful influence of price on purchasing decisions (see heading 4.1.1), this perception had a significant negative impact on some participants' perceptions of fortified foods. Unless thoroughly convinced of the benefits of purchasing fortified foods, these participants indicated being unlikely to spend the additional money to obtain vitamins and minerals in this manner.

"Perhaps that would raise prices too, if everything is added in it. Maybe if you don't need it, you'd not want to pay for it." - Ballarat, Aged 18-35

4.3.2 Fortification and labelling

As part of the group discussions, participants were provided with a number of food examples, some of which were fortified and some not. These products were drawn from the foods purchased by participants, as shown in their supermarket receipts, and other available in their local area (see Appendix F for examples). They were asked to examine these products to determine which contained added vitamins and minerals and which did not. In general, this task was an unusual one for participants, as most did not actively seek this information when assessing a product. The novelty of this task was a common finding for the majority of both Australian and New Zealand participants.

While a small number of products were labelled as fortified on the front of the pack, in most cases participants searched for this information on the back-of-pack labelling. Both the ingredients list and the Nutrition Information Panel were used as sources of information.

Examination of the labels of these products caused significant confusion among participants, with most being unable to definitively determine whether the vitamins and minerals in the products were naturally-occurring or a product of fortification. Similarly, when participants from the accompanied shopping trips were questioned as to whether any of the products they had just bought contained added vitamins and minerals, most could not provide a definitive response, nor could they confidently locate this information on the packaging of food products.

"But did they actually add that to it? Or is it something that occurs in cereals, fruits … it doesn't say, does it?" - Hobart, Aged 18-35

"I kept looking for the word 'extra' or 'added' or something like that cos that one down there I reckon, the one that you guys just pointed out, was bloody deceptive." - Balclutha, Aged 18+

While most participants were initially unconcerned about determining which vitamins and minerals occur naturally in a product and which are the result of fortification, being unable to obtain this information from product labelling caused some frustration. The confusion stemmed from the difference between information displayed on the Nutrition Information Panel, and that contained in the ingredients list.

> *"If you look at the back [of the pack] it does have a vitamin in there, but it doesn't say if it's added or naturally contained because of an ingredient." - Sydney, Aged 18-35*

Some participants came to the conclusion that vitamins and minerals mentioned in the ingredients list of a product were likely to be the result of fortification. However, most would prefer that labelling was more explicit in differentiating between added vitamins and minerals and those which occur as part of an ingredient.

> *"If it's naturally occurring, it's usually in one of the ingredients. So you'd only put it in there [the ingredients list] if it's added." - Hobart, Aged 18-35*

After examining the ingredients lists on the example products, some participants were surprised at the number of vitamins and minerals listed. This was especially the case for products perceived as 'basic' such as bread and cheese.

4.4 Folate and folic acid

Key findings

- Awareness of folate was generally low among participants, except among women who were currently or had been pregnant.
- Understanding of the sources and health benefits of consuming sufficient folate were similarly low, except among women with children.
- Consuming folate was strongly associated with pregnancy, with most who were aware of folate having heard of it in this context.

Awareness of folate was generally low among participants, except women who were or had been pregnant. Younger males (aged 18-34) were especially unlikely to be aware of folate, or to have considered obtaining a sufficient amount of folate in their diet.

Levels of understanding of the sources of naturally-occurring folate, and the benefits of consuming sufficient folate, were highly variable among participants. Foods mentioned as potentially containing naturally occurring folate were green leafy vegetables, fruits, meat, cereals, dairy products and Vegemite. However, participants were generally not confident that these sources contain folate, and even among women with children, awareness of how to obtain folate from foods was low.

While some participants recognised the term 'folate' and others 'folic acid', there was little understanding of the difference between the two. Rather, some participants were aware of just one of the two terms, while others considered them identical and interchangeable. In general, women who had been instructed to take a supplement during pregnancy were more familiar with whichever term their doctor had used, or whichever was more prominently displayed on the packaging of their supplement.

In terms of understanding the health benefits of folate, there were again various levels of understanding. A number of women with children, and some other participants, were aware that folate "reduces the risk of spina bifida". However, there were also a range of other perceptions of the benefits of consuming adequate folate, including increased likelihood to fall pregnant (especially for women over 30), and to assist the production of milk for breastfeeding mothers.

> *"Might be to produce milk? For breastfeeding as well." - Ballarat, Aged 18-35*

> *"Aren't you supposed to take it even before you have the baby? So it might not be necessarily for the baby. Like if you're trying to get pregnant." - Ballarat, Aged 18-35*

> *"I think it is just good for your - I don't know, the baby growing. I just do what I'm told from the doctor." - Auckland, Interview*

Understanding of the role folate may play in the diet of adults was less developed, with participants suggesting a range of roles in ongoing health of the brain, bones and nervous system. Some participants saw no benefit to including folate in the diets of adults. There were also some participants who considered folate a benign substance, of no particular benefit to adults other than pregnant women, but of no harm either, even if a large quantity was consumed.

> *"I thought we take folate and calcium to increase your bone density. But I don't know if that is right." - Ballarat, Aged 18-35*

"It's to aid the neurological development of the baby. But I don't see how it'd be much use for anyone who wasn't trying to get pregnant." - Sydney, Aged 36+

4.4.1 Folate in pregnancy

Folate was strongly linked to pregnancy in the minds of most participants across Australia and New Zealand. Women with children, especially those who were currently or had recently been pregnant, tended to be highly aware of recommendations to take folate supplements. Furthermore, almost all reported that they believed and had followed the recommendation of their doctors and taken folate supplements. Some women indicated having taken a pregnancy-specific multivitamin rather than a folate supplement on its own, but still tended to be aware of the specific recommendation to consume folate in adequate amounts.

In general, foods alone were not considered an appropriate source of folate for pregnant women, predominantly because all who mentioned the recommendation from their doctor to consume additional folate also mentioned being advised to take supplements in tablet form. Participants did not mention including more of any particular food in their diet to obtain the recommended amount of folate when pregnant. Some participants did refer to the need to 'eat healthily' while pregnant, but this referred to consuming fresh fruits and vegetables and avoiding foods not recommended during pregnancy, such as soft cheeses and uncooked meats.

The more general concern about vitamin and mineral supplements being 'unnatural' (whether consumed as a tablet or via a fortified product, see section 4.3) was not directly applied to folic acid. This was likely due to its being recommended by doctors for a specific purpose (i.e. to promote a healthy pregnancy), rather than used as a selling point in food advertising.

The very high levels of awareness of folate as an important vitamin during pregnancy led one participant to describe it as "a cultural norm" for women to take a folate supplement. Indeed, some viewed it as 'neglectful' for a pregnant woman not to take a folate supplement.

"If you're not taking it what's wrong with you?" - Sydney, Interview

"When it comes to that issue, I think a lot of women in Australia are very educated in that sense. When they get pregnant, they get educated very well, compared to third world countries where they don't know what's going on." - Sydney, Aged 18-35

A few participants expressed some concern regarding the possibility of consuming too much folate, although most were not aware of what harmful effect this may have. One participant mentioned:

"I took much more than my proper dose and my son had heaps of hair on his head when he was born, and I reckon it was folic acid." - Auckland (Maori), Aged 18+

A small number of participants mentioned some scepticism regarding the recommendations for all women to take folate supplements during pregnancy. These participants were less sure of the benefits of consuming folate during pregnancy, and some felt that a sufficiently balanced diet should provide all required vitamins and minerals. These views were more common among participants to whom the benefits of consuming folate during pregnancy had not been clearly explained, or to whom pregnancy was of little interest (for example, men younger than 25 years).

"The thing is, they emphasize that when you're pregnant you've got to have a certain amount of folate so you know, you think well that's essential, if you're going to have kids than you need this stuff, but do we really know what it is?" - Auckland (Maori), Aged 18+

4.5 Iodine

Key findings

- Iodised salt was more commonly recognised as an edible substance than iodine. Most participants were not aware of iodine as a mineral.
- Awareness of iodine as required in a healthy diet was generally low, except among older people (aged 36 years or older) and residents of New Zealand and Tasmania.
- Among those participants who were aware of iodine as something one consumes, awareness of the adverse effects of iodine deficiency was also relatively strong.
- Other participants were aware of iodine, but only as a disinfectant or wound treatment.
- Awareness of iodine as important to consume when pregnant was relatively low, including among women with children.
- One participant was related to an individual with iodine sensitivity, which caused significant concern regarding iodine in foods.

Among participants, iodine was almost exclusively associated with salt; most participants did not consider iodine to be a mineral on its own (unlike iron or calcium, which are known as minerals important to one's diet). While some participants were aware of iodised salt, and the

recommendations to consume this rather than other salt varieties, iodine by itself was more commonly known as a disinfectant or wound treatment.

As iodine was not generally thought of as a mineral, participants tended not to have considered it in the initial discussion of fortification. Thus, both positive and negative perceptions of adding vitamins and minerals to foods were less likely to be mentioned in the initial discussion of iodine and iodised salt. Once established that iodine is indeed a mineral that can be added to foods, many participants returned to their previous (positive or negative) orientation when considering iodine fortification. An exception to this was participants in locations where the importance of iodine had been emphasised in the media, as discussed below.

Awareness of iodised salt as important to obtain in one's diet was generally moderate among participants. Older people (aged 36 years or older), New Zealanders and participants from Tasmania were more likely to be aware of the need to consume a sufficient amount of iodised salt. Older people tended to be aware of iodised salt from information that was more commonly known and disseminated in the past regarding the importance of avoiding iodine deficiency. Some older participants mentioned being encouraged by their parents to eat iodised salt, or being provided with iodine tablets.

Participants in Tasmania and New Zealand had also been exposed to more information about iodised salt and iodine deficiency from their local media. In both locations, participants indicated having been informed that the population was at risk of iodine deficiency, and encouraged to consume iodised salt to reduce this risk. Indeed, the use of iodised salt was so entrenched in New Zealand that a number of participants were not aware that the iodine was included as the result of fortification. Instead, they perceived iodised salt as simply a variety of salt that is 'more healthy' than other types.

> *"I buy this one on purpose because there was an article about children in New Zealand lacking iodine and getting goitre troubles and because everybody's gone away from iodised salt and gone to rock salt." - Balclutha, Aged 18+*

Among those participants who were aware of iodised salt as important to their health, awareness of the effects of iodine deficiency was reasonably high. A number of participants mentioned that iodine supports thyroid functioning, or that iodine deficiency can cause goitre.

> *"Our goat had a baby and I didn't realise when goats are pregnant they need iodine … and the baby was born with a big goitre, so we just drenched it with iodine and it went down." - Balclutha, Aged 18+*

"Thyroid function. If you don't have enough iodine you end up getting goitre." - Hobart, Aged 36+

Among participants other than those who are older (aged 36 years or older) or residing in New Zealand and Tasmania, awareness of iodine as a substance to be consumed and its effect on thyroid functioning was generally low. These participants were still aware of iodine, but primarily as a disinfectant or wound treatment.

