



Your reference: A09-91057/JG/lb



27 July 2009

Dear Justine Grimley

Thank you for your letter of 21 July and the draft recommendation about my complaint about Unilever's TV advertisement. I have several comments about it which I would like to bring to the attention of the ASA.

In your Draft Recommendation, I have marked relevant points in red and followed these with a comment number. Below in this letter are explanations and my comments.

Comment 1

This statement is not supported by scientific evidence. While many agree that there may be a requirement for some n-3 and n-6 polyunsaturated fatty acids (the essential fatty acids) in the diet, there is a considerable body of evidence showing that they are chemically unstable and harmful.

Later in the draft, Unilever mention 'one to two percent' EFAs. This seems reasonable and beneficial, and I wouldn't disagree. However, evidence of harm begins to emerge with consumption over and above a relatively small amount. The most important, probably, is that studies have shown consistently since 1945 that polyunsaturated oils and fats – particularly those used in the production of margarine and cooking oils – increase cancer risk.¹⁻¹⁹

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1. Rausch HP, et al. The influence of calorie restriction and of dietary fat on the tumor formation with ultraviolet light. *Cancer Res* 1945; 5: 431.
 2. Hannan D. Atherosclerosis: possible ill-effects of the use of highly unsaturated fats to lower serum cholesterol levels. *Lancet* 1957 II: 1116, 1957.
 3. Ershoff BH. Effects of diet on fish oil toxicity in the rat. *J Nutr* 1960; 71: 45.
 4. Carroll KK, et al. Dietary fat and mammary cancer. *Can Med Assn J* 1968; 98: 590.
 5. Pearce ML, Dayton S. Incidence of cancer in men on a diet high in polyunsaturated fat. *Lancet* 1971; i: 464.
 6. Newsholme EA. Mechanism for starvation suppression and refeeding activity of infection. *Lancet* 1977; i: 654.
 7. Miller JHD, et al. Double blind trial of linoleate supplementation in the diet in multiple sclerosis. *BMJ* 1973; i: 765-768.
 8. Uldall PR, et al. Unsaturated fatty acids and renal transplantation. *Lancet* 1974; ii: 514.
 9. Nauts HC. *Cancer Research Institute Monograph No 18*. 1984: 91.
 10. Mackie BS. Do polyunsaturated fats predispose to malignant melanoma? *Med J Austr* 1974; 1: 810.
 11. Karnauchow PN. Melanoma and sun exposure. *Lancet* 1995; 346: 915.
 12. Kearney R. Promotion and prevention of tumour growth – effects of endotoxin, inflammation and dietary lipids. *Int Clin Nutr Rev* 1987; 7: 157.
 13. Carroll KK. Dietary fats and cancer. *Am J Clin Nutr* 1991; 53: 1064S.
 14. France T, Brown P. Test-tube cancers raise doubts over fats. *New Scientist*, 7 December 1991, p 12.
 15. Franceschi S, et al. Intake of macronutrients and risk of breast cancer. *Lancet* 1996; 347: 1351-1356.
 16. Hunter DJ, et al. Cohort studies of fat intake and the risk of breast cancer – a pooled analysis. *N Engl J Med* 1996; 334: 356-361.
 17. Wolk A, et al. A prospective study of association of monounsaturated fat and other types of fat with risk of breast cancer. *Arch Intern Med* 1998; 158: 41-45.
 18. Wirfält E, et al. Postmenopausal breast cancer is associated with high intakes of omega-6 fatty acids (Sweden). *Cancer Causes Control* 2002; 13: 883-93.
 19. Cho E, et al. Premenopausal fat intake and risk of breast cancer. *J Natl Cancer Inst* 2003; 95: 1079-1085.

How polyunsaturated fats increase cancer risk

There are three ways in which a substance can increase the risk of cancer:

- It can suppress the immune system thus preventing the body from fighting cancer.
- It can cause body cells to become cancerous.
- It can promote an existing cancer's growth.

