

MAJOR PROGRAM POINTS

"THE OSHA LEAD STANDARD FOR GENERAL INDUSTRY: AN EMPLOYEE TRAINING PROGRAM"

**Training for
THE OSHA LEAD STANDARD**

Quality Safety and Health Products, for Today...and Tomorrow

Outline of Major Points Covered in the "The OSHA Lead Standards" Course

The following outline summarizes the major points of information presented in the Course on The OSHA Lead Standards. The outline can be used to survey the Course before taking it on a computer, as well as to review the Course when a computer is not available.

- **Lead is a base metal with many uses.**
 - It is also a toxic substance, which can cause serious health problems.

- **OSHA has instituted two standards dealing with lead. They:**
 - Are aimed at protecting workers who may be exposed to lead.
 - Require workplace monitoring.
 - Also require employee training.

- **29 CFR 1926.62 is OSHA's Interim Final Rule for Lead in Construction. It covers a number of activities, including:**
 - Renovation or demolition (involving lead-based materials).
 - Removal of lead-based paint.
 - Construction projects that involve lead-based materials.

- **29 CFR 1910.1025 covers the use of lead in general industry. It addresses areas such as:**
 - Lead smelting.
 - Manufacturing and using lead-based pigments (inks, paints, etc.).
 - The manufacturing and recycling of lead batteries.

- **The standards deal with different types of work environments.**
 - But they contain many similarities.

- **Both standards require employers to set up worker training programs covering:**
 - Health effects and risks of lead exposure.
 - Your company's Medical Surveillance Program.
 - The Exposure Control Plan.
 - Air monitoring procedures.
 - Use and care of respirators.
 - Workplace and personal hygiene.
 - Work area housekeeping.
 - The Medical Removal Protection Program.
 - Medical Removal Protection benefits.

- **Training must take place before employees can begin work.**
 - Refresher training is also required.

- **Although lead is common in everyday life, it can have serious health effects.**
 - They occur when lead is absorbed by the body.
 - In large amounts, exposure can be fatal.

- **Lead can enter the body in two ways:**
 - Inhalation (breathing in dust or fumes).
 - Ingestion (swallowing lead dust).
 - Once in the stomach or lungs, lead can be absorbed into the bloodstream.

- **There are two types of "overexposure" that can occur from excessive amounts of lead:**
 - "Chronic" (small amounts are continually absorbed and accumulate in the body).
 - "Acute" (a large amount is absorbed in a short period of time).

- **Symptoms of chronic overexposure include:**
 - Headache.
 - Dizziness.
 - Nausea.
 - Loss of appetite.
 - A metallic taste.
 - Insomnia.
 - Excessive tiredness.
 - Muscle/joint pain or soreness.
 - Constipation.
 - Colic.

- **Chronic overexposure can damage several important body systems, including:**
 - The urinary system.
 - The reproductive system.
 - The nervous system.
 - As well as your blood.

- **Common symptoms of acute overexposure include:**
 - Fatigue.
 - Restlessness.
 - Headache.
 - Poor memory.
 - Vertigo.
 - Drowsiness.
 - Hallucinations.
 - Delirium.
 - Convulsions.
 - Coma.

- **The most serious result of acute overexposure is Encephalopathy, which can cause:**
 - Seizures.
 - Heart failure.
 - Death within 48 hours.

- **Exposure to deadly levels of lead in the workplace is highly unusual.**
 - But it can occur.
 - Small amounts of lead can accumulate and have serious effects.
 - If you experience symptoms of lead overexposure, seek medical attention.

- **OSHA requires your employer to set up a "Medical Surveillance Program" to help prevent lead poisoning.**

- **Employees will be given some medical tests as part of the surveillance program (which is provided free of charge).**
 - Blood samples...to establish existing lead levels.
 - X-rays... to show lung conditions that would make using a respirator difficult.
 - A Pulmonary Function Test... to measure lung capacity.

- **Employees will also be asked to fill out detailed work and medical histories, which will include:**
 - Previous instances of lead exposure.
 - Personal health habits (like smoking).
 - Other specific health problems.

- **The test results and historical information will help to determine two things:**
 - An employee's toleration for lead exposure.
 - The ability to use personal protective equipment.

- **Medical examinations will be performed or supervised by a licensed physician.**
 - The doctor may have questions regarding medical history and other areas.
 - It is important to be completely honest about this information.

