“Protecting Our Kids from Lead”

A Toolkit for Pediatric Healthcare Providers

NORTH SHORE HEALTH DEPARTMENT

Serving the Wisconsin communities of Bayside, Brown Deer, Fox Point, Glendale, River Hills, Shorewood and Whitefish Bay

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Department of Health Services

State of Wisconsin

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Childhood Lead Testing Challenges

In recent years, consistent childhood lead testing practices in the North Shore have been on the decline. This has created some challenges for our area pediatricians. We are hopeful that North Shore pediatricians will be able to address the following challenges in order to improve the childhood lead testing practices in our communities.

1. Decreasing Blood Lead Level Reports to the State

Between 2013-2015, there was a **50% decrease** in the number of blood lead level reports coming to the Health Department.

2. Increasing Elevated Blood Lead Levels in North Shore Children

Among children that received a blood lead level test from 2013-2015, there was an **increase from 2.6% to 4.2%** in the prevalence of children with an elevated blood lead level ≥5 µg/dL.

3. Decreasing Number of Children Tested

Four of the seven North Shore communities experienced a **decrease in the percent of children tested** for lead poisoning from the combined years of 2005-2009 to 2010-2014.

Introduction

The North Shore Health Department Childhood Lead Poisoning Prevention Toolkit for Providers was created for health care professionals as a reference guide for wellness care and prevention for infants and children who may be at risk for lead exposure. This toolkit was developed by the North Shore Health Department and contains additional information from the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP), and the Wisconsin Childhood Lead Poisoning Prevention Program (WCLPPP).

Section I contains information for health care providers about current national and Wisconsin-specific guidelines regarding blood lead screening for infants and children. The section includes what the Four Easy Questions of the Wisconsin blood lead screening recommendations cover, and why they should be utilized in our area. The section also provides a clinic-level policy template that pediatric clinics can implement to ensure proper screening, reporting, and follow-up measures.

Section II contains parent education materials designed to assist health care professionals in primary, secondary, and tertiary care to provide assistance to parents about the dangers of lead poisoning. These patient-centered resources can be printed and distributed to patients and their families to prevent childhood lead poisoning and to intervene when there is a high blood lead level in a child.

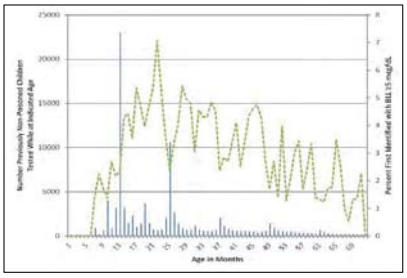
Risk Factors for Childhood Lead Poisoning

The Wisconsin Department of Health Services identifies these categories that increase a child's risk to have an elevated blood lead level: age of child, age of housing, family income, and pockets of risk.

Age of Child

Wisconsin

- The State of Wisconsin recommends testing children around 12 months of age, and again at 24 months of age. A low blood lead level at 12 months does not indicate that there is no risk to the child, so a follow-up screening at 24 months is necessary.
- At these ages, children are becoming more mobile and their ability to access lead hazards and transfer lead dust particles to their mouths is increased.



The figure above shows that most Wisconsin children are tested only around 12 months of age.

North Shore

- In the North Shore communities in 2014, 309 children aged ~10 months to ~13 months old (representing the 1-year mark) were tested for elevated blood lead levels, and only 251 children aged ~17 months old to ~27 months old (representing the 2-year mark) were tested for elevated blood lead levels.

Age of Housing

Wisconsin

- The state of Wisconsin considers older housing stock to be housing built before the year 1950, because these homes are more likely to be deteriorating at a greater rate.
- A previous analysis found that 90% of children identified with lead poisoning in Wisconsin between 1996-2006 lived in housing built before 1950.

