

A joint response from Heart of Mersey and the Faculty of Public Health to the Food Standards Agency consultation on *the draft Saturated Fat and Energy Intake Programme*

June 2007

ABOUT HEART OF MERSEY

Heart of Mersey (HoM) is a cardiovascular disease (CVD) prevention charity primarily funded by the primary care trusts and local authorities across Greater Merseyside. HoM aims to co-ordinate a strategic approach to preventing the high rates of cardiovascular disease and associated inequalities in Greater Merseyside. Heart of Mersey is working to achieve its aim through advocacy, campaigns, information and research. HoM works in partnership with a wide range of partners to achieve its aims.

ABOUT THE FACULTY OF PUBLIC HEALTH

The Faculty of Public Health is an authoritative public health body which aims to advance the health of the population through three key areas of work: health improvement, service improvement, and health protection. It maintains professional and educational standards, and advocates on key public health issues, including providing practical information and guidance for public health professionals.

SUMMARY

HoM and FPH welcome FSA's consultation on saturated fat. We have published a joint position statement on fat which makes a number of key recommendations to reduce population intakes of saturated and trans fats, as major factors in the CVD epidemic in the UK. Our key recommendations include:

- Campaigns are needed to raise public awareness of the need to reduce saturated and trans fat intake, and replace with poly- and monounsaturated fats, as demonstrated by FSA consumer research.
- FSA should encourage universal adoption of a simple food labelling scheme (such as the 'Traffic Light') by all food manufacturers and supermarkets, clearly stating levels of saturated and trans fats.
- A key priority should be product reformulation of mainstream products to reduce saturated fats and eliminate trans fats, replacing them with unsaturated fats. Evidence from Denmark shows legislation is highly effective.
- Healthier / low fat products have their place but can be more expensive, and there is evidence that consumption of these is lower among less affluent groups, which could increase inequalities.
- Reform of the EU Common Agricultural Policy is needed to reduce subsidies for beef and dairy production, and increase support for production of unsaturated oils such as rape oils, and fruit and vegetables.
- We need improved standards, training and quality control in the catering industry on choosing ingredients and cooking methods to reduce saturated fat and eliminate trans fat in meals.
- More effective restrictions on advertising high-fat snacks to children are needed.
- Continue promoting 5-A-DAY and improve access to fruit and vegetables as a substitute for fatty foods.

We also recommend a major focus on children aged two years and over for the following reasons:

- Children are eating 40% more saturated fat than the maximum recommended levels for health. High intakes lead to raised LDL cholesterol levels and the development of plaques in children as young as three years old.
- Taste preferences develop early on in childhood and are a major factor on people's consumption of foods high in saturated fat. FSA's research also identifies younger consumers as a critical target for these reasons.
- Consumers would like clarification in relation to fats / saturated fats and children (FSA 2007).

FULL RESPONSE

Introduction

We welcome the consultation and are delighted that FSA is now focusing on saturated fats. We have produced a joint position paper, *Fats* (Heart of Mersey and Faculty of Public Health 2007), which has been disseminated widely, and also a more detailed briefing paper, *Good fats: Bad fats* (Heart of Mersey 2006) to update the public on the current situation. Our recent analyses confirm that saturated fats are a significant public health concern in the UK. The target intake level for the UK population is 11% of food energy; however, intake levels are considerably higher in all population groups:

- Average intake levels for children (aged 2-18) are around 14.3% of food energy (Gregory and Lowe 2000).
- Average intake levels for adults are around 13.4% of food energy (Henderson et al 2003).

FSA's recognition that dietary intakes of saturated fats represent the greater heart health risk is appropriate. The maximum recommended intake level for trans fats is 2% of total energy, while mean population intakes are less than this in the UK

- Intake levels for adults are 1.2% of energy (Henderson et al 2003)
- Intake levels in children are 1.4% for boys and 1.5% for girls (Gregory and Lowe 2000).

Nevertheless, we recognise that trans fats are at least equally as harmful as saturated fats. **We agree with the FSA's push for the introduction of clearer labelling for trans fats – BUT ONLY UNTIL THEY ARE ELIMINATED FROM ALL PRODUCTS which would be the preferred option.** We recommend that, ultimately, the UK follow the highly effective action taken in Denmark to eliminate trans fats from foods through legislation which will limit trans fat content to 2% of energy. This legislation, which was introduced by Denmark in 2004, resulted in a 97% reduction in the trans fat content of foods between 2001 and 2006 (Stender et al 2006). Similar campaigns to abolish trans fats are also progressing rapidly in the USA.

