Tool Box Talk
Working Safely Around Lead

Most adult exposures to lead are occupational and occur in lead-related industries such as lead smelting, refining, manufacturing, construction and painting. Exposures occur when workers inhale lead dust and lead fumes, or when they eat, drink, or smoke in or near contaminated areas.

Approximately 1,000,000 workers are exposed to lead in the workplace and can expose family members by bringing lead dust home on their skin, shoes, and clothing.

Who is at greatest risk for lead poisoning?
Lead exposure can threaten you if you perform activities like **abrasive blasting, sanding, scraping, cutting, burning, welding** and **painting** during repair, reconstruction, dismantling and demolition work. If you are not properly protected, you increase the chances of exposing yourself to lead.

As with occupational exposure, hobbies involving lead can be extremely hazardous. Recognizing the risk associated with the hobby as well as practicing safe prevention techniques can help to reduce the chances of lead poisoning. The following hobbies have been associated with increased risk for lead poisoning:

- **Pottery and ceramics**: Use of lead-containing glazes exposes individuals during mixing, spraying, painting and other general handling of the materials.
- **Furniture refinishing:** The federal government banned residential lead-based paint in 1978. Up until that time stain and varnish used on furniture often contained lead. Scraping and sanding furniture can cause lead dust to become airborne.
- **Stained glass/jewelry-making**: Soldering lead creates lead vapor which is easily inhaled. It is important to remember to solder in well-ventilated areas.
- **Fishing:** Sinkers containing lead are the primary source of lead poisoning in the fishing industry.
- **Shooting sports:** The process of melting lead to make bullets causes lead vapor.

How does lead get into your body?
Most exposure to lead occurs through breathing or eating. You can breathe in lead dust, mist, or fumes, and swallow lead dust on food, drinks, cigarettes, or your hands and face. Exposures to lead can cause lead to build-up over time, and once it gets into your body, it can stay there for a long time. The more lead in your body, the more likely that harm will occur. How much damage lead does to your body may differ from one person to another.

If you are exposed to lead, many factors determine the adverse effects you may experience. These factors include the dose (how much), the duration (how long), and how you come in contact with it. You must also consider your age, gender, diet, family traits, lifestyle, and general state of health.

What does lead do to your body?
Lead affects many important body systems. It can damage the brain and nervous system, red blood cells, kidneys and reproductive systems of men and women. Lead easily crosses the placenta in a pregnant woman and can harm the fetus. Exposure can cause headaches, dizziness, sleep disturbances, memory loss, depression, fatigue, irritability, joint and/or muscle pain, miscarriage, and other serious health problems.

How can lead exposure be reduced?
Check your work area for signs of possible lead contamination before beginning work. When in doubt, ask for more information. Some locations on campus have been checked for lead, but not all.

Contact your supervisor immediately if you suspect there is lead in your work area. He will take the appropriate steps to mitigate the lead issues and contact the person requesting the work to let them know they may incur the costs for lead testing and lead abatement.

When lead exists in the work area, use the following lead-safe work practices and avoid the prohibited work practices identified below.

Lead-Safe Work Practices

- Limit access to the work area.
- Wear protective clothing.
- Mist painted surfaces before disturbing paint.
- Use manual surface preparation methods - do not use work practices that could generate dust such as dry drilling or sanding unless tools are equipped with a dust collection shroud attached to a HEPA vacuum.
- Follow good hygiene practices before leaving the work area to ensure that lead remains in the work area, and is not transported to break areas, public spaces, vehicles or home.
- Use housekeeping and cleanup procedures that will leave the work area in a condition that is safe for re-occupancy.
- If lead paint chips and debris Contact the Paint Shop to have the space properly cleaned prior to work beginning. The Paint Shop has access to HEPA vacuums that must be used when cleaning lead dust from surfaces.

Prohibited Work Practices

- Dry scraping.
- Open flame burning or torching.
- Heat guns operated above 1,100° F.
- Dry sweeping lead contaminated areas or surfaces.
- Use of chemical strippers, particularly those containing methylene chloride.

When engineering controls cannot reduce lead exposures to a safe level, a respirator must be used. In order to wear a respirator, you must be part of the respiratory protection program. This includes annual training on the use and care of the respirator, annual fit-testing to make sure your respirator fits correctly and regular medical evaluations.

Technique of the Month
Lifting Techniques

There are three (3) things to remember:

1. Big load next to your big toe. (Big Toe, Big Load)
2. Little load next to your little toe. (Little Toe, Little Load)
3. Flex your knees.

Engage core muscles for lifting, pushing, pulling. (cough or "tummy tuck")
Break eye contact for lifting to maintain curves in the spine.

Let's do a two (2)- handed lift: (Power Grip):

- **BIG TOE** touches side of load. Test the weight of the load.
- Knees Flexed.
- Tilt the load toward the big toe (if the load can be tilted).
- Break eye contact and complete the lift.

For the **Scissor lift,** lower the back knee. This reduces the angle & lifting movement on the low back.

Let's do a one (1) -handed lift: (Power Grip)

- **LITTLE TOE** touches the side of the load.
- Knees flexed.
- **Same-side hand and foot forward**.

Injury Statistics related to "lifting" since 2003			
476 injuries	**11 types of injuries**	**Body Parts Injured**	
• 234 "Record Only" • 7 First Aid • 98 Reportable • 33 Restricted • 103 Lost Work Time cases	• 1 Burn • 5 Contusions • 2 Crushing Injuries • 2 Cumulative Trauma • 1 Dislocation • 1 Foreign Body (splinter) • 1 Fracture • 8 Hernias • 2 Lacerations • 1 Puncture • 450 Sprains/Strains	• 28 arm • 189 back • 5 chest • 19 elbow • 12 finger • 1 foot • 32 groin • 5 hand • 2 hip	• 15 knee • 1 leg • 7 neck • 120 shoulder • 8 stomach • 1 toe • 2 torso • 19 wrist