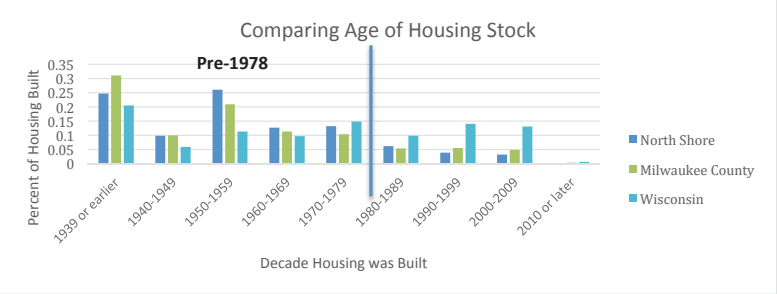
North Shore

- In the North Shore communities, there are over 10,000 homes built before 1950, and these homes make up 34.61% of the total housing stock. The North Shore communities are at a greater risk for elevated blood lead levels from older housing stock than Wisconsin as a whole.

Risk Factors Continued

Age of Housing – North Shore, continued

The figure below shows that while North Shore and Milwaukee County housing was predominantly built in earlier decades of the 20th century, Wisconsin in comparison has more housing stock built in recent decades.



Lead-Based Paint

- Another housing risk factor identified by the Centers for Disease Control (CDC) is housing that contains lead-based paint. Lead-based paint was not banned until 1978, so all housing built before 1978 is likely to contain lead-based paint.
- In Wisconsin, 62.2% of housing was built 1979 or earlier. In the North Shore communities, 86.6% of housing was built in 1979 or earlier. By looking at the figure once again, we can see that North Shore communities are at a greater risk when considering housing as a risk factor compared to the rest of the state.

Family Income

Wisconsin

- A family with a child that receives Medicaid benefits or vouchers from WIC is considered low-income.
- Children from low-income families are at greater risk for elevated BLL due to fewer housing selections and poorly maintained housing.
- There is a federal mandate that all children on Medicaid and WIC receive a blood lead test at 1-years-old and at 2-years-old, but Wisconsin is falling short.

Risk Factors Continued

Family Income, Continued

North Shore

- Within the North Shore communities, 9.6% of residents receive Medicaid health benefits. Although that may sound like a small percentage, our physicians and pediatricians also serve many community members from surrounding areas in Milwaukee County. In the county, 30.7% of our population receives Medicaid health benefits.
- Looking at a small sample of our pediatricians' offices in the North Shore, we found that the offices are not testing all children on Medicaid at 1 and again at 2-years-old.

Below is a table showing 2015 data on the number and percentage of children on Medicaid served by our sample of North Shore pediatricians that were tested.

Table 1. Sample of Medicaid Children Tested in North Shore, 2015

Age	Total Seen	Total Tested in 2015	Percent Tested in 2015
1 Year	586	354	60.4%
2 Year	466	256	54.9%
3-5 Years, not previously tested	137	17	12.4%
Total	1189	627	52.7%

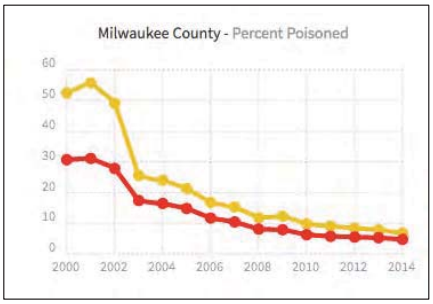
The Importance of Testing Medicaid-Enrolled Children

- Medicaid-enrolled children in Wisconsin are at a three-times greater risk of having an elevated blood lead level than children who are not on Medicaid.
- In 2014, 88% of children who had lead poisoning in Wisconsin were on Medicaid.

Pockets of Risk

Wisconsin

- Children statewide are at risk for lead poisoning, but significantly higher rates are seen in communities with a higher prevalence of older housing and other risk factors for childhood lead poisoning, including family income.



This figure shows the decrease in the percentage of children who have been lead poisoned (elevated blood lead level of 5-10µg/dL) from 2000-2014 in Wisconsin and Milwaukee County.

