Metals

Cover Letter, Results, & Info Sheets

DEPARTMENT OF HEALTH

Protecting, Maintaining and Improving the Health of All Minnesotans

Dear family,

Thank you for being part of Healthy Kids Minnesota 2022! Over 540 kids from Northeast Minnesota and St. Paul participated and helped their child provide a urine sample that we tested for different chemicals.

What is in this packet?

- Your child's results for one type of chemical we tested – metals – and how their levels compare to other kids in the program.
- Information sheet about the chemicals and tips for reducing exposures.

Why did we measure these chemicals in kids?

Healthy Kids Minnesota gives us a picture of children's exposures across the state. Children's developing bodies are especially sensitive to potentially harmful chemicals that are found in our environment – in our air, water, soil, food, and products we use. Results will help inform families, address community concerns, and work towards policies and programs that reduce childhood exposures.

For certain priority metals (arsenic, manganese, and mercury), we've already contacted families whose children have results we wanted to follow up about.

What can these results tell you about your child?

- They **can** show you how your child's results compare to other children's results in Healthy Kids. This can tell you if your child's results are higher or lower than average.
- They **can** teach you about common ways that children can be exposed to these chemicals and ways to reduce exposure.
- They **can't** tell you whether your child will develop a certain health condition from an exposure. No medical treatment or follow-up is needed.

  See the other side of this sheet for resources to support you as you follow your child's development.
- They **can't** tell you how your child was exposed.
- They **can't** tell you about your child's long-term exposure to these chemicals. Results from urine only show recent exposures.

Please email or call me if you have questions about your child's results. We will send you results for the other chemicals in a separate packet when results are ready. Again, thank you very much for participating in Healthy Kids Minnesota!

Sincerely,

Jessica Nelson, PhD, MPH
Healthy Kids Minnesota Principal Investigator
651-201-3610 | jessica.nelson@state.mn.us

Watch a walkthrough of how to read your results: **health.mn.gov/HealthyKidsVideo**

Developmental Resources For All Chemicals

- **The Follow Along Program** (*www.health.state.mn.us/mnfap*)
  This program supports you as you follow your child's development, as an infant, toddler, and young child. It helps you know if your child is playing, talking, growing, moving, and interacting like other children of the same age. The program will connect you to a nurse or other local public health staff members if you have questions or concerns. Program staff will share developmental information and activities, connecting you to other supports and services as needed. You can join in this program at no cost, regardless of immigration and financial status.
- **Help Me Connect** (*helpmeconnect.web.health.state.mn.us/HelpMeConnect*)
  This program is a navigator connecting expectant families, families with young children (birth – 8 years old), and those working with families to services in their local communities that support healthy child development and family well-being.

Healthy Kids Minnesota 2022

Your Child's Metals Results (Priority Metals)

These three metals are the only chemicals for which we provide rapid follow-up to families. This is because we know more about them and can better help families reduce exposures.

DEPARTMENT OF HEALTH

Watch a walkthrough of how to read your results: **health.mn.gov/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

Levels are in micrograms (mcg) of chemical per liter (L) of urine

Our staff followed up with you immediately if any results fall in the striped area

Mercury

Your child's level: **0.55 mcg/L**

MDH follow-up level: 5 mcg/L

Found in 20% of all kids

Average not given because chemical not found in enough kids

Your child had a high result for mercury.

We tried to contact you to talk about ways to reduce your child's exposure, but never reached you.

Please contact us at 651-201-6733 and we can request an interpreter if needed.

Manganese

Your child's level: **Not found**

MDH follow-up level: 1.5 mcg/L

Found in 20% of all kids

Average not given because chemical not found in enough kids

Manganese was not found in your child's urine so you didn't receive a call from our staff.

Arsenic

Your child's level: **40 mcg/L**

MDH follow-up level: 20 mcg/L inorganic arsenic

Found in 62% of all kids

Your child's high total arsenic result was because of organic arsenic which is **not a health concern.** You didn't receive a call from our staff.

There are two types of arsenic: organic and inorganic. Total arsenic is the amount of organic and inorganic arsenic combined into one number.

Organic arsenic **is not** of health concern. Inorganic arsenic **is** of health concern.

Your child's inorganic level: **6 mcg/L**

We know this because we did an additional test to determine how much of the total arsenic is organic or inorganic. Our staff follows up for any inorganic results over 20 mcg/L.