Key recommendations made in the joint FPH and HoM position statement include:

- increased public awareness of the need to reduce saturated and trans fat intake, and replace with poly- and monounsaturated fats;
- universal adoption of a simple food labelling scheme (such as the 'Traffic Light') by all food manufacturers and supermarkets, clearly stating levels of saturated and trans fats
- further pressure on the food industry, with a timetable for legislation, to reformulate its products to use less saturated fat and eliminate trans fat, and to offer a wider range of reduced-fat alternatives;
- reform of the EU Common Agricultural Policy to reduce subsidies for beef and dairy production, and increase support for production of sunflower, maize, rape and other unsaturated oils, and fruit and vegetables;
- improved standards, training and quality control in the catering industry on choosing ingredients and cooking methods to reduce saturated fat and eliminate trans fat in meals;
- reduced saturated and eliminate trans fat in food provided in schools eg. through nutritional standards for schools;
- more effective restrictions on advertising high-fat snacks to children;
- continued promotion of the 5-A-DAY message and improved access to good quality, affordable, fresh fruit and vegetables as a substitute for fatty foods.

Recommendations for children

We recommend a strong focus on saturated fat reductions among children aged two years and over for the following reasons:

- High intakes of saturated fat lead to raised LDL cholesterol levels and the development of plaques in children as young as three years old (Rogers 2001).
- Children are eating 40% more saturated fat than the maximum recommended levels for health (Gregory et al 2000).
- Taste preferences develop early on in childhood and are a major influencing factor on people's consumption of foods high in saturated fat, particularly for food such as dairy products, cakes and pastries etc. Recent market research by Heart of Mersey with 100 children in Merseyside found significant differences in taste preferences for low fat dairy products between younger and older children. Children aged 5-7 were far more likely to like the taste of skimmed milk compared to those aged 7-11 years. After tasting the milk, 73% of children aged between 4 and 7 said that they would like their parent to buy skimmed milk for them, compared with 56% of children aged between 8 and 11. FSA's research also identifies younger consumers as a critical target for these reasons (FSA 2007).
- FSA's consumer research (FSA 2007) has found that consumers would like clarification in relation to fats / saturated fats and children.

Young children aged 2-5 years

Saturated fat intakes among children aged 2-5 in the UK are very high, averaging at around 15% of energy intakes. Unhealthy snacks and processed foods such as crisps, biscuits, chocolates etc all contribute to these high intakes. However, unbeknown to many, dairy products are the biggest single source of saturated fats, contributing to over 30% of saturated fat intakes among children in this age-group, largely due to full fat milk being the principal milk consumed. Heart of Mersey recently analysed the public health impact on fat soluble vitamin intakes of switching from full fat to skimmed milk among children in this age group. We found that based on current consumption patterns, mean consumption levels of vitamins A, D and E would not be adversely affected among children in this age group, while the contribution of saturated fat from milk would be slashed by 96% by a switch to skimmed milk (Heart of Mersey 2006).

COMA guidance on weaning and target nutrient intake levels is now dated and does not place enough emphasis on saturated fats (DH 1994); targets only apply from age 5, whereas in US and other countries, they apply from younger age groups. In particular, the advice on dairy products is confusing. Low fat products are not actively recommended for younger children (whereas they are in other countries including the US, Australia and Sweden) in recognising their significant contribution to reducing saturated fat intakes in children (NHMRC 2003 and AMA 2004). **We therefore strongly recommend that SACN should review the recommendations for saturated fat for young children as part of its Estimated Average Requirements for energy (EAR) review.**

Energy recommendations

We are delighted that SACN is reviewing public health recommendations on EARs for energy. We strongly recommend that this includes a revision of dietary target levels for total and saturated fats which, in our view, remain too high. Revised UK targets are needed: we need to aim for the levels already seen in exemplar countries such as Japan (where saturated fat intake represents only 6% of energy, compared with a UK average of 14%).

We also feel that it is odd that the consultation is talking about drinks and alcohol when the overall focus is saturated fats; this is potentially confusing. We suggest these alcohol sections are omitted from this paper, but that they are sufficiently important to merit a paper of their own.

ANSWERS TO SPECIFIC QUESTIONS

Work with catering businesses

Q1: We invite views from stakeholders in the catering sector on the contribution that catering businesses could make to the delivery of this Programme and on any of the specific issues addressed in this paper.