Risk Factors Continued

Pockets of Risk—Wisconsin, Continued

In 2014, the state average percentage of children who were lead poisoned was 4.69% compared to the Milwaukee County average of 6.73%. Milwaukee County consistently has a higher percentage of children under 6 that are lead-poisoned when compared to the entire state. It is important to focus lead testing awareness efforts in areas like Milwaukee County where the risk for lead poisoning in children is higher.

Milwaukee County

The state of Wisconsin collects lead testing data at a broader, county level, and also within individual census tracts. County-level data is helpful when looking at a greater geographical area, while census tract-level data is helpful to compare neighborhoods to one another. Because the North Shore is a subset of Milwaukee County, we can use both county-level and census tract-level data to identify pockets of risk in our communities.

- Within Milwaukee County, the North Shore communities can be considered as a pocket of risk because of older housing stock and because the physicians and pediatricians are likely to serve Medicaid-enrolled children.
- In 2014, 75% of the census tracts in the North Shore communities had higher than the state average (4.69%) of children in their communities with elevated blood lead levels (5-10µg/dL).

National Recommendations for Lead Screening

Centers for Disease Control and Prevention (CDC)

The CDC has long recognized that there is no safe level of lead in the body.

- In 2012 the CDC updated its recommendations on children's blood lead level and reduced the reference level from 10 µg/dL to 5 µg/dL.
- Now, it is recommended nationwide that when a child's blood lead level is 5 µg/dL or greater, parents will be notified, a physician will issue a venous blood draw to confirm the elevated level, and the local health department will follow up with the family if the venous draw is elevated as well.
- The CDC will reconsider the reference value for children's blood lead concentrations every 4 years (Updated in June, 2016).

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

For more information please visit www.cdc.gov/nceh/lead/

American Academy of Pediatrics (AAP)

Recommendations for Pediatricians, Health Care Providers, and Public Health Officials

- Pediatricians and other primary care health providers should conduct targeted screening of children for elevated blood lead concentrations if they are 12 to 24 months of age and live in communities or census block groups with ≥25% of housing built before 1960 or a prevalence of children's blood lead concentrations ≥5 µg/dL (≥50 ppb) of ≥5%.
- Pediatricians and other primary care providers should test asymptomatic children for elevated blood lead concentrations according to federal, local, and state requirements.
    - Immigrant, refugee, and internationally adopted children also should be tested for blood lead concentrations when they arrive in the United States because of their increased risk.
- The pediatrician or other primary care provider should attempt to verify that screening was performed elsewhere and determine the result before testing is deferred during the office visit.
- Pediatricians and other primary care providers should test children for elevated blood lead concentrations if they live in or visit a home or child care facility with an identified lead hazard or a home built before 1960 that is in poor repair or was renovated in the past 6 months.
- Pediatricians and primary care providers should work with their federal, state, and local governments to ensure that a comprehensive environmental inspection is conducted in the housing units of children who have blood lead concentrations ≥5 µg/dL (≥50 ppb) and that they receive appropriate case management.

For more information please visit http://pediatrics.aappublications.org/content/138/1/e20161493

Wisconsin Blood Lead Screening Recommendations And the Four Easy Questions

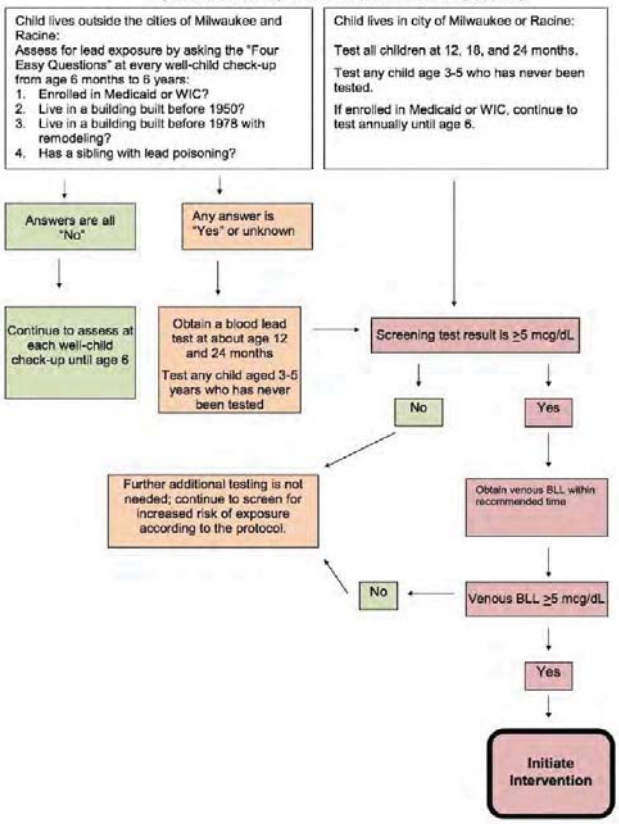
For the full report and more information on the Wisconsin Blood Lead Screening Recommendations, please visit: https://www.dhs.wisconsin.gov/lead/links/wibloodleadscreeningrecommendations.pdf

