

# Understanding Lead

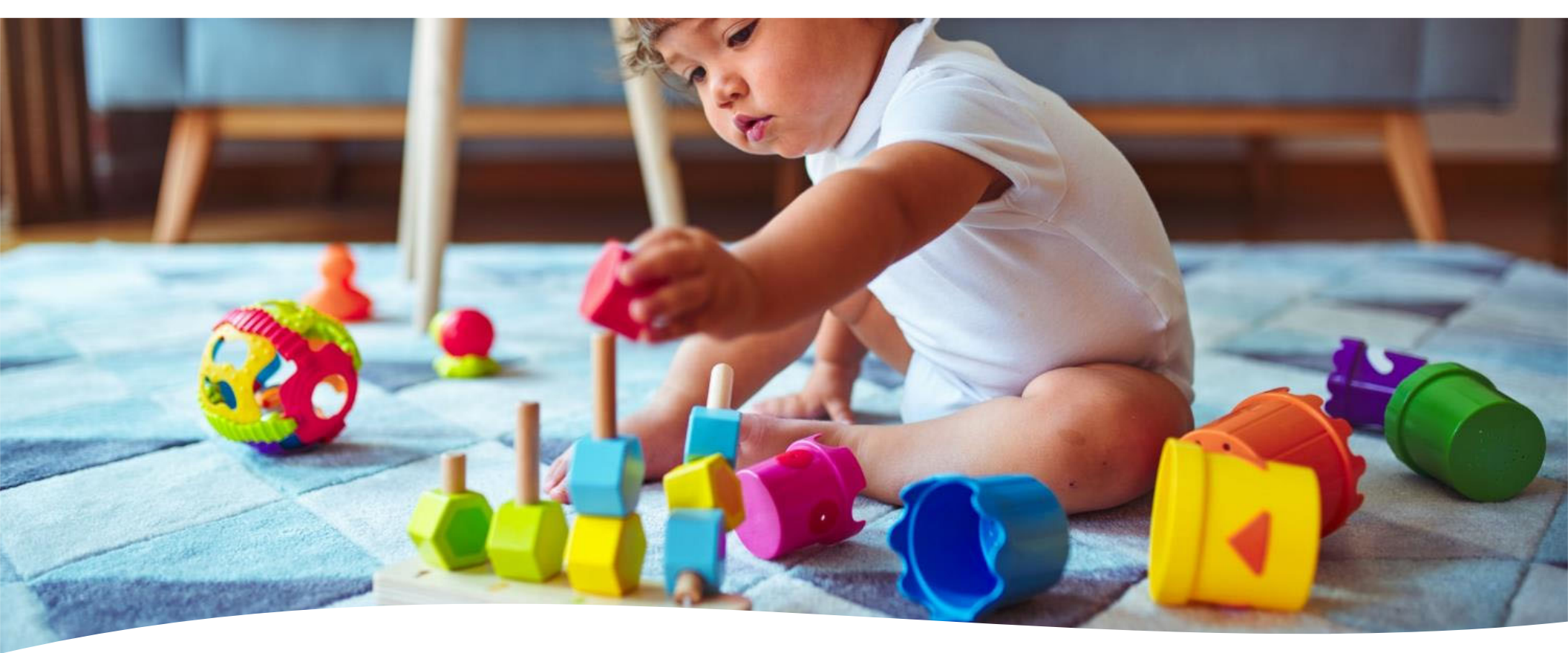
Community Name  
Month, Day, Year





## Outline

- Potential Sources of Lead Exposure
- Vulnerable Populations
- Impacts and Effects of Lead Exposure
- Taking Action



## Introduction

1. How many of you have ever heard of lead or lead poisoning before today?
2. What are some things you have heard about lead or lead poisoning?
3. Does anyone know what year their house or apartment was built; was it before or after 1978?

What questions do you  
have about lead and lead  
poisoning?





Flush your home's pipes by running your tap, taking a shower or doing a load of laundry or dishes before drinking or cooking.

Clean your home once a week using a clean, wet or damp cloth, sponge or mop to minimize dust, which may contain lead.

Eat a well-balanced diet with foods high in calcium, iron, and vitamin C to help reduce the absorption of lead.