"I don't know any benefits. I just remember at school the brown stuff … a disinfectant?" - Balclutha, Aged 18+

"When I think of iodine I think of something like Betadine or something for wounds. Maybe it helps in blood clotting…" - Sydney, Interview

In general, awareness of the natural sources of iodine was low, with only a small number mentioning fish or seafood as potential sources. By far the most well-known food source of iodine among participants was iodised salt. Following the discussion of the benefits of iodised salt some participants mentioned that they will continue to purchase the fortified product, rather than other types of salt. However, no participant mentioned switching from purchasing non-iodised to iodised salt.

4.5.1 Iodine in pregnancy

Awareness of the need to consume additional iodine during pregnancy was not nearly as strong as awareness of the need to consume folate (see heading 4.4.1). While some participants did mention having noticed iodine as a constituent of the pregnancy-specific multivitamin, they did not mention having received information from their doctor in relation to the benefits of consuming additional iodine during pregnancy.

4.5.2 Iodine sensitivity

One participant in this research had a family member with a relatively severe sensitivity to iodine when applied topically. This participant was not aware of iodine as a mineral in foods (or as a mineral included in iodised salt) and was quite surprised to find out that iodine does play a role in supporting thyroid function. Due to the sensitivity she had witnessed in her family member, this participant was concerned to find out that iodine may be included in foods.

"I'm a bit worried about that now, knowing that iodine is in food. As I know what it does to my husbands outside, what does it do to his inside? I might get more information on that." - Hobart, Interview

4.6 Food regulations

Key findings

- Knowledge of how foods are monitored and regulated was relatively low. While some participants were aware that a government body performed this function, none could correctly produce the name of Food Standards Australia New Zealand.
- Some participants believed that food producers regulate and monitor food safety.

Knowledge of how foods are monitored and regulated in Australia and New Zealand was relatively low. A very few participants mentioned a government body called 'food standards' or something similar, with none able to produce the full name of Food Standards Australia New Zealand. Other participants mentioned a 'government body', "the Health Department", the "Department of Agriculture" or the CSIRO. Whether this 'government body' is at the State or Federal level was not clear to participants, with some providing competing views, while others were completely unaware.

> *"The government has some sort of nutrition body that looks after it. I'm assuming it has controls and levels on what you must or can't put in." - Sydney, Aged 36+*

> *"Isn't there the health – the food safety, there's a food authority board that regulates what – I think like the meat board that we have for the sheep, I'm sure there's a food – food standards, safety of food standards or something along those sort of lines. Like the Heart Foundation obviously monitors different things but the food – it's got a name, you know, the food, Food Safety Authority, along those sort of lines." - Balclutha, Interview*

Other participants, particularly in metropolitan Australia, felt that food safety was regulated only by the manufacturers and producers of food. While this had clearly not previously concerned these participants, food producers as the sole regulators of food safety was a concept which did provoke some anxiety during the discussion. When other participants mentioned their awareness of an independent government body which monitors the safety of food, the participants who were not previously aware tended to express at least some level of relief.

> *"So then you wonder, I mean these processed things, that are advertising it – who is testing them to make sure that their guidelines are right and that their advertising is correct." - Auckland (Maori), Aged 18+*

4.7 Mandatory fortification

Key findings

- The concept of mandatory fortification was generally perceived negatively by participants.
- The most common concerns expressed by participants were: restriction of choice; concerns about the safety of fortified foods for all individuals; imposing fortification on all products to benefit only a proportion of the population; mistrust in health messages; and concern about whether fortification is the best solution to increase vitamin and mineral intake.

Awareness of current mandatory fortification of foods was extremely low, with just one participant across Australia and New Zealand mentioning having heard about the inclusion of thiamin in bread products.

> *"Isn't there some legislation that says you have to have something like thiamin in the bread?" - Hobart, Aged 36+*

While the discussion of food fortification related to products which participants could choose (i.e. voluntarily fortified products), their opinions remained fairly moderate. However, when mandatory fortification of foods was mentioned, the majority of participants expressed negative views, some of which were quite intense. These negative perceptions and concerns are discussed under headings 4.7.1 to 4.7.5.

A notable exception to this generally negative perception of mandatory fortification was the reception that the addition of iodised salt gained among participants in New Zealand and Tasmania. As participants in these areas generally mentioned a greater awareness of the need to consume sufficient iodine (see section 4.5), the concept of adding iodised salt to bread products tended to elicit a neutral or indifferent response.

The few participants whose views regarding mandatory fortification were not significantly negative instead expressed indifference or cautious endorsement. Indifferent views were most commonly expressed by younger males (aged 18-34), particularly in non-metropolitan locations. This is perhaps unsurprising, as these participants were less likely than others to be concerned about other food additives, such as preservatives or flavour enhancers.

> *"I don't think it would worry me a hell of a lot either to be honest, one way or the other." - Balclutha, Aged 18+*

Some participants expressed a high level of trust in regulatory authorities to assess the effectiveness and necessity of bringing in mandatory fortification. These participants felt confident that mandatory fortification would be supported with sufficient research and testing to ensure its safety for the population. While more comprehensive information was not requested by these participants, reassurance that an independent government body had made the mandatory fortification decision would likely be welcomed.

> *"I think if it was damaging to people then there is a concern, but if they are looking at bringing it across all breads then they would have done their research on it that it is fine for children, adults whatever, so I think it would be fine. I guess it's just giving them that extra but that won't do any harm." - Auckland, Interview*

> *"Well I thought if it was gonna be a good thing, they should do it, you know, and as long as it wasn't harmful, you know, I think they should." - Wellington, Interview*

> *"I think its good isn't it? It's good to know that as a consumer we are being protected. If there is a legislation that incorporates minerals being put in a product, it could be saying that it's lacking naturally in the product or in people … but how far do we take it?" - Hobart, Aged 36+*

> *"I think someone's thinking about everybody's health. They're thinking about how can we improve the health of the nation." - Hobart, Aged 36+*

Finally, some participants viewed the mandatory addition of folate to bread products as convenient, particularly for women during pregnancy. These participants tended to view folate as a benign substance of which one cannot have too much, and were not concerned about consuming it in increased quantities, even if not required.

> *"It'd be easier than having to source it [folate] if you're pregnant … having it in something you have everyday anyway." - Hobart, Aged 18-35*

4.7.1 Choice

One of the key aspects of the concept of mandatory fortification to which participants objected was the perceived removal of choice. Choice was seen by most participants as a fundamental right, and strong objections were raised to the concept of removing choice by changing all forms of a particular product (in this case, bread).

> *"It does reduce your choice. You know, if [NAMED PARTICIPANT] doesn't want her kids to have that but she can't buy anything other than a fortified food then*

that's just not the way the world's supposed to work today." - Balclutha, Aged 18+

"I think that's wrong. You've got your choice, if you want folate in bread you buy it. No one should force you to buy anything." - Sydney, Aged 18-35

"I just don't agree with governments colluding with companies to eliminate freedom of choice." - Sydney, Aged 18-35

Notably, some participants who indicated that they may purchase fortified products objected to mandatory fortification purely on the grounds that it eliminated the ability to choose. For these participants, the key issue was the feeling of not having control over the choices they make when purchasing foods for themselves and their families.

"I'd rather the choice of being able to do this or that and then have an advertising campaign that would take me there or a marketing thing so that we felt like we were in control." - Sydney, Interview

As a lack of choice caused such contention, the concept of organic foods being excluded from mandatory regulation was raised. However, excluding organic foods was not perceived to alleviate the issue of restricting choice, as organic products are considered too expensive for the majority of consumers.

The strong reactions to the concept of mandatory fortification appeared to be exacerbated by the vehicle for folate and iodine being bread. Bread was viewed by many participants as a 'staple' food, and one which "everyone buys". The prevalence of bread in participants' diets increased the extent to which they felt their free choice had been restricted, as there was not an obvious alternative to bread which could be purchased, and most would not choose to exclude bread from their diet.

4.7.2 Safety of fortified foods for everyone

Another key issue driving negative perceptions of mandatory fortification was the fear that specific segments of the Australian and New Zealand community may be adversely affected by the regulations. For example, some participants were concerned about individuals who may have an allergy or sensitivity to folate or iodine. Should mandatory fortification be introduced, participants perceived a significant disadvantage for these individuals.

"I don't actually agree with [mandatory fortification], because what if you've been told you can't have folate or that you've got too much? Then you don't have that option of buying something without it." - Hobart, Aged 18-35

Some participants were also concerned about sections of the community that may consume large quantities of bread, and thus ingest considerably more folate and iodine than is recommended. While participants had generally low awareness of the quantity of folate and iodine which may be included in bread, and low awareness of the extent to which these vitamins and minerals can be harmful, the fear of over-consumption remained. In particular, teenage males were considered to be in this risk category.

> *"Seriously, teenagers when they are growing up and they are forming, they eat a lot of carbohydrates, much more than I know that I am eating now. That would be my concern." - Sydney, Interview*

> *"The thing is that you may inadvertently be impacting on a section of the community because of their large consumption of bread. I'd rather the education and the choice of the supplement than mandatory additives." - Sydney, Interview*

4.7.3 Imposing on all to benefit a few

In relation to folate fortification, some participants were uncomfortable with the concept of changing all bread products in order to provide a benefit specifically to pregnant women.

For some, confusion regarding when folate should be consumed in order to prevent neural tube defects provoked misunderstanding of the reasons for mandatory fortification. For these participants, consuming an adequate amount of folate is the responsibility of women who are currently pregnant, or planning to become pregnant.

> *"I think that if you cared about your baby enough then you would do the right thing, without having to go and buy the bread. You would take the tablet." - Ballarat, Aged 36+*

> *"I'm mixed because yeah if it does help someone, one person that might end up with a baby with a neural tube defect but if she'd had that bread – that was in all the bread, she didn't know, then you know that's a little life that doesn't have to suffer for the rest of their life. And if it doesn't hurt anyone else by doing it then why not. But also you know we are people and we should have freedom of choice, we're not in an economy and a state or somewhere where we don't – you know, where we have to do things. We should have a choice." - Wellington, Aged 18+*

4.7.4 Inconsistent messages about health

As noted above (heading 4.3), perceived inconsistency in messages about healthy food have caused some participants to develop a highly sceptical view in relation to new information. For these participants, previous information being modified or contradicted by later research has

undermined their trust in new information, especially in an area which seems new or unfamiliar, such as food fortification.