PUFAs, particularly n-6 linoleic acid, their major fatty acid, have been shown to do all three. Is it merely coincidence that numbers of cancers have tripled over the last 30 years, and now affect one in two people in this country?

Other harmful effects of polyunsaturated fats include increasing the risk of many other conditions which are now increasing in number and have been since COMA introduced the concept of 'healthy eating'. These include **coronary heart disease**,²⁰⁻²³ (in a 10-year study of fats and the numbers of heart events, researchers found that *only* polyunsaturated fats significantly increased heart disease.)²³ PUFAs also reduce the availability of vitamin D,²⁴ increase risk of cirrhosis of the liver,²⁵ ADHD,²⁶ suicide,²⁷ and age related macular degeneration.²⁸

Saturated fats, particularly from animal fats and tropical oils, on the other hand, have never been shown to be harmful – even in heart disease. Although it is commonly believed that saturated fats and dietary cholesterol 'clog arteries' and cause heart disease, such ideas have been shown to be false many times. On the contrary, studies have shown that arterial plaque is primarily composed of *unsaturated* fats, particularly polyunsaturated ones, and *not* the saturated fats.²⁹

Saturated fats are actually beneficial in heart disease: "These effects include the paradox that a high-saturated fat diet is associated with diminished coronary artery disease progression."³⁰ "a greater saturated fat intake is associated with less progression of coronary atherosclerosis"³¹ "[high saturated fat very low carbohydrate diets] are more effective in improving triacylglycerols, HDL-C, fasting and post prandial glucose and insulin concentrations."³²

The conversion of n-3 alpha-linolenic acid to EPA and DHA is enhanced when the diet contains saturated fat, and hindered when there is omega-6 vegetable margarines and oils in the diet.³³

20. (No authors listed.) Ghee, cholesterol, and heart disease. *Lancet* 1987; 2: 1144-1145.

21. Singh RB, et al. Low fat intake and coronary artery disease in a population with higher prevalence of coronary artery disease: The Indian paradox. *J Am Coll Nutr* 1998; 17: 342-350.

22. Rose GA, et al. Corn oil in treatment of ischaemic heart disease. *BMJ* 1965; 1: 1531-1533.

23. McGee DL, et al. Ten-year incidence of coronary heart disease in Honolulu Heart Programme – Relationship to nutrient intake. *Am J Epidemiol* 1984; 119: 667-676.

24. Bouillon R, et al. Polyunsaturated fatty acids decrease the apparent affinity of vitamin D metabolites for human vitamin D-binding protein. *J Steroid Biochem Mol Biol* 1992; 42: 855-861.

25. Nanji AA, French SW. Dietary linoleic acid is required for development of experimentally induced alcoholic liver-injury. *Life Sciences* 1989; 44: 223-301.

26. Stevens LJ, et al. Essential fatty acid metabolism in boys with attention deficit hyperactivity disorder. *Am J Clin Nutr* 1995; 62: 761-768.

27. Sublette ME, et al. Omega-3 polyunsaturated essential fatty acid status as a predictor of future suicide risk. *Am J Psychiatry* 2006; 163: 1100-1102.

28. Seddon JM, et al. Dietary fat and risk for advanced age-related macular degeneration. *Arch Ophthalmol* 2001; 119: 1191-1199.

29. Felton CV, et al. Dietary polyunsaturated fatty acids and composition of human aortic plaques. *Lancet* 1994; 344:1195-96.

30. Knopp RH, Retzlaff BM. Saturated fat prevents coronary artery disease? An American Paradox. *Am J Clin Nutr* 2004; 80:1102-3.

31. Mozaffarian D, et al. Dietary fats, carbohydrate, and progression of coronary atherosclerosis in postmenopausal women. *Am J Clin Nutr* 2004; 80: 1175-84.

32. Noakes M, et al. Comparison of isocaloric very low carbohydrate/high saturated fat and high carbohydrate/low saturated fat diets on body composition and cardiovascular risk. *Nutr Metab* 2006; 3:7.