MDHID: 0000000 | DOB: 00/00/0000

Your Child's Metals Results (Other Metals)

DEPARTMENT OF HEALTH

Watch a walkthrough of how to read your results: **health.mn.gov/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

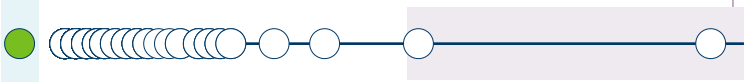
Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

Antimony

Your child's level: **Not found**

Found in 13% of all kids

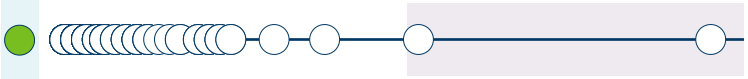


Average not given because chemical not found in enough kids

Cadmium

Your child's level: **Not found**

Found in 4% of all kids



Average not given because chemical not found in enough kids

Chromium

Your child's level: **0.2 mcg/L**

Found in 80% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

Cobalt

Your child's level: **0.2 mcg/L**

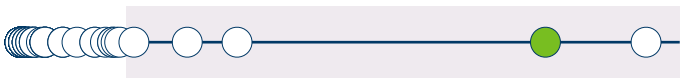
Found in 72% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

Molybdenum

Your child's level: **64.5 mcg/L**

Found in 97% of all kids



Average not given because chemical not found in enough kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

Nickel

Your child's level: **1.0 mcg/L**

Found in 97% of all kids

MDHID: 0000000 | DOB: 00/00/0000

Watch a walkthrough of how to read your results: **health.mn.gov/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

Thallium

Your child's level: **0.2 mcg/L**

Found in 65% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

Tungsten

Your child's level: **Not found**

Found in 22% of all kids

Average not given because chemical not found in enough kids

Uranium

Your child's level: **Not found**

Found in 19% of all kids

Average not given because chemical not found in enough kids

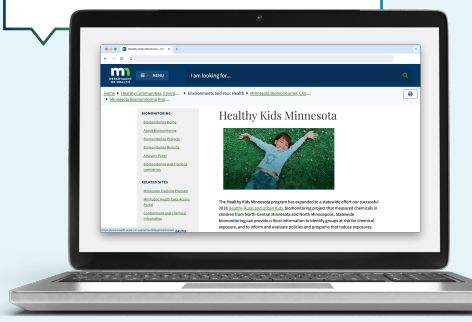
Interpreting Your Child's Results

- Scientists are still learning about what chemical levels in kids' urine are safe.

> If your child's result is above average or higher than expected, this does not mean their health will be affected. Healthy Kids staff will call families whose kids' levels are unusually high. Read the information sheet included and see if there are ways to reduce your child's exposure.

- If you would like to compare your child's levels to more results from Healthy Kids Minnesota (like the 95th percentile), visit: health.mn.gov.us/HealthyKidsResults
- It is not necessary to share these results with your child's health care provider but you can do so if you choose. Resources for provider:
  1. Show them this packet
  2. Visit our provider web page: health.mn.gov.us/HealthyKidsProvider
  3. Contact us: 651-201-6733

Healthy Kids MN: health.mn.gov/healthykidsmn



Visit our website for more information and resources:

- Explanation of Results
- FAQs
- Chemical Information and Resources
- Information for Healthcare Providers

MDHID: 0000000 | DOB: 00/00/0000

Healthy Kids Metals Information

DEPARTMENT OF HEALTH

Metals are naturally found in the environment and get into food, air, and water.

Some metals are essential nutrients at low levels. They are also used in industry and farming and can be found in some products we purchase including foods. If children are exposed to high levels of certain metals, it may harm their health. Some possible health effects include learning and behavior problems, allergic reactions, damage to the lungs, heart and kidneys, and an increase in cancer risk as an adult.

> Finding metals in a child's urine is normal and does not mean their health will be affected. For most chemicals, scientists are still learning what levels may be unsafe.