> *"My only problem is that, in future let's say research is done and they say it causes cancer. It can happen, it's possible … You shouldn't be forced to eat anything, if you just want bread you should be able to have bread on its own."*
> *- Sydney, Aged 18-35*

4.7.5 Is fortification the best solution?

A number of participants questioned whether mandatory fortification of bread should be considered the best solution to the problems caused by some individuals currently not consuming adequate amounts of folate or iodine. To these participants, including vitamins and minerals in all breads seemed an extreme solution to an issue currently perceived as only mild in terms of severity. Instead, these participants recommended an education campaign to encourage women to take folic acid supplements, or to encourage those at risk of iodine deficiency to purchase iodised salt.

> *"Is that the better solution? Or is it better to educate women about how they need to take folate when they plan to get pregnant or when they are pregnant?"*
> *- Sydney, Aged 18-35*

However, participants who supported mandatory fortification felt that it could improve the health of the Australian and New Zealand population more generally. Fluoridation of water and its contribution to improved dental health was a commonly cited example in this context.

> *"I think it's like the fluoridation of the water. That wasn't always done and now it's done and we all have healthier teeth." - Sydney, Aged 18-35*

4.8 Communicating mandatory fortification

Key findings

- Communicating with the public regarding food fortification should be treated with caution as this issue showed evidence of provoking strong negative sentiments.
- Some participants will prefer a large amount of information about mandatory fortification, while others will be satisfied with reassurance that the decision to introduce mandatory fortification is sufficiently supported with research.

There are a number of important issues in considering the most important messages which need to be communicated in relation to mandatory fortification, and the best methods of providing this communication. However, as noted above, the views of many participants became more negative as mandatory fortification was discussed in more detail by the group. This seems to imply that negative or anxiety-producing arguments may be more compelling than positive arguments in this case. Thus, any communications campaign should take careful note of the risk of provoking concern by raising the issue of fortification, regardless of the messages disseminated.

4.8.1 What needs to be communicated

The issues raised by participants that would need to be covered in a communications campaign are:

- Why are folate and iodine important?
- What is the current impact of Australians and New Zealanders not obtaining sufficient amounts of these vitamins and minerals? What is the severity of this problem?
- At what level would folate and iodine be added to bread? How does this level relate to recommended daily intakes?
- Is there a level of consumption at which folate or iodine can be harmful? If so, what is this level?

> *"If there's any real possible risk that you think you could be harmed or whatever … then they need to let you know." - Hobart, Aged 18-35*

> *"I think we need to know the benefits and the disadvantages of having it too. It might be better for your bones, but it might be worse for your blood pressure…" - Ballarat, Aged 36+*

- What are the origins of the folate and iodine added to foods? Are they man-made, or extracted from natural ingredients?

> *"Where are they getting it from? Is the folate they're adding, is it a synthetic folate or is it a folate that they're getting from somewhere else? And if they are getting it from somewhere else, why don't they just make that part of the product in the first place?" - Sydney, Interview*

- Why has fortification of bread been chosen as the best method of addressing the issue of insufficient intake of folate and iodine?

- What research has been conducted to support the recommendations, and who completed this research?

> *"I don't think there's enough research out there that tells us if it's fortified, what the reaction of that vitamin is against the chemicals that are in that food to start with. And we don't know that and we are reliant on the people who manufacture it to do the testing and everything and let's face it, they come up pretty short sometimes. And then that's our health that we are concerned with." - Auckland (Maori), Aged 18+*

> *"Is the research done independent? And not driven by the goal that the people who make folate are manipulating things?" - Sydney, Interview*

4.8.2 Communication channels

A range of communication channels were mentioned as the preferred method of obtaining information about mandatory fortification. Some participants were quick to suggest mass media information, such as television and radio advertising. However, it should be noted that this is a very common reaction when members of the public are asked to suggest a method of communicating information and is not necessarily required.

Similarly, some participants requested that information be mailed to every household in Australia and New Zealand to ensure individuals are aware of mandatory fortification. While this would ensure all members of the public have access to the information, the cost of this approach may be prohibitive. Furthermore, a large communications exercise such as this may cause members of the public to place unnecessary importance on the issue, or consider it overly severe. Given the strong negative reactions obtained in the group discussions, a very large information campaign of this type could provoke more anxiety and concern than it assuages.

"They could do a mail out, give you all the information. You know, 'we want to do this and this is what it involves' … as long as they actually put the information in, because a lot of the time they don't actually give you all the information that you need." - Hobart, Aged 18-35

Potentially a better technique, and one endorsed by some participants, would be to inform consumers at the point of sale of bread products (i.e. in supermarkets). This technique is less likely to provoke anxiety regarding fortification, while still communicating important information about the benefits of consuming sufficient folate and iodine.

For those members of the community who are likely to seek more information, detailed responses to the issues mentioned above (heading 4.8.1) should be available. Displaying this information online, either on the Food Standards website or another dedicated website, and in factsheets is likely to be sufficient for this audience.

Along with these low-profile communications, a public relations strategy should be devised to address negative public sentiment should it arise. The strong effect that the media can have on public opinions in the domain of food safety and nutrition mean that negative reporting could quickly affect acceptance of mandatory fortification. Thus, it would be prudent to devise a strategy to address this eventuality.

5

This section provides conclusions from the key findings

CONCLUSIONS

Fortification can be seen as artificial processing

A large proportion of participants – particularly females and older people (aged 36 years or older) – express a strong preference for purchasing foods which are fresh and have undergone minimal or no processing. Beliefs about the superior health value of fresh foods, combined with a high level of scepticism regarding food processing, have led these participants to mistrust all but the most basic foods.

This preference for 'unadulterated' products can extend to a mistrust of fortified foods. For some participants in this group, the addition of vitamins and minerals to a food product is viewed similarly to the inclusion of artificial preservatives, colours or flavour enhancers, and thus rejected as unhealthy.

Price is a strong driver of food purchasing decisions

Many participants rate price as the most important factor when making food purchasing decisions. This is especially prevalent among participants with children and those who live in non-metropolitan areas. For many of these participants, even a small increase in the price of an item will encourage them to seek an alternative.

As the products currently marketed as fortified (i.e. voluntarily fortified foods) tend to be perceived as more expensive, or come from more expensive brands, some participants concluded that mandatory fortification would increase prices. This was considered especially alarming for highly price-sensitive participants when applied to bread, which is commonly purchased in relatively large quantities.

Changing messages about healthy foods have resulted in mistrust among some

A number of participants expressed frustration at the many and often contradictory messages they receive regarding health and nutrition. Changing information and contradictory recommendations about which foods are and are not 'healthy' have bred a growing mistrust in

nutritional information among these participants. Presenting information as arising from scientific study does not necessarily alleviate this mistrust, as the scientific community are perceived to have 'changed their minds' and produced contradictory information in the past. As a result, some participants reject new information regarding food and nutrition, and extend this mistrust to the concept of vitamins and minerals added to foods.

Mandatory fortification is perceived to limit choice

A key objection to mandatory fortification of foods was the perceived restriction of personal choice. Regardless of positive or negative perceptions of fortified foods, most participants were uncomfortable with the removal of choice implied by mandatory fortification. Exclusion of organic foods from mandatory fortification unfortunately did not alleviate concerns among participants, as organic foods are not generally perceived as a viable alternative, predominantly due to perceptions of higher cost.

That bread was the proposed vehicle for mandatory fortification exacerbated negative perceptions, as bread is perceived as a 'staple' food which most participants consume, some in large quantities. Most participants felt that mandatory fortification would force them to purchase a fortified product, as they were highly unlikely to exclude bread from their diet or begin purchasing the organic alternative.

Communications about mandatory fortification may increase anxiety

Throughout the research, participants' initial reactions to the concept of food fortification tended towards indifference. While some expressed somewhat positive or negative views, very few strong opinions arose at the outset of discussions. However, as discussion of the concept progressed, views became increasingly negative and intensified, with many participants leaving the discussion with a firm stance against mandatory fortification. By this stage, even a strong demonstration of the benefits of mandatory fortification was unlikely to reverse participants' negative opinions.

When mandatory fortification was discussed away from the group context (i.e. during the accompanied shopping trips) this trend of increasing negativity was weaker. While these participants generally did not express positive views regarding mandatory fortification, neither did they voice vehemently negative opinions. Instead, reactions tended to be neutral or cautious, with these participants seeking more information about the reasons and potential effects of consuming bread following its mandatory fortification with folic acid and iodine.

6

This section details Ipsos-Eureka's assessment of the implications of the current findings for FSANZ communications

IMPLICATIONS

Fortification can be seen as artificial processing

Information about the origins of vitamins and minerals added to foods will be important in convincing people, especially those opposed to artificial processing, of the benefits of fortification. A vitamin or mineral extracted from a fresh food is more likely to be accepted by this group than one produced in a laboratory. Where vitamins and minerals are man-made, information about their proven safety may assist the general acceptance of mandatory fortification.

Providing reassurance that fortification has been mandated by an independent Government authority may also reduce some of the deep mistrust that some participants expressed for food manufacturers. Understanding that mandatory fortification has been introduced purely for health-enhancement purposes, and not for cynical reasons such as improving the saleability of a product, is likely to reduce negative sentiments.

Price is a strong driver of food purchasing decisions

For the large segment of the community sensitive to food prices, clear information about the impact of mandatory fortification on price, if any, will be important. If there is likely to be a price increase related to the mandated inclusion of vitamins or minerals, communications as to the magnitude of this increase may help to assuage concerns amongst the public. Similarly, if no price rise is expected, this should also be communicated.

Changing messages about healthy foods have resulted in mistrust among some

Among the participants in this research, food fortification was not viewed as a strategy supported by the scientific community. Instead, it was generally perceived as a way for food producers to market their products as 'healthy' (regardless of whether or not products would be considered healthy by an expert). The introduction of mandatory fortification will likely change this perception, from being a marketing strategy to a scientific recommendation. While this

may increase acceptance among some individuals, those who have begun to reject nutritional information may require further evidence to convince them of the efficacy and safety of fortified foods. In particular, evidence that fortification has been used effectively and safely in the longer term may prove more convincing to these individuals.

Mandatory fortification is perceived to limit choice

A relatively large proportion of participants in the current research rejected the notion of mandating the fortification of some foods because of the perceived impact on their freedom of choice. Allaying the concerns of this group may prove quite difficult, as choice of non-fortified bread products will be restricted under mandatory fortification regulations. Providing information to convince members of the public regarding the safety and efficacy of fortification may prove a more effective means of persuading them to accept mandatory fortification.

Communications about mandatory fortification may increase anxiety

The progression of attitudes observed in this research, from mildly negative or indifferent to strong opposition, demonstrates the potential for the issue of mandatory fortification to inflame negative sentiment in the community. In this case, a large-scale communications campaign may not achieve the goal of securing public confidence in mandatory fortification, but may in fact solidify opposition to the concept. An alternate strategy of providing lower-profile communications, such as information on packaging or at point of sale, is likely to reduce the risk of alarming the public, while still providing sufficient information. Additional information that responds to participants' key questions should also be available if sought, in the form of website information or comprehensive factsheets.