(Paras 18-20)

- Changes in cooking practices eg replacing animal fats and saturated cooking oils with vegetable oils (polyunsaturated) are crucial. Catering businesses should also substitute with low fat cheeses, yoghurts etc.
- Suppliers should begin to stock healthier alternatives (accessing healthier / lower fat options is often an issue for the smaller establishments).
- The HoM Greater Merseyside Food Charter award (www.heartofmersey.org.uk) successfully promotes healthier practices in the Merseyside area. FSA should work with DH to set up a similar national award modeled on the national Clean Air Award. Another good example is the Eat Safe, Eat Well award in Knowsley for food premises (www.knowsley.gov.uk).
- Assessments on healthy food provision should be included in routine environmental inspections and linked to the Scores on the Doors website.
- Other useful publications to support this work include the North West Healthier Catering & Hospitality Guidelines (Towers et al 2006).
- Training on healthy eating and fats should be mandatory on the curriculum for catering and hospitality staff and school children.
- Action on saturated fats / healthy eating could be incorporated in the Safer Food, Better Business initiative (environmental health inspections).

Consumer awareness and understanding

Q2: We propose that we work with health department colleagues and the new Drinkaware Trust to support their sensible drinking initiatives. Also, seek ways of extending this type of partnership approach. We welcome views on this approach. (Para 37)

- We do not understand why this topic is addressed in a programme focusing on fats. It deserves its own programme.
- However, we agree with FSA's approach to working with health department colleagues to support sensible drinking initiatives.
- FSA should also work with retailers and bars/pubs that sell drinks to sell them more responsibly (cut back on promotions eg 'happy hours,' selling doubles as standard measures, selling large wine glasses as standard measures, etc. Environmental Health / Trading Standards are useful allies.
- We recommend having separate sections for alcohol in supermarkets, so it is sold separately from food (as is the case with tobacco).

Q3: Would energy value labeling on alcoholic drinks labels be helpful?

(Para 37)

- Yes it would. It should be mandatory.

Q4: Do you consider that improved education about the need to reduce saturated fat intakes is needed? If so, how should this be done? (Para 39)

- Yes there is confusion as FSA's recent qualitative research on consumers and fats found "general awareness of saturated fats was low and understanding of the different fats fragmented. According to the report, "*many consumers were not able to identify the main sources of saturated fat in their diet.*" It recommends that education is needed on saturated fats. These findings echo consumer surveys carried out by HoM to inform the development of its low fat dairy campaign to promote a reduction in saturated fat intake among children (Heart of Mersey, 2006).
- More awareness of "Good Fats and Bad Fats" is needed. FSA's research showed that consumers already classify some fats in this light eg olive oil and trans fats. This is a simple way to communicate a complex message.
- Campaigns to raise awareness of saturated fats and how people can cut back or substitute with polyunsaturates are needed. Recent examples from Merseyside have included the HoM low fat dairy campaign and Sefton fats campaign (Mwatsama and Ireland 2007).
- FSA and those working in health promotion should produce simple educational booklets on good and bad fats.
- The current central messages and tools in place do not sufficiently address the saturated fat issue. The BGH for example does not explicitly promote low fat dairy foods (whereas the US version does).

Q5: Please indicate your views on:

- *the preferred target audience(s)*
 - Children and young people should be major focus. Savoury snacks, biscuits, pastries etc are all sources of saturated fat in children's diets, however, unbeknown to many, dairy products are the major source of saturated fats among them and the rest of the population. Recommending a switch to low fat dairy is a simple, easy step which parents can make. As previously stated, and acknowledged by FSA's own consumer research, taste preferences begin early so we need to get used to low saturated fats early on. The same applies to snacks/crisps and meat and meat products.
 - Parents - especially mothers as the main gate-keepers with responsibility for food shopping.
- *the type of messaging, and how it should be delivered*
 - Focus on specific foods / food groups especially dairy and meat products, take-aways, ready meals, processed foods eg pies, savoury snacks, biscuits and pastry products.
 - FSA website is a good start, but it doesn't appeal to men. It also appears slightly geared toward the middle class - testing should be carried out on a broader social cross-section of the general public, especially those not living in the South East.
 - Messages on frequency of consumption and portion sizes can help with education and could be developed based on current consumption patterns.
- *scope for partnership working between the Agency and stakeholders*
 - Partnership working is essential and FSA has been very successful on this with its salt programme. Partners should include PCTs, health promoting / public health bodies, environmental health & trading standards, NGOs and charities including British Heart Foundation.
- *how it might relate to existing information sources (such as labelling, leaflets on healthy eating, websites)? (Para 39)*
 - Link to traffic light labeling and what counts as 'a little and a lot.'
 - The BGH should be extended to include drinks.

