

Cadmium is a rare element found in the Earth's crust which combines with other substances, such as oxygen, sulfur, or chlorine. Cadmium is used in metal plating, pigments, nickel-cadmium batteries, plastics, and nuclear reactors. It is mined during the production of other metals, such as zinc, lead, and copper.

## HOW DOES CADMIUM GET INTO MY BODY?

You ingest it by eating foods that contain cadmium, such as leafy vegetables, grains, and legumes. Low levels of cadmium are found in all foods. You may drink surface or groundwater containing cadmium. You breathe in cadmium from contaminated air, including cigarette smoke. Only a small amount of cadmium enters your body through your skin when you come into contact with liquids containing cadmium. Cadmium does not break down in the environment.

## WHAT CAN CADMIUM DO TO ME?

Cadmium is primarily toxic to the lungs and kidneys, with secondary effects on the skeletal system. Breathing high levels of cadmium can severely damage the lungs. Eating food or drinking water with very high levels of cadmium can lead to vomiting and diarrhea. Low levels of exposure to cadmium in air, food, or water affect the kidneys, leading to possible kidney disease, and may weaken bones. According to the U.S. Department of Health and Human Services and the International Agency for Research on Cancer, cadmium and cadmium compounds are considered carcinogenic.

## WHAT ARE THE ENVIRONMENTAL REGULATIONS FOR CADMIUM?

The Environmental Protection Agency (EPA) limits cadmium in public drinking water to 0.005 parts per million (ppm). Private well owners should test their water to ensure their systems are within EPA regulations. Additionally, the Occupational Safety and Health Agency (OSHA) limits cadmium in workplace air to 5 micrograms per cubic meter during an 8-hour day and 40-hour week. OSHA requires medical examination and biological monitoring for workers exposed to cadmium for 30 or more days a year at levels equal to or greater than 2.5 micrograms per cubic meter in the air.

The background level of cadmium has been estimated for soil in Pennsylvania. In 1998, a [Penn State University report<sup>1</sup>](#) found the median concentration of cadmium in soil samples collected around counties in the state in the 1980s ranged from 0.07 ppm to 4.82 ppm.

## WHAT CAN I DO?

- Do not smoke or work to quit smoking.
- Maintain adequate iron intake in your diet.
- Wear dust masks, gloves, and protective clothing when working with manganese-containing products.
- Use raised bed gardens and store-bought soil.
- Regularly test private water wells for cadmium.
- If your water is high in cadmium, consider installing a water treatment system or change water sources.
- If you work at a job that may expose you to cadmium, shower and change clothes before going home.
- Concerned about cadmium in your body? Visit a health care provider for testing and follow-up.

If you have questions or concerns about cadmium, please contact the  
Division of Environmental Health Epidemiology at [dehe@pa.gov](mailto:dehe@pa.gov) or 717-787-3350.