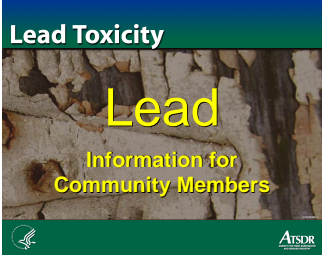
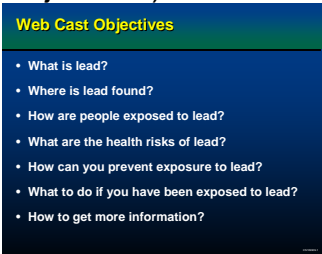

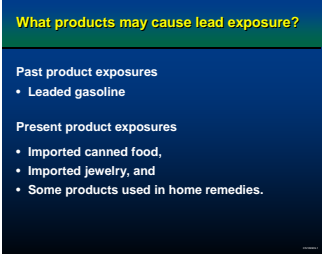
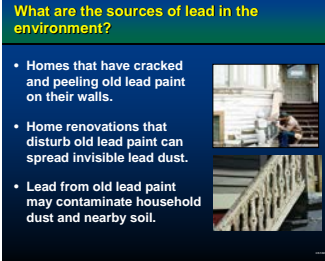





LEAD COMMUNITY WEBCAST STORYBOARD

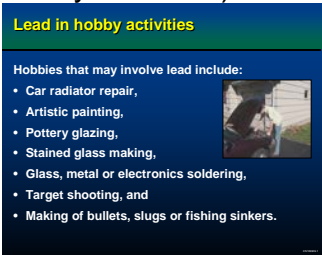
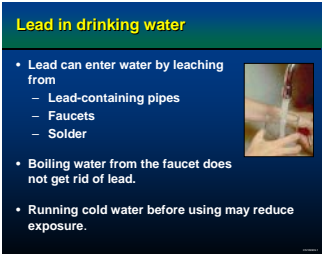
SCRIPT	GRAPHICS
None	<p>SLIDE 1 (Lead – Information for Community Members)</p> 
<p>Welcome to the lead web cast for community members. I'm Dr. Jewel Crawford from the Centers for Disease Control and Prevention, Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine. My specialty is family practice.</p> <p>The goal of this web cast is to increase your knowledge about lead, its effects on health, and how to reduce the risk of lead exposures.</p>	CAMERA
<p>I'll begin with an overview and talk about what lead is, where it's found, and how people might be exposed to it. This will be followed by a more detailed discussion of these issues. I'll also talk about what the health risks are from exposure to lead, how to prevent exposure, and what to do if you or someone you know might have been exposed.</p> <p>There will also be resources listed at the end of this web cast so you can get more information about lead.</p>	<p>SLIDE 2 (Web Cast Objectives)</p> 
<p>Okay, so what is lead?</p> <p>Lead is a soft gray metal that is a naturally occurring element in the earth. Lead is toxic to people and levels of lead that were once considered safe are now considered hazardous. Lead poisoning can be prevented. Much of lead's presence in the environment comes from its past use in paint, gasoline, ongoing or historic mining, and from commercial and industrial operations.</p>	<p>SLIDE 3 (What is lead?)</p> 
<p>People have used lead almost since the beginning of civilization. Human activities have spread lead widely</p>	CAMERA


