

Completing a Childhood Lead Exposure Interview and Questionnaire

When a child under six years of age has an elevated blood lead level or lead poisoning, the *Childhood Lead Exposure Questionnaire* should be completed with the child's parent or guardian. The questionnaire information should be logged into the Healthy Housing Lead Poisoning Surveillance System (HHPSS) following the steps outlined in the HHPSS manual.

The following text guides individuals through the interview process when speaking with the parent or guardian. The individual conducting the interview should explain the purpose of the interview and why each question is important. Each section contains one or more educational discussion points that should be shared with the parent or guardian.

Pre-Interview Tips:

- Questions may be answered in a previously administered questionnaire and need only be verified.
- Check events to review any previous contact attempts or completed questionnaires.
- Check address and associated persons, to see if any siblings or relatives have previously had an open case, questionnaire, lead risk assessment or other events completed.

Conducting the Interview

- Call the parent or guardian and confirm with whom you are speaking.
- Confirm that the interviewee has 15 to 20 minutes available for the interview.

I. Demographics:

Discussion Points:

Children less than six years old are at a higher risk of lead exposure. This is because their bodies are rapidly developing and more susceptible to taking in lead if exposed. Young children also tend to put their hands or other objects into their mouths. This is why the most common source of lead exposure in young children is lead dust that they swallow after placing their lead-contaminated hands or other objects in their mouths.

Lead-based paints were banned for residential use in 1978. Homes built in the U.S. before 1978 are likely to have some lead-based paint. When the paint peels and cracks, it makes lead paint chips and dust.

If the child recently relocated, there may be lead hazards at the previous address. That address may be responsible for or contributed to the child's lead exposure.

- Confirm/add full name, date of birth (DOB), gender, race, birth country, ethnicity, and other demographic information.
- Add any children less than six years old who reside in the household.
- Verify current address.
 - Enter date child moved to residence. You may reference a season, (i.e. spring, summer, fall or winter) to assist in pinpointing a move-out date, which is critical for determining jurisdiction.

- Enter year the home was built. Verify the date via the county auditor's website.
- Check if they own or rent:
 - If living with family, check the rent box.
 - If renting, check if receiving any subsidies such as Section 8, public housing, etc. This information is used to determine who may be responsible for the property.
- Enter any previous addresses where child lived within the last year.
 - Confirm move in and out dates of all addresses associated with the child.
- Confirm guardian name, relationship and occupation.
- Collect mobile phone number and email address, if applicable.
- Ask permission to communicate via text and/or email.

II. Potential Exposure:

Discussion Points:

Some adults work in industries or have hobbies that expose them to lead. These adults may bring lead home with them and unknowingly expose their families to lead. This dust can be tracked onto carpets, floors, furniture, and other surfaces that a child may touch.

Workers are exposed to lead as a result of the production, use, maintenance, recycling, and disposal of lead material and products. Lead exposure occurs in most industry sectors including construction, manufacturing, wholesale trade (leaded consumer products), transportation (leaded gasoline or commercial road paint), remediation (lead abatement or hazardous material removal) and recreation (see hobbies listed below).

Construction workers are exposed to lead during the removal, renovation, or demolition of structures painted with lead pigments. Workers may also be exposed during the installation, maintenance, or demolition of lead pipes and fittings, lead linings in tanks, radiation protection, leaded glass, work involving soldering, and other work involving lead metal or lead alloys. In general industry, workers encounter lead in solder, plumbing fixtures, rechargeable batteries, lead bullets, leaded glass, brass, or bronze objects, and radiators. Lead exposure can occur not only in the production of these kinds of objects but also in their use (e.g., firing ranges), repair (e.g., radiator repair), and recycling (e.g., lead-acid battery recycling).

Employers are required to protect workers from inorganic lead exposure under OSHA lead standards covering general industry. Blood lead testing is required in certain industries to ensure workers are protected. OSHA can be consulted if there is a concern about worker safety in the private sector. Find further information here: <https://www.osha.gov/contactus/bystate/OH/areaoffice>. If an employee is a public employee, more information can be found here: <https://info.bwc.ohio.gov/for-employers/safety-and-training/safety-consultations/perrp>.

Hobbies that may involve exposure to lead hazards include:

- Casting or soldering (e.g., bullets, fishing weights, stained glass).
- Mixing or applying glaze or pigments containing lead (pottery and ceramics).
- Conducting home renovation, repair, remodeling, or painting in structures built prior to 1978.
- Shooting firearms.
- Drinking home-distilled liquids (e.g., moonshine).

Tips to reduce take-home lead exposure include:

- Shower and change clothing before leaving worksite and entering vehicle.
 - If unable to shower and change clothing at work, do so upon arrival at home.
 - Take off work shoes in the garage or home's entryway.
- Wash work clothes separately from family's laundry.