33. Gerster H. Can adults adequately convert alpha-linolenic acid (18:3n-3) to eicosapentaenoic acid (20:5n-3) and docosahexaenoic acid (22:6n-3)? *Int J Vitam Nutr Res* 1998; 68: 159-73

Comment 2

Both polyunsaturated and saturated fats have been shown to lower cholesterol. Studies have shown that if carbohydrate is replaced with any type of fat, levels in the blood of triglycerides (which are ‘bad’) go down and HDL (which is ‘good’) rises. The rise in HDL is greater with saturated fat than with unsaturated fat.³⁴ If we reduce saturated fat, the larger and more beneficial HDL₂ molecules are reduced.³⁵ Conversely, increases in saturated fat increase this ‘anti-heart attack’ fraction.³⁶⁻³⁷

So, while both polyunsaturated and saturated fats reduce cholesterol, saturated fats do it in a more beneficial way.

Comment 3

Clearcast does not appear to be a scientific organisation. Are they in a position to question or confirm whether the information is accurate or not? Or do they merely determine whether the ad sets out to do what it is designed to do?

Yes, the intention of the ad was to influence people to buy Unilever’s polyunsaturated products. But that does not mean that, in so doing, people who use those products will improve their health.

Comment 4

There is a conflict of figures: intakes of 5-6% and 1-2% of n-6 and n-3, do not add up to 6-10%, but a maximum of 8%. This difference may not seem great but in view of the risk of possible harm from eating too much of these products, it may be significant.

Unilever admit that the UK intake of n-3 and n-6 is already within the recommended ranges, so there is no need to eat more. In stating that “many people would benefit from eating more to obtain the optimal intake range for good health”, they appear not to realise the harm that eating more could do. And as they give no recommended limit or warning about the possible health consequences of overeating these products, people could be led into eating an excess.

Comment 5

The EU Directive on nutrition labelling is inaccurate, unreliable and misleading – see Comment 6 below.

Comment 6

Calorie restriction for weight loss

Scientists at the Faculty of Medicine, University of Geneva in Switzerland, found that the more saturated a fat was, the less likely it was to increase a person’s weight. Similarly, they found that fats which were composed of shorter chain fatty acids were also less fattening.³⁸

European Community rules on nutrition labelling (Directive EC 90/496) which assign the value of 9 kcal/g to any fat, is seriously misleading the consumer with respect to the true calorific value of foods, as fats can and do vary widely in this respect.

Long-chain polyunsaturated fats do provide some 9 kcals/g, but the caloric availability of other

34. Katan MB, et al. Dietary oils, serum lipoproteins, and coronary heart disease. *Am J Clin Nutr* 1995; 61: 1368S-1373S.

35. Berglund L, et al. HDL-subpopulation patterns in response to reductions in dietary total and saturated fat intakes in healthy subjects. *Am J Clin Nutr* 1999; 70: 992-1000.

36. Hays JH, et al. Effect of a high saturated fat and no-starch diet on serum lipid subfractions in patients with documented atherosclerotic cardiovascular disease. *Mayo Clin Proc* 2003; 78: 1331-1336.

37. Seshadri P, et al. A randomized study comparing the effects of a low-carbohydrate diet and a conventional diet on lipoprotein subfractions and C-reactive protein levels in patients with severe obesity. *Am J Med* 2004; 117: 398-405.

38. Dulloo AG, et al. Differential effects of high-fat diets varying in fatty acid com-position on the efficiency of lean and fat tissue deposition during weight recovery after low food intake. *Metabolism* 1995; 44: 273-279.

fats is lower. A more accurate figure for the net metabolisable energy of saturated fats from warm-blooded animals such as cattle is not the usually accepted 9 kcals per gram, but 7.3 kcals per gram.³⁹ The more saturated tropical oils are even lower.

For this reason, if you are counting calories for weight loss, fish oils are the worst (but we are unlikely to eat a lot of these); polyunsaturated vegetable oils and olive oil come next; less likely to be fattening are animal fats; and least fattening of all are the highly saturated tropical oils, with cocoa butter lowest at 6.5 kcals/g.⁴⁰

So calorically speaking, 40 grams of polyunsaturated margarine contains as many calories as 50 grams of butter. This is another good reason to eat traditional animal fats and tropical oils, and avoid modern processed vegetable oils.