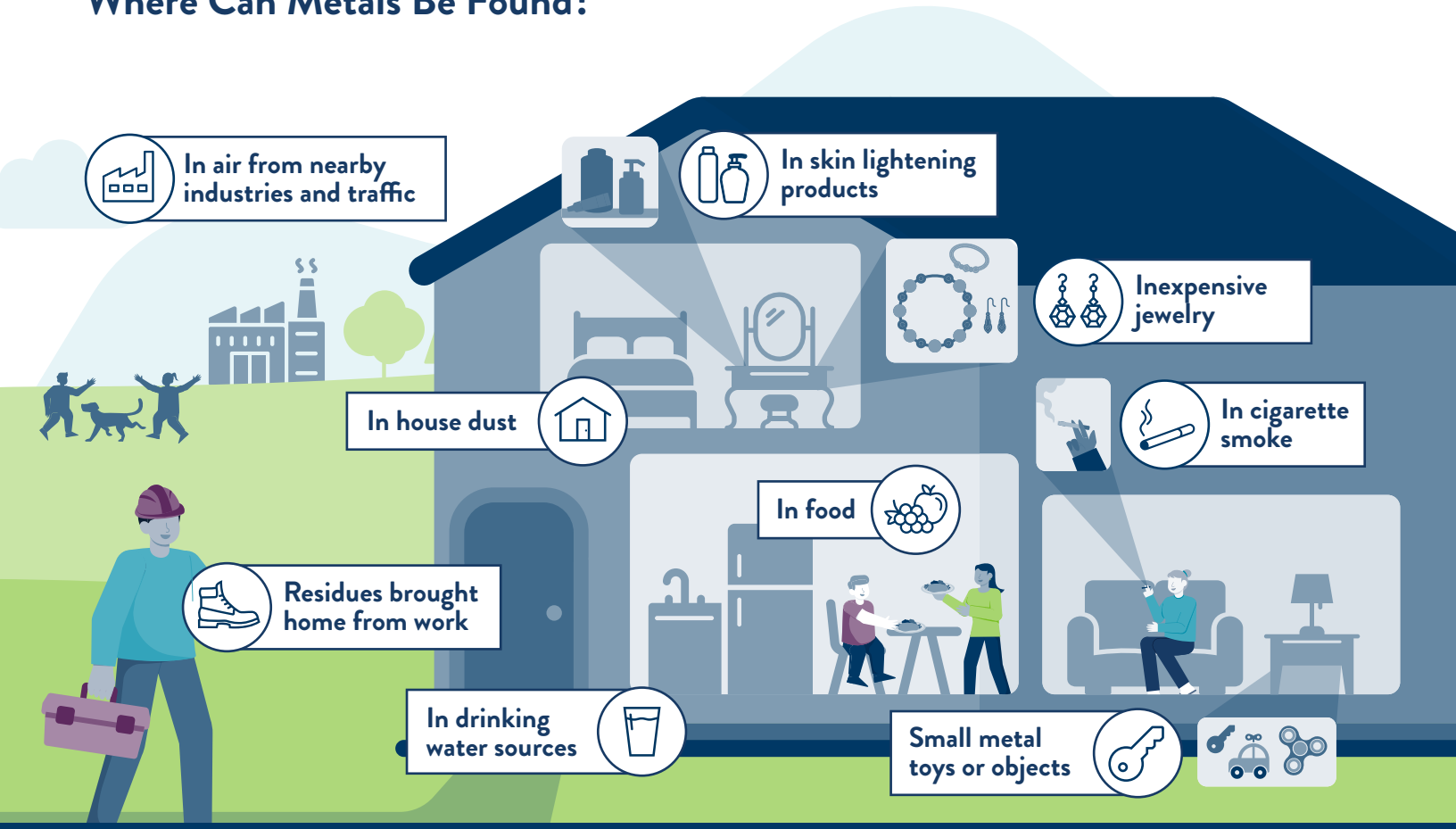
Important Note Regarding Lead: Exposure to lead has many harmful health effects for children. Testing urine is not a good way to check for lead so it is not one of the metals included in Healthy Kids Minnesota. **If you are concerned about lead exposure, speak to your child's health care provider or local clinic.**

For more information and resources, please visit our webpage:

Healthy Kids MN

health.mn.gov/HealthyKidsChemicals

Where Can Metals Be Found?



Priority Metals Tested in Your Child's Urine

Healthy Kids Minnesota tested for twelve metals in children's urine. We know a lot about how to limit exposures to three priority metals we tested: arsenic, manganese, and mercury.

Mercury

Mercury is naturally found in water, food, and air. Mining and industrial sources release mercury into the environment.

Left: Skin lightening products that have been found to contain mercury.

Common Exposures:

Skin Lightening Products: These products can contain high levels of mercury. The sale of mercury-containing products is illegal in Minnesota but they can be purchased online and in some ethnic markets. Use of these products releases mercury into indoor air and can expose children.

Household Products: Mercury used to be common in some products like thermometers. Mercury is still common in fluorescent light bulbs. When these products break, mercury can get into air.

Fish: Large, locally caught fish such as bass, walleye, and northern pike, tend to have the highest levels of mercury. Some store-bought fish, including tuna, do too.

Ways to Lower Exposure:

Do not purchase or use any skin lightening products. Mercury in these products cannot be seen or smelled, and often the product ingredient list is not complete.

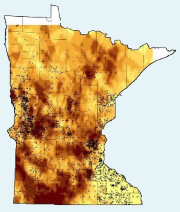
If a glass mercury thermometer or fluorescent light bulb breaks, it must be cleaned up properly following recommended guidelines. Do not sweep or vacuum the mercury.

Follow MDH's safe-eating guidelines to reduce mercury exposure from fish.

Note: Healthy Kids Minnesota urine results don't provide information about your child's exposure to the type of mercury found in fish.

Manganese

Manganese occurs naturally in water, rocks, soil, food, and air. Your body needs some manganese to stay healthy, but too much can be harmful. Manganese from the diet is not a health concern.



Projected Manganese Levels in Private Wells

Lower levels

Higher levels

Common Exposures:

Drinking Water: About 50% of private wells in Minnesota are estimated to have a manganese level higher than what is safe for an infant to drink (see map).

Jobs and Hobbies: Adults who weld or work in a factory where steel is made may be exposed to high levels of manganese. They can bring the manganese home on clothes or other surfaces.