Along with these low-profile communications, a public relations strategy should be devised to address negative public sentiment should it arise. The strong effect that the media can have on public opinions in the domain of food safety and nutrition mean that negative reporting could quickly affect acceptance of mandatory fortification. Thus, it would be prudent to devise a strategy to address this eventuality.

7

This section provides some suggestions for future research into food fortification issues

FUTURE RESEARCH

Future research into this issue could quantify a number of key issues, including:

- current levels of awareness of vitamins and minerals added to food;
- acceptance of currently available fortified products; and
- factors of importance when choosing food products, including impact of price on purchasing decisions.

To effectively address these issues across the population of interest, a quantitative survey would need to be of sufficient scope to allow for analysis across different locations and a range of demographic subgroups. In particular, respondents in the following groups should be represented:

- males and females;
- different age groups;
- those with children, including both younger (pre-teen) and older (aged 13-18) children;
- respondents with food allergies, or who care for a child with a food allergy;
- respondents from different cultural backgrounds; and
- respondents with differing levels of household income.

Ensuring coverage of these groups will provide robust data relating to the population as a whole, as well as insight into the prevalence of noted beliefs and opinions among sectors of the community.

8

APPENDIX A: DISCUSSION GUIDE

09-003975 FSANZ Food fortification – Discussion guide

Introduction

- Thank for coming along
- Introduction to market research / group discussions
- Facilitator's role: to raise topics and issues and then for you to tell me what you think
- No right or wrong answers, your opinion that counts. Please be honest
- Group rules: one person speaks at a time / feel free to disagree
- Audio / video taping, mirror. Reassure confidentiality, anonymity
- Session will take two hours
- Topic: Foods you buy in the supermarket
- Refreshments, toilet facilities, please turn off mobile phones

Materials

Examples of fortified and non-fortified foods in each of the following categories:

1. Cereal products
2. Salt
3. Dairy products
4. Fruit/ Vegetable juices

A list of foods bought by participants from that location (obtained from supermarket receipts) including whether or not foods have added vitamins and minerals. The following table is an abbreviated example:

Product name	Fortified?	Vitamins and minerals
Kellogg's Special K	Yes	Folate, Thiamin, Niacin, B6, Riboflavin
Yoplait original yogurt	No	
Berri juice Plus	Yes	Folate

The table shown to participants will not include the information about whether the food is fortified or what with – this information will be revealed after initial discussion.

Warm up (5 mins)

- Just to start off, I'm going to show you a list of things we buy. Why do we buy these products? What are all the reasons we decide to buy them?

A Vitamins and minerals (10 mins)

I'd like to talk for a while about vitamins and minerals.

- What are vitamins and minerals?
  - What do they do for us?
  - Why are they important?
- Which vitamins and minerals are important to have in your diet?
  - How about for children, which vitamins and minerals are important for them?
  - Do you know of any vitamins and minerals that are important for pregnant women?
- What are all the ways we can get vitamins and minerals in our diet?
  - What do you think are the best ways of getting vitamins and minerals?

B Awareness of food fortification (10 mins)

I'd like to start by talking about food fortification.

- Have we heard of food fortification? What does it mean if a food is fortified?
  - IF UNSURE: What might it mean if a food is fortified?

"Food Fortification" is when a vitamin or mineral is added to a processed food product.

- Are we aware of vitamins and minerals being added to foods?
- Now that we have a definition, how do we feel about vitamins and minerals being added to foods?
  - What do we think are the good things about adding vitamins and minerals?
  - What are the bad things?
- Do we currently purchase foods with added vitamins and minerals?

- PROBE: Do we know if any of the foods we purchase are fortified with vitamins or minerals?
- IF YES: Which ones? Why do we purchase these foods?
- IF NO: Why not?

- What are all the reasons for which we would purchase foods that have been fortified with vitamins or minerals?

C Processed foods with added vitamins and minerals (15 mins)

Let's talk about one option, using fortified foods as a way to get vitamins and minerals in your diet.

- Are fortified foods a good way of getting vitamins and minerals in your diet?
  - What are the good things about getting vitamins and minerals this way? What are the bad things?
  - What types of processed foods have added vitamins and minerals?
  - What are the vitamins and minerals that could be added?
  - Which processed foods do you know of that have added vitamins and minerals?
  - Which processed foods do you think could/should have added vitamins and minerals?
  - Are there any processed foods that shouldn't have added vitamins and minerals?
- Who buys foods that have added vitamins and minerals?

D. Pre-group task (15 mins)

We received your pre-group tasks in the last couple of weeks. We took this information and made up the following list of foods. *Show the list.*

- Of the foods on this list, which have added vitamins and minerals?
  - FOR ANY MENTIONED: What vitamins and minerals have been added?
- Before we came to the group discussion tonight, did we know that these foods had added vitamins and minerals?
  - IF YES: Did this make a difference to whether or not you purchase the food?
  - IF NO: Does this now make a difference to whether or not you will purchase this food in future?

- FOR NON-FORTIFIED PRODUCTS: Is there an alternative to this food that has added vitamins and minerals?
    - In future, would we be more likely to purchase the fortified or the non-fortified food? Why?

Product task (15 mins)

Now I have some more examples of foods which are available in your local supermarkets.

Set up the product samples in food groups.

- FOR EACH PRODUCT SET: Which of these foods have added vitamins and minerals?
    - How do we know that vitamins and minerals have been added?
    - What parts of the label would you read to find out if a product has added vitamins and minerals?
    - Which vitamins and minerals have been added to these products?
    - Of all these products, which would we buy? Why?
    - Would we buy the products with added vitamins and minerals? Why or why not?
    - Who would buy the fortified products?

E. Types of fortification – Folate (20 mins)

Now I'd like to talk about fortification with some specific types of vitamins and minerals. Let's start by talking about folate/ folic acid.

Definition of folate/folic acid if necessary:

"Folate is a group B vitamin, known as folate when occurring naturally and as folic acid when added in a 'man made' form".

- Have we heard of folate / folic acid?
- What have we heard about folate / folic acid?
    - What sorts of foods contain folate / folic acid?
- What might be the benefits of consuming adequate amounts of folate / folic acid?
- What might be the bad things about not consuming enough folate/folic acid?

- Can you have too much folate / folic acid? What might be the effects of this?
- Who might benefit from consuming adequate amounts of folate/folic acid? Who might not benefit?
- What is the best way to consume folate / folic acid?
- Have we heard anything about pregnant women consuming folate/ folic acid?
    - What are the benefits for pregnant women of consuming adequate amounts of folate/ folic acid? What are the benefits for the baby?
    - Have we heard of Neural Tube Defects (NTDs)? What have we heard about this type of problem?

F. Types of fortification – Iodine (20 mins)

Now let's talk about adding iodine to foods.

- Have we heard of iodine?
- What have we heard about iodine?
    - What sorts of foods contain iodine?
- What might be the benefits of consuming adequate amounts of iodine?
- What might be the bad things about not consuming enough iodine?
- Can you have too much iodine? What might be the effects of this?
- Who might benefit from consuming enough iodine? Who might not benefit?
- What is the best way to increase iodine intake?
- Have we heard/ know of iodine deficiency? What problems might iodine deficiency cause?
    - Who is at risk of iodine deficiency?
- Have we heard anything about pregnant women being encouraged to consume adequate amounts of iodine?
    - **What are the benefits for pregnant women to consume enough iodine? Are there benefits for the baby?**

G. Controls regarding food fortification (10 mins)

Now I'd like to talk about how processed foods are regulated in Australia/New Zealand.

- Who controls how processed foods are produced?
    - What sort of things do they control?
    - IF NOT MENTIONED: What about adding vitamins and minerals to foods – is that controlled?
- Why would a manufacturer want to add vitamins and minerals to the foods they make?
    - What might be the benefits for the manufacturer? What might be the drawbacks?
- How would we feel if some foods always contained added vitamins and minerals?
    - What would be the good things about some foods always having added vitamins and minerals? What would be the bad things?
- Would we support laws that cause some foods to be fortified?
    - Why or why not?

H Closing

- Do you have any other comments or questions?
- This research is being conducted on behalf of Food Standards Australia New Zealand. The findings will be used to help them to communicate with Australians and New Zealanders about food fortification.
- Thank and hand out incentives and fact sheets.

9

APPENDIX B: INTERVIEW GUIDE

09-003975 FSANZ Food fortification – Interview guide

Introduction

- Topic: Foods you bought in the supermarket

A Food labels

- FOR RELEVANT PRODUCTS PURCHASED & NOT PURCHASED: I noticed that you read the label on [product name]. What did you notice on the label?
    - Were you looking for something specific on the label?
    - Did anything you read on the label make you want to purchase the product?
    - What finally made you want to buy/not buy that product?

B Vitamins and minerals

I'd like to talk for a while about vitamins and minerals.

- What are vitamins and minerals?
    - What do they do for us?
    - Why are they important?
- Which vitamins and minerals are important to have in your diet?
    - How about for children, which vitamins and minerals are important for them?
    - Do you know of any vitamins and minerals that are important for pregnant women?

C Awareness of food fortification

- Before today, had you heard of food fortification? What does it mean if a food is fortified?
    - IF UNSURE: What might it mean if a food is fortified?

"Food Fortification" is when a vitamin or mineral is added to a processed food product.

- How do you feel about vitamins and minerals being added to foods?
    - What are the good things about adding vitamins and minerals?
    - What are the bad things?
- Of all the foods you purchased today, which ones had added vitamins and minerals?
    - FOR A SELECTION OF PRODUCTS MENTIONED: Did you know that this product had added vitamins and minerals when you bought it?
    - How important was the vitamin or mineral content in your decision to buy that product?
    - Will the whole household use the product or is it for a particular member of the household?

D Processed foods with added vitamins and minerals

- Are the fortified foods you bought a good way of getting vitamins and minerals in your diet?
    - What are the good things about getting vitamins and minerals in these foods? What are the bad things?
    - What other vitamins and minerals could be added to these foods?
    - Which processed foods do you think should have added vitamins and minerals?
    - Are there any processed foods that shouldn't have added vitamins and minerals?

E. Types of fortification – Folate

Now I'd like to talk about fortification with some specific types of vitamins and minerals. Let's start by talking about folate/ folic acid.

Definition of folate/folic acid if necessary:

"Folate is a group B vitamin, known as folate when occurring naturally and as folic acid when 'man made'".

- Have you heard of folate / folic acid?
- What have you heard about folate / folic acid?
    - Do any of the foods you bought today contain added folate / folic acid? Which ones?

- FOR EACH PRODUCT: Did you know that product had added folic acid when you bought it?