Work

- Record all individuals who spend time with child who are employed in lead-related occupations. Document the details of the source of lead exposure including:
 - Occupation field.
 - Source of exposure.
 - Length of employment.
 - Whether showers are offered, and clothes are changed at work.

Hobby

- Record all individuals who spend time with the child who has a hobby involving lead.
- Document the details of the hobby lead exposure including:
 - How often the activity takes place.
 - Where the hobby takes place.
 - Whether shower is available or if clothes are changed before entering the home.

Home Remedies/Food Drink

Certain products purchased in other countries and brought to the United States may contain high levels of lead. Lead has been found in health remedies, eye cosmetics (kohl, surma) candies and wrappers, spices, snack foods, clay pots and dishes, painted toys, and children's jewelry. See toolkit, imported products flyer, and CDC website <https://www.cdc.gov/nceh/lead/prevention/sources/foods-cosmetics-medicines.htm>, for other specific examples.

- Document whether child uses herbal/ayurvedic remedies or vitamins including:
 - Type and purpose of remedy.
 - When, amount and how often it is given.
- Document whether family uses imported or handmade ceramics.
 - If so, document how the item is used.
- Document if any cosmetics such as Kohl, Kajal, Surma are used on the child.
 - List the name of cosmetic.
 - How often it is used.
- Document if child consumes food/drink made in other countries.
 - If so, include the name of food/drink.
 - How item was brought to the U.S.
 - Amount of item.
 - How long a child has been consuming the item.

Behavior

Young children often put their hands or other objects into their mouths. Hence, one of the most common sources of lead exposure in young children is lead dust ingested after placing lead-contaminated hands and/or objects in their mouths.

- Document whether child has been seen eating or mouthing non-food items.
 - If so, note specific items or behaviors.
- Check if child sucks his/her thumb and/or fingers.

Frequented Properties

- Document whether child spends 6 or more hours per week away from home. Include:
 - Name, phone number and address of the caregiver.
 - Dates and number of hours spent per week.
 - Details regarding the building condition and construction date.

- Document whether child attends a childcare facility, pre or elementary school. Include:
 - Name, phone number and address of the facility.
 - Dates and number of hours spent per week.
 - Details regarding the building condition and construction date.

III. Environmental Questions

Answer the questions for current and previous addresses, childcare facility, school, and any other address where child spends six hours or more a week.

Discussion Points:

Lead-based paints were banned for residential use in 1978. Homes built in the U.S. before 1978 are likely to have some lead-based paint. When the paint peels and cracks, it makes lead paint chips and dust. The primary way in which most children are exposed to harmful levels of lead is through contact with deteriorating lead paint and lead contaminated dust.

This can occur in other locations outside the home, as well. Lead-based paints were often used on porches, wood siding, and outbuildings, such as garages, because it lasted longer. Exposure to the elements wears down the paint and will contaminate the soil as well.

Lead-contaminated soil continues to be a hazardous source of lead exposure for young children in the United States. Deposits from leaded gasoline, exterior lead-based paint, and industrial sources have contributed to increased levels of lead in the soil.

Let the water run before using it for drinking or cooking. If you have a lead service line, let the water run for 3-5 minutes. If you do not have a lead service line, let the water run for 30-60 seconds. The more time water has been sitting in your pipes, the more lead it may contain. More information can be found at the following link: <https://epa.ohio.gov/static/Portals/28/documents/pws/LeadinDrinkingWater.pdf>.

Paint Questions

- Document whether there has been any recent repainting or remodeling.
- Document whether there are paint chips in window troughs or windowsills.
- Document whether there is any flaking paint inside or outside, including any outbuilding or other structures.
- Document whether your child has picked at or chewed on any painted surface, or eaten any paint chips.

Soil Questions

- Document whether there is any bare dirt on the property.
- Document whether child has eaten or put dirt in his/her mouth.
- Document whether there are any paint chips on the ground.

Water Questions

- Document whether the property has a well.
- Document whether tap water is used for drinking or food preparation.
 - If so, document if the water is used immediately.

IV. Exposure

Some common lead exposure routes include:

- Indoor/outdoor pets. Pets may track in lead when enter the home, especially if they tend to dig in bare soil.
- Nearby industrial or major roadways. Leaded gasoline exhaust contaminated soil along roadways.
- Antique furniture. Some furniture may be painted with lead-based paint or varnish.
- Art supplies. Frequently chewed on crayons and sidewalk chalk have previously been recalled for containing lead. American made art supplies (Crayola, rose art, etc.) are tested and have a seal that they are lead free. Check the consumer product safety website for any lead safety recalls, see toolkit for link.
- Metal items. Keys, belt buckles, and jewelry may contain lead and should not be encouraged as teething items.
- Batteries.

Residential

- Document observations made during the home visit that may be of concern. Include deteriorated paint from all areas of the home, garages, outdoor structures. List any off-site lead sources in proximity such as a major roadway, industry, or construction sites.