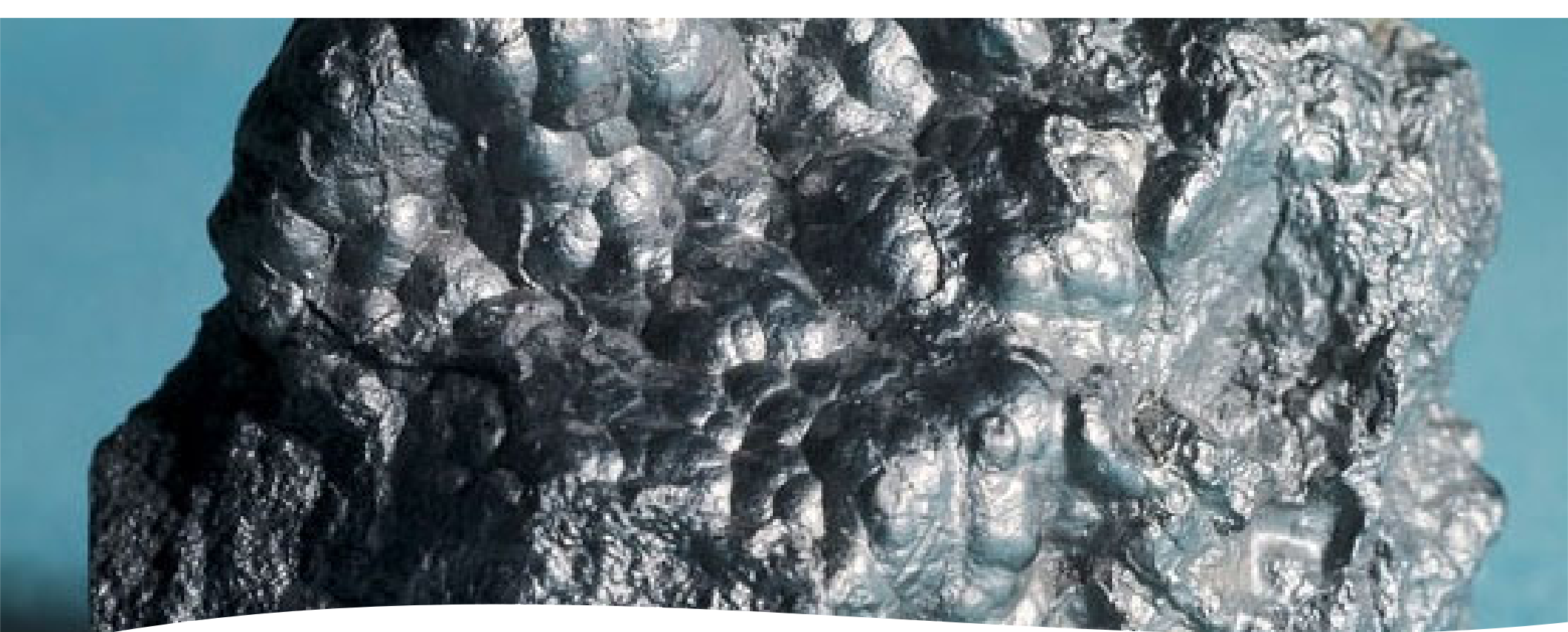
Wash daily any items your child uses regularly, such as pacifiers and toys, to minimize exposure to dust, which may contain lead.

Use soap and water (warm or cold) to wash children's hands several times a day, especially after playing outside or with animals.

Change and wash clothes, remove shoes and shower to avoid tracking lead into the home from soil, work sites, or hobbies.

Hire a certified lead professional when renovation, repair or painting will disturb painted surfaces in a home built before 1978. Keep family out of the work area.

Play in grass and dirt not contaminated with lead, and use designated picnic, camping and hiking areas.