Table 5.2 Wisconsin blood lead screening recommendations

Recommendations for Wisconsin outside the cities of Milwaukee and Racine	
Age	Recommendation
12 months *and* 24 months	Ask the Four Easy Questions (see below) Test if any one answer indicates a risk of exposure or the child is enrolled in Medicaid or WIC
36 – 72 months	If no record of previous test, ask the *4 Easy Questions* Test if any one answer indicates a risk of exposure or the child is enrolled in Medicaid or WIC
Four Easy Questions 1. Does the child now live in or visit a house or building built before 1950 or have they ever in the past? (include places such as day care, home of friends, grandparents or other relatives) 2. Does the child now live in or visit a house or building built before 1978 with recent or ongoing renovations or have they ever in the past? (include places such as day care, home of friends, grandparents or other relatives) 3. Does the child have a brother, sister or playmate who has/had lead poisoning? 4. Is the child enrolled in Medicaid or WIC?	
Recommendations for the cities of Milwaukee and Racine	
Age	Recommendation
Under 3 years	Test around 12 months Test around 18 months Test around 24 months
3 – 5 years	Children enrolled in Medicaid, WIC or uninsured: Test around 36 months Test around 48 months Test around 60 months
	Any child: Test if no record of prior test Test if lives in house built prior to 1978 with recent or ongoing renovations Test if child has sibling or playmate with lead poisoning Test if lives in a house built before 1950 (Racine only)

