FAB Factsheet – Trans Fats

A major issue with western-type diets today is not the total amount of fat, but the types of fats they contain. People often worry about 'saturated fats' (for which any health risks appear small), when in fact, the **trans fats** found in many processed foods are a far worse problem.

What Are Trans Fats?

Trans fats are artificial, warped and 'twisted' (mis-shapen) versions of natural polyunsaturated fats (such as omega-6 and omega-3). Most are created by 'hydrogenation' – a process by which liquid vegetable oils are chemically altered to turn them into more solid fats, thus allowing them to be used by the food industry in place of more expensive animal fats.

In addition to being cheap, trans fats add texture or bulk to products, have a neutral flavour and help give products a long shelf life. But they have absolutely no nutritional value whatsoever. Instead, these fats are toxic – as formally recognised by the W.H.O. in 2009.

Why Are Trans Fats Bad For You?

By displacing natural omega-3 and omega-6 polyunsaturated fats (which are essential nutrients for the body and brain), trans fats raise the risks for many degenerative physical health conditions. Higher intakes of trans fats are linked with many health problems, including:

- Increased risks for heart attack and stroke (and higher blood cholesterol levels)
- Insulin resistance and Type 2 diabetes
- Obesity
- Infertility

The effects of trans fats on mental health and performance are likely to be even more serious. This is because the brain is 60% fat – and trans fats compete with the natural (untwisted) omega-3 and omega-6 fats that are essential for healthy brain development and function. Such effects are very difficult to measure directly (for ethical and/or practical reasons), so definitive research evidence in humans is limited. However, higher intakes of trans fats have already been linked with increased risks for:

- Depression (Sánchez-Villegas et al 2011)
- Aggression and Irritability (Golomb et al 2012); and also manic and aggressive behaviour (and damage to brain cells) following amphetamine use (Trevizol et al 2011)
- Alzheimer's disease (Morris et al 2003)
- Memory problems in younger adults (Golomb & Bui 2015)

Which Foods Contain Trans Fats?

Partially hydrogenated vegetable oils (HVO), the primary source of dietary trans fats, are still used in all kinds of **highly processed foods** – including some margarines, crisps and other snacks, cakes, biscuits, pastries, desserts, sauces, soups, salad dressings and many more (including some non-dairy coffee 'creamers').

Some food manufacturers have taken serious steps to reduce or eliminate HVO. However, trans fats can still result from other methods of refining vegetable oils. In fact, any heating of vegetable oils to very high temperatures can damage the polyunsaturated fats they contain (and especially the fragile omega-3), potentially creating trans fats and other toxic substances.

Trans fats are found in numerous take-away foods and ready-meals, but there is no way for the consumer to know whether or not this is the case. (See Stender et al 2006 whose careful study found simply huge variations in the trans fat content of exactly the same 'fast food' meals bought at different outlets.)

In the UK, there is no specific requirement for the trans fat content of products to be included on food labels, although some manufacturers have started to do so voluntarily. Hydrogenated fats must be declared on food labels, so if a product contains any 'hydrogenated' fats, it may contain trans fats. Look out for the words 'partially hydrogenated' on food labels - because these products almost always contain trans fats.

Why are Trans Fats Still Allowed in our Food Supply?

This is a very good question. The UK Faculty of Public Health and Royal Society for Public Health proposed that consumption of *trans* fatty acids (TFAs) should be virtually eliminated in the United Kingdom by 2012. Their report noted that, ***"it has been proven that industrially-produced TFA can damage health,"*** "***there is no known safe level of consumption,"*** and **"*banning TFA from foods is a relatively easy way to help protect the public*."**

See Mozzafarian and Stampfer, (2010) Removing industrial trans fat from foods.

Goverment regulation (i.e. banning trans fats – or at least restricting them to an absolute minimum) would virtually eliminate these toxins from our diets. Denmark was the first country to do this in 2006; New York also banned trans fats some years ago (see Okie et al 2007) and since then, many other developed countries have been following suit.

However, the UK government still refuses to implement a ban (as was recommended by N.I.C.E. in 2010) – instead relying on 'voluntary' action by the food industry. This ensures that trans fats will continue to be used by many food manufacturers and catering outlets (either through ignorance, or simply to increase their profits) – so consumers will continue to find them very difficult to avoid.

'Voluntary' action fails to protect the public (and particularly the most vulnerable members of our society). BBC Radio 4 - The Food Programme: Trans Fats explains this clearly – as does the article: Dying for a burger? Why are trans fats still legal in the UK?. Both will give you plenty to think about the next time you eat out, or order a takeaway....

Further Information

TFX (The Campaign to Ban Trans Fats in Food)

Fats And Cholesterol – Harvard School of Public Health