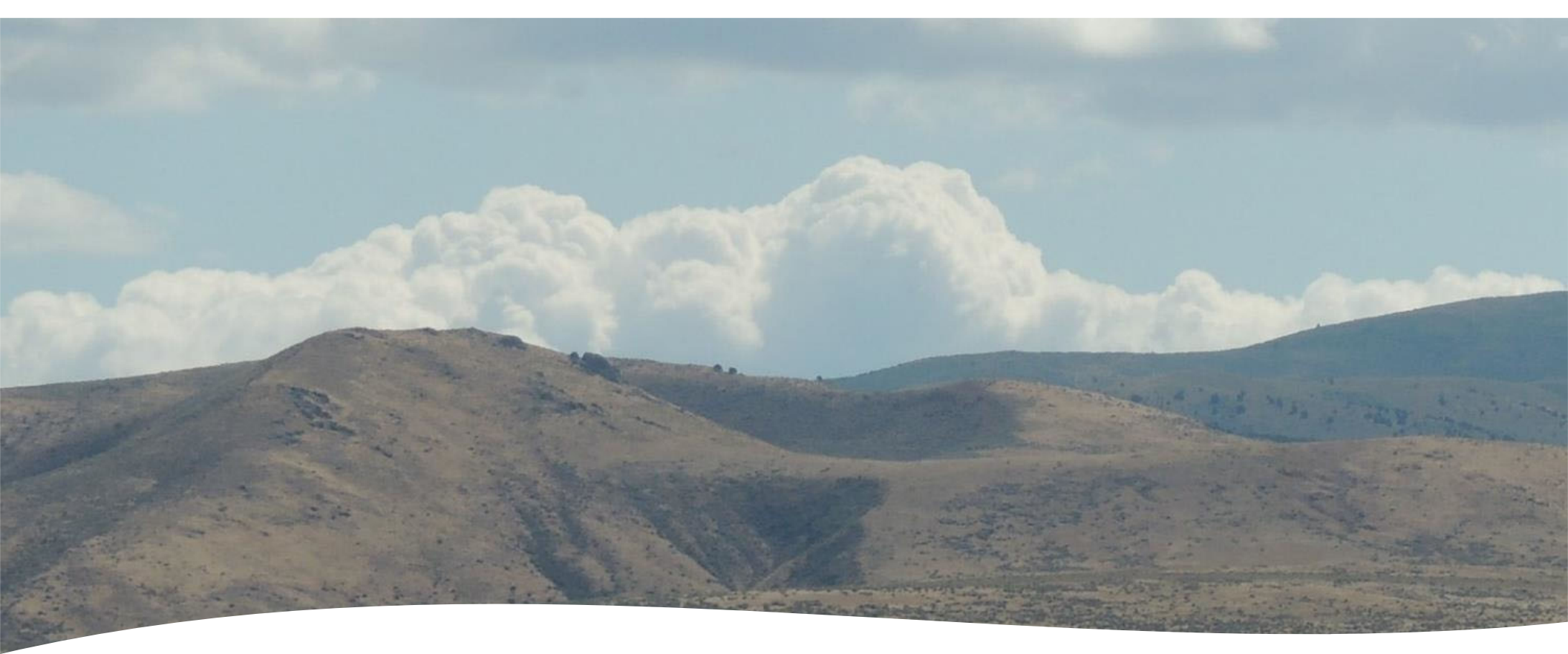


[http://mfritz8science.wikispaces.com/file/view/lead\\_1.jpg/262242078/lead\\_1.jpg](http://mfritz8science.wikispaces.com/file/view/lead_1.jpg/262242078/lead_1.jpg)

## What is Lead?

- Bluish-gray metal found in small amounts in the earth's crust
- Impossible to identify with the naked eye
- Does not biodegrade or disappear from the environment over time

Where do you think lead  
can be found?



**Lead can be  
found in...**

- All parts of our environment:
  - Air
  - Soil
  - Water
  - Inside our homes





## Lead-based Paint

- Found in older homes built before 1978
- Major source of exposure when not maintained
  - i.e., peeling, chipping, cracking
- Chips and dust can scatter and become a hazard
  - These hazards can be breathed in or swallowed by children, residents and workers



## Children can be exposed...

- Through lead-based paint chips and dust in buildings & homes when they put toys, fingers, and other objects in their mouth.
- When licking or biting chewable lead-based paint surfaces
- Lead-based paint has a “sweet” taste



## **Childhood lead exposure and lead poisoning is preventable!**

- When lead-based paint is in good condition and not on an impact or friction surface, it is usually not a hazard
- Keep children from coming into contact with lead



# Potential Sources of Exposure

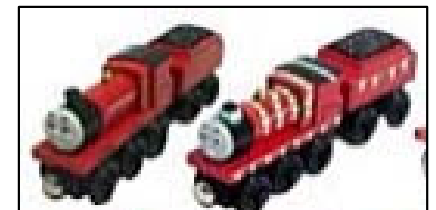
- Painted farm equipment and boats
- Imported pottery, candles, older mini blinds
- Toys
- Ceramicware
- Solder
- Batteries
- Ammunition
- Old cellphones in disrepair
- Cosmetics



Photo by Randy Fath on Unsplash



Imported pottery from Mexico



Toy Recall from  
<https://www.cpsc.gov/Recalls/2007/rc2-corp-recalls-various-thomas-friends-wooden-railway-toys-due-to-lead-poisoning>

# Potential Sources of Exposure

- Any renovation, repair, or painting project in a pre-1978 home can easily create dangerous lead dust
- Hire a lead-safe certified contractor: [epa.gov/lead/findacontractor](http://epa.gov/lead/findacontractor)
- Or follow DIY lead-safe work practices: [epa.gov/lead/rrp-diyers](http://epa.gov/lead/rrp-diyers)





# Potential Sources of Exposure

- Lead can enter drinking water when plumbing materials that contain lead corrode
- [www.epa.gov/protectyourtap](http://www.epa.gov/protectyourtap)



Lead pipes



Faucets

# Potential Sources of Exposure

- Industrial sources and contaminated sites
- Improper disposal/recycling of lead-acid batteries
- Improper storage of metal parts
- Abandoned mines



Photo provided by Zender Environmental and Health Group

# Potential Sources of Exposure

- Imported pottery may contain lead in its glaze and/or other decorations
- Lead glaze can leach into food and drinks that are prepared, stored or served in these dishes
- Many traditional potters have switched to non-lead glazes



# Potential Sources of Exposure

- Using lead ammunition
- Discharging firearms in poorly ventilated areas
- Cleaning firearms or handling lead ammunition
- Many subsistence hunters have switched to lead-free ammunition

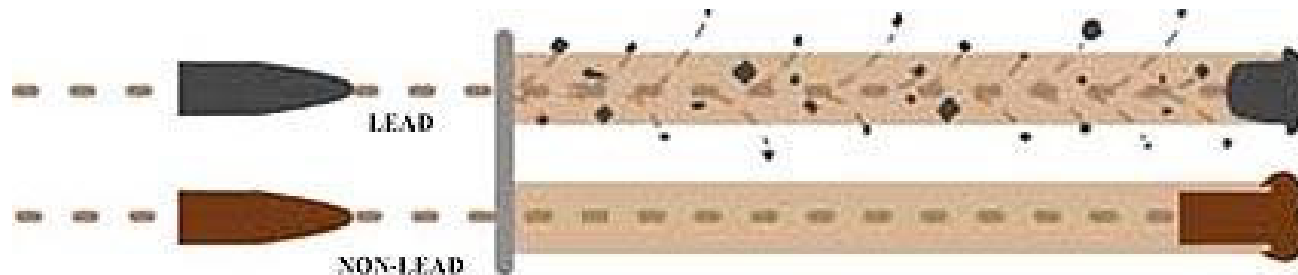


Image from <https://www.fws.gov/midwest/refuges/leadfree.html>

# Potential Sources of Exposure

- Lead in products used to hunt and fish
- Melting lead to make (cast) bullets, sinkers, decoys and other metal items





# Potential Sources of Exposure

- Superfund Sites
  - Known to leach lead into soil and groundwater
  - Tar Creek Superfund Site



Chat pile

Photo provided by Rick Dubois, Director of Environmental Services at Seneca-Cayuga Nation

# Potential Sources of Exposure

- Lead can enter soil and water
- Lead in soil can:
  - Settle on or be absorbed by plants
  - Get tracked into the house on the bottom of shoes
  - Be inhaled if resuspended in the air



Use raised garden beds

Are there other sources of  
lead exposure in your  
community?

