



L E A D
-IN-
CONSTRUCTION
-IN-
DEMOLITION
W O R K

AN
EMPLOYEE
M A N U A L
29CFR 1926.62

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LEAD-IN-CONSTRUCTION IN DEMOLITION WORK

An Employee Manual

Why the Extra Attention?

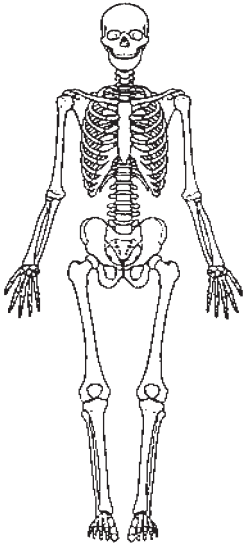
Lead has long been recognized as a substance which can cause people to become sick. Protecting workers from lead has received more attention over the past

several years. In 1992, Congress addressed its concern for the use of lead-based paints in houses. At the same time, Congress also decided to protect construction workers from lead by requiring OSHA to write a new lead-in-construction standard. This rule contains more strict requirements than before. The entire construction industry, includ-



ing demolition work, is covered by this new rule. Demolition contractors are meeting the requirements of this new law in order to better protect their workers from lead.

How Can Lead Affect Me?



Lead can affect a person only if it can enter the body. This can happen by breathing lead dust or fumes or by accidentally ingesting it.

If inhaled, lead enters the lungs and passes into the blood which carries it through the body.

If lead is present on the food you eat or on the cups or cans of beverages you drink or on your cigarettes, it can enter your mouth. It will go to your stomach and your blood can

carry it throughout the body. Some of the ill effects of lead are listed below.

Acute Effects

- Loss of appetite
- Nausea
- Vomiting
- Stomach cramps
- Constipation
- Fatigue
- Sleeping difficulty
- Moodiness
- Headaches
- Joint or muscle aches
- Anemia
- Decreased sexual drive
- Wrist or foot drop
- Tremors
- Convulsions
- Seizures

Chronic Effects

- Weight Loss
- Blood disorder
- Hypertension
- Reproductive effects including decreased sperm count
- Fetal effects
- Nervous system disorder
- Liver damage
- Kidney damage
- Loss of memory

Once lead has entered the body, it can cause you to become sick in a short period of time (acute). If a lot of it is present or if a person is exposed over a much longer period of time, this is a "chronic" exposure. So lead's health effects depend on both the amount of lead to which you are exposed to as well as the length of time you are exposed to it. It might take days, weeks, months or even years before you become sick. The amount of lead you breathe and the length of time you breathe it will determine the total amount of lead which is present in the body. The good news is that your body will work to eliminate lead. Of course, if you continue to be exposed to lead, your body may not be able to eliminate all of it. Lead will continue to build up in the body, which may cause ill effects. If you are exposed to lead at work and have signs or symptoms of it, you should immediately notify your foreman.

How Much is Too Much?



The new OSHA rule sets a limit for worker exposure to lead which is present in the air. The limit is necessary to protect you. This Permissible Exposure Limit or PEL is the maximum allowable limit. It is 50 micrograms per cubic meter (50 ug/m³). This means that for every cubic meter (slightly larger than a cubic

yard) of air which you breathe, only 50 micrograms can be present.

To give you an idea of how little this is, a packet of artificial sweetener weighs about one gram. A microgram is one one millionth of a gram. This low limit is designed to protect workers from becoming sick. It is the maximum amount of lead you can breathe in an 8-hour day. If you work with lead more than 8 hours, the limit is less. If you breathe more lead, your employer must take steps to control it.

The OSHA rule also sets an Action Level of 30 ug/m³. This level is a warning point. If it is exceeded, some steps must be taken by your employer.

How Much Lead Have I Been Exposed To?



There are two ways to learn how much lead you are breathing. The first is to measure the lead in the air by taking air samples. The second way is to measure the lead in your own blood. This test will tell you how much lead is already in your body. OSHA requires your employer to take air samples and to offer to test your blood. The results of these tests will be given to you. They will tell you and your employer what other steps may be necessary to protect you from lead.

In order to measure the lead, which you breathe, you will be asked to wear a sampling pump just as you may have done for asbestos.

The pump fits on your belt and is connected to a plastic tube with a filter,

which is placed near your collar. The test will be taken for a full shift while you work at your regular job. At the end of the day, it will be removed and the filter sent to a lab. It may take some time to get the results. You will be given the results within five working days after your employer gets them. You may be required to wear protective clothing and a mask (respirator) until your employer can do the air test.

Additional air monitoring is also required every six months if the first test result is at or above the Action Level. Air testing must be repeated every three months if the results are at or above the PEL. Additional tests are also required if your job, equipment, or controls change.



If your air test exceeds the Action Level, you will be asked for a blood sample. Although you are not required to have your blood tested, this test will tell you how much lead is already present in your body. There is no charge to you for this test.

If you are exposed to lead above the Action Level for 30 or more days in a year, you will be offered a test every other month for six months. You will also be offered repeated tests every two months if your blood lead level equals or exceeds 40 micrograms per deciliter. (A deciliter [dl] is about 1/2 of a cup.)

If air monitoring shows that you are exposed to lead above the Action Level, you will also be offered a medical examination each year or if you have the following concerns:

- You have signs of lead poisoning
- You want medical advice about having children
- You are a pregnant woman
- You have difficulty breathing when wearing a respirator

At the time of the medical exam, women can request pregnancy testing and men can request an evaluation of their ability to have children.

You will be provided a written opinion from the doctor which will tell you whether your health is at risk due to lead. This opinion will also let you know if there are any limits on the amount of lead which you can breathe, on your exposure, on your use of a respirator, and on your blood level results.

