



Toxins in Your Computer

Unfortunately, computers contain hazardous materials.

At the end of its life, computer hardware must be handled responsibly to ensure that these substances do not enter the biosphere:

Lead: Many older TV and Computer monitors can contain up to 4-8 lbs of lead. It is also used in the soldering on the circuit boards. Exposure can cause brain damage, nervous damage, blood disorders, kidney damage, and developmental damage to fetuses. Children are especially vulnerable. Acute exposure can cause vomiting, diarrhea, convulsions, coma, or death.

Mercury: Light bulbs in flat panel displays, LCD screens, switches, & printed wiring boards all contain mercury. High levels of exposure contribute to brain & kidney damage, harm the developing fetus & can be passed down through breast milk and fish consumption. Exposure through ingestion or inhalation can cause central nervous system and kidney damage.

Plastics & Polyvinyl chloride (PVC): Make up to 14 pounds (about 20%) of an average computer. Dioxin can be formed when PVC is burned. Combinations of plastics which are difficult to separate and recycle are used in printed circuit boards, in components such as connectors, plastic covers & cables.

Cadmium: SMD chip resistors, infrared detectors, semiconductors, older types of cathode ray tubes, and some plastics contain cadmium. It concentrates in the body & can cause kidney damage & harm to fragile bones. Long term exposure can cause kidney damage and damage to the bone structure. Cadmium is a known cancer causing substance

Brominated flame retardants (BFRs): Used in plastic casings, released when electronics are dumped or incinerated. BFR's likely endocrine disrupters, reduce levels of the hormone thyroxin in exposed animals and can potentially harm the developing fetus in pregnant women.

Barium: is used in the front panel of the CRT to protect users from radiation. Short-term exposure to barium can cause brain swelling, muscle weakness, and damage to the heart, liver and spleen.

Beryllium: is found on motherboards and connectors and is a human carcinogen.

Hexavalent Chromium: Used for corrosion protection of untreated & galvanized steel plates & hardener for steel housing. It can cause DNA damage & asthmatic bronchitis.

Dioxins and Furans: Used in the plastic casings, released when electronics are incinerated or thrown in a landfill.