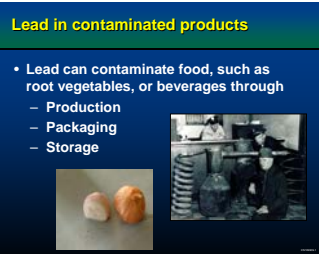

<p>throughout the environment including in air, water, soil, plants, animals, and man-made constructions. Because lead is spread so widely throughout the environment, it's common for people to have some amounts of lead in their bodies. Both children and adults are susceptible to the health effects of lead from higher levels of exposure.</p> <p>What products can cause lead exposure?</p>	
<p>People in the United States were once exposed from leaded gasoline, but that's no longer happening because lead has been removed from gasoline in this country. Some products such as imported canned food and jewelry, along with some home remedies, may still contain lead.</p>	<p>SLIDE 4 (What products may cause lead exposure?)</p> 
<p>What are the sources of lead in the environment?</p> <p>The sources vary from place to place. In many older, urban communities, old paint and gasoline are the primary sources for lead in the environment.</p> <p>Paint produced before nineteen seventy-eight contained lead.</p>	<p>CAMERA</p>
<p>The biggest concern about lead in the United States today is in houses where this paint was used, which are now in poor condition, with cracked, peeling paint. This lead can enter the household dust from friction, such as the normal rubbing of windows and doors as they open and close. In addition, home renovations that disturb old paint can easily spread invisible lead dust throughout the home.</p> <p>Outside these houses, lead may enter soil from paint chips that are ground into surrounding dirt over time.</p>	<p>SLIDE 5 (What are the sources of lead in the environment?)</p> 
<p>In addition, soil may also have been contaminated by the lead that was in gasoline before that practice was stopped in nineteen seventy-six. This lead does not go away and remains in the soil. If this happened, soil can pose a hazard.</p> <p>Some workplaces that use lead also have higher levels because the lead used in various production processes may enter the dust or air in these work environments.</p>	<p>SLIDE 6 (What are the sources of lead in the environment? Continued)</p>



<p>Finally, lead from mining or smelting areas can get into the air and this lead can settle into the soil, resulting in high soil lead levels.</p>	<p>What are the sources of lead in the environment? (continued)</p> <ul style="list-style-type: none"> • Soil may still have high lead levels resulting from pre-1976 gasoline. • Lead enters the dust or air in businesses that involve lead. • Lead mines or smelters may contaminate nearby soil or water.
<p>Now let's return to our discussion about how people are exposed to lead.</p> <p>Exposure to lead and lead chemicals occurs through breathing or eating it, through skin contact, drinking water contaminated with lead, and swallowing or touching dust or dirt that contains lead. Most human exposure to lead occurs through eating or breathing it.</p>	<p>CAMERA</p>
<p>Ingestion of lead through food, water or alcohol may be significant for certain populations. For example, lead exposure in the general population, including children, occurs primarily through eating it. Breathing it also contributes to a build up in the body and</p>	<p>SLIDE 7 (How are people exposed to lead?)</p> <p>How are people exposed to lead?</p> <ul style="list-style-type: none"> • Ingestion of foods, water, alcohol may be significant for certain populations. • Ingestion primary way general population, especially children, are exposed to lead. • Inhalation of lead dust contributes to a build up in the body. 
<p>Inhalation may be the major route for lead exposure for workers in lead-related occupations.</p> <p>In addition, ingesting certain home remedies may expose people to lead or lead compounds.</p> <p>Lead paint, however, is the major source of lead exposure for children in the United States. As lead paint deteriorates, peels, chips, or is removed by renovation, house dust and surrounding soil may become contaminated. We're all aware of the practice of young children putting almost anything and everything in their mouths. Lead can enter a child's body through this normal hand-to-mouth activity, as well as through inhalation.</p>	<p>SLIDE 8 (How are people exposed to lead? Continued)</p> <p>How are people exposed to lead? (continued)</p> <ul style="list-style-type: none"> • Inhalation may be the major route for workers in lead-related occupations. • Ingestion of certain home remedies. • Ingestion of lead paint or inhalation of lead dust or fumes is a major source for children in the United States. 
<p>What happens when lead enters the body?</p> <p>It's important to remember that once lead is absorbed by the body,</p>	<p>CAMERA</p>