Healthier alternatives

Q6: We welcome views on the impact of 'healthier' versions of a food category or product on intakes and how uptake can be increased. (Paras 43-45)

- Healthier versions have their role and the market is growing. However, there is evidence of inequalities in consumption patterns of low fat foods. The recent Health Survey for England found a trend towards higher consumption of low fat products among those on higher incomes. The low fat score was more frequent among those men in the highest equivalised household income quintile (77%) than in other quintiles (67%-71%). In women, low fat score more prevalent in top two income quintiles (87% in top quintile, 85% in 2nd) than in the lower three (81-82%). There was also a small but significant increase in the proportion of men with a high fat score across decreasing income quintiles (from 4% in highest income quintile to 7% in lowest three quintiles, $p < 0.01$) (Doyle M, 2004).
- Pricing of 'healthier versions' is crucial. Efforts to promote healthier versions must not exacerbate inequalities (reduced fat versions can be more expensive – may require cross subsidisation, eg. financed by additional tax on saturated fats).
- Industry should be encouraged to reformulate all lines (not just healthier ones). FSA's 2005 review of nutrient specifications for manufactured foods used in school meals found a wide range in levels of fat, salt and sugar in different brands of the same products. This represents solid evidence that it is possible to produce products with low fat levels.
- Psychological impact of 'healthier' varieties - some people automatically think it's going to taste different, which can be a turn-off. Mainstream modification will help tackle this issue and spread the benefits to all rather than just those who are looking for them.
- Incremental changes in salt and fat content tend not to be noticed by consumers.
- FSA should consider setting maximum limits for fat in processed foods targeted at specific vulnerable groups, especially children: yoghurts/ready meals/snacks/savoury crisps, etc.
- Labelling rules should be tightened to stop mis-leading the public eg "low fat" products which may be higher in sugar can be confusing. Simple multiple traffic light labelling needs to be supported by legislation.

Portion sizes

Q7: We welcome views on the accessibility of different portion sizes to the consumer and whether this influences quantity of food consumed. Please include any evidence to support your views. (Paras 47-51)

- Portion sizes impact on quantities of food consumed. Retailers should be encouraged to stock smaller portion sizes of products (as opposed to only king-size chocolates and snacks) - this could be linked to a national healthy eating award or inspections as mentioned above in Q1.
- Industry should be encouraged to standardize portion sizes (making sure both those sold in multi-packs and those sold individually are small). One reason for the popularity of smaller multi-pack portion sizes is because these are seen as being 'value for money' - it appears cheaper to buy 12 packs of crisps in bulk than buying the same quantity individually. But it is sometimes questionable whether these really are "value for money."
- The move by chocolate confectioners to reduce portion sizes to 100kcal is an interesting and novel one and would make it easier for consumers to control calorie intakes. Perhaps this is one that could be extended to other snacks. It would be helpful if this could be monitored and the impact on sales / consumption used to gauge whether it is a suitable way forward.
- Moves by industry to reduce standard size of 330ml soft drinks to 250ml are a welcome development. The value of depicting a 'portion' on bigger 2L bottles is questionable as the amount of drink poured is more likely to depend on the size of the glass rather than the 'portion size' listed on the bottle.

Reformulation

Q8: We propose that the Agency continue to work with food-industry organisations to encourage reformulation of food products to reduce saturated fat and energy (particularly through reductions in total sugars), where achievable. (Paras 55-58)

- We strongly support reformulation of mainstream products to reduce saturated fat energy which will have an effect on total fat and energy. Mainstream products should be key so as not to disadvantage those on low income who might not be able to afford the more expensive 'healthier' brands (as stated in response to Q6). Evidence from Finland shows the food industry has gone a long way to developing healthier mainstream products. Finland's range of low fat cheeses is a good example.
- Products for prioritization should be those that contribute most to people's saturated fat intakes including dairy, meat products, processed foods, take-aways, biscuits, pastry products and snacks.
- We also support the focus on added sugars for reformulation efforts.
- Efforts by some of sectors of industry such as the Co-op, M&S and Waitrose which prioritise saturated fat reduction over reduction in unsaturates are an encouraging start. All food manufacturers should be encouraged to reformulate products along these lines.