- What might be the benefits of consuming adequate amounts of folate / folic acid?
- Can you have too much folate / folic acid? What might be the effects of this?
- Who might benefit from consuming adequate amounts of folate/folic acid? Who might not benefit?
- What is the best way to consume folate / folic acid?
- Have you heard anything about pregnant women consuming folate/ folic acid?
  - What are the benefits for pregnant women of consuming adequate amounts of folate/ folic acid? What are the benefits for the baby?
  - Have you heard of Neural Tube Defects (NTDs)? What have you heard about this type of problem?

F. Types of fortification – Iodine

Now let's talk about adding iodine to foods.

- Have you heard of iodine?
- What have you heard about iodine?
  - Do any of the foods you bought today contain added iodine? Which ones?
  - FOR EACH PRODUCT: Did you know that product had added iodine when you bought it?
- What might be the benefits of consuming adequate amounts of iodine?
- What might be the bad things about not consuming enough iodine?
- Can you have too much iodine? What might be the effects of this?
- Who might benefit from consuming enough iodine? Who might not benefit?
- What is the best way to increase iodine intake?
- Have you heard/ know of iodine deficiency? What problems might iodine deficiency cause?
  - Who is at risk of iodine deficiency?

- Have you heard anything about pregnant women being encouraged to consume adequate amounts of iodine?

    - What are the benefits for pregnant women to consume enough iodine? Are there benefits for the baby?

G. Controls regarding food fortification

Now I'd like to talk about how processed foods are regulated in Australia/New Zealand.

- Who controls how processed foods are produced?

    - What sort of things do they control?

    - IF NOT MENTIONED: What about adding vitamins and minerals to foods – is that controlled?

- Why would a manufacturer want to add vitamins and minerals to the foods they make?

    - What might be the benefits for the manufacturer? What might be the drawbacks?

- How would you feel if some foods always contained added vitamins and minerals?

    - What would be the good things about some foods always having added vitamins and minerals? What would be the bad things?

- Would you support laws that cause some foods to be fortified?

    - Why or why not?

H Closing

- Do you have any other comments or questions?
- This research is being conducted on behalf of Food Standards Australia New Zealand. The findings will be used to help them to communicate with Australians and New Zealanders about food fortification.
- Thank and hand out incentive and fact sheets.

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APPENDIX C: RECRUITMENT SCREENERS

Group discussion recruitment screener – Australia

FSANZ Food fortification

Ipsos-Eureka project #09-003975-01

To be used for all recruitment of group discussions in Australia.

Please recruit 10 participants per group, including a roughly equal number of males and females. All participants must meet the criteria of 'either buys or prepares food for themselves or others'. There is also a minimum quota to be achieved across all groups (see Table 2).

Other questions in the screener are for information only. Please provide responses to all questions for each participant.

Table 1. Groups to be recruited

Group	Sample	Location	Date
1	18-35 years	Nth Sydney	Tue 2 June, 6pm
2	36+ years	Nth Sydney	Wed 3 June, 6pm
3	18-35 years	Ballarat	Tue 9 June, 5.30pm
4	36+ years	Ballarat	Tue 9 June, 8pm
5	18-35 years	Hobart	Thurs 11 June, 5.30pm
6	36+ years	Hobart	Thurs 11 June, 8pm
	Total	**6 groups**	

Table 2. Minimum quotas across all groups

QUOTA	Description	Number of participants
A	Has one or more children aged 0-15 years	15

Introduction

Hello, my name is [INTERVIEWER] and I'm calling from xx, a market and social research firm.

We are conducting a research project about different foods you might buy at the supermarket. We'd like to invite you to participate in a group discussion.

If you choose to participate, the information and opinions you provide will be used only for research purposes.

Around 8 people will attend the discussion and it will be very relaxed and informal. If you are eligible and participate, you'll receive $60 as a 'thank you' for helping us with the project. Refreshments will be provided and it will take no more than 2 hours.

Would you be interested in attending?

[IF QUERIED AS TO THE CLIENT:]
This research is conducted on behalf of an Australian Government agency.

[IF QUERIED ABOUT BONA FIDES OF RESEARCH:]
I can provide the name and phone number of someone who will verify the legitimate nature of this research project. The contact is the Project Manager at Ipsos-Eureka, Emma Rowland, on (03) 9900 0826.

IF AGREE:
That's great! I just need to ask you a few questions. Your answers will determine which group is most suitable for you.

Screening questions

Do you ever buy food from a supermarket or prepare food for yourself or others?

YES	CONTINUE
NO	THANK & CLOSE

Do you work in any of the following industries?

Marketing, Advertising or Market research	THANK & CLOSE
Nutritionist or Dietician	THANK & CLOSE
Food Regulatory Agency	THANK & CLOSE
Healthcare (e.g. Doctor, Nurse, Maternal health worker etc)	THANK & CLOSE
None of the above	CONTINUE

Which of the following age groups includes your age?

Under 18 years	THANK & CLOSE

18-35 years	RECRUIT TO GROUP 1, 3 OR 5
36 years or more	RECRUIT TO GROUP 2, 4 OR 6

Do you have any children aged 15 years or younger?

YES	CHECK QUOTA A
NO	CONTINUE

Do you speak a language other than English at home?

YES	RECORD LANGUAGE(S)
NO	CONTINUE

Are you of Aboriginal or Torres Strait Islander descent?

YES	CONTINUE
NO	CONTINUE

What is the highest level of formal education you have completed?

University degree or higher (Note: This includes postgraduate)	CONTINUE
Diploma or associate diploma	CONTINUE
Certificate or trade qualification	CONTINUE
Highest level of secondary school (eg Year 12/6th form)	CONTINUE
Did not complete highest level of school (ie Year 12/6th form)	CONTINUE
Never attended school	CONTINUE
Refused	CONTINUE

Into which of the following brackets does your annual household income fall?

Less than $26,000	CONTINUE
$26,000 to $51,999	CONTINUE
$52,000 to $87,999	CONTINUE
$88,000 or more	CONTINUE

Using a scale from 0 to 10, where 0 is "not at all health conscious" and 10 is "extremely health conscious", how health conscious are you?

Record 0-10	CONTINUE

GIVE LOCATION AND DATE/TIME DETAILS FOR APPROPRIATE GROUP.
To ensure that the group starts on time can I please ask that you arrive 15 minutes before the scheduled start time. The discussion will be recorded on audio and videotape, but the

tapes will only be used for research purposes and will not be transferred to anyone else without your full knowledge and consent.

PRE-GROUP TASK
To confirm your participation in the group, we'd like to send you a confirmation letter with the date and time of the group. We'll also include a reply paid envelope, because we'd like you to complete a short task to send back to us before the group. There will be full instructions in the envelope, but just briefly, it will involve listing some food products you have bought on a recent trip to the supermarket, and including a receipt. The information will not be attributed to you personally during the group, but it will be aggregated and used in the discussion.

IF ASKED WHAT TYPE OF RECEIPT:
The receipt can be from any shopping you do in a supermarket. A longer receipt would be better than a shorter one, but any receipt will do. If you prefer, a photocopy of a receipt is also fine.

OBTAIN/VERIFY MAILING ADDRESS.

Thanks very much. We look forward to seeing you on the night.
THANK AND CLOSE.

North Sydney location:

The Chatroom Facility
Level 1, 431 Miller St
Cammeray, NSW
Phone: 02 9404 8008

Ballarat location:

Mercure Ballarat Hotel and Convention Centre
613 Main Rd
Ballarat
Phone: 03 5327 1200

Hobart location:

Grand Mercure Hadleys Hotel
34 Murray St
Hobart
Phone: 03 6223 4355

Group discussion recruitment screener – New Zealand

FSANZ Food fortification

Ipsos-Eureka project #09-003975-01

To be used for all recruitment of group discussions in New Zealand.

Please recruit 10 participants per group, including a roughly equal number of males and females. All participants must meet the criteria of 'either buys or prepares food for themselves or others'. There is also a minimum quota to be achieved across all groups (see Table 2).

Other questions in the screener are for information only. Please provide responses to all questions for each participant.

Table 3. Groups to be recruited

Group	Sample	Location	Date
1	18+ years	Auckland	TBA
2	18+ years, Maori	Auckland	TBA
3	18+ years	Wellington	TBA
4	18+ years	Balclutha	TBA
	Total	**4 groups**	

Table 4. Minimum quotas across all groups

QUOTA	Description	Number of participants
A	Has one or more children aged 0-15 years	15

Introduction

Hello, my name is [INTERVIEWER] and I'm calling from xx, a market and social research firm.

We are conducting a research project about different foods you might buy at the supermarket. We'd like to invite you to participate in a group discussion.

If you choose to participate, the information and opinions you provide will be used only for research purposes.

Around 8 people will attend the discussion and it will be very relaxed and informal. If you are eligible and participate, you'll receive $60 as a 'thank you' for helping us with the project. Refreshments will be provided and it will take no more than 2 hours.

Would you be interested in attending?

[IF QUERIED AS TO THE CLIENT:]
This research is conducted on behalf of an Australian and New Zealand Government agency.

[IF QUERIED ABOUT BONA FIDES OF RESEARCH:]
I can provide the name and phone number of someone who will verify the legitimate nature of this research project. . The contact is Jude Varcoe at Premium Research, on (04) 389 2425.

IF AGREE:
That's great! I just need to ask you a few questions. Your answers will determine which group is most suitable for you.

Screening questions

Do you ever buy food from a supermarket or prepare food for yourself or others?

YES	CONTINUE
NO	THANK & CLOSE

Which of the following age groups includes your age?

Under 18 years	THANK & CLOSE
18-35 years	CONTINUE
36 years or more	CONTINUE

Do you work in any of the following industries?

Marketing, Advertising or Market research	THANK & CLOSE
Nutritionist or Dietician	THANK & CLOSE
Food Regulatory Agency	THANK & CLOSE
Healthcare (e.g. Doctor, Nurse, Maternal health worker etc)	THANK & CLOSE
None of the above	CONTINUE

Do you have any children aged 15 years or younger?

YES	CHECK QUOTA A
NO	CONTINUE

Do you speak a language other than English at home?

YES	RECORD LANGUAGE(S)
NO	CONTINUE

Are you of Maori or Pacific Islander descent?

YES	RECRUIT TO GROUP 2
NO	CONTINUE

What is the highest level of formal education you have completed?

University degree or higher (Note: This includes postgraduate)	CONTINUE
Diploma or associate diploma	CONTINUE
Certificate or trade qualification	CONTINUE
Highest level of secondary school (eg Year 13/7th form)	CONTINUE
Did not complete highest level of school (ie Year 13/7th form)	CONTINUE
Never attended school	CONTINUE
Refused	CONTINUE

Into which of the following brackets does your annual household income fall?

Less than $26,000	CONTINUE
$26,000 to $51,999	CONTINUE
$52,000 to $87,999	CONTINUE
$88,000 or more	CONTINUE

Using a scale from 0 to 10, where 0 is "not at all health conscious" and 10 is "extremely health conscious", how health conscious are you?