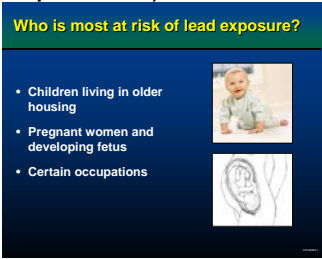
<p>it may be stored for long periods in mineralizing tissue such as teeth and bones and then released again into the bloodstream, especially in times of bodily stress, such as pregnancy, breast feeding, calcium deficiency, or osteoporosis, which is thinning of the bones.</p>	<p>SLIDE 9 (What happens when lead enters the body?)</p> <p>What happens when lead enters the body?</p> <ul style="list-style-type: none"> • Lead is stored for long periods in mineralizing tissue such as teeth and bones. • Lead is can be released again into the bloodstream from these sources during times of bodily stress, such as <ul style="list-style-type: none"> - pregnancy - breastfeeding - calcium deficiency - osteoporosis (thinning of the bones)
<p>This type of exposure can be significant, especially for individuals who have been exposed to lead over a long period of time.</p> <p>Now let's return to our discussion about lead in the home environment.</p>	<p>CAMERA</p>
<p>Even though leaded paint was banned in the United States in nineteen seventy-eight, it may have been used and then covered with non-leaded paint. If this occurred, it may still be released into the home environment by peeling, chipping, friction, impacts, or by home renovation.</p> <p>In fact, between eighty-three percent and eighty-six percent of all homes built in the United States before nineteen seventy-eight, have lead-based paint in them. The older the house, the more likely it is to contain lead-based paint and have a higher concentration of lead in the paint. Before Nineteen fifty-five, much of the white house paint sold contained up to fifty percent lead.</p> <p>Many people think that children will be safe if they are prevented from eating paint chips, but children are exposed to lead mainly by lead in dust and not by eating paint chips.</p>	<p>SLIDE 10 (Lead in home environments)</p> <p>Lead in home environments</p> <ul style="list-style-type: none"> • Most lead exposure in the U.S. today occurs in older homes with deteriorated leaded paint. • Children are at greatest risk of lead poisoning from their homes. • Most children are exposed to lead in dust (not by eating paint chips). 
<p>Now, some children who exhibit repeated ingestion of nonfood items - a condition known as pica - are at higher risk for lead poisoning.</p> <p>However, significant blood lead elevations can result from invisible lead contaminated dust or soil ingested through normal hand-to-mouth behaviors.</p>	<p>CAMERA</p>

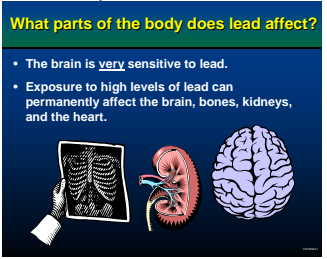
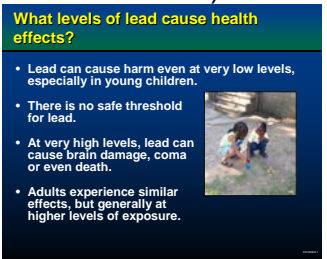
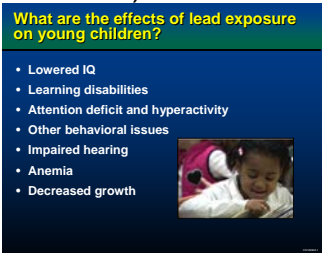
<p>Children may ingest leaded paint, dust, or soil from many sources in their homes. Windows, porches, and doors are usually the most significant contributors of lead dust in the home environment. Playing in contaminated soil can also be a major source of lead.</p> <p>Any home renovation that disturbs lead paint can create hazardous levels of lead in dust that may not be visible to the eye.</p>	<p>SLIDE 11 (Lead in home environments. Continued)</p> 
<p>Finally smoking cigarettes or breathing second-hand smoke increases exposure to lead because tobacco smoke contains small amounts of lead.</p>	<p>CAMERA</p>
<p>The amount of lead found in dust in the home environment is important because lead dust levels have been directly correlated with children's blood lead levels. And, there is really no safe blood lead level.</p>	<p>SLIDE 12 (Lead in home dust)</p>  <ul style="list-style-type: none"> • The more lead in the dust in a home, the higher the levels of lead in children. • There is no safe threshold for lead.
<p>Now, let's turn to a discussion of lead in the work environment.</p> <p>Most adult exposures are occupational and occur in lead-related industries, workers in the lead smelting, refining, and manufacturing industries have the highest and most prolonged occupational exposures to lead.</p>	<p>CAMERA</p>
<p>Other jobs that may involve lead include jobs in: construction, automobile repair, lead mining, plumbing, printing, and military and police work involving fire arms.</p> <p>Workers doing home renovations that involve scraping, remodeling, or otherwise disturbing lead-based paint are at increased risk of exposure. Renovations involving lead-based paint should only be undertaken after proper training.</p>	<p>SLIDE 13 (Lead in work environments)</p> 