Other Sources

- Document any potential sources discussed including antique furniture, toys and pets.
- Document duration of such use or exposure.
- Document if any of the other potential sources have been tested.
 - If so, document by whom.

Regularly clean floors and windowsills with wet wipes. Any household detergent is sufficient. Wipe areas and dispose of the wipe/paper towel. This helps to pick up lead dust. Avoid sweeping as it spreads the dust. Vacuums should be sealed around a HEPA filter so that all the dust is forced through the filter. See Prevent Childhood Lead Poisoning in toolkit for more cleaning tips and location of a HEPA vacuum available to loan.

V. Medical/Developmental Information

A diet rich in vitamin C, calcium, iron, zinc, and magnesium reduces the likelihood of lead absorption and increases the likelihood of lead excretion. The body will more readily absorb lead if the child is deficient in these nutrients. Also, the body doesn't differentiate between iron and lead so keeping iron levels up helps the body to be less likely to absorb lead.

Foods to boost iron, calcium, and Vitamin C include:

- **Iron** - lean red meats, beans (pinto, black, kidney), peanut butter, cereal, dried fruit.
- **Calcium** - milk, yogurt, cheese, leafy greens.
- **Vitamin C** - oranges, red/green peppers, citrus juices, tomatoes, broccoli, and sweet potatoes.

Nutrition Information

- Document whether family receives food stamps (SNAP).
- Document whether a nutrition assessment has been completed on child, such as through WIC or primary care physician.
- If so, list source
- Document whether child is/was breastfed.
 - Breast milk may contain lead if mom is currently or had previously elevated lead levels. The CDC recommends mom pump and discard milk until her lead level drops below 40 µg/dL.

- Document whether child is or has been anemic or takes iron supplements.
- Document whether there are any concerns for child's nutrition if child is a picky eater, or if family needs help getting food.

Links to applications for food assistance including WIC and SNAP benefits are provided in the toolkit.

Developmental Information

Children under the age of three whose confirmed lead level is equal to or greater than 5 mcg/dL will receive a referral for Early Intervention services automatically. However, if a delay is suspected, please refer directly. Lead exposure may cause brain and nervous system damage. It can cause growth and developmental delays and create learning and behavior problems.

- Document whether child is enrolled in Help Me Grow, or if child has had any developmental testing.
- Document if any developmental delays have been identified and if services are provided.
- Document whether family feels the need for services or if child is progressing as expected.
- Document any delays noted when observing child.

A link to make a Help Me Grow referral is available in the toolkit.

Medical Information

Children may display no symptoms, especially at lower levels. Often, symptoms are not apparent until years after the child was exposed to lead when more complex brain functioning is needed. Lower IQ's as well as behavioral problems are a couple ways lead exposure manifests later in life.

Children may not have medical insurance or a primary care physician. Some children are tested at a clinic or a local health promotion. Often, refugees are tested upon entering the United States. These families may need a referral for Medicaid. A link to the application is available in the toolkit. Medicaid recipients may also receive additional resources such as, free transportation for doctor visits, cash, food, medical, or childcare assistance. They should contact their local DJFS case worker for more specifics.

- Document the child's primary care physician.
- Document whether the child has health insurance/ or Medicaid benefits.
- Document whether the child takes medication or has any medical problems such as asthma, diabetes, or ADHD.
- Document whether the child has displayed any symptoms of lead poisoning.

Chelation

Chelation therapy is recommended when a child's blood lead level is 45 mcg/dL or higher. The chelating agent binds with the lead to be excreted in urine. Vital minerals may also be excreted with lead. Thus, it is essential that the child is not in an environment with lead hazards while undergoing chelation therapy. Also, lead stored in bones may be released back into the blood after chelation therapy. This rebound effect can continue for quite some time. Therefore, regular blood lead testing is important.

- Document whether the child is receiving chelation therapy.
 - If so, when and what medication.
- Document whether the child was hospitalized for chelation.
 - If so, where was medical treatment administered and name of physician.

Referrals

Make referral to appropriate agencies or programs as needed. See toolkit for links to applications and available handouts.

- Document whether the family consents to have the child screened for any developmental delays.
- Document whether the family consents to referrals to any other programs.

Tips, Common Events and Scenarios

- Some doctors refer families to ODH or their LHD to request a home inspection. Health department staff conduct lead risk assessments when a child's confirmed blood lead level is $\geq 10\mu\text{g/dL}$. Licensed lead risk assessors are available for hire and tax credit is available for lead abatement work.
- Increase fruit and vegetable consumption with smoothies. Hide vegetables in other food sources.
- Individuals may be eligible for \$1000 emergency moving fee for a family who has a child with EBLI who is on Medicaid. They may contact their local department of job and family services case worker for options.
- Refer to toolkit for more educational information.