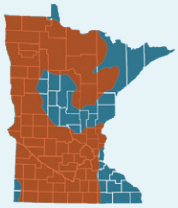
Ways to Lower Exposure:

Test your private well water. If an unsafe level of manganese is detected consider installing a treatment unit or using a different drinking water source.

Follow safe working practices and avoid bringing dust home. Shower and change clothes and shoes when you finish work.

Arsenic

Arsenic occurs naturally in rocks and soil. Some arsenic in the environment is from human activities. It was an ingredient in pesticides and wood preservatives.



Arsenic Levels in Groundwater

- *Lower levels*
- *Higher levels*

Common Exposures:

Food: Arsenic is in certain foods, including:

- Rice and rice products like rice milk, cereals, and snacks
- Fruit juice, especially apple, pear, and grape

Drinking Water: About 40% of private wells in Minnesota have arsenic (see map). You cannot see, taste, or smell arsenic in drinking water.

Wood Structures: Children can be exposed by playing on older outdoor wood structures, like decks or play equipment, if they are not cedar or redwood.

Ways to Lower Exposure:

Rice is the main source of arsenic in food. If your child eats rice or rice products multiple times per day:

- Eat a variety of rice types and brands because some types of rice have more arsenic. White rice has lower arsenic than brown rice.
- Check where the rice is grown. White basmati rice from California, India, and Pakistan and sushi rice from the U.S. may have less arsenic.
- Cook the rice in extra water like you cook pasta – use 6 times as much water as rice and then drain.
- Try serving other grains in place of rice such as oats, quinoa, or corn.
- Eat less of other rice products.

Limit your child's apple, pear, and grape juice to 4 oz. or less per day.

Test your private well water. If arsenic is detected, consider installinga treatment unit or using a different drinking water source.

Have your children wash their hands after playing on older wooden structures, and do not burn this wood.

Note: The form of arsenic (called organic arsenic) found in fish and seafood is not a health concern.

Other Metals Tested

Sb Antimony | Cd Cadmium | Cr Chromium | Co Cobalt | Mo Molybdenum

Ni Nickel | Ti Thallium | W Tungsten | U Uranium

These metals are found naturally in rock and can get into air, water, soil, and food. Children are exposed to them through everyday activities like eating, drinking, and playing. Human activities, like fossil-fuel burning and industry, can increase the amount of metals in the environment. Here are ways kids can come in contact with them and tips for lowering exposure.

Ways to Lower Exposure:

Metals in House Dust

Metals from outside air, soil, and consumer products can build up in house dust. Children are exposed to house dust when they crawl and play on the floor and put their hands or objects in their mouths.

- Clean floors and surfaces in your home, especially where your child plays.
- Wash hands before eating.

Ways to Lower Exposure:

Metals Brought Home from Work

Some jobs and hobbies involve metals, such as welding, soldering, plating, and electronics recycling. Metal dust can attach to you. Children may be exposed to this dust.

- Follow safe practices when working to minimize exposure.
- Shower and change your clothes and shoes right after work.

Metals in Cigarette Smoke or E-cigarette Vapors

Tobacco is naturally higher in certain metals such as **cadmium.** Children are exposed through second-hand smoke. Metal coils in e-cigarettes may add metals such as **cadmium, chromium,** or **nickel** into the vapor.

- Smoke or vape outside of the home or car and away from your child.
- For assistance with quitting smoking, call 1-800-QUIT-NOW (784-8669) or visit www.quitpartnermn.com.

Metals in Inexpensive Jewelry, Small Toys, and Other Small Objects

Children often chew or suck on metal jewelry or other small metal objects. They may also accidentally swallow these items. **Cadmium** and **nickel** are of particular concern.

- Keep inexpensive jewelry out of children's reach.
- Ensure your child is not chewing or sucking on small metal objects such as zippers, keys, or toys.

Metals in Certain Foods

Foods may have higher levels of certain metals such as **cadmium** based on the type of plant or where it is grown.

*Note: Two of these metals – **chromium** and **molybdenum** – are needed by the body in small amounts but too much can be harmful.*

- Offer your child a variety of foods to help them get essential nutrients. This also makes it less likely for them to be exposed to the same metal from thesame food many times.

Metals in Drinking Water

Corrosion of water pipes or household plumbing can increase certain metals like **chromium** or **nickel** in drinking water. There may also be local contamination issues.

- If you suspect you have corroded pipes in your household plumbing, consult a plumber.
- If you have a private well, be aware of any groundwater advisories from your local health or environmental department.

www.health.mn.gov
To obtain this information in a different format, email:
health.biomonitoring@state.mn.us

Minnesota Department of Health
Biomonitoring Program
625 Robert St N, PO BOX 64975
St. Paul, MN 55155-2538

For more information and resources, please visit our webpage:
health.mn.gov/healthykidsmn

Pesticides & PAHs

Cover Letter, Results, & Info Sheets

DEPARTMENT OF HEALTH

Protecting, Maintaining and Improving the Health of All Minnesotans

Dear family,

Thank you for being part of Healthy Kids Minnesota 2022! Over 540 kids from Northeast Minnesota and St. Paul participated and helped their child provide a urine sample that we tested for different chemicals.

