

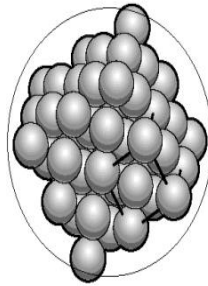
How does lead enter the body?

HOW LEAD POISONS

Lead is a neurotoxin that can reduce a child's intelligence and cause a lifetime of behavioral and health problems. Despite this, lead is widespread in homes and yards throughout the nation.

WHAT IS LEAD?

Lead is a bluish white metallic element (chemical symbol: Pb) commonly found in pipes and batteries, as well as old house paint and contaminated soil.

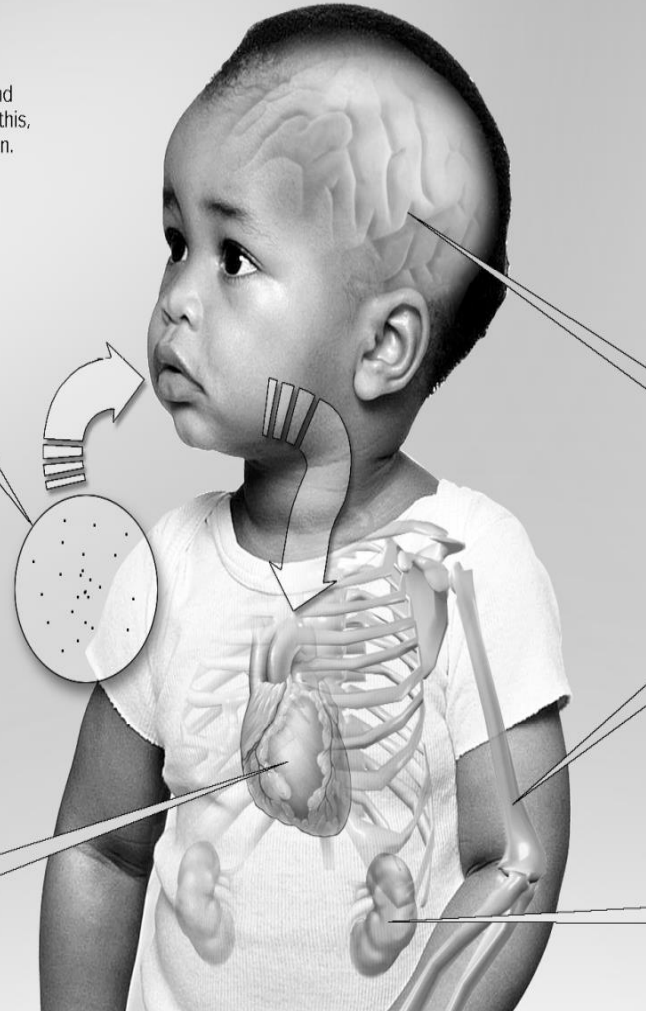


Lead was added to gasoline because it reduced engine knock. It was also an additive in paint because it made paint more durable. The United States banned lead from paint in 1978 and gasoline in 1986.

HOW CONTAMINATION OCCURS

ENTERING THE SYSTEM. Tiny particles of lead may be found in many places, including soil, paint, air, water or household dust. These particles enter the body when they are ingested. Sometimes children will eat chips of peeling paint because they taste sweet. But often, poisoning occurs less obviously — simply by putting dusty hands or toys in their mouths or by breathing air that has lead dust in it.

CIRCULATING PARTICLES. Once inside the body, the particles move through the bloodstream to tissues and organs where the lead attacks the cells.



ONCE INSIDE THE BODY

Lead particles damage or destroy cells that they come in contact with. Even a tiny amount of lead is dangerous. Some research says children can tolerate just 6 micrograms of lead — approximately 1/17 the size of a grain of salt — per day.

BRAIN

This is where lead does the most damage, especially in children younger than 6. Lead can permanently disrupt growing brain connections and stay in soft tissue for weeks or months. The result is decreased intelligence, learning disabilities and behavior problems, such as hyperactivity. Studies indicate a child will lose from two to eight IQ points for every increase of 10 in his or her blood-lead level.

BONES

While softer tissues hold lead for months, bones retain the particles for decades. Bones hold very high concentrations of lead. Some medical experts think bones also shed high amounts of lead back into the bloodstream, promoting further damage to organs.

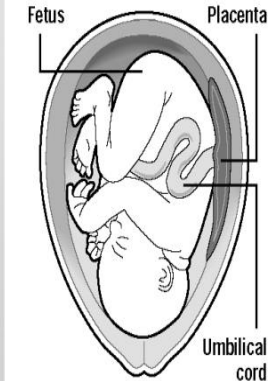
KIDNEYS

The kidneys serve as filters for liquid waste, but with lead particles, the kidney works like a sponge, holding high concentrations.

LEAD POISONING ALSO AFFECTS ...

FETUSES

Lead particles from a pregnant woman can be passed to her fetus via the placenta. A fetus receives its nutrients from the mother's placenta which eliminates waste products through a filtering system.



ADULTS

Because their brains are already fully developed, adults are at less risk of lead poisoning. However, if unchecked, adults may suffer from reproductive difficulty, nerve and digestive disorders, high blood pressure, memory loss and reduced hearing ability.