Record 0-10	CONTINUE

GIVE LOCATION AND DATE/TIME DETAILS FOR APPROPRIATE GROUP.
To ensure that the group starts on time can I please ask that you arrive 15 minutes before the scheduled start time. The discussion will be recorded on audio and videotape, but the tapes will only be used for research purposes and will not be transferred to anyone else without your full knowledge and consent.

PRE-GROUP TASK
To confirm your participation in the group, we'd like to send you a confirmation letter with the date and time of the group. We'll also include a reply paid envelope, because we'd like you to complete a short task to send back to us before the group. There will be full instructions in the envelope, but just briefly, it will involve listing some food products you have bought on a recent trip to the supermarket, and including a receipt. The information will not be attributed to you personally during the group, but it will be aggregated and used in the discussion.

IF ASKED WHAT TYPE OF RECEIPT:
The receipt can be from any shopping you do in a supermarket. A longer receipt would be better than a shorter one, but any receipt will do. If you prefer, a photocopy of a receipt is also fine.

OBTAIN/VERIFY MAILING ADDRESS.

Thanks very much. We look forward to seeing you on the night.
THANK AND CLOSE.

Accompanied shop recruitment screener – Australia

FSANZ Food fortification

Ipsos-Eureka project #09-003975-01

To be used for all recruitment of accompanied shopping trips in Australia.

Please recruit individuals for accompanied shops carefully – it is important that they meet all criteria and are fully aware of the task. Participants should also be doing a medium to large shop – i.e. intending to purchase at least 10 items.

Timing is flexible depending on what participants prefer – any time between 9am and 3pm is fine. Please contact the moderator to confirm times outside of this window.

Other questions in the screener are for information only. Please provide responses to all questions for each participant.

Table 5. Individuals to be recruited

Trip	Sample	Location	Date
1	18-35 years	Nth Sydney	Tue 2 June
2	36+ years	Nth Sydney	Wed 3 June
3	18+ years	Ballarat	Tue 9 June
4	18+ years	Hobart	Thurs 11 June
	Total	**4 trips**	

Table 6. Minimum quotas across interviews

QUOTA	Description	Number of participants
A	Has one or more children aged 0-15 years	1
B	High health consciousness (Q1.8 >5)	1
C	Low income (Less than $26,000)	1

Introduction

Hello, my name is [INTERVIEWER] and I'm calling from xx, a market and social research firm.

We are conducting a research project about different foods you might buy at the supermarket. We'd like to invite you to participate in an accompanied shopping trip.

If you choose to participate, the information and opinions you provide will be used only for research purposes.

The trip will involve a researcher coming with you when you go to the supermarket to buy food. The trip would need to be one where you intend to purchase at least ten items. The researcher will observe you in the supermarket and ask questions. Then, there will be a short interview after your shopping is complete.

If you are eligible and participate, you'll receive $80 as a 'thank you' for helping us with the project.

Would you be interested?

[IF QUERIED AS TO THE CLIENT:]
This research is conducted on behalf of an Australian Government agency.

[IF QUERIED ABOUT BONA FIDES OF RESEARCH:]
I can provide the name and phone number of someone who will verify the legitimate nature of this research project. The contact is the Project Manager at Ipsos-Eureka, Emma Rowland, on (03) 9900 0826.

IF AGREE:
That's great! I just need to ask you a few questions. Your answers will determine whether we can include you in the research.

Screening questions

Which of the following age groups includes your age?

Under 18 years	THANK & CLOSE
18-35 years	CONTINUE
36 years or more	CONTINUE

Do you work in any of the following industries?

Marketing, Advertising or Market research	THANK & CLOSE
Nutritionist or Dietician	THANK & CLOSE
Food Regulatory Agency	THANK & CLOSE
Healthcare (e.g. Doctor, Nurse, Maternal health worker etc)	THANK & CLOSE
None of the above	CONTINUE

Do you have any children aged 15 years or younger?

YES	CHECK QUOTA A

NO	CONTINUE

Do you speak a language other than English at home?

YES	RECORD LANGUAGE(S)
NO	CONTINUE

Are you of Aboriginal or Torres Strait Islander descent?

YES	CONTINUE
NO	CONTINUE

What is the highest level of formal education you have completed?

University degree or higher (Note: This includes postgraduate)	CONTINUE
Diploma or associate diploma	CONTINUE
Certificate or trade qualification	CONTINUE
Highest level of secondary school (eg Year 12/6th form)	CONTINUE
Did not complete highest level of school (ie Year 12/6th form)	CONTINUE
Never attended school	CONTINUE
Refused	CONTINUE

Into which of the following brackets does your annual household income fall?

Less than $26,000	CHECK QUOTA C
$26,000 to $51,999	CONTINUE
$52,000 to $87,999	CONTINUE
$88,000 or more	CONTINUE

Using a scale from 0 to 10, where 0 is "not at all health conscious" and 10 is "extremely health conscious", how health conscious are you?

Record 0-10	CHECK QUOTA B

OBTAIN LOCATION/TIME DETAILS AND ESTABLISH A MEETING PLACE.

You will be able to identify the researcher by their name tag.

Thanks very much. We look forward to seeing you.
THANK AND CLOSE.

Accompanied shop recruitment screener – New Zealand

FSANZ Food fortification

Ipsos-Eureka project #09-003975-01

To be used for all recruitment of accompanied shopping trips in New Zealand.

Please recruit individuals for accompanied shops carefully – it is important that they meet all criteria and are fully aware of the task. Participants should also be doing a medium to large shop – i.e. intending to purchase at least 10 items.

Timing is flexible depending on what participants prefer – any time between 9am and 3pm is fine. Please contact the moderator to confirm times outside of this window.

Other questions in the screener are for information only. Please provide responses to all questions for each participant.

Table 7. Individuals to be recruited

Trip	Sample	Location	Date
1	18-35 years	Auckland	TBA
2	36+ years	Auckland	TBA
3	18+ years	Wellington	TBA
4	18+ years	Balclutha	TBA
	Total	**4 trips**	

Table 8. Minimum quotas across interviews

QUOTA	Description	Number of participants
A	Has one or more children aged 0-15 years	1
B	High health consciousness (Q1.8 >5)	1
C	Low income (Less than $26,000)	1
D	Maori or Pacific Islander	1

Introduction

Hello, my name is [INTERVIEWER] and I'm calling from xx, a market and social research firm.

We are conducting a research project about different foods you might buy at the supermarket. We'd like to invite you to participate in an accompanied shopping trip.

If you choose to participate, the information and opinions you provide will be used only for research purposes.

The trip will involve a researcher coming with you when you go to the supermarket to buy food. The trip would need to be one where you intend to purchase at least ten items. The researcher will observe you in the supermarket and ask questions. Then, there will be a short interview after your shopping is complete.

If you are eligible and participate, you'll receive $80 as a 'thank you' for helping us with the project.

Would you be interested?

[IF QUERIED AS TO THE CLIENT:]
This research is conducted on behalf of an Australian and New Zealand Government agency.

[IF QUERIED ABOUT BONA FIDES OF RESEARCH:]
I can provide the name and phone number of someone who will verify the legitimate nature of this research project. The contact is Jude Varcoe at Premium Research, on (04) 389 2425.

IF AGREE:
That's great! I just need to ask you a few questions. Your answers will determine whether we can include you in the research.

Screening questions

Which of the following age groups includes your age?

Under 18 years	THANK & CLOSE
18-35 years	CONTINUE
36 years or more	CONTINUE

Do you work in any of the following industries?

Marketing, Advertising or Market research	THANK & CLOSE
Nutritionist or Dietician	THANK & CLOSE
Food Regulatory Agency	THANK & CLOSE
Healthcare (e.g. Doctor, Nurse, Maternal health worker etc)	THANK & CLOSE
None of the above	CONTINUE

Do you have any children aged 15 years or younger?

YES	CHECK QUOTA A
NO	CONTINUE

Do you speak a language other than English at home?

YES	RECORD LANGUAGE(S)
NO	CONTINUE

Are you of Maori or Pacific Islander descent?

YES	CHECK QUOTA D
NO	CONTINUE

What is the highest level of formal education you have completed?

University degree or higher (Note: This includes postgraduate)	CONTINUE
Diploma or associate diploma	CONTINUE
Certificate or trade qualification	CONTINUE
Highest level of secondary school (eg Year 13/7th form)	CONTINUE
Did not complete highest level of school (ie Year 13/7th form)	CONTINUE
Never attended school	CONTINUE
Refused	CONTINUE

Into which of the following brackets does your annual household income fall?

Less than $26,000	CHECK QUOTA C
$26,000 to $51,999	CONTINUE
$52,000 to $87,999	CONTINUE
$88,000 or more	CONTINUE

Using a scale from 0 to 10, where 0 is "not at all health conscious" and 10 is "extremely health conscious", how health conscious are you?

Record 0-10	CHECK QUOTA B

OBTAIN LOCATION/TIME DETAILS AND ESTABLISH A MEETING PLACE.

You will be able to identify the researcher by their name tag.

Thanks very much. We look forward to seeing you.
THANK AND CLOSE.

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APPENDIX D: PRE-GROUP TASK

Group discussion task

Please complete the following table by writing in the brand and product name of 2 or 3 items you purchased on a recent trip to a supermarket. Please also write in 2 other things you noticed on the packaging. One example has been included in the first category. If did not purchase any items in a category, just leave the boxes blank.

When complete, please mail back this form in the envelope provided and include the receipt from the supermarket trip.

Food type	Brand	Product name and description
Cereals and cereal products *Including breakfast cereal, breads, cakes etc*	*Tip Top UP*	*Wholegrain sandwich bread* *Australian flag logo* *Soft and smooth wholegrains*
Dairy products and alternatives to dairy products *Including milk, butter, cheese, yoghurt, soy milk etc.*		
Fruit and vegetable juices or drinks *Including fruit juice, fruit juice drink, vegetable juice etc.*		

Food type	Brand	Product name and description
Salt *Including table salt, cooking salt, celery salt etc.*		
Meat and fish *Including fresh or frozen meat or fish products.*		

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APPENDIX E: FOOD LISTS

The following lists of food products are all those submitted by participants via the pre-group task.