# Fill in the Blanks

1. Lead has been found in a variety of products found in our homes, including: imported scented CANDLES, toys, glassware, ceramicware and cosmetics.
2. LEAD-BASED paint, if present in older homes built before 1978, may be a major source of exposure to lead to those who live there.
3. The most common sources of lead in DRINKING water are from lead pipes, faucets and fixtures.

# Vulnerable Populations



Children  
under age 6



Adults  
through jobs,  
hobbies or cultural  
practices



Pregnant and nursing  
people



# Vulnerable Populations



Children  
under age 6

# Vulnerable Populations

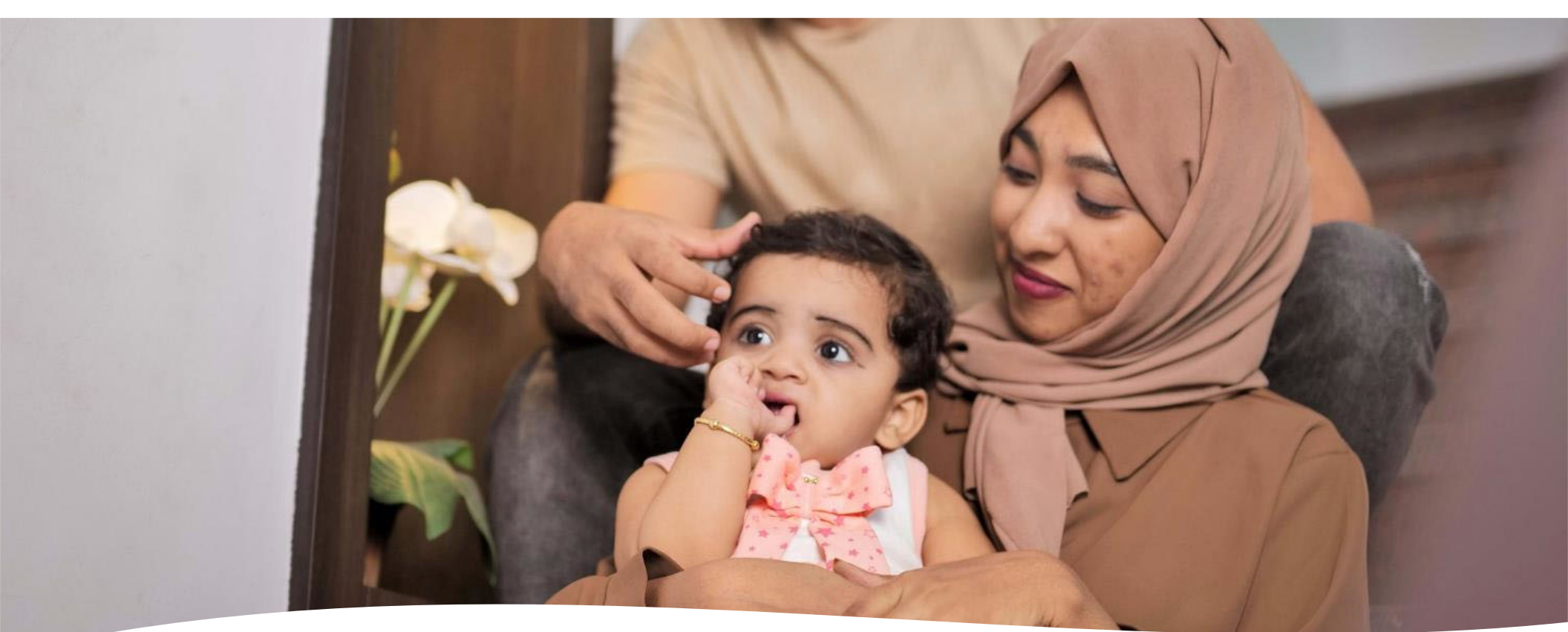


Adults through jobs, hobbies or  
cultural practices

# Vulnerable Populations



Pregnant and nursing  
people



## Impacts and Effects of Lead Exposure

- Harmful to human health
- Impacts the environment and wildlife





## Health Effects: Children

- Behavior and learning problems
- Lower IQ and hyperactivity
- Slowed growth
- Hearing problems
- Anemia





## Health Effects: Adults

- Increased blood pressure and incidence of hypertension
- Decreased kidney function
- Reproductive problems (in both men and women)



## Health Effects: Pregnant People

- Lead can pass from the parent, exposing the fetus or breastfeeding infant
- Puts the parent at risk for miscarriage
- Baby may be born too early or too small
- Hurts the baby's brain, kidneys and nervous system



## Health Effects: Wildlife

- Lead can also impact wildlife species, such as birds, mammals and amphibians
- Animals can be exposed to lead from mining, facility emissions and lead-based paint
- Major source of exposure is ingestion of lead fishing tackle and spent lead ammunition





## Non-Lead Alternatives for Fishing and Hunting Activities

- Action is being taken to increase use of non-lead alternatives for fishing and hunting activities
- For fishing and hunting activities, use:
  - Non-lead ammunition
  - Non-lead lures or sinkers

Are you aware of specific stories  
of how lead has already  
impacted your community?