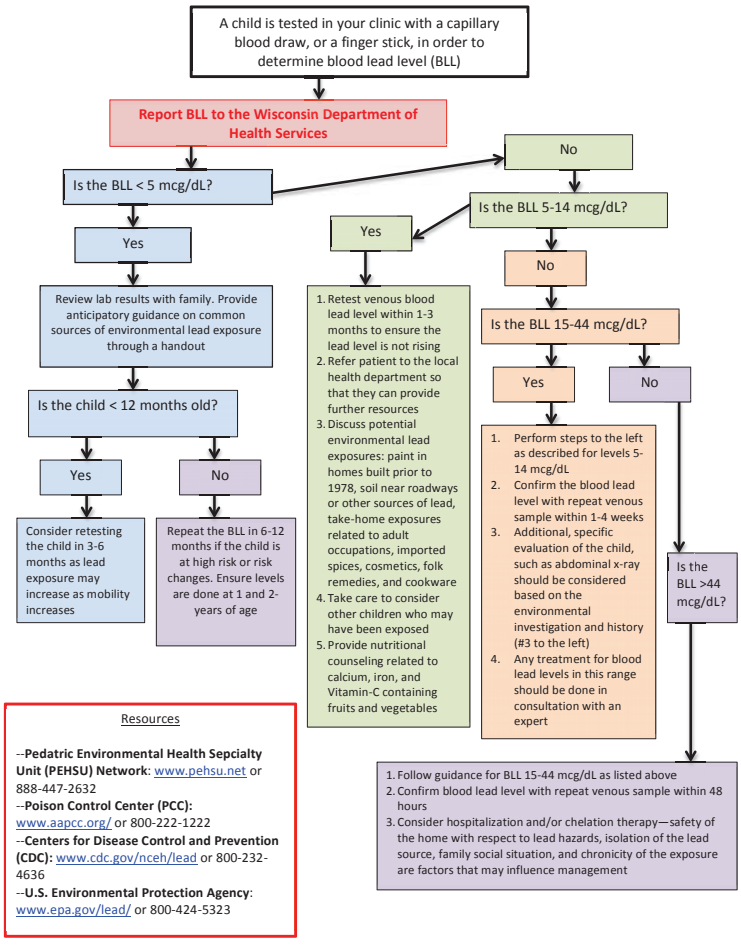
Screening Wisconsin Children Flowchart

Figure 5.1 Screening Wisconsin children for lead poisoning



Chapter 5.6

Medical Management of Childhood Lead Exposure Flowchart



Clinic-Level Lead Screening Policy Template

1. **OVERVIEW**

   This section should include a brief description of the organization's policy for when lead testing is performed. The facility's laboratory director must review and approve its policy and procedures for lead screening.

   NOTE: Procedures should include standing orders to screen individuals using a point-of-care device if a health care provider is not present at the time of the screening to order the test, how to obtain legal consent for testing those less than 18 years of age, and follow-up steps for results of 5 µg/dL or greater.

2. **EQUIPMENT AND MATERIALS REQUIRED**

   All equipment used to perform testing should be included in this section (i.e. analyzer, treatment tubes, space where testing is performed, disposable workspace cover, etc.).

3. **ENVIRONMENTAL CONDITIONS**

   This section should include:

   ___ how and when work surfaces are cleaned to avoid lead contamination from dust

   ___ how the laboratory stores reagents and quality materials and how the temperatures are monitored to make certain that these materials are stored at the temperatures required by the manufacturer

   ___ site(s) where testing will occur, including off-site screenings, such as health fairs or home visits

4. **CALIBRATION**

   This section should include an explanation of how the device is calibrated in accordance with the manufacturer's package insert.

5. **QUALITY CONTROL**

   This section should include:

   ___ a description of the quality control materials used

   ___ an explanation of when and under what circumstances quality control is performed (i.e. on each new test kit, with each new operator, etc.)

   ___ an explanation of next steps if the quality control is not within the manufacturer's acceptable range (i.e. rerun quality control, open new quality control, contact the manufacturer, etc.)

6. **COLLECTION REQUIREMENTS AND SPECIMEN REJECTION CRITERIA**

   This section should include:

   ___ a description of how specimens are collected

   - Specimens are collected first through a capillary blood draw. Please use “Table 5.2 Wisconsin Blood Lead Screening Recommendations” provided in this toolkit to identify when to screen a child based on the Four Easy Questions.

   ___ an explanation of when specimens are unacceptable for testing and a follow-up plan of action for next steps (i.e. collect another specimen, etc.)

- **RECORD KEEPING**

  This section should describe how the laboratory records instrument calibration, and kit lot numbers and quality control results for each day's runs.

- **RESULTS AND INTERPRETATIONS**

  This section should include:

  ___ a description of how results are reported including the result obtained and the unit of measurement (i.e. 10.2 µg/dL, <3.3 µg/dL)

  ___ an explanation of when specimens are referred to a laboratory holding a permit for confirmatory testing

  ___ an explanation of when follow-up testing will be performed

- **CONFIRMATORY TESTING**

  This section should include:

  ___ a description of when specimens are collected for confirmatory testing by a Wisconsin Laboratory

  - If the capillary blood draw is elevated, then a confirmatory venous sample should be taken. Please follow the following guidelines from the Wisconsin Blood Lead Screening Recommendations Chapter 5.9:

Blood Lead Level (mcg/dL)	Time to confirmation testing
≤ 5 - 9	1 – 3 months
10 - 44	1 week – 1 month*
45 - 59	48 hours
60 - 69	24 hours
≥ 70	Urgently as emergency test

*The higher the BLL on the screening test, the more urgent the need for confirmatory testing.

