



CADMIUM

Sources, Detection & Effects

Compliments of Dr. Donna F. Smith

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Cadmium



Sources Of Cadmium

- food grown on cadmium-contaminated soil - sewage sludge, fertilizers, and irrigation water can contaminate the soil
- large ocean fish - tuna, cod, haddock
- refined and processed foods
- processed meats, cola drinks and instant coffee
- cigarette smoke
- contaminated drinking water
- occupational exposure - battery manufacture, semiconductors, dental materials
- solder used in food cans
- motor oil and exhaust fumes from cars
- artists paints
- air pollution - incineration of rubber tires, plastic and paints

Children today are commonly born with cadmium toxicity passed from mother to child via the placenta.



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Detection Of Cadmium

"...Cadmium data from the blood have little diagnostic value" (Cranston & Passwater, 1983).

This is because cadmium is rapidly removed from the blood soon after it is ingested.

Blood challenge tests can detect cadmium in the blood and arteries.

Cadmium levels in the hair show a good correlation with cadmium levels in the kidneys. If your initial test does not show cadmium, which is the same for any metal, this is because it often required a number of months of nutritional therapy to increase your "nutrient mineral" levels before the body will be able to detoxify Cadmium (or any metal, and it makes take a number of hair tests are required before cadmium is revealed in the hair.

How Cadmium Affects Health

1. **Energy** - cadmium causes strong inhibition of essential enzymes in the Krebs energy cycle which compromises the cell's ability to produce energy. So people with Cadmium in their tissue are often fatigued and have issues in other areas of their body because energy is required for all biological functions.
2. **Nervous System** - cadmium inhibits the release of acetylcholine and activates cholinesterase. This results in a tendency for hyperactivity of the nervous system. Cadmium also directly damages nerve cells. Cadmium alters calcium and phosphorus. Smoking results in high levels of Cadmium in the body.
3. **Bones and Joints** - metabolism, thus contributing to arthritis, osteoporosis and neuromuscular diseases.
4. **Cardiovascular System** - cadmium replaces zinc in the arteries, contributing to brittle, inflexible arteries.
5. **Digestive System** - cadmium interferes with the production of digestive enzymes that require zinc.
6. **Male Reproductive System** - prostate problems and impotence can result from cadmium-induced zinc deficiency prostate problems and impotence can result from cadmium-induced zinc deficiency.
7. **Endocrine System** - zinc is required for growth and insulin release. Cadmium can contribute to failure to thrive, delayed growth development and diabetes.
8. **Excretory System** - Cadmium accumulates in the kidneys, resulting in high blood pressure and kidney disease.
9. **Dental** - alterations in calcium and vitamin D activity, caused by cadmium toxicity, can result in cavities and tooth deformities.
10. **Psychological** - cadmium toxicity is associated with learning disorders and hyperactivity. This may be due to zinc deficiency, or inhibition of acetylcholine release in the brain.