Lead (Pb)
Exposure to lead may damage the blood, central nervous system (CNS), blood pressure, kidneys, and Vitamin D metabolism. Children are particularly sensitive to the effects of lead, with slowed cognitive development, reduced growth and other effects. Reproductive effects such as decreased sperm count and spontaneous abortions have also been associated with high lead exposure.

Health effects

☑ Lead is an extremely toxic metallic element, which can enter the body through a variety of means, including inhaling dust or fumes, or by consuming contaminated food, or using contaminated eating utensils.
☑ When Lead enters the body faster than the body can excrete it through the feces, it begins to accumulate in various bodily tissues, and when levels in the body become excessive, numerous health effects can occur. These effects are toxic to all humans but are much more toxic to children, infants, and unborn children.
☑ Signs/symptoms of Lead poisoning include muscle/joint pain, problems with memory or concentration, loss of appetite, weight loss, gastrointestinal/digestive problems, irritability, etc.
☑ It is especially toxic to unborn children, affecting their development, birth weight, and in severe cases causing spontaneous abortions.
☑ There is some limited evidence that exposure to Lead has been associated with various cancers.
☑ Studies on males show a severe depression of sperm count and decreased function of the prostate and/or seminal vesicles.

☑ Chronic exposure to lead in humans can affect the blood and the nervous system.

Work practices

☑ Pregnant women should see a physician before being allowed to work around Lead.
☑ Employees must wash hands frequently when working around lead, especially before eating.
☑ Where exposure may be severe, employees should shower and change clothes prior to leaving work, and before going home, especially if there are children, or pregnant women present at home. Changing shoes, or cleaning the soles of shoes is especially important.
☑ No smoking, eating, drinking, application of lip balm, or cosmetics is permitted.
☑ Avoid cleaning methods which create airborne lead dust or fumes. HEPA vacuums should be used.

Personal Protection

☑ Respiratory protection, such as a negative pressure, tight fitting respirator with HEPA cartridges should be worn where over-exposure is likely.
Knowledge check

1. True or false: Lead is toxic to all humans, including the unborn.

2. The two most important ways that Lead enters the body are:
   a. Inhalation and ingestion
   b. Inhalation and skin contact
   c. Ingestion and skin contact
   d. Skin contact and skin injection.

3. Which of the following should you NOT do where Lead is present?
   a. Eat
   b. Drink
   c. Apply lip balm or cosmetics
   d. Smoke
   e. You shouldn’t do ANY of these things around Lead.

4. True or false: To keep airborne dust to a minimum, sweep up floors frequently.