Q9: We propose that the Programme focuses its reformulation efforts on the food categories outlined in Appendix II but also encourages a broader approach by the food industry. We welcome your views on this approach. (Paras 59-61)

- Reformulating all foods is preferable to focusing on a limited range of foods (which would require a greater degree of reformulation to have equal impact on intakes).
- Monitoring the impact of reformulation will be key to measuring the success of either approach.
- As part of the sat fat programme, FSA should set up a dedicated programme to closely and transparently monitor and report on progress towards product reformulation.

Q10: Appendix II outlines the range of food categories that play a key role in saturated fat and energy intakes in young people and adults and the potential for reformulation within these food categories. We welcome your views on the proposals outlined in Appendix II. (Paras 59-61)

- Industry should be strongly encouraged to replace unhealthy saturated fat with healthier polyunsaturated fats (vegetable oils) using legislation if necessary.
- Clear guidance and clarification on appropriate descriptions for mince meat is needed. This is a cheap cut which is popular among children and more likely to be consumed by those on low incomes due to the low cost.
- Appendix 2 demonstrates a wide range of saturated fat levels (0.7% to 10.9% saturated fat) in sausage products. Industry should be encouraged to lower the saturated fat content of sausages and improve the overall fat profile - especially as they are an important source of saturated fats among young children.
- FSA should work with DEFRA to encourage meat producers in the UK to produce leaner cuts of meat through the types of feed they give the animals. Cattle raised on grass (as opposed to grains) have better fat profiles and this is also better for the environment.

Specific comments on proposals in Appendix II. We recommend that the following proposals be given priority

Proposal	Comments
Proposal 2: To press for a relaxation of current categories for fat content for drinking milk during negotiations to revise Council Regulation (EC) No. 2597/97.	Priority
Proposal 3: To continue to explore with interested parties the scope and legality for the use of 1% fat milk as an ingredient.	Priority
Proposal 5: Explore the potential to reduce saturated creams and dairy desserts within legal constraints.	Priority
Proposal 7: Explore with industry the potential for reformulation and processing changes to reduce saturated fat levels in biscuits, cakes and the toppings and fillings of these and other fine bakerywares.	Priority
Proposal 8: Encourage consideration of the ingredients and quantity of ingredients used to result in a reduction in saturated fat and added fats	Priority (as this encourages a sweet tooth)
Proposal 9: Explore the potential for reducing levels of added sugars in some high-added-sugars breakfast cereals.	Priority (as this encourages a sweet tooth)
Proposal 10: Encourage a widespread adoption of improved frying and processing practices, crucially replacement with polyunsaturated (vegetable) oils.	Priority
Proposal 13: Encourage a widespread adoption of improved frying and processing practices for chips and roasted/fried potato products, crucially, the replacement with polyunsaturated (vegetable) oils.	Priority
Proposal 14: Work with industry and research organisations to encourage research into methods of manufacturing pastry containing a lower level of saturated fat, and replacement by polyunsaturated (vegetable) oils.	Priority

Q11: Are there any foods for which reformulation should not be considered? Why is this? Please provide evidence to support your views. (Paras 59-61)

Q12: Are there any foods for which reformulation is not possible for technical, legislative and/or safety reasons? Why? Please provide evidence to support your views. (Paras 62-63)

The food industry have a long history of obstructing health initiatives alleging it is "too difficult" or "not technically feasible". We commend FSA for demanding evidence.

Q13: What research do you believe is required to help overcome existing technical barriers to reformulation? (Para 64)

The industry can decide, they will wish to maintain profits.

Q14: We welcome your views on the Agency's suggested approaches to reformulation with the food industry. (Paras 65-66)

We are strongly supportive. More explicit encouragement is needed to substitute saturated fats with polyunsaturated (vegetable) oils or stanols (such as Benecol or Flora Pro-Active or Danacol).

Q15: Initially we propose a compilation of commitments. Would this encourage progress? Would a name and praise element be helpful? (Paras 65-66)

YES

Q16: Are industry-led partnerships possible, and if so what might be done to encourage them? (Paras 65-66)

- The chocolate/confectionery manufacturers 100kcal per bar marketing initiative appears innovative and could prove to be consumer-friendly.
- More collaboration like this will be useful for consumers, especially on similar product groups eg savoury snacks, soft-drinks, individual portions of cheese, yoghurts etc.
- FSA should work with DEFRA (department for environment, food and rural affairs) to support dairy and beef farmers to diversify their product range and develop healthier / added value products - especially with European funding. For instance, in Finland, dairy farmers received subsidies to move into berry production (very successful), such as raspberries, strawberries, blackcurrants, etc. There is also evidence that grass-fed as opposed to grain-fed cattle are leaner and produce milk with a lower fat content. Farmers should be encouraged to switch to these production methods to support health.