What is in this packet?

- Your child's results for two types of chemicals we tested – pesticides and PAHs – and how their levels compare to other kids in the program.
- Information sheet about the chemicals and tips for reducing exposures.

Why did we measure these chemicals in kids?

Healthy Kids Minnesota gives us a picture of children's exposures across the state. Children's developing bodies are especially sensitive to potentially harmful chemicals that are found in our environment – in our air, water, soil, food, and products we use. Results will help inform families, address community concerns, and work towards policies and programs that reduce childhood exposures.

What can these results tell you about your child?

- ✓ They **can** show you how your child's results compare to other children's results in Healthy Kids. This can tell you if your child's results are higher or lower than average.
- ✓ They **can** teach you about common ways that children can be exposed to these chemicals and ways to reduce exposure.
- ✗ They **can't** tell you whether your child will develop a certain health condition from an exposure. No medical treatment or follow-up is needed.

See the other side of this sheet for resources to support you as you follow your child's development. →

- ✗ They **can't** tell you how your child was exposed.
- ✗ They **can't** tell you about your child's long-term exposure to these chemicals. Results from urine only show recent exposures.

Please email or call me if you have questions about your child's results. We will send you results for the other chemicals in a separate packet when results are ready. Again, thank you very much for participating in Healthy Kids Minnesota!

Sincerely,

Jessica Nelson, PhD, MPH
Healthy Kids Minnesota Principal Investigator
651-201-3610 | jessica.nelson@state.mn.us

Developmental Resources For All Chemicals

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  This program is a navigator connecting expectant families, families with young children (birth – 8 years old), and those working with families to services in their local communities that support healthy child development and family well-being.

Your Child's Pesticides Results

DEPARTMENT OF HEALTH

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

2,4-D

Your Child's level: **13.8 µg/L**

Found in 97% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

IMPY

Your Child's level: **0.2 µg/L**

Found in 26% of all kids

Average not given because chemical not found in enough kids

PNP

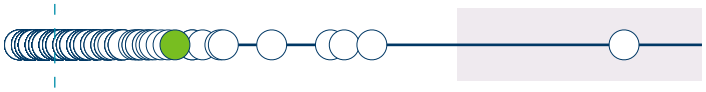
Your Child's level: **0.9 µg/L**

Found in 97% of all kids

TCPY

Your Child's level: **3.2 µg/L**

Found in 92% of all kids

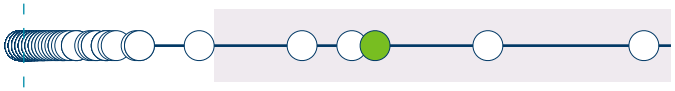


Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

3-PBA

Your Child's level: **0.8 µg/L**

Found in 90% of all kids



Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

4-F-3-PBA

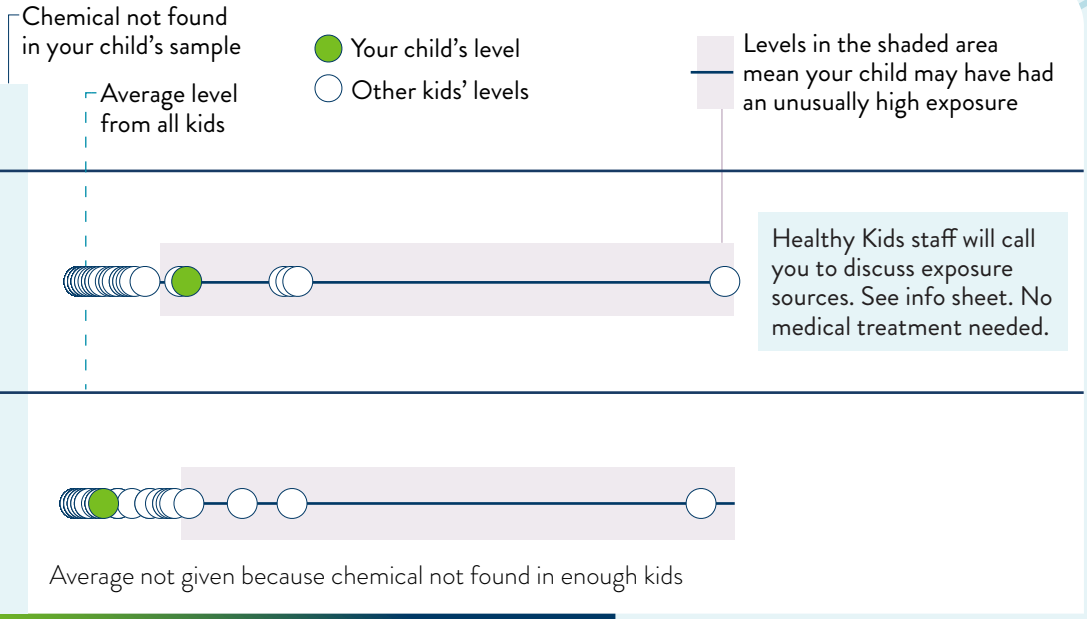
Your Child's level: **Not found**

Found in 8% of all kids

Average not given because chemical not found in enough kids

MDHID: 0000000 | DOB: 00/00/0000

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**



Interpreting Your Child's Results

- Scientists are still learning about what chemical levels in kids' urine are safe.