- **If the doctor finds that you will be safe in your employer's work environment, they will write a positive "Medical Determination."**
 - This lets you begin work.
 - Blood testing and medical exams will continue during any work you do involving lead exposure.
 - Your employer will keep you apprised of your blood lead levels.

- **Your company's written compliance program (the Exposure Control Plan) describes the methods used to protect employees from lead exposure.**

- **In reading this, two terms are critical.**
 - "Action Level" (the airborne lead concentration at which OSHA requires various activities).
 - "Permissible Exposure Limit" or PEL (the highest lead level which OSHA allows a worker to be exposed to in eight hours).

- **Airborne lead concentrations are measured with personal air monitors.**
 - The Action Level equals 30 micrograms per cubic meter (averaged over eight hours).
 - The PEL is 50 micrograms per cubic meter (also an eight hour average).

- **The written compliance program outlines the methods your employer will use to keep exposure at or below the PEL.**

- **In some situations, "Engineering Controls" can be used, such as:**
 - Mechanical ventilation systems.
 - Power tools with vacuum collection systems.

- **Using good work practices are also important. This includes:**
 - Using HEPA vacuums for cleanup.
 - Wetting surfaces before scraping them.

- **"Administrative Controls" can also be used to reduce exposure. They include:**
 - Job rotation.
 - Working abbreviated shifts.
- **If other controls are not feasible (or don't reduce lead levels enough) respirators must be used. They:**
 - Must also be worn if the airborne lead concentration in the area is unknown.
 - Can also be required for additional safety.
- **Other areas covered by the Exposure Control Plan include:**
 - Descriptions of work activities involving lead exposure.
 - Records of air monitoring results.
 - A job site inspection schedule.
 - Other relevant information.
- **Under the standards both "Exposure Assessment" and "Air Monitoring" may need to be conducted periodically on a job site.**
 - This helps to determine whether lead concentrations exceed acceptable levels.
- **Exposure assessment gives your employer an initial indication regarding lead levels. It:**
 - Must be conducted any time a new project or operation begins.
 - Looks for levels exceeding the Action Level.
- **Exposure assessment can be based on several things:**
 - Current air monitoring data.
 - Previous air monitoring results.
 - Objective data (from industry studies).
 - If this information indicates lead concentrations could be at or above the Action Level, air monitoring is required.
- **To help conduct air monitoring, you may be asked to wear an air-sampling device.**
 - An air pump is strapped to the waist.
 - A "sampling cassette" is taped to the shoulder.

- **Air samples will be taken over a full eight-hour workshift.**
 - A filter in the cassette collects lead particles.
 - The filter is then tested to determine lead concentrations.
- **If samples are below the Action Level, no additional monitoring is required.**
 - Monitoring can be required if equipment, processes or personnel change.
- **If air sampling results are at or above the Action Level, additional monitoring is required.**
- **How monitoring results relate to the PEL is also important.**
 - If they are below the PEL, no controls (such as PPE) are required.
 - If they are above the PEL, your employer must implement appropriate control methods.
- **You will be notified (in writing) of monitoring results within five days.**
- **If lead concentrations are above the PEL, your employer will do several things, including:**
 - Explaining, in writing, what they will do to reduce your exposure.
 - Installing ventilation systems, if appropriate.
 - Providing respirators, when necessary.
 - Using other control methods.
- **Certain construction work is treated specially by OSHA.**
 - If it is of short duration.
 - If it can generate high airborne lead concentrations.
 - In these situations, unless workers are trained and protected, lead overexposure could easily occur before air-monitoring results are available.

- **The construction industry version of the Lead Standard requires employers to provide "interim protection" in these cases. These include:**
 - Respirators.
 - Work clothing.
 - Other personal protective equipment.

- **OSHA feels that respiratory protection is key in these situations.**
 - If exposure is possible up to 10 times the PEL, at least a half-mask respirator (with high efficiency filters) is required.

- **Work in this category (up to 10 times the PEL) where lead-based paint is present, includes:**
 - Manual demolition.
 - Manual scraping.
 - Manual sanding.
 - Using power tools with dust collection systems.
 - Using a heat gun for paint removal.

- **The next category of activities has the potential for very high exposure.**
 - Up to 50 times the PEL.
 - These situations require at least a "full-face" respirator (with high efficiency filters).

- **Work in this category includes:**
 - Using mortar containing lead.
 - "Lead burning."
 - Using power tools without dust collection systems.
 - "Rivet busting."
 - Removing abrasive blasting enclosures.
 - Cleanup activities.