<p>In addition to direct ingestion of lead dust during their work, workers may inhale lead dust and fumes, as well as eat, drink, and smoke in or near contaminated areas, thereby increasing their probability of lead ingestion. Between point five and one point five million workers are exposed to lead in the workplace.</p> <p>If showers and a change of clothing are not provided, workers can bring lead dust home on their skin, hair, shoes, and clothing, inadvertently exposing family members. These small daily exposures can become significant overtime.</p>	<p>CAMERA</p>
<p>Adults can also be exposed during hobbies and activities where lead is used. Certain types of auto repair work, such as repairing the car radiator can contribute to lead exposure. Some of the more common hobbies that involve lead include artistic painting; glazed pottery making; stained-glass making; glass, metal or electronics soldering; target shooting; and molding of bullets, slugs, or fishing sinkers.</p>	<p>SLIDE 14 (Lead in hobby activities)</p> 
<p>What are other sources of lead in the home?</p> <p>Lead occurs in drinking water through leaching from lead-containing pipes, faucets, and solder, which can be found in plumbing in older buildings. Other potential sources of lead contamination include brass fixtures, old drinking water coolers, and old coffee urns.</p> <p>Leaching rates accelerate when water is acidic or hot, or when it's been standing in the pipes for extended periods, like overnight. Boiling water will not get rid of lead. Flushing the standing water from the lines and faucet for a few minutes before use and using cold water for drinking may reduce exposure. Commercially available water filters may also reduce lead levels in drinking water.</p>	<p>SLIDE 15 (Lead in drinking water)</p> 




<p>Lead is still used in commercial products, such as bridge paint, computers, pewter, some ceramic glazes, and costume jewelry.</p>	<p>SLIDE 16 (Lead in commercial products)</p> 
<p>While lead may be prohibited from many of these products in the United States, imported products or products produced prior to regulations being established may still pose a risk.</p>	<p>CAMERA</p>
<p>Lead may also contaminate food and beverages through production, packaging, or storage.</p> <p>For example, produce, such as root vegetables, can take up lead from contaminated soil. Another example is homemade alcohol or “moonshine” that was distilled or stored in leaded containers.</p> <p>Packaging may also pose a risk. Until the phase-out in the United States of lead-soldered food cans during the nineteen eighties, canned food was a major source of lead in our diet. Although some plastic food wrappers may be printed with lead-containing pigments, and some food cans produced and sold in foreign countries may be lead-soldered, the amount of lead in the United States diet has declined substantially.</p>	<p>SLIDE 17 (Lead in contaminated products)</p> 
<p>Storage or serving of food or beverages in lead-containing vessels can cause contamination. This includes some ceramic tableware, especially tableware that’s imported, as well as leaded-crystal glassware.</p> <p>Lead-glazed pottery, particularly if it’s imported, is a potential source of exposure that’s often overlooked.</p>	<p>SLIDE 18 (Lead in contaminated products. Continued)</p> 

