



## Mercury in Seafood

Mercury is a naturally occurring metallic mineral – it is everywhere in the environment, mainly as a result of the natural process of 'degassing' of the earth's crust and oceans, but also as a direct result of human activities such as the burning of fossil fuels and household and industrial waste. There are minute quantities of mercury in air, soil, water and in all living matter.

Mercury exists in both inorganic and organic forms. Not of these are considered dangerous to humans, but the most harmful is thought to be organic methyl mercury.

Fish absorb mercury from water as it passes over their gills and as they feed on other fish and aquatic organisms, so nearly all fish contain trace amounts of mercury, usually between 0.01 and 0.5 parts per million. The levels of mercury are likely to be higher in larger predatory fish such as shark, swordfish and marlin because they are at the top of the food chain and accumulate traces of mercury from the many smaller fish that they eat.

Recent analysis of museum specimens of tuna caught between 1879 and 1909 in the USA showed that these historic specimens contained similar levels of mercury to those that are caught today. Scientists therefore are able to conclude that mercury levels in tuna, and probably other large species such as marlin and swordfish, have not changed in the last 100 years and that the presence of mercury in fish is not as a result of industrial pollution but through natural exposure to the mineral in the environment at large.

### **How much is safe to eat?**

Current legislation in the EU permits total mercury levels of up to 0.5 parts per million for most food fish and up to 1 part per million for a limited range of larger predatory fish. These standards are for total mercury, not just for the dangerous organic methyl mercury, and most experts agree that there is a considerable margin of safety in setting the upper limit for mercury in seafood at 1 part per million.

However, because the developing foetus is particularly susceptible to toxins, in 2003, the Food Standards Agency (FSA) in the UK issued new advice to pregnant and breastfeeding women (see below). This advice is based on opinion from the independent Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT), using the dietary exposure safety guidelines set by the World Health Organisation (WHO):

*"You can eat most types of fish when you're pregnant or breastfeeding. Eating fish is good for your health and the development of your baby. But you should avoid some types of fish and limit the amount you eat of some other types.*

*When you're pregnant or planning to get pregnant, you shouldn't eat shark, swordfish or marlin. You should also limit the amount of tuna you eat to no more than two tuna steaks (weighing about 140g when cooked, or 170g raw) or four medium-size cans of tuna a week (with a drained weight of about 140g per can).*

*The limits for shark, swordfish, marlin and tuna are because these fish contain more mercury than other types of fish. The amount of mercury we get from food isn't harmful for most people, but if you take in high levels of mercury when you're pregnant this could affect your baby's developing nervous system."*



Young's fully endorses this advice for pregnant women and for women who are intending to become pregnant. We also endorse FSA advice that women who are breastfeeding do not need to avoid certain species of fish or limit the amount of tuna eaten.

#### **Young's product assurance**

Young's sells as many as 60 seafood species, including swordfish, marlin and tuna. To ensure that all our products are safe and comply in full with the safety standards set by EU legislation, we conduct extensive analysis of our raw materials at point of delivery to our factories. Given what is known about the accumulation of environmental substances in larger fish such as swordfish, marlin and tuna, we carry out more frequent inspections on these species.

In addition to our own factory tests, our supplier of marlin, swordfish and tuna in Sri Lanka conducts analysis for mercury on every consignment and sends us the results before the fish arrives in our UK factory.

Over the course of our many years of analysing seafood for mercury content, we have accumulated a strong bank of historical data. Using this in conjunction with our extensive product testing regimes and 'positive release' systems has clearly shown that our products conform in all respects to the safety standards for mercury set by EU legislation.