If your employer picked the doctor who examined you, your employer must tell you that you may get another opinion from a doctor of your choice at no cost to you. If you decide to get a second opinion you must tell your employer and you must contact a doctor within 15 days. If the opinions of the two doctors differ and they cannot agree, these doctors can pick a third doctor whose opinion must be followed.

If your air test is above the Action Level and your blood lead level is above 50 ug/dl, you will be offered another blood test within two weeks. If the second test is also above 50 ug/dl, OR your final doctor's opinion shows that your health is at risk because of exposure to lead at work, your employer must place you in a job where your exposure to lead is below the Action Level.

If you are removed from your normal job due to your exposure to

lead, your pay and benefits will continue as long as the job exists (up to 18 months). You can return to your normal job when your blood lead tests are lower (below 40 ug/dl) or when the doctor says that it's safe for you to return. These job removal requirements are designed to protect your health.

What Will Be Done To Protect My Health?

The main ways to control the amount of lead which you breathe are through the use of engineering controls and work practices. Engineering control methods include the use of ventilation and enclosures. Work practice controls include the use of water sprays, vacuums and specialized tools.

Before starting the job, your employer must have a written plan which says which engineering controls and work practices, including job rotation, will be used. This plan will be based on the air tests and types of jobs which are planned. The program must include inspections by a competent person. This written program is available for your review. It will be revised and updated every six months.

Another way to protect your health is to wear a respirator so that you do not breathe lead dust or fumes. If your exposure to lead exceeds the PEL, even when engineering and work practice controls are used, respirators must be provided to you and used by you.

Of course, the respirator, which you wear has to be the correct



one to protect you from lead. The type, which must be used, will depend upon the air monitoring results. Even if the air tests are not above the PEL, you may choose to wear a respirator. You can even get a respirator (PAPR) which blows filtered air into your mask. If you are required to wear a respirator, three things must be given to you:

- A fit test to make sure it fits properly,
- Training in the use, care and inspection of the respirator, and
- A medical examination to determine if you can wear it.

Beards which interfere with the respirator are not permitted.

If you are exposed to lead above the PEL or where lead may cause skin or eye irritation, you will also be given clean work clothing such as coveralls, gloves, hats, face shields and goggles at least weekly (daily if air tests exceed 200 ug/m³). Containers with lids will be provided for work clothing, which must be cleaned, laundered, or thrown out.

These protective clothes may be removed only in special change areas. This clothing is given to you to prevent lead from getting on your street clothes and then taking the lead into your car or home.

What Other Steps Must Be Taken?

Since any lead dust which is present in the air may be breathed, steps must be taken to keep lead dust to a minimum. Work surfaces must be kept as clean as possible. Special vacuums or other clean up methods must be used.



When the air tests are above the PEL, food, drinks, tobacco products and cosmetics are not permitted in these areas. This will keep lead from getting on your food or cigarettes and then from accidentally eating it.

To help prevent this, your employer must provide:

- Clothes,
- Change areas,
- Showers,
- Lunchrooms, and
- Sinks to wash up.



Protective clothing must be taken off in change areas with separate lockers for work clothes and street clothes. When showers are provided, you must use them at the end of each day. Lunchrooms or eating areas must be nearby. They must be regularly cleaned

and kept as free as possible from lead dust.



Before you enter the lunchroom, work clothes must be taken off or cleaned (such as by vacuuming). Sinks for washing your hands and face must always be provided when any lead is present. Besides washing the hands and face at the end of the shift and before eating, drinking, smoking or using cosmetics,

you are allowed to leave your work area to wash your face and respirator in order to prevent skin irritation.

How Will I Know About the Hazards of Lead?

SUBSTANCE: LEAD SCRAP	
MSDS NO.: 3582-22	
HEALTH HAZARDS	
[Detailed text describing health hazards, including acute and chronic effects, and first aid measures.]	
PHYSICAL HAZARDS	PERSONAL PROTECTION
[Text describing physical hazards]	[Text describing personal protection requirements]
SUPPLIER	
ADDRESS	
CITY STATE ZIP	
EMERGENCY TELEPHONE NO.	

Employers must inform their workers about lead hazards by using warning signs, labels and Material Safety Data Sheets (MSDS).

If your air tests are above the Action Level, a training program will be conducted before you start the job. It will be repeated each year. The training will include the

information on the OSHA standard, the jobs which may result in exposure above the Action Level, and your right to get copies of your medical and air monitoring tests. You may review the training materials. Warning signs must be posted in work areas where air lead levels are above the permissible exposure limit (PEL) level.

What Are My Rights As An Employee?

Employees and former employees who are exposed to lead (and their designated representatives) can get copies of or look at the following:

- Records of air tests
- Medical records and doctors opinions
- Written compliance program
- Respirator program
- Training program

You also have the right to observe air monitoring and to ask for a second medical opinion.

It is important that you know and understand your rights and responsibilities under this new standard. Your health and that of your family must be protected. If you have questions or concerns, ask your supervisor for more information to make you understand the risks you face and the protective measures available to you before beginning work. Help your employer and fellow employees to maintain a safe workplace.

When Does The OSHA Standard Go Into Effect?

It has! Most parts were required as of August 3, 1993. All parts went into effect on October 2, 1993.



The National Demolition Association is the trade organization for the Demolition Industry in the United States and Canada.

Part of the National Demolition Association's mission is "to eliminate as far as possible the occurrence of) injury or death to employees of its members. . ." This OSHA-funded document is part of the Association's effort to continually inform its members about the safe work practices the industry can follow to protect its most valuable asset, its workforce.

The National Demolition Association is committed to the development of a safe, productive work environment. As part of the Association's overall Demolition Safety Program, this document continues the National Demolition Association' s commitment to serve the demolition industry, the construction community and the general public.





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