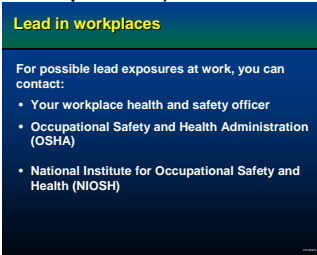
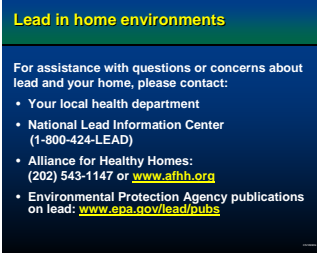
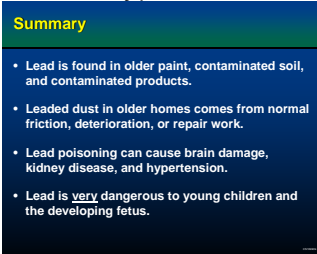
<p>Even "safe" pottery and ceramic-ware can pose a risk. If for example, a dish is chipped or the protective glaze wears off, people can be exposed to lead-containing pigments.</p> <p>Now, let's discuss another potential source of exposure to lead and that is exposures which are related to various cultural practices.</p> <p>Some members of certain ethnic groups may engage in practices that might increase their exposure to lead. Examples include some folk treatments and cosmetics of Mexican, Asian, and Middle Eastern origin.</p>	<p>CAMERA</p>
<p>Azarcon and greta, which are Mexican folk treatments used to treat the colic-like illness "empacho," may contain lead. Azarcon and greta are also known as: liga, Maria Luisa, alarcon, coral, and rueda.</p> <p>Folk treatments containing lead used by some Asian communities are: chuifong, tokuwan, ghasard, bali goli, and kandu.</p> <p>Middle Eastern treatments and cosmetics include: alkohl, saoot, and cebagin.</p>	<p>SLIDE 19 (Ethnic products)</p>  <p>Lead in ethnic products</p> <ul style="list-style-type: none"> • Mexican treatments: Azarcon and greta (also known as liga, Maria Luisa, alarcon, coral, and rueda). • Asian treatments: chuifong, tokuwan, ghasard, bali goli, and kandu. • Middle eastern treatments or cosmetics: alkohl, saoot, cebagin.
<p>Now let's summarize what we've learned about lead in the environment.</p> <p>Because of widespread human use, lead is found throughout our environment. The background levels vary, depending on the historic uses in a given area.</p> <p>The past use of lead in gasoline has contaminated soils, especially along roadways.</p> <p>Industries, such as mining and lead smelting have also contributed to high levels of lead in the soil, water, and air around such facilities.</p> <p>Small businesses, such as auto repair shops, can contribute to elevations of lead in adjacent areas.</p>	<p>SLIDE 20 (Lead in the environment)</p>  <p>Summary of lead in the environment</p> <ul style="list-style-type: none"> • Lead is found throughout our environment. • Lead levels vary from place to place, depending on historic use. • May be elevated in soil near roadways (from pre-1976 gasoline). • Communities near lead mining or smelting facilities may have high lead in soil, water, or air. • Smaller businesses and industries that involve lead may contaminate local area.

<p>Now, who are the people that are most susceptible to lead exposure?</p> <p>Children are more affected by exposure than adults for several reasons. Children generally come into contact with lead because of mouthing and hand-to-mouth behaviors. As mentioned earlier, certain children demonstrate a compulsive hand-to-mouth behavior and repeated eating of nonfood items, called pica. These children are at greater risk for exposure.</p> <p>Children are smaller. They're closer to the ground and play in and roll around on the dirt where there may be contaminated soil. Children also breathe at higher rates than adults, so they breathe in more lead-contaminated dust and soil fumes.</p>	<p>CAMERA</p>
<p>Children who live in housing built before nineteen seventy-eight, especially those in the inner cities and adults who are occupationally exposed, are at the greatest risk.</p> <p>While the level of lead in children's blood has declined in recent decades, there are still many children that are at significant risk of lead poisoning. These children are more likely to be living in poverty and/or from racial or ethnic minority groups.</p> <p>Pregnant women and developing fetuses are also at risk. The mother's blood lead level is an important indication of the risk to her unborn child. In addition, mothers who had exposure to lead in the past may store lead in their bones. Lead may be released from bones during times of higher calcium requirement, such as pregnancy and breastfeeding.</p> <p>Although children are at greater risk from lead exposure, adult exposures can also result in harmful health effects.</p> <p>As mentioned earlier, most adult exposures are occupational and occur in lead-related industries, such as lead smelting, refining, and manufacturing. Adults can also be exposed while engaging in certain hobbies and activities where lead is used.</p>	<p>SLIDE 21 (Who is most at risk of lead exposure?)</p> 
<p>What parts of the body are affected by lead and what are the adverse health effects?</p>	<p>CAMERA</p>