These differences are well known within the food industry as short chain saturated fatty acids are utilised to make novel low-calorie fats.

Comment 7

This is the main problem and reason for my complaint. In giving the impression that polyunsaturated fats are ‘healthy’ and saturated fats are not, the public is being grievously misled. We have been eating ‘saturated’ animal fats for the whole of our existence as a species; the heart disease at which the ‘saturated-fats-are-bad’ propaganda is directed, didn’t take off until the 1920s.

The idea that a modern disease can be blamed on a traditional way of eating is quite ludicrous.

If we look at other cultures who eat their traditional diet which is high in saturated fats, we don’t find the heart disease we in the industrialised world suffer. For example, the inhabitants of Tokelau in the South Pacific, who have been studied in detail, eat a diet of coconuts. At over 90% saturation, coconut oil is Nature’s most saturated natural fat. The Tokelauans’ calorie intake is 60% from coconut fat. Yet heart disease is non-existent.⁴¹

What of a human’s natural fats?

Table 1: Fatty acid composition of selected fats (to nearest %)

Fat or oil	Saturated (%)	Monounsaturated (%)	Polyunsaturated (%)	Omega-6 (%)	Omega-3 (%)
Human fats					
Breast milk	54	39	8	7	1
Adipose tissue	40	57	3	6.3	1
Heart muscle	39	56	6	5.5	0.7
Animal fats					
Lamb	49	42	8	5.7	2.4
Beef	45	51	5	3.2	1
Pork	43	48	8	10.7	1
Butter	60	34	6	2.9	1
Vegetable oils					
Soy oil	16	24	60	53.0	7.0
Corn oil	13	24	60	52.6	1
Sunflower oil	11	20	69	68.8	0
Safflower oil	7	15	78	78.4	0

If saturated fats really were harmful to us and polyunsaturated fats were really beneficial, why would Mother Nature have ensured that our own natural fats are high in saturated fatty acids

39. Finley JW, et al. Growth method for estimating the caloric availability of fats and oils: A potential low-calorie fat substitute. *J Agric Food Chem* 1994; 42: 489-494.

40. Hoagland R, Snider GG. Digestibility of some animal and vegetable fats. *J Nutr* 1942; 25:295-302.

41. Prior IA, et al. Cholesterol, coconuts, and diet on Polynesian atolls: a natural experiment: the Pukapuka and Tokelau island studies. *Am J Clin Nutr* 1981; 34: 1552-1561.

and low in polyunsaturated fatty acids? Are we to conclude, for example, that mother's milk is unsuitable or dangerous? Surely such a thought would be preposterous.

Note in Table 1 above that the fats of our food animals are similar in composition to our own fats; vegetable oils, from which polyunsaturated margarines are made, are very, very different. Note in particular the huge difference in percentages of polyunsaturated fatty acids between human fats and vegetable oils. It is in this respect that PUFAs have been found to be harmful.

Comment 8

The FSA is in error, as I have demonstrated above.

Comment 9

I do not believe that highly processed, highly polyunsaturated margarines such as those sold by Unilever, have any place in a healthy diet. In promoting them as aggressively as they do, they mislead by demonising and, thus, displacing, the natural traditional fats that really are healthy and which do have a part in a healthy diet.

Conclusion

As all the healthy traditional fats, including butter, already contain the essential n-3 and n-6 fatty acids in the correct amounts and the correct proportions, there is no need to take risks by replacing them with highly processed, unstable and inferior alternatives.

That said, I have no objection to people eating these margarines if they wish (I have no doubt that vegans would buy them), so long as the manufacturers do tell the 'big fat truth'.

Dr Broda Barnes wrote:

'Everyone should have the privilege of playing Russian Roulette if it is desired, but it is only fair to have the warning that with the use of polyunsaturated fats the gun probably contains live ammunition.'

