



WHAT YOU NEED TO KNOW ABOUT CADMIUM, HOW IT AFFECTS YOU AND WHAT YOU CAN DO TO REDUCE YOUR RISK.

What is Cadmium and where is it?

Cadmium is a naturally occurring metal found in the earth's crust. It is always found combined with other substances such as oxygen (cadmium oxide), sulphur (cadmium sulphate, or sulphide) and chlorine (cadmium chloride). Cadmium compounds are often found in or attached to small particles in the air. Soil and rocks contain varying amounts – generally very small – but sometimes in larger amounts e.g. fossil fuels or fertilisers). Cadmium is extracted as a by-product during the production of other metals such as zinc, lead and copper. It has many uses in industry and consumer products mainly in batteries, pigments, metal coatings, plastics and some metal alloys.

Where does the cadmium found in humans come from?

Most people with high levels of cadmium are exposed at work. It is rare for those who haven't worked in high risk jobs to be exposed at levels sufficiently high to cause harm. However it can happen. Cadmium compounds are found naturally in zinc, lead and copper ores and where these ores are processed cadmium finds its way into the air, water or soil in the surrounding areas. In addition, the use of certain fertilisers can increase the cadmium concentration in the local soil.

Some forms of cadmium found in soil can then be taken up by plants. Cadmium in water can be taken up by fish, other sea creatures (especially mussels, oysters and crab) and animals (especially in their liver and kidneys). Eating vegetables, plants, seafood or liver or kidneys containing cadmium is how most people get cadmium into our bodies.

Smoking cigarettes is another common way cadmium enters our bodies. Smokers take in cadmium every time they smoke a cigarette as cadmium is contained in every cigarette and is easily absorbed through the lungs.

Cadmium cannot enter your body through the skin so touching contaminated water or soil doesn't increase the amount of cadmium in your body.

Other things contain cadmium including

- Some fungicides and fertilisers
- Batteries (Nickel- cadmium batteries)
- Fabric dyes, ceramic (pottery) and glass glazes
- Welding or electroplating metals

Handling and working with these substances is usually harmless. It is important however to work carefully with them to make sure that they are not accidentally eaten or that if they are burned the fumes are not inhaled.

What harm does cadmium do?

This depends on the form of cadmium, the amount take into the body and whether the cadmium is eaten or inhaled. Breathing air with very high levels of cadmium is extremely dangerous and can cause death. Being exposed to lower levels of cadmium over a long period of time can cause damage to kidneys, lungs and bones.

How can I reduce my risk of harm from cadmium?

- 1) Don't smoke or reduce the number of cigarettes you smoke (Phone QUIT to get help)
- 2) Ensure your diet is high in calcium, iron, protein and zinc as this helps to reduce the amount of cadmium absorbed from the gut
- 3) Take an inventory of items in and around your home that may contain cadmium (see list above) and make sure you store, handle and dispose of them carefully. Keep these items out of reach of young children.
- 4) Ensure your children do not play on hazardous waste sites or near waste incinerators

How do I know if I have too much cadmium in my body?

As cadmium is naturally occurring, everyone will have some in their body. If you have done all you can to reduce your exposure within the home and you are still concerned that your levels may be high you can ask your GP to carry out a blood test and/or a urine test. The blood test is better at showing short term exposure and the urine test is better at showing exposure over a long time. Your GP can receive advice on what tests to do by contacting the Public Health department.