<p>The brain and the nervous system are the most sensitive to lead.</p> <p>Exposure to high levels of lead can permanently affect the brain, bones, kidneys, and the heart.</p>	<p>SLIDE 22 (What parts of the body does lead affect?)</p> 
<p>Lead at any level can cause health effects, and even at low exposure doses may adversely affect a child's development. A high level of lead in the blood of children may produce brain damage, coma, or death.</p> <p>While the major health concern in children is typically neurologic, lead toxicity can affect almost every organ system. It's important to remember that childhood lead poisoning can lead to health effects later in life, including kidney damage, high blood pressure, and other problems such as learning disabilities.</p> <p>Adults with current lead exposure may have neurologic effects similar to children, but normally these occur at higher levels of exposure.</p>	<p>SLIDE 23 (What levels of Lead cause health effects?)</p> 
<p>In adults, slowed nerve conduction, wrist drop, and weakness in the arms show up as late signs of lead intoxication and are more classic signs in workers chronically exposed to high lead levels.</p> <p>In young children, the nervous system is the most sensitive to lead exposure. The main effects are</p>	<p>CAMERA</p>
<p>lowered IQ, learning disabilities, attention deficit and hyperactive disorder, behavioral issues and impaired hearing, which can hinder a child's opportunities for obtaining an education and better opportunities for work. In addition, anemia and developmental problems can also be seen.</p>	<p>SLIDE 24 (What are the effects of lead exposure on young children?)</p> 

<p>Children who are exposed to lead are more likely to have these health problems as adults.</p>	<p>CAMERA</p>
<p>As I mentioned earlier, the effects of lead on adults are similar to children, but require higher levels of exposure. Long-term exposure may also affect the thyroid. In women, lead can adversely affect pregnancy and the unborn child. Prenatal exposure to lead may increase the risk of low birth weight babies and premature birth. In males, lead may impair their ability to have children.</p>	<p>SLIDE 25 (What are the effects of lead on adults?)</p> <p>What are the effects of lead on adults?</p> <ul style="list-style-type: none"> • Similar to children, although generally at higher lead levels. • Long-term exposure may affect thyroid. • Problems with pregnancy and offspring. • May also affect reproduction/fertility.
<p>The symptoms of lead poisoning are not always obvious. In fact, sometimes the family doesn't notice any symptoms. If you or your family have been exposed to lead, not having symptoms doesn't mean that you won't develop health problems later.</p>	<p>CAMERA</p>
<p>There are often no visible effects of lead exposure, even at levels that can cause damage over time.</p> <p>If you or your child are exposed to lead, only a blood test can tell if you have a high lead level. The more lead you are exposed to over time, the greater your risk of disease.</p> <p>The most important thing is to see a doctor.</p>	<p>SLIDE 26 (When do symptoms appear?)</p> <p>When do symptoms appear?</p> <ul style="list-style-type: none"> • Often no visible effects, even at levels that can cause damage. • Only way to determine high blood lead level is a blood test. • The more lead you are exposed to over time, the greater your risk of disease. • Most important thing is to see a doctor.
<p>So once again, the population groups most sensitive to lead are young children and pregnant mothers. Remember, lead can pass from the mother to the unborn child.</p>	<p>SLIDE 27 (Are certain people more sensitive to lead exposure?)</p> <p>Are certain groups more sensitive to lead exposure?</p> <ul style="list-style-type: none"> • Exposure most harmful to young children and the developing unborn child. • Lead is passed from the mother to the developing unborn child and may cause brain damage.
<p>A blood test can tell if you or your child has high blood lead levels.</p> <p>Okay, now who should be tested?</p>	<p>CAMERA</p>