I urge you to change your draft recommendation to reflect the science, rather than the hype. These adverts are quite clearly in breach of CAP (Broadcast) TV Advertising Standards Code rules 5.1.1, 5.1.2 (Misleading advertising), 8.3.1(a) and 8.3.1(d) (Accuracy in food advertising).

Yours sincerely



Barry A Groves, PhD

Author: *Trick and Treat: How 'healthy eating' is making us ill.*

Attachment: Annotated copy of ASA Draft Recommendation for reference to comments.

Unilever UK Ltd
Unilever House
Springfield Drive
Leatherhead
KT22 7GR

Case number: A09-91057/JG
Media: Television
Sector: Food and drink
Agency:

Number of complaints:	2
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Ad

A TV ad for Flora, Flora Pro-Activ, Bertolli and I Can't Believe It's Not Butter spreads, stated in voiceover "So, have you heard the big fat truth? Not all fats are bad. The truth is, some fats are not only good, they're essential. They're called essential fats because we need them to grow, renew, be healthy today and tomorrow and one of the best sources is spreads like these because they are made from seed or vegetable oils for the essential fats in your daily diet. And that my friend is the big fat truth". On-screen text stated "Specifically include Flora, Flora Pro-Activ, Bertolli or I Can't Believe It's Not Butter as part of a healthy balanced diet and lifestyle".

The ad showed a spread on different types of bread and melting into peas, sweetcorn, asparagus and baked potato. On each occasion, the spread formed the words "FAT", "BAD?", "TRUTH", "essential", "need" "healthy" and "daily".

Issue

Author on nutrition, Dr Barry Groves, and a second member of the public challenged whether the ad was misleading, because it:

1. exaggerated the health benefits associated with polyunsaturated fat spreads and
2. encouraged the consumption of unhealthy levels of the spreads.

Response

1. Unilever UK Ltd (Unilever) explained that the **health benefits of polyunsaturated fats (PUFAs) were well established in the scientific community (Comment 1)** and explained that those benefits included the provision of essential fatty acids (omega-3 (n-3) and omega-6 (n-6)); replacing saturated fat (SAFA); reducing bad and increasing good cholesterol and being beneficial for heart health. They said, in the UK, general consumption of SAFA was too high and dietary recommendations were to replace some of this with unsaturated fats (Monounsaturates (MONOs) and PUFAs). They explained that unsaturated fats, particularly **PUFAs, helped to lower cholesterol when substituted for saturated fat (Comment 2)** and sent references to scientific studies to support their view.

They said some polyunsaturated fatty acids, alpha-linoleic acid (ALA) and linoleic acid (LA), members of the n-3 and n-6 fatty acid families respectively, were essential and had to be provided by the diet as the body was unable to make them. They added that n-3 and n-6 were important structural components of cell membranes and were essential for various membrane functions such as fluidity, permeability, activity of membrane-bound enzymes and receptors and signal transduction. They concluded, therefore, that PUFAs were vital in the diet and the ad did not exaggerate their scientifically proven benefits.

(Comment 3) Clearcast said they were satisfied that the intention of the ad was to educate viewers to the fact that not all fats were 'bad' and that some fat was required in a healthy diet. They believed the ad suggested that the specific products referred to were examples of fats that were 'good' and explained that the ad and supporting evidence had been assessed by an expert consultant who had advised that that the ad's claims were accurate for the specific products referred to prior to its approval.

2. Unilever explained that one to two per cent of n-3 and n-6 was the minimum recommended daily energy intake amount required to prevent deficiency diseases. However, they said the World Health Organisation and Food and Agriculture Organisation of the United Nations (WHO/FAO) stated that "Diets should provide an adequate intake of PUFAs ... in the range of 6-10% of daily energy intake for optimal health. There should also be an optimal balance between intake of n-6 PUFAs and n-3 PUFAs ... 5-6% and 1-2% of daily energy intake respectively". They said, although the UK intake of n-3 and n-6 was within the recommended ranges, many people would benefit from eating more to obtain the optimal intake range for good health. (Comment 4) They explained that, in real terms, this might be a daily intake of 20g Flora, plus two teaspoons of rapeseed oil, one tablespoon of chopped walnut and one tablespoon of sunflower seeds.