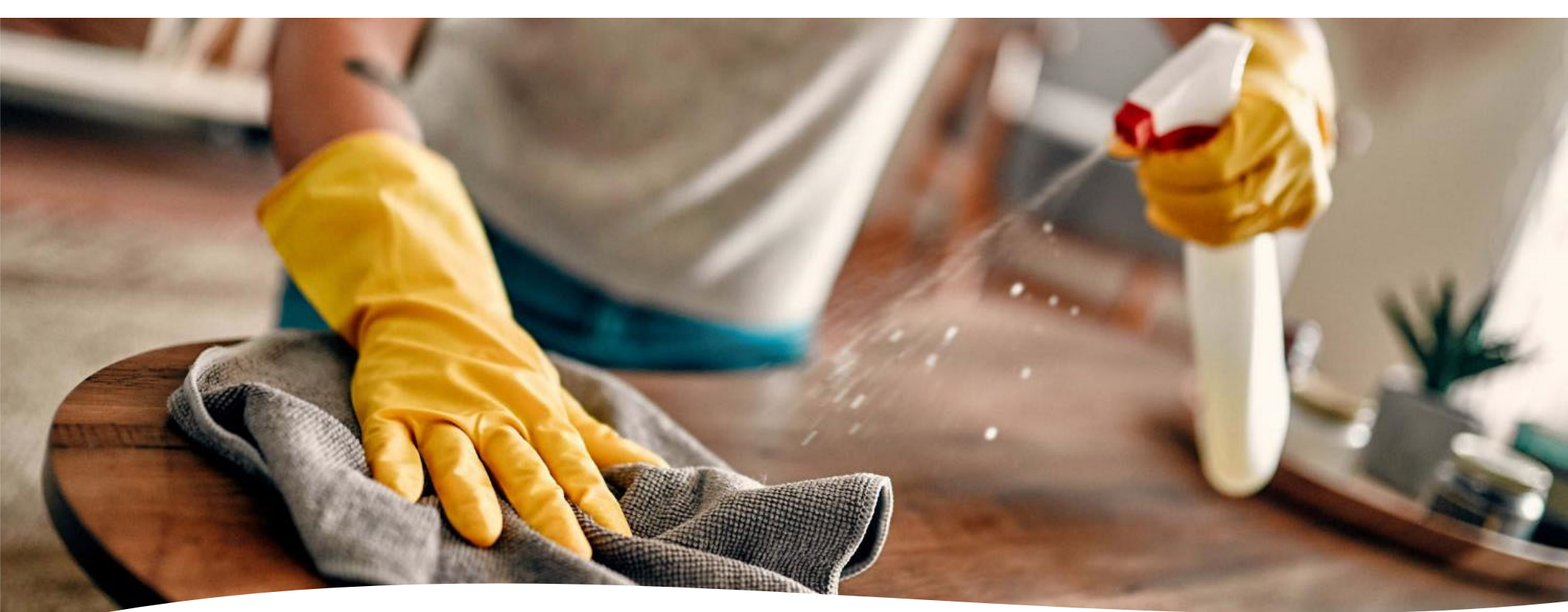
## Cultural Impacts

- Using natural resources
- Imported materials
  - Spices

# Taking Action

Lead exposure and lead poisoning is preventable!

