

What is Lead and How is it Harmful?

Lead is a poisonous metal that has been known to be harmful to man as far back as 100 B.C. Two ways lead enters the body is through the mouth (eating or breathing) or through the skin (by way of a cut or scrape). Lead affects just about every system of the body, especially the developing brain and nervous system of unborn babies and children 6 years of age and under.

Shortly after the lead enters the body, it travels in the blood to the soft tissues; liver, kidneys, lungs, brain, spleen, muscles and heart. After several weeks, the body will begin to store the lead in the bones and teeth (the body confuses lead with calcium). About 99% of the lead taken into the body of an adult will leave in the waste (urine, feces, hair/nail growth and sweat), but only about 32% will be eliminated from a child's body.

The damage caused by lead poisoning depends on the amount and how long lead stays in the body. Lead levels in the body are measure in micrograms per deciliter (ug/dL). The lead levels listed below show the lowest amount of lead that research has found damage to occur.

CHILDREN

10 ug/dL	Child will have learning disabilities; impaired growth; IQ decline and some hearing loss.
20 ug/dL	Interference with ability to make red blood cells.
30 ug/dL	Less ability to use vitamin D; higher blood pressure and hearing loss.
40 ug/dL	Less ability to make red blood cells; Nerve problems develop (decreased sensation, less ability to move quickly, kidney damage).
60 ug/dL	Stomach aches/cramps.
70 ug/dL	Mental retardation.
90 ug/dL	Seizures, coma, kidney damage and anemia.
130 ug/dL and up	Seizures, coma and death.

ADULTS

15 ug/dL	Increase in blood pressure, harmful effects on fetus, joint and muscle aches.
25 ug/dL	Reproductive problems.
40 ug/dL	Kidney damage, damage to blood formation.
60 ug/dL	Anemia, nerve damage, constipation, stomach pains, irritability and fatigue, memory and concentration problems, clumsiness, sleep problems.
80 ug/dL and over	Blue line on gums, uncontrollable shaking of hands, wrist and foot drop, hallucinations, brain damage, coma, death.