Sydney

Product name	Fortified?	Vitamins and minerals	Description
Breads and cereals			
Arnott's Kingston	No		Arnott's logo, name, picture of biscuits
Bonvit Psyllium husks	No		For cereal, high fibre, clear packaging;
Bürgen Men's Formula Bread	Yes	Thiamin	Black and Orange plastic with shades of Grey, nutrition info, "your body works better with burgen"
Coles Corn Flakes	No		Corn on the cob, happy man eating
Homeland bread	Unknown		
Kellogg's Crunchy Nut Cornflakes	Yes	E, C, niacin, riboflavin, thiamin, folate, iron, zinc oxide	
Kellogg's Special K with Chocolate Flakes	Yes	Calcium carbonate, iron, zinc oxide, niacin, B6, riboflavin, thiamin, folate	Special K with Chocolate, the word "new", cereal sample, pictures;
Mighty Soft crumpets	No		Thin plastic Packaging; Mighty Strong logo is strong;
Franklins No Frills White Sandwich Bread	Unknown		
Franklins No Frills Fruit Rings	Unknown		
Noble Rise bread	No		Bakery, Wholemeal with a hint of honey, "Nobel Rise" in big letter, soft thick, no grains;
Nutri Grain	Yes	Minerals (calcium carbonate), mineral salt (sodium bicarbonate), vitamin C, niacin,	

Product name	Fortified?	Vitamins and minerals	Description
		thiamin	
Paradise Shortbread biscuits	No		Red and white packet with yellow top;
Pittes lite souvlaki	No		Pittes lite souvlaki and pizza, lady consuming the product;
Sanitarium Weetbix	No		Blue colouring, multi-grain, bowl with cereal; 1.2 kg value pack, proudly supports Cricket Australia
Sanitarium Weetbix Bites	Yes	Zinc, gluconate, iron, niacin, thiamin, riboflavin, folate	
Special K			Aldi brand rip-off, blue box, similar fine-line packaging;
Tip Top UP	Yes	Iodised sale, thiamin, folate	
Uncle Toby's Oats	No		
Uncle Toby's Fibre Plus	Yes	Thiamin, riboflavin, niacin, folate, calcium, iron, fibre	
Woolworths Four Seed Sliced Loaf	Unknown		'Special Sticker', very detailed ingredients list, very useful for those with allergies or intolerances.
Woolworths Pecan Danish	No		Custard filled
Fruit and vegetable juices[22]			
Australian Fresh Orange Juice	Yes	Vitamin C	The oranges, orange colour and maroon colour.
Campbells V8 Plus juice Orchard Blend	Yes	A, C	V8 Plus start-up orchard blend, pictures of fruits and vegetables, 1 serve of vegetables, 1 serve of fruit[23];
Cascade Blackcurrant juice	No	C	Ultra C, rich in Vitamin C, refreshingly Tasmanian
Coles Farmland Apple juice	No		Apple juice, no added sugar, good source of Vitamin C;
Extra juicy Apple & Blackcurrant juice	No		No added sugar or preservatives, made in a Australia from;

[22] One of the respondents did not list the brand of Apple juice bought, but commented – labels says "extra juicy" so makes it sound appealing.
This respondent listed Pink Lady Apples and Coles Carrots in the juice column.

Product name	Fortified?	Vitamins and minerals	Description
Mildura Sunrise Fruit Drink	No		Mildura Sunrise[24]; Orchy [sic] juice
Original Black Label Orange Juice	No		Black Labe, Australian; fruits displayed at __ orange juice
Dairy and dairy alternatives			
Bega Super Slim Cheese Slices	No		
Blue Ribbon Ice Cream	No		Made with wholesome buttermilk, extra creamy ice cream
Bulla Yoghurt with Fresh Muesli	No		Smooth and Creamy, fruit, muesli tap and spoon included
Buttersoft Mainland Cheese	No		Yellow tub with blue colour – 'butter soft'
Coles Cheese	No		
Coles Full Cream Milk	No		3 litre Smart Buy Milk, Australian logo;
Coles Lite Milk	No		Light milk, 3 litre;
Coon Lite 'n' Tasty shredded cheese	No		25% less fat, shredded cheese, blue resealable pack;
Dairy Farmers Cream	No		Pure Fresh Cream
Dairy Farmers Milk Chocolate	No		
Dairy Farmers Shape No Fat Milk	No		
Devondale Milk	No		Full cream;
Devondale Tasty Cheese	No		Australian tasty, wholly Australian, natural cheddar;
Devondale Thickened Cream	No		Thickened cream, no preservatives;
Flora Pro-active Margerine	No		Green and white background, lowers cholesterol
Franklins No Frills Sour Cream	No		
Franklins No Frills Ice Cream	No		Choc chip
Harmonie Butter	No		Organic, Denmark;
Home Brand Milk	No		Black and Red packaging all very similar shape and size;
Home Brand Butter	No		

[24] This respondent listed Coles Red Delicious Apples in the juice column. Another listed Golden Circle fruit cup cordial.

Product name	Fortified?	Vitamins and minerals	Description
Jalna Yoghurt	No		Australian pot set;
Kraft Cheese Slices	No		
Parmalat	No		Australian low-fat milk;
Paul's 12-Pack Kids Yoghurt	No		Wiggles on Packaging, Cardboard outer pack;
Paul's Dora the Explorer Yoghurt	No		
Pepe's Cheese and Spinach Pastizzis	No		
Pura Milk Light Start	No		Light milk 1% fat, 99% taste;
No Frills Full Cream	No		Full Cream, Quantity ;
Olive Grove Margerine	No		
Sanitarium So Good Lite	No		Low GI, 99% fat free;
Ski D'lite Yoghurt	No		Muesli tap and spoon included; 6-pack
Woolworths Fresh Cream	No		Thickened cream
Woolworths Low Fat Milk	No		Green top and green label; low-fat, 3 litre, "fresh and lite" on the label, Woolworths quality assurance label included on front; fresh low for milk, 3 litre, quality assured stamp;
Woolworths Full Cream Milk	No		Fresh and Quality assured;
Yoplait Le Rice	No		
Yoplait Yoghurt	No		Star Wars [on the packaging]
Salt			
Home Brand Salt	No		
Lilydale	Unknown		Chicken salt, Australian
Maldon Sea Salt	No		White and yellow box, the name 'Maldon'
Mitani Chicken Salt	Unknown		
Reeva	Unknown		White and Red Packaging, same sort of packaging as Saxa, Australian product
Sel Marin Gros	Unknown		Coarse Sea Salt, Italian product

Ballarat

Product name	Fortified?	Vitamins and minerals	Description
Breads and cereals			
Coles Quick Oats	No		
Coles Wheatbix	No		Coles Smart buy, otherwise plain packaging
Coles white bread	Yes	Thiamin, folic acid, mineral salt (calcium carbonate)	White sandwich bread; white bread toast, sliced, Australian flag logo;
Coles wholegrain bread (could only find multi-grain or wholemeal)	Yes	Iodised salt, mineral salt (calcium carbonate), Citric acid, iron, niacin, Vitamin E, Thiamin, folic acid	Made in Australia logo, basic packaging;
Gold Max white bread	Unknown		
Jade Imperial Noodles	Unknown		99% fat free, barcode, rice, attractive blue finish
Kellogg's Cocoa Pops cereal	Yes	Calcium, iron, zinc, C, niacin, thiamin, riboflavin, folate	Chocolate flavour cereal, kids love it;
Kellogg's Corn Flakes cereal	Yes	E, C, niacin, riboflavin, thiamin, folate, iron, zinc	Contains Vitamin C, iron and zinc, yum;
Kellogg's Nutrigrain cereal	Yes	Calcium, iron, C, niacin, thiamin, folate, B6, riboflavin	Protein, calcium, carbs;
Kellogg's Rice Bubbles cereal	Yes	C, niacin, riboflavin, thiamin, folate, iron, zinc	
Kellogg's Special K cereal	Yes	Calcium, iron, zinc, niacin, B6, riboflavin, thiamin, folate	Big red K as logo, 99% fat free;
Kellogg's Sultana Bran	Yes	Iron, zinc, niacin, riboflavin, B6, thiamin, folate	Heart Foundation, High in Fibre; Purple pack, sultana pictures
M.E.B. Foods Cedar Pita Bread	Unknown		Heart Foundation approved tick, 'Australian made, Australian owend'
Mighty Soft White bread	Yes	Iodised salt, folic acid, Thiamin, mineral salt (calcium carbonate).	Thick white bread, no artificial preservatives;
Tip Top Sunblest wholemeal bread	Yes	Thiamin	Wholemeal bread, no artificial preservatives

Product name	Fortified?	Vitamins and minerals	Description
Tip Top fruit bread	Yes	Thiamin	
Uncle Toby's Plus Crisp & Crunchy cereal	Yes	Thiamin, riboflavin, niacin, folate, calcium, iron	
Uncle Toby's Vita Brits cereal	No		Whole grain, Heart Foudnation tick, Made in Australia;
Wonder White bread	Yes	Thiamin, niacin, iron, zinc, E, folate, B6	
Fruit and vegetable juices[25]			
Coles Apple Juice	Yes	Vitamin C	Source of Vitamin C, no added sugar
Coles Tropical Fruit drink	Yes	Vitamin C	Contains 25% fruit juice, big red tick logo
Farmland Apple juice	Yes	Vitamin (300)	Farmland Apple Juice 2 litres, no added sugar, good source of Vitamin C
Golden Circle Juice	No		3 Litre juice, fruit pictures, bright colours;
Just Juice Apple Juice	No		
Just Juice Orange juice	No		
Mildura Sunrise juice	Yes	Vitamin C	Apple and guava juice, 25% fruit juice, apple and guava pictures;
Dairy and dairy alternatives			
Aldi Skim Milk	Unknown		
Big M Chocolate milk	No		Chocolate Big M, no artificial flavours
Big M Edge milk	Yes	A, D, riboflavin, niacin, B6, B12, magnesium, zinc, iodine, phosphorus	
Black & Gold cheese slices	Unknown		
Black & Gold margarine	Unknown		
Bulla Gourmet yoghurt	No		
Bulla Lite Sour Cream	No		
Coles Canola Spread	Yes	Vitamin A and D	Omega 3, easy to spread

[25] One of the respondents did not list the brand of Apple juice bought, but commented – label says "extra juicy" so makes it sound appealing.