- **The category containing activities where lead exposure can be the highest calls for even greater protection.**
 - This is where exposure can exceed 50 times the PEL.
 - These environments require "supplied-air" respirators.

- **Work in this category includes the following activities where lead-based materials are present:**
 - Welding.
 - Cutting.
 - "Torch burning."
 - Abrasive blasting.

- **Specific respirators and other personal protective equipment that should be used in these situations can vary.**
 - It may change from jobsite to jobsite.
 - If you work in construction, see your supervisor.

- **An overall Respiratory Protection Program is required in both construction and general industry where other controls do not reduce exposure to below the PEL.**

- **As part of this program, OSHA requires that employees receive the following training regarding respirators:**
 - Fit-testing.
 - Use.
 - Maintenance.
 - Limitations.

- **Different work situations require different respiratory protection.**
 - Your supervisor can help you select the correct respirator.

- **Before using a respirator on the job, it must be "Fit-tested".**
 - This makes sure it is the right size and shape.
 - It also checks for leaks.
 - Fit-testing can be "Qualitative" (checking for "noticeable" leakage).
 - It can also be "Quantitative" (where a machine is used to measure material leaking through).

- **Respirator training will also include proper usage procedures, such as:**
 - How and when to change cartridges.
 - Other important features of the respirator.
- **You will also receive instruction on cleaning and maintenance of your respirator.**
 - You must leave the work area to clean your face and respirator.
 - You should also practice proper washing procedures.
- **Limitations of respirators will also be covered in the training.**
 - This includes situations where specific filter cartridges are and are not effective.
 - Check with your supervisor regarding cartridge specifications.
- **The Lead Standards also require employers to set up "Hygiene Facilities" and implement good hygiene and housekeeping practices.**
 - In areas where concentrations are above the Action Levels employees must be provided with the appropriate PPE.
 - Clean changing rooms must also be set up.
 - "Dirty Areas" must be designated for contaminated work clothing.
- **It is important to know proper cleaning procedures.**
 - Never shake or knock loose lead dust off clothes and PPE.
 - Use a HEPA vacuum to remove dust before undressing.
 - Deposit contaminated clothing in designated containers.
- **Shower facilities must also be set up where feasible.**
 - They can be permanent or "temporary".

- **If no showers are available on site, employees must wash their hands and face thoroughly before leaving work.**
 - They must also take a shower immediately upon arriving at home.
- **Work site eating areas must be kept as free of lead as possible.**
 - Never enter eating areas wearing work clothing or PPE (unless all surface dust has been removed).
 - Wash your hands and face before eating.
 - Be especially conscious of dust trapped in hair, mustaches and beards.
- **Work areas themselves must also be kept as free of excess lead as possible.**
 - For best results use a HEPA vacuum.
 - Shoveling/sweeping/brushing should only be used where authorized, and vacuuming or other methods are not feasible.
 - Know what respiratory protection is required when doing cleaning.
- **"Medical Removal" is sometime is necessary to protect workers from lead overexposure.**
 - This is when an employee is temporarily not permitted to work in lead exposure areas.
 - It can be triggered by blood lead levels at or above 50 ug/dl.
 - It can also be triggered by a doctor's recommendation.
- **If you are planning on having children, OSHA recommends maintaining even lower blood lead levels.**
 - They should be kept at below 30 ug/dl.
 - If you have questions, ask your doctor.
- **"Medical Removal Protection Benefits" must be provided to workers who are "removed". These include maintaining normal:**
 - Earnings.
 - Benefits.
 - Job status.
 - Seniority.

- **These benefits will continue for eighteen months, or until the work you are involved in is completed (whichever comes first).**
- **Medical Removal Benefits can be reduced if you are also receiving:**
 - Workers' Compensation payments.
 - Unemployment benefits.
 - Income from other jobs.
 - Other sources of earnings.
- **The Lead Standards require employers to maintain a number of records. These include:**
 - Temporary medical removals.
 - Medical Removal Protection Benefits.
 - Medical examinations.
 - Blood testing results.
 - Air monitoring data.
- **You, or your representative, can see these records if you like.**
- **The Lead Standards also require that employees receive information and training periodically.**
 - Training must be given at least annually.
 - In many cases training must also be given prior to new job assignments.
 - You can have access to training materials or other information regarding lead exposure at any time.
 - If you have questions, ask your supervisor.
- **You should take your company's Lead Standard training program seriously!**
 - It helps to protect you from lead overexposure.
 - It will let you do your job safely.