- **PUBLIC HEALTH REPORTING**

  This section should include:

  ___ an explanation of how and when blood lead results are reported

  ___ an explanation of who receives the laboratory's reports

  ___ an explanation of the timeframe in which the laboratory reports (i.e. within 24 hours of analysis, etc)

Childhood Lead Poisoning

What You Should Know about Your Child's Blood Lead Test Results

What is childhood lead poisoning?

Childhood lead poisoning is a sickness caused by swallowing or breathing lead dust. Lead poisoning can hurt a child's brain and nervous system and slow down growth and development. Exposure to lead can affect almost every organ and system in a child's body. It is most harmful to a child's brain. Children whose bodies have too much lead may have problems with learning and behaving well. They may be cranky or too active, and they may have trouble paying attention. These problems may not show up until a child is in school.

Where does lead come from?

Lead is a metal found in the earth. Lead was used in household paint (until 1978), in gasoline (until the early 1980s), and in some pipes for drinking water. Children come into contact with lead in different ways. The most common sources of lead are paint in homes built before 1978 and the lead dust and soil that comes from the lead paint. Other sources of lead include: Drinking water, imported products, and dust that adults bring home from hobbies or from jobs that use lead.

How do I know if my child is lead poisoned?

A blood test is the only way to find out whether your child is lead poisoned. Your health care provider may take blood from your child's finger or arm to test for lead. Blood lead testing is covered by Medicaid and many private insurers.

What do my child's test results mean?

No safe amount of lead has been found in a child's blood. According to the Centers for Disease Control and Prevention (CDC), most U.S. children ages 1 through 5 years have blood lead levels below 5 µg/dL (micrograms of lead per deciliter of blood). If your child has a blood lead level of 5 or more, your family needs a plan to lower your child's exposure to lead.

Can my child be treated for lead poisoning?

At very high levels (above 45 µg/dL), health care providers may treat children with medicine to help remove lead from their bodies. The medicine can not reverse the injury to the brain caused by lead. It can reduce other serious and even life threatening dangers of lead, such as coma and convulsions. Finding and removing the sources of lead is the most important way to prevent additional exposure and reduce levels in the blood. The next section tells you how to make a plan to reduce your child's blood lead level.

You may need help to reduce your child's blood lead levels. Keep reading to learn how to:

- Work with your health care provider to follow up on your child's lead test
- Seek help from other professionals to find the sources of lead and to fix the problems

National Center for Healthy Housing

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Make a Plan to Reduce Your Child's Blood Lead Level

1) Work with your child's health care provider

☐ **Ask for the blood lead level of your child's blood lead test** (for example, 2, 5, or 10 micrograms per deciliter). Keep a record so that you can show the test results to schools, WIC, or early intervention programs later and track changes over time.

☐ **Ask whether your child needs more follow up**, such as more blood tests, nutrition services, or screening.

☐ **Tell the health care provider about possible sources of the lead** in your child's environment, such as peeling paint in your home or child care, recent painting or repairs, or work, hobbies, or consumer products that may involve lead.

☐ **Be sure that all of your children under age 6 years are tested.**

☐ **Ask your health care provider for a list of local programs that help children** with high blood lead levels.

☐ **Contact your local Pediatric Environmental Health Specialty Unit for more information** on lead poisoning and medical advice: *www.pehsu.net*

2) Find the sources of your child's lead exposure and fix

Find: Paint that is in bad condition (peeling, flaking, chipping, or cracking), inside or outside your home, especially in places where your child spends time

Fix: ☐ **Put a barrier over the area** to keep it out of your children's reach. You can use plastic, duct tape, cardboard, or heavy furniture.

☐ **If you see paint chips or dust on windowsills or floors**, clean these areas regularly with detergent and a damp rag or mop. Do not sweep or vacuum paint chips. For detailed cleaning directions, see *http://nmhealth.org/eheb/documents/Lead/HOW%20TO%20CLEAN.pdf.*

☐ **Frequently wash your child's hands, toys, bottles, pacifiers, and other items** that your child may put in his or her mouth.