> If your child's result is above average or higher than expected, this does not mean their health will be affected. Healthy Kids staff will call families whose kids' levels are unusually high. Read the information sheet included and see if there are ways to reduce your child's exposure.

- If you would like to compare your child's levels to more results from Healthy Kids Minnesota 2022 (like the 95th percentile), scan the QR code to the right for this information.
- It is not necessary to share these results with your child's health care provider but you can do so if you choose. Resources for provider:
  1. Show them this packet
  2. Visit our provider web page: health.mn.gov.us/HealthyKidsProvider
  3. Contact us: 651-201-6733

Healthy Kids MN: health.mn.gov/healthykidsmn

Visit our website for more information and resources:

- Explanation of Results
- FAQs
- Chemical Information and Resources
- Information for Healthcare Providers

MDHID: 0000000 | DOB: 00/00/0000

Healthy Kids Pesticides Information

DEPARTMENT OF HEALTH

Pesticides control a variety of pests such as insects, weeds, and bacteria.

They are used in farming, in and around the home, and many other places. Children can be exposed to pesticides where they live, learn, and play.

The potential health effects of pesticides depend on the specific pesticide. For example, some may harm the nervous system, irritate skin or eyes, or increase cancer risk. Infants and children are more sensitive than adults.

> Finding pesticides in a child's urine is common and does not mean your child's health will be affected. Scientists are still learning what levels may be unsafe.

For more information and resources, please visit our webpage:

Healthy Kids MN
health.mn.gov/HealthyKidsChemicals

Where Can Pesticides Be Found?

Pesticides Tested in Your Child's Urine

Pesticides can change into related chemicals once they enter the body. We call these "breakdown products." Healthy Kids Minnesota tested for eight chemicals in your child's urine—one pesticide and seven pesticide breakdown products.

Name	Main Uses	Common Ways Kids Are Exposed
2,4-D 2,4-Dichlorophenoxyacetic acid	• Controls weeds in home lawns • Widely used in farming to control weeds	Eating food Playing on treated lawns Nearby farming use
IMPY 2-Isopropyl-4-methyl-6-hydroxypyrimidine **This is a breakdown product of diazinon.**	• Controls insects in farming (crops, livestock)	Eating food Nearby farming use
PNP P-nitrophenol **This is a breakdown product of methyl- and ethyl-parathion.**	• Previously used to control insects in farming but use is no longer allowed in the U.S. • PNP is also a breakdown product of an industrial chemical called nitrobenzene	Scientists are still learning how kids are exposed to this chemical
TCPY TCPy [3,5,6-Trichloro-2-pyridinol] **This is a breakdown product of chlorpyrifos and chlorpyrifos-methyl.**	• In the home, chlorpyrifos can be used in ant and roach bait stations only – no other home uses are allowed • Outside the home, chlorpyrifos can be used to control insects on farms and non-farm settings such as golf courses • Chlorpyrifos-methyl is used on stored grain	Eating food Air exposure, nearby farming use
3-PBA, 4-F-3-PBA, trans-DCCA, cis-DCCA 3-Phenoxybenzoic acid, 4-Fluoro-3-phenoxybenzoic acid, Trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid, Cis-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid **These are breakdown products from a group of insecticides called pyrethroids.**	• Controls insects in the home and yard/garden • Used in some flea and tick products for pets • Controls insects in farming	Eating food Contact with treated areas in home and yard Nearby farming use Contact with pets

How You Can Lower Exposure to Pesticides

Pesticides Used in the Home

Making your home less welcoming to pests is the best way to avoid using pesticides—like cleaning up food spills quickly, sealing holes and cracks, and fixing plumbing leaks.

If you need to use a pest control product:

- Make sure to identify the pest correctly and that the pest is listed on the label.
- Follow instructions on the product label.
- Choose baits and gels. They are more contained than sprays. Place baits and gels where your child or pet cannot touch them.
- If using a spray, limit use to targeted locations or cracks and crevices. Ventilate your home by opening windows.
- Keep your child, pet, toys, clothes, etc. away from treated area.
- Avoid foggers or bug bombs.
- If the pest problem is severe, consider hiring a certified applicator.
- Always store pesticides in their original containers out of your child's reach.

Applies to:

TCPY

3-PBA, 4-F-3-PBA, trans-DCCA, cis-DCCA

Pesticides Used on Lawns

Keeping your lawn strong and healthy is the best way to avoid using pesticides like weedkillers. Consider tolerating some pest activity, like weeds, in your lawn.