Product name	Fortified?	Vitamins and minerals	Description
Coles Full Cream milk	No		Full cream milk, Coles Smart buy, expiry date; savings written on package, red font; Coles 3 litre Smart Buy milk, Australian logo, full cream milk;
(You'll Love) Coles Cheese	No		Shredded mozzarella cheese, 'mild and creamy', Australian made logo; 500 smart buy, Australian logo, simple effective packaging (value);
Coon Light & Tasty	No		
Dreamwhip Whipped Dairy Cream	No		Whipped dairy cream, picture of cane and cream on can, 'ready to serice
Farmland butter	No		Reduced salt butter
Farmdale skim milk	Unknown		Plain, simple
Homebrand Cheese Slices Lite	No		
Kraft singles	Yes	D	Smooth and creamy, individually wrapped – great for freshness;
Meadow Lea Logicol	No		
Mooloo milk	Unknown		
Nuttelex margarine	Yes	A, D2, E	No artificial additives, no cholesterol
Paul's Kids Yoghurt 12 Pack	No		Wiggles on packaging, cardboard outer pack
Paul's Strawberry Milk 6 Pack	Unknown		High in calcium, no artificial colours
Pura light start milk	No		Only 1% fat, 18% of your daily needs, low GI, national foods;
Pura milk	No		Milk, 1 litre, full milk, high in vitamin B2, nutritional information, plastic hourglass shape bottle;
Vaalia yoghurt	No		Luscious berries, pro-biotic yoghurt, low fat, no artificial colours, flavours or preservatives;
Woolworths Lite Milk	No		
Western Star Spreadable butter	No		Original spreadable

Product name	Fortified?	Vitamins and minerals	Description
			butter
Yoplait Lite yoghurt	No		
Salt			
Mermaid Table salt	No		Table salt, a mermaid logo, 'Australian owned since 1888';
Coles Table salt	No		Coles Table Salt, Australian owned;

Hobart

Product name	Fortified?	Vitamins and minerals	Description
Breads and cereals			
Carmen's Fruit Free Muesli	No		Black and green box (easy to spot), 100% Australian made and owned,;
Coles Corn Flakes	Yes	Niacin, Thiamin, Riboflavin, Folate, Iron	Australian made corn flakes, low fat, good source
Country Life Bread	Yes (white bread is not)	Iodised salt 'Multigrain', 'wholemeal', 'organic rye' have thiamin. 'Country grain and organic rye' has thiamin and folic acid.	Gluten free bread, low GI, 100% Gluten Free;
Cripps High Top White bread	Yes	Thiamin, iodine	Well-known brand, used at home regularly, good tasting;
Cripps Master Loaf White Toast Bread	Unknown		Tasmanian, since 1878
Cripps Nubake Crumpets	Unknown		Crumpets split, 6 pack
Home Brand muesli	No		
Kellogg's Just Right cereal	Yes	Iron, niacin, riboflavin, folate, thiamin	
Masterbread			Thick slices, no preservatives

Product name	Fortified?	Vitamins and minerals	Description
Mighty Soft bread	Yes	Iodised salt, folic acid, Thiamin, Mineral salt (calcium carbonate)	
Sanitarium Skippy Corn Flakes	Yes	Niacin, Thiamin, Riboflavin, folate, iron	99% fat free, 800gram value pack, made and packed in Australia;
Sanitarium Weet Bix	Yes	Zinc, iron, niacin, thiamin, riboflavin, folate	97% whole grain, low in sugar, long-lasting goodness and energy;
Woolworths Bakehouse white bread	Yes	Thiamin, folate, iodised salt.	White bread, backed on site that day, large 680gram loaf;
Woolworths Bakehouse Four Seed Ploughman Bread			Four seed ploughman bread, special reduced stickers. 680grams;
Woolworths Bakehouse Wholemeal Bread	Yes	Thiamin, folate, iodised salt	Wholemeal
(You'll love) Coles Cocoa Puffs	Yes	Niacin, thiamin, riboflavin, folate, iron.	700grams, source of vitamins, source iron, crispy grains of rice;
Fruit and vegetable juices			
Cascade Ultra C Blackcurrant Cordial	Unknown		Distinctive colour, picture of blackcurrants, cascade logo, 'Tasmanian';
Extra Juicy Breakfast Juice	Yes	Calcium, vitamin C.	3 litre, with vitamins A, C and E, no added sugar;
Home Brand Orange juice	Yes	Vitamin C	No. of litres – 3, source of Vitamin C, no added sugar, nutritional information.
Mildura Sunrise Apple and Guava Fruit drink	Yes	Vitamin C	Logo is a drawing, orange colour
Dairy and dairy alternatives			
Bega cheese	Unknown		Australian company, tasty, labelling – eye catching;
Bulla ice cream	Unknown		Cookies and cream ice cream, creamy classic
Farmland (Coles) Thickened Cream	Unknown		Tick logo and Australian made logo

Product name	Fortified?	Vitamins and minerals	Description
Home Brand Skim Milk Powder	Unknown		Product of Australia, Refund if not satisfied, Woolworths quality assured
IRC Coffee milk	Unknown		
Kraft Philadelphia Spread	Unknown		Chive and Onion Philadelphia spread, 80% less fat, light;
Mainland Tasty Cheddar Cheese	Unknown		Green Packaging, 'Tasty', aged 12 months;
Olive Grove	Unknown		classic spread, Heart Foundation approved, cholesterol free, olive oil;
Pauls cream	No		On special – best buy
Ski D'Lite yoghurt	Unknown		
Ski Island Escape Yoghurt	Unknown		The variety of fruit ingredients 99% fat free;
Tablelands Butter	Unknown		Health Smart, reduced fat spread, heart friendly, good oils, good fat, cholesterol free;
Vitasoy Rice milk	Unknown		Rice milk, original, calcium enriched, no added sugar, gluten free, made with non-GM rice;
Vitasoy Lite milk	No		Soy milk lite, gluten free, calcium enriched, and soy milk goodness;
Woolworths Fresh Sour Cream	Unknown		Dolloping, Cooking
Woolworths Milk	Unknown		Cheap and tastes the same as the others; Fresh milk 2litre, quality assured, product of Australia; Use by date, No. of litres – 3, fresh milk, quality assured, product of Australia;
Woolworths Low Fat Milk	No		Low fat milk, fresh, quality assured; milk 'lite', green label; has Woolworths quality guarantee sticker,

Product name	Fortified?	Vitamins and minerals	Description
			green lid'
(You'll Love) Coles Milk	Unknown		Pasteurised, homogenised, a good source of calcium, Australian made;
Salt (no products provided)			

Auckland

Product name	Fortified?	Vitamins and minerals	Description
Breads and cereals			
Pams Wheatmeal Bread	Unknown		
Total Goodness Original Swiss Bread	Unknown		
Pams Bread Toast Multigrain	Unknown		
Pams Bread Soy and Linseed	Unknown		
Simple Muesli, Apricot and Coconut	Yes	Thiamin, riboflavin, niacin, folate	
Kellogg's Special K	Yes	Calcium carbonate, iron, zinc oxide, niacin, vitamin B6, riboflavin, thiamin, folate	
Kellogg's Coco Pops	Yes	Calcium carbonate, iron, zinc oxide, vitamin C, niacin, riboflavin, thiamin, folate	
Tasti Macadamia nut bars	Yes	Niacin, thiamin, riboflavin, folate, iron	
Nice & Natural Nut bars	No		
Fruit and vegetable juices			
Mizone Water, Passionfruit	Yes	Vitamins B5, B6, B12, C, niacin	
G Force, Pineapple and Mango juice	Yes	Vitamin C	
Charlie's Pineapple juice	Yes	Vitamin C	

Product name	Fortified?	Vitamins and minerals	Description
Dairy and dairy alternatives			
Yoplait Kiwi Favourites	No		
Bertolli Olivio spread	Unknown		
Flora spread	No		
Salt (no products provided)			

Wellington

Product name	Fortified?	Vitamins and minerals	Description
Breads and cereals			
Kellogg's Allbran	Yes	Riboflavin, folate, thiamin, iron	
Kellogg's Sultana Bran	Yes	Iron, zinc oxide, niacin, riboflavin, vitamin B6, thiamin, folate	
Burgen bread	Yes	Iodised salt, thiamin, folate	
Fruit and vegetable juices (no products provided)			
Dairy and dairy alternatives			
Meadow Fresh yoghurt	No		
Fresh and fruity yoghurt	Yes	Calcium, vitamin A, vitamin D	
Salt (no products provided)			
Home Brand Table salt	No		
Sea salt	No		

Balclutha

Product name	Fortified?	Vitamins and minerals	Description
Breads and cereals			

Product name	Fortified?	Vitamins and minerals	Description
Kellogg's Sultana Bran	Yes	Iron, zinc oxide, niacin, riboflavin, vitamin B6, thiamin, folate	
Sanitarium Light and Tasty	Yes	Calcium phosphate, ferrous lactate, iron, niacin, thiamin, riboflavin, folate	
Fruit and vegetable juices			
V Plus Sports Drink	Unknown		
Jungle Juice	Unknown		
Dairy and dairy alternatives			
Naturalea Yoghurt	No		
DeWinkel Acidophillus Yoghurt	No		
Salt (no products provided)			
Mrs Rogers salt shaker	No		

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APPENDIX F: PRODUCT PICTURES

The following products were used as stimulus during the group discussions. There is some variation in products by location based on the types of products participants' indicated purchasing.

Sydney

Uncle Toby's Plus Cereal, 525g

Golden Crumpet Rounds, 300g

Buttercup Wonder White Sandwich Bread, 700g

Berri Juice Multi-V, 2.4L

V8 Juice, 1L

Kraft Singles Cheese Slices, 250g

Ski D'Lite Yoghurt, 2pk

McKenzies Table Salt, 95g

Saxa Iodised Table Salt, 125g

Ballarat

Uncle Toby's Plus Cereal, 525g

Golden Crumpet Rounds, 300g

Buttercup Wonder White Sandwich Bread, 700g

Berri Juice Multi-V, 2.4L

Mildura Orange Drink, 2L

Coles Full Cream Milk, 1L

Big M Edge, 500mL

McKenzies Table Salt, 95g

Saxa Iodised Table Salt, 125g

Hobart

Uncle Toby's Plus Cereal, 525g

Buttercup Wonder White Sandwich Bread, 700g

Cripps Hi Top Bread, 880g

Coles Orange Juice, 2L

Sunraysia Prune Plus Juice, 250mL

Kraft Singles Cheese Slices, 250g

Vitasoy Soy Drink, 1L

McKenzies Table Salt, 95g

Saxa Iodised Table Salt, 125g

Auckland

Burgen bread, 700g

Simple Apricot & Coconut Muesli, 500g

Kellogg's Special K, 600g

Mizone Water, Passionfruit, 750ml

Charlie's Fruit Juice, Pure Pineapple, 1L

Tasti Nut Bar, White Choc & Macadamia, 225g

Nice & Natural Nut Bars, 192g

Yoplait Yoghurt, Kiwi Favourites, 6pk

Flora spread, 500g

Home Brand Table Salt, 500g

Mrs Rogers Iodised Rock Salt, 500g

Wellington

Burgen bread, 700g

Kellogg's Allbran, 350g

Kellogg's Sultana Bran, 500g

G Force Pineapple and Mango, 650ml

Charlie's Fruit Juice, Pure Pineapple, 1L

Yoplait Yoghurt, Kiwi Favourites, 6pk

Meadow Fresh Yoghurt, Deliteful Strawberry, 6pk

Home Brand Table Salt, 500g

Mrs Rogers Iodised Rock Salt, 500g

Balclutha

Kellogg's Sultana Bran, 500g

Sanitarium Light and Tasty, Berry Fruits, 500g

V Energy drink, 350ml

Just Juice, Tropical, 3L

Naturalea Yoghurt, Apricot Vanilla, 500ml

DeWinkel Acidophillus Yoghurt, 1kg

Home Brand Table Salt, 500g

Mrs Rogers Iodised Rock Salt, 500g

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