☐ If you are a tenant, **tell your property manager about chipping and peeling paint**. It is management's responsibility to fix the problem. If you are worried about reporting the problem, you can contact Legal Aid at *www.lsc.gov/find-legal-aid*

Find: A certified lead risk assessor to look for all the sources of lead in your home and help you decide which repairs need to be done

Fix: ☐ **Contact your local health or housing department to see if they offer lead risk assessments**. For a list of risk assessors in your state, call the National Lead Information Center at 800-424-5323.

Find: Bare soil

Fix: ☐ **Cover bare soil with mulch, wood shavings, or grass.**

☐ **Remove your shoes or wipe your feet carefully on a mat** before you enter your home.

Find: Items that may contain lead

Fix: ☐ **Avoid imported products that may have high levels of lead** such as health remedies, eye cosmetics (such as kohl, kajal, and surma), candies, spices, foods, clay pots and dishes, painted toys, and children's jewelry.

☐ **Read about other sources of lead:** *www.epa.gov/lead/pubs/chancechecklist.pdf*

☐ **Find out about lead in consumer products:** *www.saferproducts.gov*

Find: Renovation, repair, or painting work in a home built before 1978

Fix: ☐ **Keep your child away from any repair work** that disturbs paint. It can create a lot of lead dust.

☐ If you hire a contractor to renovate, repair, or paint your home, **hire someone who is certified in lead-safe work practices** by EPA. See: *www.epa.gov/lead/pubs/renovation.htm*

☐ If you need to fix lead paint hazards, **hire a certified abatement professional**. You can find a firm by calling the National Lead Information Center at 800-424-5323.

☐ If you are working on your own home, l**earn how to work lead-safe**. See: *www.epa.gov/lead/pubs/do-it-yourselfers.html*

☐ **If you come into contact with lead, take a shower and wash your hair before being around any children**.

Find: Lead in drinking water

Fix: ☐ You cannot see, taste, or smell lead in water. **To find a certified laboratory to test your water, see** *http://water.epa.gov/scitech/drinkingwater/labcert/statecertification.cfm*

☐ **To learn whether your pitcher or faucet device does a good job removing lead from your water, see** *www.nsf.org/Certified/DWTU/*

☐ **Use cold tap water for making baby formula, drinking, and cooking.** Always run the cold water for a few minutes before using. Boiling water does not remove lead.

☐ **To learn more call the Safe Drinking Water Hot Line for Lead**: 800-426-4791

Find: Work or hobbies that may involve lead

Fix: ☐ **Remove work clothes and shoes before entering the home.** Wash these clothes separately from other family laundry.

☐ **Do hobby activities away from your home and away from children.**

Blood Lead Levels in Children

What Do Parents Need to Know to Protect Their Children?

Protecting children from exposure to lead is important to lifelong good health. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement. And effects of lead exposure cannot be corrected.

The most important step parents, doctors, and others can take is to **prevent lead exposure before it occurs**.

Update on Blood Lead Levels in Children

- Children can be given a blood test to measure the level of lead in their blood.
- Until recently, children were identified as having a blood lead level of *concern* if the test result is 10 or more micrograms per deciliter of lead in blood. Experts now use a new level based on the U.S. population of children ages 1-5 years who are in the top 2.5% of children when tested for lead in their blood (when compared to children who are exposed to more lead than most children).
- In the past, blood lead level tests below 10 micrograms per deciliter of lead in blood may, or may not, have been reported to parents. The new, lower value means that more children likely will be identified as having lead exposure allowing parents, doctors, public health officials, and communities to take action *earlier* to reduce the child's future exposure to lead.
- What has *not* changed is the recommendation for when to use medical treatment for children. These new recommendations do not change the recommendation that chelation therapy be considered when a child is found with a test result of greater than or equal to 45 micrograms per deciliter of lead in blood.

Actions for Parents

Parents can take simple steps to make their homes more lead-safe.