If you need to use a pest control product:

- Make sure to identify the pest correctly and that the pest is listed on the label.
- Follow instructions on the product label.
- Make sure children and pets are not nearby while applying and keep them away from the treated area for the time listed on the label.
- For liquid products, choose calm weather so it doesn't drift to other places.
- Take shoes off before entering the house and change clothes after applying.
- Always store pesticides in their original containers out of your child's reach.

Applies to:

2,4-D

3-PBA, 4-F-3-PBA, trans-DCCA, cis-DCCA

Pesticide Residues on Food

- Wash fruits and vegetables before eating.
- See our website for guidance on how to minimize your exposure to pesticide residues in food.

Applies to:

2,4-D

IMPY TCPY

3-PBA, 4-F-3-PBA, trans-DCCA, cis-DCCA

How You Can Lower Exposure to Pesticides *(cont.)*

Pesticides Used on Pets

- Ask your veterinarian to help you select the most appropriate products.
- Follow the label directions and never over-treat your pet.

Applies to:

3-PBA, 4-F-3-PBA, trans-DCCA, cis-DCCA

Pesticides in the Air from Farms and Neighboring Properties

Keep your child and pet indoors with windows closed if you know pesticides are being sprayed nearby.

If you think your child came in contact with pesticide drift, follow these steps:

- Handle medical emergencies first and call 911, if needed.
- Call the Minnesota Poison Control System 24/7 at 800-222-1222 or a doctor to determine if they need medical attention.
- Report the incident to Minnesota Department of Agriculture: 651-201-6333. Pesticide drift is against Minnesota law.

Applies to:

2,4-D

IMPY TCPY

3-PBA, 4-F-3-PBA, trans-DCCA, cis-DCCA

Pesticides in Drinking Water

Water from public water systems is already tested for many pesticides.

If you are concerned about pesticides in your private well, consider your well's risk factors:

- Pesticides are more likely to occur in wells in farming areas with vulnerable groundwater. There is a water vulnerability map on our website.
- Testing for nitrate can indicate if there are pesticides in your water. At three milligrams per liter of nitrate or above, the likelihood increases.
- If you are concerned about pesticides in your water, reverse osmosis (RO) devices remove nearly all pesticides when properly maintained.

Applies to:

2,4-D

IMPY TCPY

3-PBA, 4-F-3-PBA, trans-DCCA, cis-DCCA

Pesticide Residues Brought Home from Work

- Follow safe work practices and the product label instructions.
- Do not bring pesticide containers or pesticides home from work.
- After work, change your clothes and shoes before entering your home and car. Shower before touching your child.
- Wash work clothes separately from other clothes.

Applies to:

2,4-D IMPY

PNP TCPY

3-PBA, 4-F-3-PBA, trans-DCCA, cis-DCCA

www.health.mn.gov
To obtain this information in a different format, email:
health.biomonitoring@state.mn.us