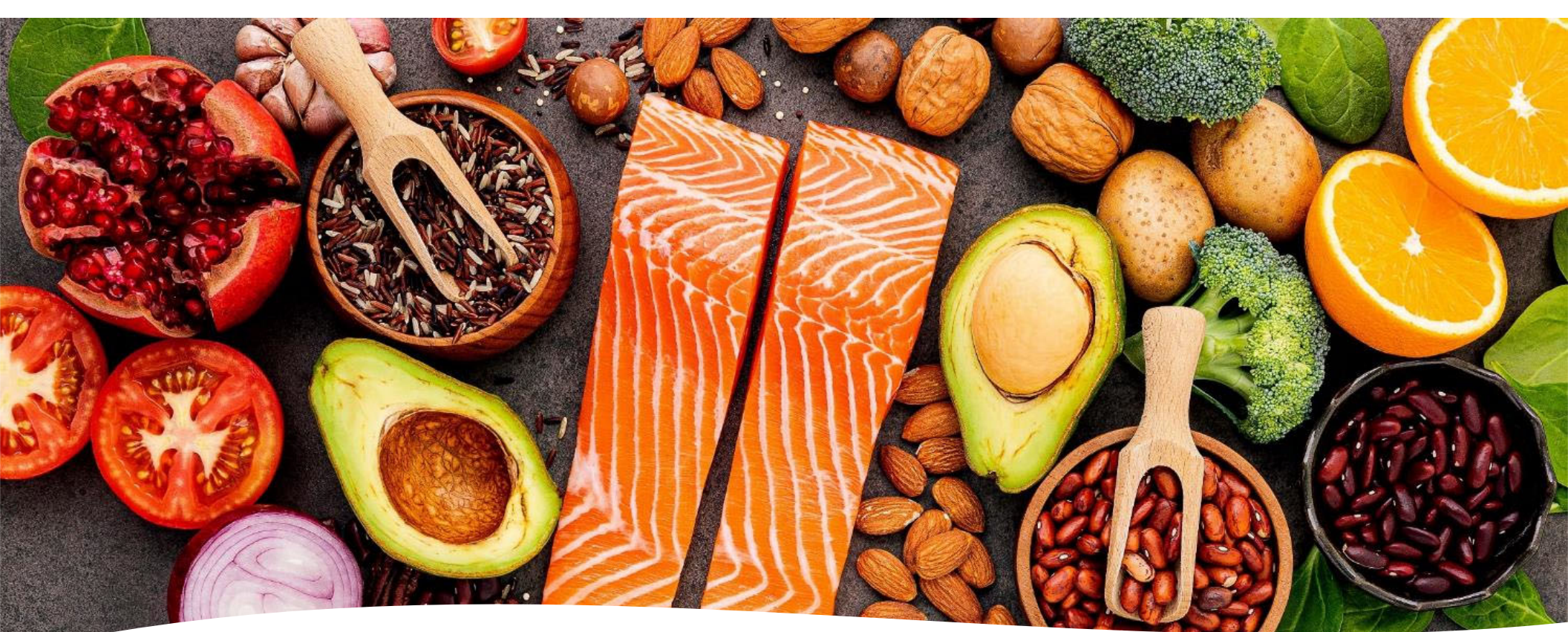




## Keep Homes Clean & Dust- Free

- Wet mop floors and hard surfaces
- Wipe down hard surfaces with a wet cloth
- Inspect and maintain painted surfaces
- Wet wipe peeling, chipping, chalking or cracking paint





## Eat a Diet High in Iron, Calcium & Vitamin C

- Wash food thoroughly with clean water prior to eating
- Do not eat food or drink water that has been cooked or stored in chipped or cracked lead-crystal, lead-glazed pottery or lead-porcelain cookware





## **Eat a Diet High in Iron, Calcium & Vitamin C**

- Use only cold water for drinking, cooking and preparing baby formula
- Know the source of natural resources, ingredients, herbs, etc.
- Check governmental fish advisories for recommendations on fish consumption





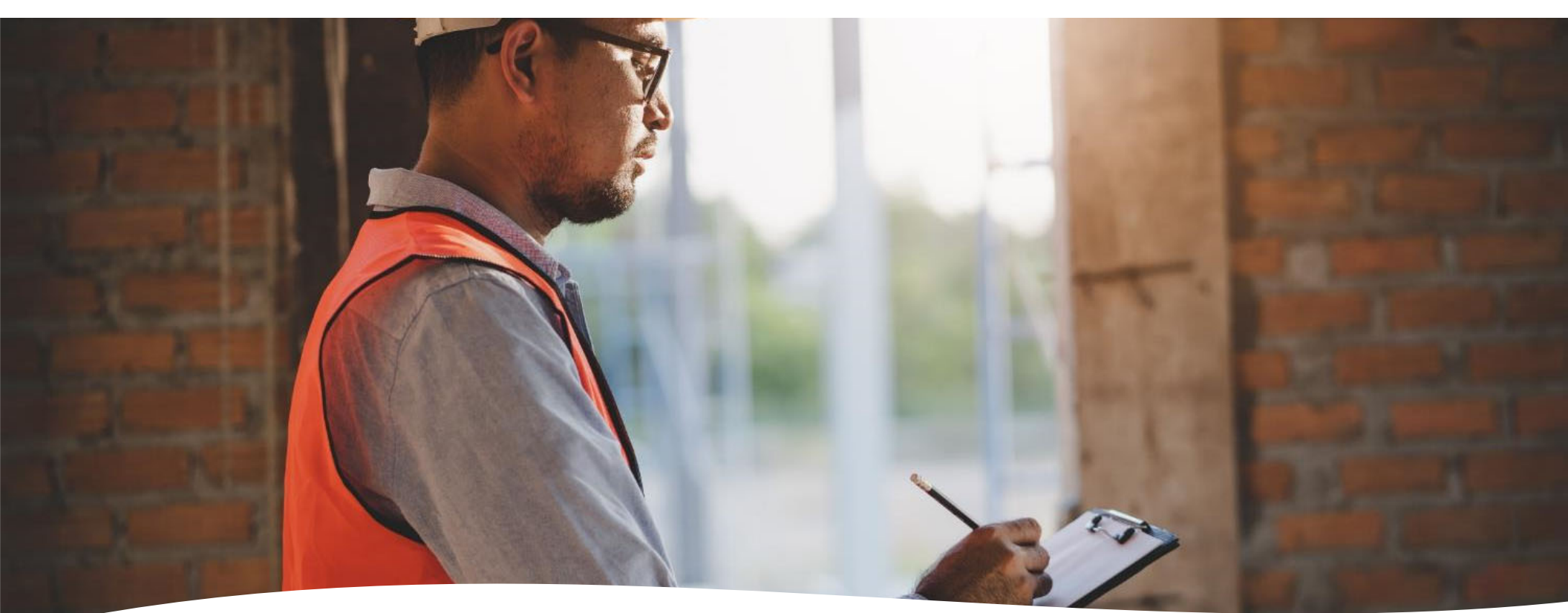
## Wash Hands

- Use soap and water (warm or cold) to wash children's hands several times a day
- Adults should wash their hands after participating in activities in which they may have come in contact with lead



