CADMIUM

The information on this sheet is of a general nature and is for educational purposes only. It is in no way intended to reflect the findings in this report.

SOURCES OF CADMIUM TOXICITY

- 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.

DETECTION OF CADMIUM TOXICITY

"...Cadmium data from 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 hair show good correlation with cadmium levels in the kidneys. Often, however, several months of nutritional therapy and several hair tests are required before cadmium is revealed in the hair.

HOW CADMIUM AFFECTS HEALTH

Energy - cadmium causes strong inhibition of essential enzymes in the Krebs energy cycle.

Nervous System - cadmium inhibits release of acetylcholine and activates cholinesterase. This results in a tendency for hyperactivity of the nervous system. Cadmium also directly damages nerve cells.

Bones and Joints - cadmium alters calcium and phosphorus metabolism, thus contributing to arthritis, osteoporosis and neuromuscular diseases.

Cardiovascular System - cadmium replaces zinc in the arteries, contributing to brittle, inflexible arteries.
HOW CADMIUM AFFECTS HEALTH – CONT.

Digestive System - cadmium interferes with production of digestive enzymes that require zinc.

Male Reproductive System - prostate problems and impotence can result from cadmium-induced zinc deficiency.

Endocrine System - zinc is required for growth and insulin release. Cadmium can contribute to failure to thrive, delayed growth development and diabetes.

Excretory System - cadmium accumulates in the kidneys, resulting in high blood pressure and kidney disease.

Dental - alterations in calcium and vitamin D activity, caused by cadmium toxicity, can result in cavities and tooth deformities.

Psychological - cadmium toxicity is associated with learning disorders and hyperactivity. This may be due to zinc deficiency, or to inhibition of acetylcholine release in the brain.

POSSIBLE CONDITIONS ASSOCIATED WITH CADMIUM TOXICITY

alopecia (hair loss) failure to thrive syndrome
anemia fertility, decreased
atherosclerosis hyperlipidemia (high levels of fat in blood)
arteriosclerosis hyperactivity in children
arthritis, osteo hypertension
arthritis, rheumatoid hypoglycemia
bone repair, inhibited inflammation
cancer lung disease
cardiovascular disease migraine headaches
cerebral hemorrhage osteoporosis
cholesterol, elevated renal (kidney) disease
cirrhosis of the liver schizophrenia
diabetes sex drive, reduced
emphysema strokes
enlarged heart vascular disease