Unilever said margarine was an important source of n-6 and n-3 and that a 20g serving (the amount normally spread on four slices of bread) of Flora (Light and Original), Bertolli or I can't believe it's not butter contained at least 15% of the recommended level of either n-3 or n-6 fatty acids, or both, and as such could claim to be a good source of those nutrients in line with the EU Directive on nutrition labelling (Comment 5). They believed the UK population could benefit from eating more n-3 and n-6 and margarine could provide a useful contribution to this intake, but the ad in no way encouraged excessive consumption.

Clearcast explained that, although their consultant had commented that all nutrients if taken in excess would contribute to overweight and obesity (Comment 6) and had shown some concern that the ad suggested daily consumption, they were satisfied that the overall message conveyed was that not all fats were 'bad' and that some fat was required as part of a healthy diet. They believed the ad would not encourage excessive consumption.

Assessment

1. Not upheld

The ASA considered that viewers would interpret the ad to mean that there were both 'good' and 'bad' fats and that some fats were not only good but 'essential', and would infer from it that essential fats were necessary to maintain health and one source of essential fats was spreads like those featured in the ad, because they were made from seed or vegetable oils. We considered that viewers would understand the ad's reference to 'bad' fats as relating to SAFAs (Comment 7), and noted the advice of the Food Standards Agency (FSA) was that SAFAs, which they reported raised cholesterol and blocked arteries (Comment 8), should be substituted for PUFAs and MONOs wherever possible and noted all of the spreads featured contained PUFAs rather than SAFAs.

We acknowledged that the complainants were concerned because they understood that PUFAs, and particularly n-6 LA, when consumed in excess or in imbalance with n-3 levels, could be harmful to health. We noted, however, that the ad referred to the intake of the products only as part of a healthy, balanced diet and lifestyle and considered that it was sufficiently clear that encouragement to consume PUFAs, or essential fatty acids such as n-6,

was made in that context only. (Comment 9) We noted the ad incorporated the phrase "healthy" as a spread was shown being applied to a baked potato, but considered that viewers would interpret this in the context of the voiceover's claim that essential fats were required for growth and renewal and to maintain health, rather than as an implication that PUFA spreads in isolation were a healthy food.

We concluded that the ad did not misleadingly exaggerate the health benefits associated with polyunsaturated fat spreads.

On this point, we investigated the ad under CAP (Broadcast) TV Advertising Standards Code rules 5.1.1, 5.1.2 (Misleading advertising), 8.3.1(a) and 8.3.1(d) (Accuracy in food advertising) but did not find it in breach.

2. Not upheld

We noted Unilever's comments about the WHO/FAO recommended optimal intake for PUFAs and their example of how the spreads could contribute to that. We also understood that, although the FSA advised consumers to opt for foods rich in PUFAs rather than SAFAs, they also advised the importance of a diet low in fat to assist weight management.

We noted the ad included several examples of PUFA spreads being used in context, including on vegetables and bread. We considered, however, that viewers would understand that the examples represented occasions where fats were frequently added to foods and showed some of the ways in which essential fats could be incorporated into the diet. We acknowledged that the on-screen text stated that the spreads should be included as part of a healthy, balanced diet and lifestyle and considered that the ad was likely to encourage viewers to use PUFA spreads as substitutes for other added fats, not to encourage them to introduce additional fats into their diet. We concluded that the ad was therefore unlikely to encourage the consumption of unhealthy levels of PUFAs.

On this point, we investigated the ad under CAP (Broadcast) TV Advertising Standards Code rules 5.1.1, 5.1.2 (Misleading advertising), 8.3.1(a) and 8.3.1(d) (Accuracy in food advertising) but did not find it in breach.

Action

No action necessary.