## Play in Grass

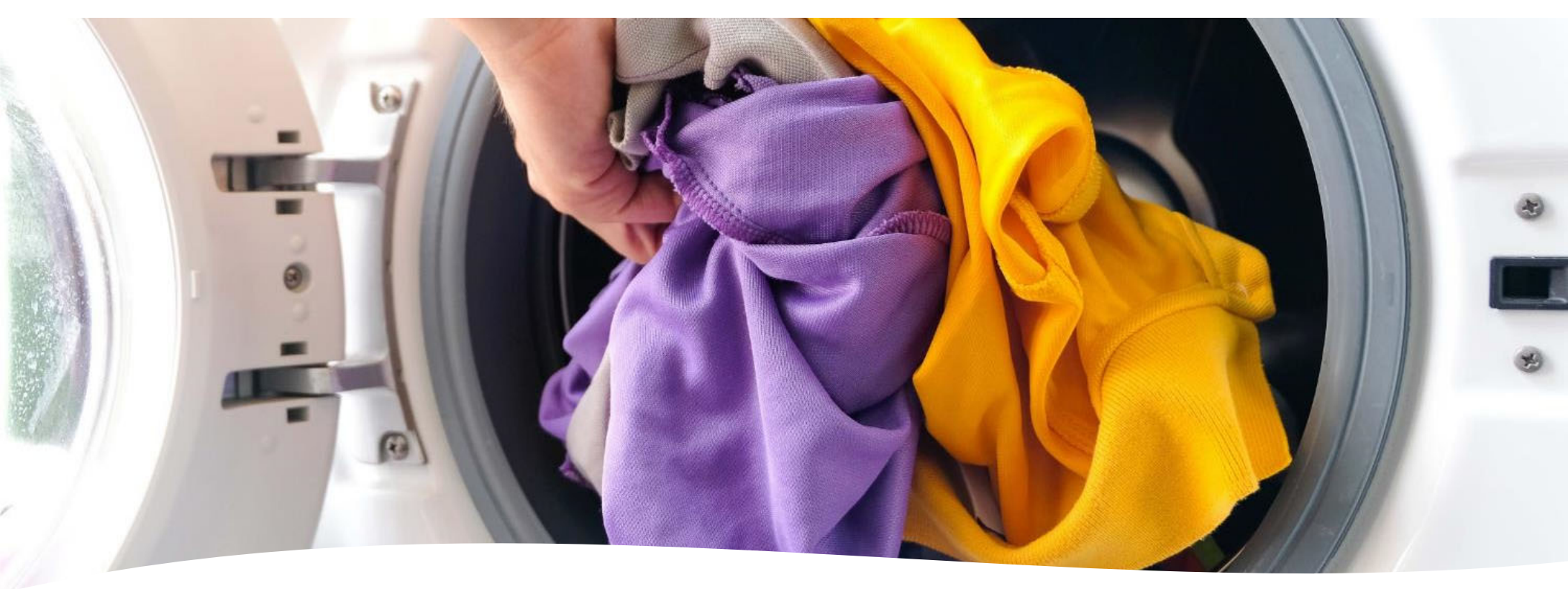
- Play in grassy/non-contaminated bare soil areas
- Use designated picnic, camping and hiking areas
- Wipe, remove shoes and wash hands after playing outdoors
- Wipe off pet's paws
- Place dust mats inside and outside your home



## Hire Certified Lead Professionals

- Hire a certified lead professional for renovation and repair work on pre-1978 homes
- Make sure your contractor is Lead-Safe Certified by EPA
- [www.epa.gov/lead/findacontractor](http://www.epa.gov/lead/findacontractor)





## Shower & Change

- Clean or remove work clothes and shoes before entering your home
- Wash work clothes separately
- Shower after activities in which you may have been exposed to lead



## **Wash Toys, Pacifiers & Bottles**

- Wash children's pacifiers, bottles, and toys, like stuffed animals, often
- Do not let children chew on painted toys, window sills or other painted surfaces





