

Much of the mercury in our bodies comes from eating fish and other seafood. But how does it get there in the first place?

Mercury is a toxic element found throughout the environment. It's released from natural sources, such as plants and soil, by processes like evaporation.

The main source of mercury release however, is industrial activity. It's pumped directly into rivers or seas as factory waste, but also emitted into the air by burning fossil fuels like coal.

This airborne mercury circulates in the atmosphere, before rain drives it into rivers and oceans.

Most of the mercury that ends up in the water is inorganic – which means it's not easily absorbed by living things when they ingest it.

The benefit here is that they can get rid of it quickly, so it doesn't build up in their bodies.

However some types of bacteria in water convert inorganic mercury into an organic form called *methylmercury*.

This is easily absorbed by organisms and is hard to excrete, which means over time it accumulates in their bodies.

Methylmercury is first absorbed by algae*, which is in turn eaten by tiny organisms like shrimp and krill.

They need to eat a lot of algae to survive, so the amount of methylmercury stored in their bodies increases the longer they live.

They are then preyed on by fish, which are then eaten by bigger fish, which are eaten by bigger fish... and so on, and so on...

Each fish consumes and retains the methylmercury that all its prey has accumulated – a process called biomagnification.

As a result, the largest fish species nearer the top of the food chain can contain up to 10 million times the amount of methylmercury that's found in sea-water.