

## Playground Equipment and Lead-Based Paint Hazards

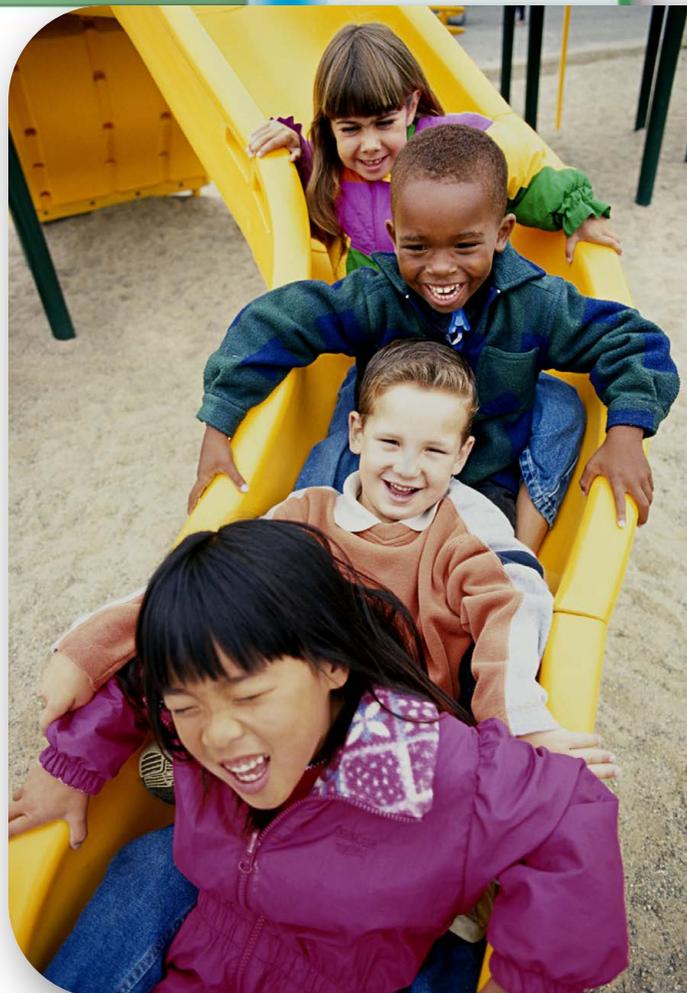
Schools, parks and community playgrounds present a potential source of lead poisoning for young children. As a result, concerned parents, school officials and playground managers have been eagerly promoting efforts to provide safe playground equipment for children by minimizing potential lead-based paint (LBP) hazards.

Although exposure to deteriorating paint in homes is the leading cause of lead poisoning in children, exposure to LBP from playground equipment also presents a risk. Additionally, because the effect of the ingestion of lead is somewhat cumulative, many seemingly unrelated mechanisms of lead exposure may combine to increase the overall risk of lead poisoning. While symptoms of lead poisoning in children vary greatly depending on the level of lead in a child's blood, and other factors such as nutrition, common symptoms include behavioral problems, learning disabilities, hearing problems and growth retardation.

Over time, LBP on playground equipment (especially outdoors) can deteriorate into chips and dust that contain lead. Young children may ingest lead paint chips and dust by putting their hands on the equipment, then placing their hands in their mouths.

In 1978, the Consumer Product Safety Commission (CPSC) banned the sale of LBP for consumer use. In 1992, the United States Congress enacted the Residential Lead-Based Paint Hazard Reduction Act, which defined LBP as any paint containing 0.5 percent lead by weight, or more. Congress found that this lead level in paint may present a hazard to children if inhaled or ingested. Paint containing lead above these levels is still available for commercial and other uses; therefore, LBP may have been applied on playground equipment after the above dates. Additionally, even if leaded paint is not used on playground equipment today, such equipment has typically been repainted numerous times with multiple layers of paint. It is possible that some of the older paint layers contain lead. As the painted surface deteriorates, children may be exposed to the deeper, older layers of paint that have hazardous levels of lead.

School officials and/or playground maintenance managers may want to test playground equipment to determine if LBP is present. A Lead Hazard Risk Assessment for playground equipment should include a visual inspection, paint testing/sampling, characterization of the hazard and identification of a plan to establish and prioritize control measures. The condition of the paint, percentage of lead in the paint, age of the equipment, overall safety features of the equipment and the financial resources available, are all factors to be considered when developing a plan that is appropriate for controlling any discovered lead hazards.



# Playground Lead-Based Paint Hazards



Deteriorating paint that contains lead levels equal to or above 0.5 percent should be given priority whenever implementing lead hazard control measures. Officials and/or playground maintenance managers may want to consider long-term control measures for playground equipment coated with paint that contains lesser amounts of lead (between 0.06 percent and 0.5 percent).

Bare soil surrounding the playground equipment should also be tested to determine if lead contamination is present. Lead contamination of soil may occur from deteriorated LBP on the playground equipment itself or from unrelated sources such as a nearby highways, steel structures, other local sources of lead or previous industrial use of the property.

For more information, or to obtain lists of DEQ-certified LBP Inspectors and Risk Assessors or accredited training facilities in Oklahoma, you may contact:

## **Department of Environmental Quality**

Air Quality Division

Technical Resources and Projects Section

707 N. Robinson

P.O. Box 1677

Oklahoma City, OK 73101-1677

(405) 702-4100

<https://www.deq.ok.gov/air-quality-division/lead-based-paint>

Additional sources of information include:

## **U.S. Consumer Product Safety Commission**

CPSC hotline number 1-800-638-2772 ext. 274 for publications and pilot research results regarding LBP on playground equipment, <http://www.cpsc.gov>

## **U.S. Department of Housing and Urban Development**

Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing that contain procedures for paint and soil sampling. Please call 1-800-245-2691

<http://www.hud.gov>

## **U.S. Environmental Protection Agency**

Agency National Lead Information Center hotline at 1-800-LEAD-FYI for general information on LBP hazards, <http://www.epa.gov>

