

Fish-diabetes pollution link may boost supplements

13/04/2007 - **A new study linking pollutants found in fish to insulin resistance and type-2 diabetes may further turn people off fish and boost the omega-3 supplements market.**

The new study lays the blame at the feet of persistence organic pesticides (POPs), but experts have been quick to point out that the research is far from conclusive. The topic of benefits versus the risks of regular [fish](#) consumption is still a hotly debated.

Omega-3 fatty acids have been linked to a wide-range of health benefits, including cardiovascular disease (CVD), good development of a baby during pregnancy, joint health, behaviour and mood, and certain cancers.

However, the risk of pollutants from oily fish, such a methyl mercury, dioxins, and polychlorinated biphenols (PCBs) have led to some claims to reduce fresh fish intake, especially for pregnant women who may damage the development of their babies.

Such advice has seen the number of [omega-3](#) enriched or fortified products on the market increase. Most extracted fish oils are molecularly distilled and steam deodorised to remove contaminants.

The European omega-3 market was worth around €160m (£108m) in 2004, and is expected to grow at rates of 8 per cent on average to 2010.

The researchers behind the new study report that the action of POPs may be critical during the early stages of [diabetes](#) development. The pesticides are reported to be stored in fatty tissue, which might suggest why overweight and obese people are more susceptible to diabetes, said the researchers.

The study observed a link between POP levels and diabetes, with obese people with low blood levels of POPs had lower incidence of diabetes.

Such an observation does not prove a causal link, however, meaning that increased POP blood levels do not necessary cause insulin resistance. Indeed, the researchers note that insulin resistance may reduce the body's ability to expel POPs, leading to the build up.

The researchers called for more studies to further explore the potential relationship.

Commenting independently on the research, Matt Hunt, head of science information at British charity Diabetes UK, said: *"Insulin resistance is often observed as an early warning sign for developing diabetes and therefore possible contributors to this state are always of interest.*

"However, this particular research paper appears extremely complex and speculative and it is not clear how substances such as organochlorines are contributing to the development of insulin resistance.

"Neither would it explain the global rises in obesity and Type 2 diabetes. At the moment we would not conclude that the rise of obesity can be attributed to pesticide use and should still be put down to increasingly unhealthy diets and lack of exercise."

An estimated 19 million people are affected by diabetes in the EU 25, equal to four per cent of the total population. This figure is projected to increase to 26 million by 2030.

In the US, there are over 20 million people with diabetes, equal to seven per cent of the population. The total costs are thought to be as much as \$132bn, with \$92bn being direct costs from medication, according to 2002 American Diabetes Association figures.