

Cadmium Fact Sheet

Cadmium is a naturally occurring element in the earth's crust. Low levels are in all soils and rocks. Cadmium can also be released into the environment from industrial activities, including: mining, smelting, and refining of non-ferrous metals (such as zinc, copper, and lead); combustion of fossil fuels; and incineration of municipal waste (especially batteries and plastics). Releases from these sources can travel long distances to deposit on areas far from the emission sources. Cadmium in soil and water can be taken up by some crops and aquatic organisms and accumulate in the food-chain. Food is the primary source of cadmium environmental exposure for the general population. Smoking tobacco is another important source of human environmental exposure. Inhaled cadmium is much more toxic to humans than when it is ingested. Cadmium exposure from drinking water is a less important exposure source than diet, but impurities in the zinc of galvanized pipes and solders in fittings, water heaters, water coolers, and taps can sometimes contaminate drinking water.

Cadmium is found in:

- Tobacco and cigarette smoke.
- Rechargeable batteries.
- Some cheap metal jewelry and some imported children's jewelry and toys.
- Some drinking water sources.
- Some color pigments used for paints on glassware, ceramic pots, and plastics.
- Some phosphate fertilizers and soil amendments.
- Almost all foods. Foods known to have the highest levels include:
 - o Leafy and starchy root vegetables.
 - o Grains (such as rice and wheat).
 - o Legumes.
 - o Shellfish (such as muscles, oysters, and scallops).
 - o Organ meat (such as the kidneys and liver of mammals fed with a high cadmium diet).

Possible health concerns from excessive exposure to cadmium:

- Long-term exposure to even low-levels of cadmium in food or drinking water may:
 - o Affect the way kidneys function. [Note: accumulated cadmium may persist in the kidney for tens of years].
 - o Be associated with cancers of the kidney and of the prostate in some people.
 - o Lead to disturbances in calcium metabolism and formation of kidney stones, softening of the bones, and osteoporosis (increased bone loss).
 - o Cause abnormal behavior and/or decreased intelligence in children and adults.
- Long-term inhalation exposure to cadmium may lead to chronic obstructive pulmonary disease and may cause lung cancer in some people; smoking can increase the cancer risk.

Possible actions one can take to reduce excessive exposure to cadmium:

- Do not allow children to play with batteries.
- Dispose of nickel-cadmium batteries properly.
- Quit smoking or avoid smoking, especially around children and other family members.
- Maintain a balanced diet for you and your family.
- If you work with cadmium, take all precautions to avoid bringing cadmium-containing dust home on your clothing, skin, hair, or tools.
- Always wash fruits and vegetables, and it is recommended to discard the outside portion of starchy root vegetables grown in high-cadmium soils.
- If your water comes from a private well, and you live in an area that may be subject to industrial pollution have it tested for cadmium. If cadmium levels are high consider appropriate treatment/filtration options, or consuming water from a different source. (If your water comes from a public water supply, it will regularly be tested for cadmium).

For more information, visit: <http://www.atsdr.cdc.gov/toxfaqs/tfacts5.pdf> or <http://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C-8.pdf> or <http://www.cdc.gov/biomonitoring/>

For information about well testing and maintaining a well, visit: <https://nmtracking.org/water>

To find resources for disposing of cadmium batteries, visit:

<http://www.call2recycle.org/> - just enter your zip code in the 'Drop-Off Locations' box to find a rechargeable battery recycling location near you.