<ul style="list-style-type: none"> • Children should have their blood tested at ages one and two; older children at risk of lead poisoning should also be tested. • Adults who may be exposed to lead at work or through hobbies or activities, such as home remodeling or the other activities mentioned earlier, should be tested. 	<p>SLIDE 28 (Is there a medical test to find out if I was exposed to lead?)</p> <p>Is there a medical test to find out if I was exposed to lead?</p> <ul style="list-style-type: none"> • Children should have their blood tested at ages one and two. • Older children at risk of lead poisoning should also be tested. • Adults who may be exposed to lead at work should also be tested. 
<p>What are some things you can do to prevent exposure to lead?</p> <ul style="list-style-type: none"> • If your home was built before nineteen seventy-eight, you should have it tested for lead, • Make sure all paint is in good condition, • Wet-clean all surfaces, especially window sills, at least every week, • Wash children's hands frequently, • Cover bare soil in the yard, and • Learn about lead-safe work practices when doing work on your home that disturbs paint. 	<p>SLIDE 29 (How can I prevent exposure to lead in my home?)</p> <p>How can I prevent exposure to lead in my home?</p> <ul style="list-style-type: none"> • If your home was built before 1978, you should have it tested for lead. • Make sure all paint is in good condition. • Wet-clean all surfaces, especially window sills, at least every week. • Wash children's hands frequently. • Cover bare soil in the yard. • Learn about lead-safe work practices when doing work on your home that disturbs paint. 
<p>How can you prevent exposure to lead in your workplace?</p> <p>If you work around lead paint, solder, or other products that contain lead, you may want to:</p>	<p>CAMERA</p>
<ul style="list-style-type: none"> • Ask your doctor to test your blood for lead, • Talk to your workplace health and safety officer about what precautions have been put in place, • Wear protective clothing and use a respirator as appropriate, and • Wash your hands carefully and change your clothes before going home. 	<p>SLIDE 30 (How can I prevent exposure to lead in my workplace?)</p> <p>How can I prevent exposure to lead in my workplace?</p> <p>If you work around lead paint, solder, or other products that contain lead:</p> <ul style="list-style-type: none"> • Ask your doctor to test your blood for lead. • Talk to your workplace health and safety officer. • Wear protective clothing and use a respirator as appropriate. • Wash hands carefully and change clothing before going home. 

<p>If you're concerned about possible lead exposure at work, you can contact:</p>	<p>CAMERA</p>
<ul style="list-style-type: none"> • Your workplace health and safety officer; • The Occupational Safety and Health Administration, or • The National Institute for Occupational Safety and Health. 	<p>SLIDE 31 (Lead in workplaces)</p> 
<p>If you are concerned about possible lead exposure in your home, you can contact:</p>	<p>CAMERA</p>
<ul style="list-style-type: none"> • Your local health department, • The National Lead Information Center, • The Alliance for Healthy homes, or • The Environmental Protection Agency's web site for publications on lead and remodeling. 	<p>SLIDE 32 (Lead in home environments)</p> 
<p>Now let's review what I have discussed about lead in this web cast:</p> <ul style="list-style-type: none"> • Lead is found in older paint, contaminated soil, and contaminated products. • Leaded dust in older homes comes from normal friction, deterioration, or repair work, • Lead poisoning can cause brain damage, kidney disease, and hypertension, and • Lead is <u>very</u> dangerous to young children and the developing unborn child. 	<p>SLIDE 33 (Lead Summary)</p> 

<p>If you would like more information on lead and it's health effects, you may contact any of the resources listed on the next SLIDE. Thank you!</p>	<p>CAMERA</p>
<ul style="list-style-type: none"> • Agency for Toxic Substances and Disease Registry (ATSDR) <ul style="list-style-type: none"> – Referrals to occupational and environmental health clinics. – Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. – www.atsdr.cdc.gov; 1-800-CDC-INFO • Regional poison control center. • State, county, or local health department. 	<p>SLIDE 34 (How can I get more information?)</p> 