- Talk to your local health department about testing paint and dust in your home for lead if you live in a home built before 1978.
- Common home renovation activities like sanding, cutting, and demolition can create hazardous lead dust and chips by disturbing lead-based paint. These can be harmful to adults and children.
- Renovation activities should be performed by certified renovators who are trained by EPA-approved training providers to follow lead-safe work practices.
- Learn more at EPA's Renovation, Repair, and Painting rule Web page: http://www.epa.gov/lead/pubs/renovation.htm.
- If you see paint chips or dust in windowsills or on floors because of peeling paint, clean these areas regularly with a wet mop.
- Wipe your feet on mats before entering the home, especially if you work in occupations where lead is used. Removing your shoes when you are entering the home is a good practice to control lead.
- Remove recalled toys and toy jewelry from children. Stay up-to-date on current recalls by visiting the Consumer Product Safety Commission's Web site: http://www.cpsc.gov/.

Lead can be found in a variety of sources. These include:

- **paint in homes built before 1978.**
- **water pumped through leaded pipes.**
- **imported items including clay pots.**
- **certain consumer products such as candies, make up and jewelry.**
- **certain imported home remedies.**

National Center for Environmental Health
Division of Emergency and Environmental Health Services

Background

Effect of a Different Blood Lead Level

- In the past, blood lead level tests below10 micrograms per deciliter may, or may not, have been reported to parents. Identifying a child's blood lead equal to or above 5 micrograms per deciliter means more parents should learn that their child has an elevated blood lead level.
- Even though no medical treatment is recommended for children with blood lead levels lower than 45 micrograms per deciliter, parents will know they need to learn about sources of lead exposure and find out if one or more unrecognized sources of lead are present in their home. Parents then can follow the Centers for Disease Control and Prevention (CDC)'s recommendations to control exposure to lead.
- No changes are recommended to the existing CDC guidelines for the evaluation and treatment of children requiring chelation (those with BLLs ≥ 45 micrograms per deciliter).

New Recommendations to Define Elevated Blood Lead Levels

- In January 2012, a committee of experts recommended that the CDC change its "blood lead level of concern." The recommendation was based on a growing number of scientific studies that show that even low blood lead levels can cause lifelong health effects.
- The committee recommended that CDC link lead levels to data from the National Health and Nutritional Examination Survey (NHANES) to identify children living or staying for long periods in environments that expose them to lead hazards. This new level is based on the population of children aged 1-5 years in the U.S. who are in the top 2.5% of children when tested for lead in their blood. Currently, that is 5 micrograms per deciliter of lead in blood. CDC's "blood lead level of concern" has been 10 micrograms per deciliter.
- The new value means that more children will be identified as having lead exposure earlier and parents, doctors, public health officials, and communities can take action earlier.
- The committee also said, as CDC has long said, that the best way to protect children is to prevent lead exposure in the first place.

To learn more about preventing lead exposure, visit CDC's Web site at http://www.cdc.gov/nceh/lead/

References and More Information on Lead

Wisconsin Department of Health Services

- What is Lead Poisoning
  - https://www.dhs.wisconsin.gov/lead/clppp-info.htm
- Lead Poisoning Data and Data Analysis
  - https://www.dhs.wisconsin.gov/lead/data.htm
- Wisconsin-Specific Lead Poisoning Information
  - https://www.dhs.wisconsin.gov/lead/lead-wisconsin.htm
- Lead-Safe Wisconsin – Tools for Outreach
  - https://www.dhs.wisconsin.gov/lead/toolkits.htm
- Lead-Safe Wisconsin – Website Resources
  - https://www.dhs.wisconsin.gov/lead/leadwebs.htm

North Shore Health Department

- Lead in Water Frequently Asked Questions
  - www.nshealthdept.org/Portals/NsHealthDept.org/Lead%20in%20water%20FAQ(2).pdf
- Childhood Lead Poisoning in the North Shore
  - http://www.nshealthdept.org/Other.aspx

NORTH SHORE
HEALTH DEPARTMENT

Serving the Wisconsin communities of Bayside, Brown Deer,
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