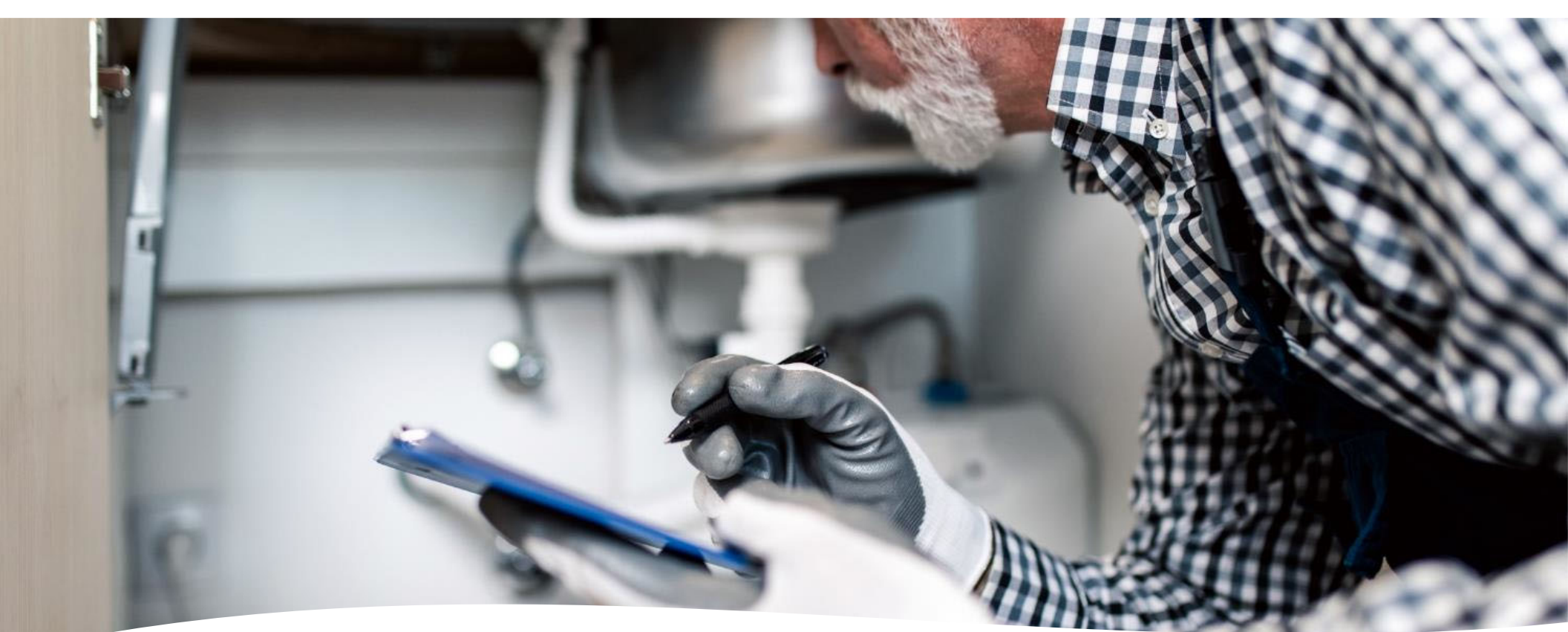
## Run Your Water

- Before drinking, flush your home's pipes by running the tap, taking a shower, doing laundry or washing dishes
- Use a water filter that is certified to remove lead
- Clean faucet screens regularly



## Run Your Water

- Contact your water utility or a licensed plumber to:
  - Determine if the pipe that connects your home to the water main (service line) is made from lead
  - Test your water for lead
  - Learn about lead levels in your drinking water



## Run Your Water

- If your drinking water comes from a private well or cistern, check with your health department or nearby water utility for information on water in your area
- Be aware of any construction or maintenance work that could disturb your lead service line



## Getting Your Child Tested

- Lead exposure often occurs with no obvious symptoms
- A blood test is the only way to know if a child has lead in their blood
- Testing is generally recommended at ages 1 and 2





## Getting Your Child Tested

- Contact your healthcare provider, local health department, clinic or hospital
- [Community Health Center]
  - Address
  - Phone
  - Hours of operation



# Protect Your Family

## Before You Buy or Rent

- Before signing a lease or contract, homebuyers and renters have the right to know whether lead is present.

# Federal Law Requires Buyers & Renters Receive



The image shows the cover of a pamphlet titled "Protect Your Family From Lead in Your Home". The cover is dark blue with three white-bordered photographs on the left: a family with a baby, a crawling baby, and a row of houses. The title is in large white text. At the bottom, there are logos for the EPA, the United States Consumer Product Safety Commission, and the United States Department of Housing and Urban Development. The date "March 2021" is printed in the bottom left corner.

**Protect  
Your  
Family  
From  
Lead in  
Your  
Home**

 **EPA** United States  
Environmental  
Protection Agency

 United States  
Consumer Product  
Safety Commission

 United States  
Department of Housing  
and Urban Development

March 2021

- A copy of the *Protect Your Family From Lead in Your Home* pamphlet
- Any information about the presence of lead-based paint and/or lead-based paint hazards
- Disclosure of information in or attached to the contract/lease

Submit complaints to EPA at  
**1-800-424-5323**



## Conclusion

- We discussed:
  - Potential sources of lead exposure
  - How lead harms children and adults
  - Lead's impacts on the environment and wildlife
  - Actions that can be taken to prevent potential lead exposure



# Review

1. What are the potential health effects of children exposed to lead?
  - Behavior and learning problems;
  - Lower IQ and hyperactivity;
  - Slowed growth;
  - Hearing problems; and
  - Anemia.
2. Are wildlife species also vulnerable to lead exposure and lead poisoning effects?

Yes!

Does anyone have any questions about the information covered today?

# National Lead Information Center

1 (800) 424-LEAD [5323]

- Ask for information about lead, lead hazards and lead exposure prevention.
- Monday to Friday, 8:00 am to 6:00 pm ET (except federal holidays).
- Hearing- or speech-challenged individuals may access this number through TTY by calling the Federal Relay Service at **1-800-877-8339**.