Q17: We welcome your views on whether the Agency should work with stakeholders to develop voluntary targets for saturated fat and/or energy (such as through voluntary targets for total sugars) in specific foods. (Paras 65-66)

NO – we favour the legislative approach. FSA should explore the benefits of the approach taken in Denmark, which has led to drastic reductions in trans fat intakes as a result of legislation. (Experience with tobacco companies demonstrates legislation is much more effective than voluntary agreements). This approach could be used effectively for foods targeted at specific vulnerable groups in the population eg children.

Q19: How should changes in the nutrition profile of individual food categories be monitored? (Paras 67-68)

These legislated mandatory targets could be incorporated into a comprehensive national programme for environmental health inspections.

Q20: Should this information be made publicly available by the Agency? (Paras 67-68)

YES

Placing the information on a website like Scores on the doors, which publicises environmental health scores would be helpful. Scores on the doors has generated significant media and public interest in boroughs which have adopted it (such as Sefton in Merseyside).

Q21: Do you consider that providing information and advice on the fatty acid profiles of oils and fats intended for food manufacture, and their technical properties, would help to food manufacturers to reduce trans fatty acids (TFA) and saturated fat levels? (Paras 75-76)

The Danish experience has shown that legislating on maximum permitted levels has been most effective in reducing trans fat levels in manufactured foods. Providing information might be helpful but most companies are already knowledgeable about nutrient content. The key issue is creating incentives for healthy changes.

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References

American Dietetic Association. 2004. Position of the American Dietetic Association: Dietary Guidance for Healthy Children Ages 2 to 11 Years. *J Am Diet Assoc.*104:660-677.

Department of Health. 1994. Weaning and the weaning diet. Report of the Working Group on the weaning diet of the Committee on Medical Aspects of Food Policy. London: TSO

Doyle M. Fruit, vegetable, fat and salt consumption. Chapter 4 in Sproston K, Primatesta P (eds). *Health Survey for England 2003. Volume 2. Risk factors for cardiovascular disease*. London: TSO, 2004.

Faculty of Public Health and Heart of Mersey 2006. *Fat position statement*. Faculty of Public Health and Heart of Mersey. www.fph.org.uk

Food Standards Agency. 2007. Consumer qualitative research on fats. Narrative reference report. The People Partnership, May 2007.

Gregory J and Lowe S. 2000. *National Diet & Nutrition Survey: Young people aged 4 to 18 years*. London: TSO.

Heart of Mersey. 2006. *Appendix 3: Different milks, fat soluble vitamins and consumption patterns in children in Nursery food provision, policy and practice across Cheshire and Merseyside*. Report of a survey of food provision in nurseries across Cheshire and Merseyside to support the Big Noise social marketing project. Available at www.heartofmersey.org.uk

Heart of Mersey. 2006. *Good fats: Bad fats briefing paper*. Heart of Mersey 2006. www.heartofmersey.org.uk

Heart of Mersey. 2006. *Survey of parents' knowledge on saturated fat and purchasing habits of dairy products in Merseyside*. www.heartofmersey.org.uk

Henderson L, Gregory J, Irving K and Swan G. 2003. *The National Diet & Nutrition Survey: adults aged 19 to 64 years. Volume 2: Energy, protein, carbohydrate, fat*. London: TSO.

Mwatsama M and Ireland R. 2007. *Low fat dairy campaign report. A report on the evaluation of the Low Fat Dairy campaign which ran in October 2006 across Greater Merseyside*. Heart of Mersey.

National Health and Medical Research Council Australia. 2003. *Dietary Guidelines for Children and Adolescents in Australia incorporating the Infant Feeding Guidelines for Health Workers*.

Rogers S, Emmet M and ALSPAC Study Team. 2001. Fat content of the diet among preschool children in Southwest Britain: II. Relationship with growth, blood lipids and iron status. *Paediatrics* 108: 49.

Stender S, Dyerberg J, Bysted A, Leth T, Astrup A. 2006. A trans world journey. *Atherosclerosis Supplements* 7, 47–52.

Towers A, Williams E, Mwatsama M, Nelson A and Ashton M. 2006. *Healthier Catering and Hospitality Guidelines*. North West Food and Health Task Force. www.nwph.net