

RTC SAFETY BULLETIN



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LEAD-BASED PAINT

Lead is a heavy, soft, malleable, blue-gray metal found either as a natural ore or a by-product of smelting silver. In its natural state, lead is not a problem. Once processed, however, it is part of the environment forever. There is no known way to dispose of lead nor is there a method to render it harmless.

This metal has been used throughout the ages continuously and extensively. Its usage intensified during the industrial revolution. Lead was found in electrical storage batteries, ammunition, gasoline, building construction, roofing, cornices, solder in electrical conduit, and water and sewer pipes. ***Leads' most extensive use was as a pigment in paints,*** and was sometimes used in varnishes and primers.

Air is the main source of lead exposure. Very fine airborne particles are inhaled. Still other particles find their way into our mouths by settling on food or on objects placed in the mouth. It is also easily carried by many other sources: clothing, tools, shoes, etc.

Poisoning occurs when high concentrations of lead are ingested either by mouth or from breathing fine particles (it is not absorbed through the skin) and getting into your bloodstream. Lead does not stay long in the bloodstream and ordinarily passes through the body in a few days. However, lead may become lodged in soft tissue and bone. It may also enter the brain where it can do serious and irreparable damage, especially to children.

Early symptoms of excessive levels of lead in adults include irritability and restlessness, vomiting and drowsiness. Prolonged exposure can destroy blood cells, cause anemia and hypertension, trigger gall bladder problems or appendicitis. Chronic overexposure to lead impairs the reproductive systems of both men and women. Overexposure to lead may result in decreased sex drive, impotence and sterility in men. Lead exposure also may result in decreased fertility and abnormal menstrual cycles in women.

In the body, lead is measured by a blood screening measurement and is expressed as micrograms per deciliter (*ug/dl*). When elevated lead levels are found, testing is done to determine the source of the contamination so that appropriate measures can be taken to correct the cause. It may be necessary to be enrolled in a medical surveillance program, whose purpose is to monitor an individuals' blood lead level to indicate recent exposure/acute absorption.

The removal of lead from the body may be as simple as the passage of time reducing lead levels within the body to an acceptable range. The only way to quickly eliminate lead from the body is by Chelation, a process whereby an ingested substance combines chemically with lead so that it can be excreted through the urinary system. There can be serious side effects from this treatment, so the best solution is to prevent contamination in the first place.

At Recruit Training Command Great Lakes, do not commence projects that may involve removal of lead products (especially paint) without a project review by a NavSta Safety professional. This includes chipping, scraping, drilling, sanding of lead containing products.

Contact the NavSta Safety office (1-847-688-2035) for guidance on obtaining bulk samples/analysis for a particular material.