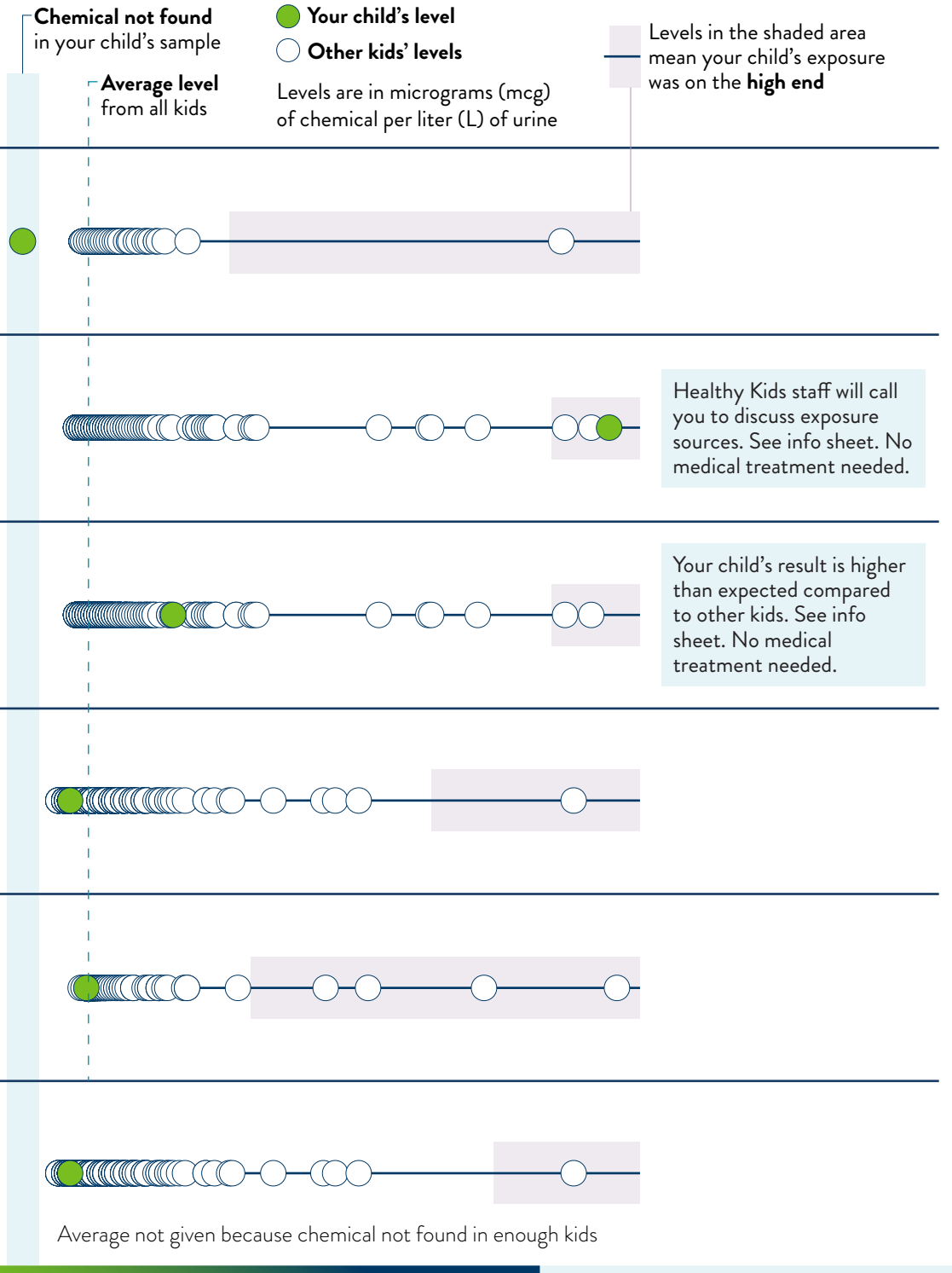
Minnesota Department of Health
Biomonitoring Program
625 Robert St N, PO BOX 64975
St. Paul, MN 55155-2538

For more information and resources, please visit our webpage:
health.mn.gov/healthykidsmn

Your Child's PAHs Results

DEPARTMENT OF HEALTH

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**



1-PYR

Your Child's level: **Not found**
Found in 99% of all kids

1-NAP

Your Child's level: **134 mcg/L**
Found in 99% of all kids

2-NAP

Your Child's level: **1530 mcg/L**
Found in 100% of all kids

2-FLUO

Your Child's level: **33.8 mcg/L**
Found in 100% of all kids

3-FLUO

Your Child's level: **10.1 mcg/L**
Found in 95% of all kids

3-PHEN

Your Child's level: **10.7 mcg/L**
Found in 20% of all kids

MDHID: 0000000 | DOB: 00-00-0000

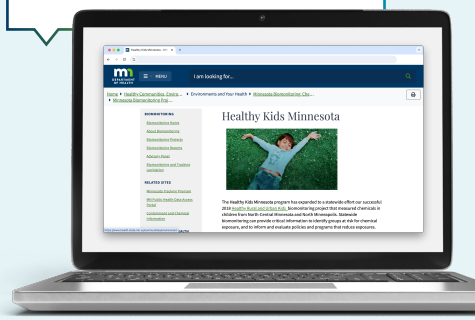
Interpreting Your Child's Results

- Scientists are still learning about what chemical levels in kids' urine are safe.

> If your child's result is above average or higher than expected, this does not mean their health will be affected. Healthy Kids staff will call families whose kids' levels are unusually high. Read the information sheet included and see if there are ways to reduce your child's exposure.

- If you would like to compare your child's levels to more results from Healthy Kids Minnesota (like the 95th percentile), visit: health.mn.gov/HealthyKidsResults
- It is not necessary to share these results with your child's health care provider but you can do so if you choose. Resources for provider:
  1. Show them this packet
  2. Visit our provider web page: health.mn.gov/HealthyKidsProvider
  3. Contact us at 651-201-6733

Healthy Kids MN:
health.mn.gov/healthykidsmn



Visit our website for more information and resources:

- Explanation of Results
- FAQs
- Chemical Information and Resources
- Information for Healthcare Providers

MDHID: 0000000 | DOB: 00-00-0000

Healthy Kids Polycyclic Aromatic Hydrocarbons Information

DEPARTMENT OF HEALTH

Polycyclic aromatic hydrocarbons (PAHs) are a family of chemicals that form and get released into air when materials like wood, gasoline, coal, garbage, and tobacco are burned. They also form in food that has been grilled, barbecued, smoked, or fried.

PAHs in air can irritate eyes and breathing passages, and lead to asthma and other respiratory problems. They may be especially harmful for children because their lungs and other organs are still developing. Some PAHs may cause cancer.

> Finding PAHs in children's urine is common and does not mean their health will be affected. Scientists are still learning what levels may be unsafe.

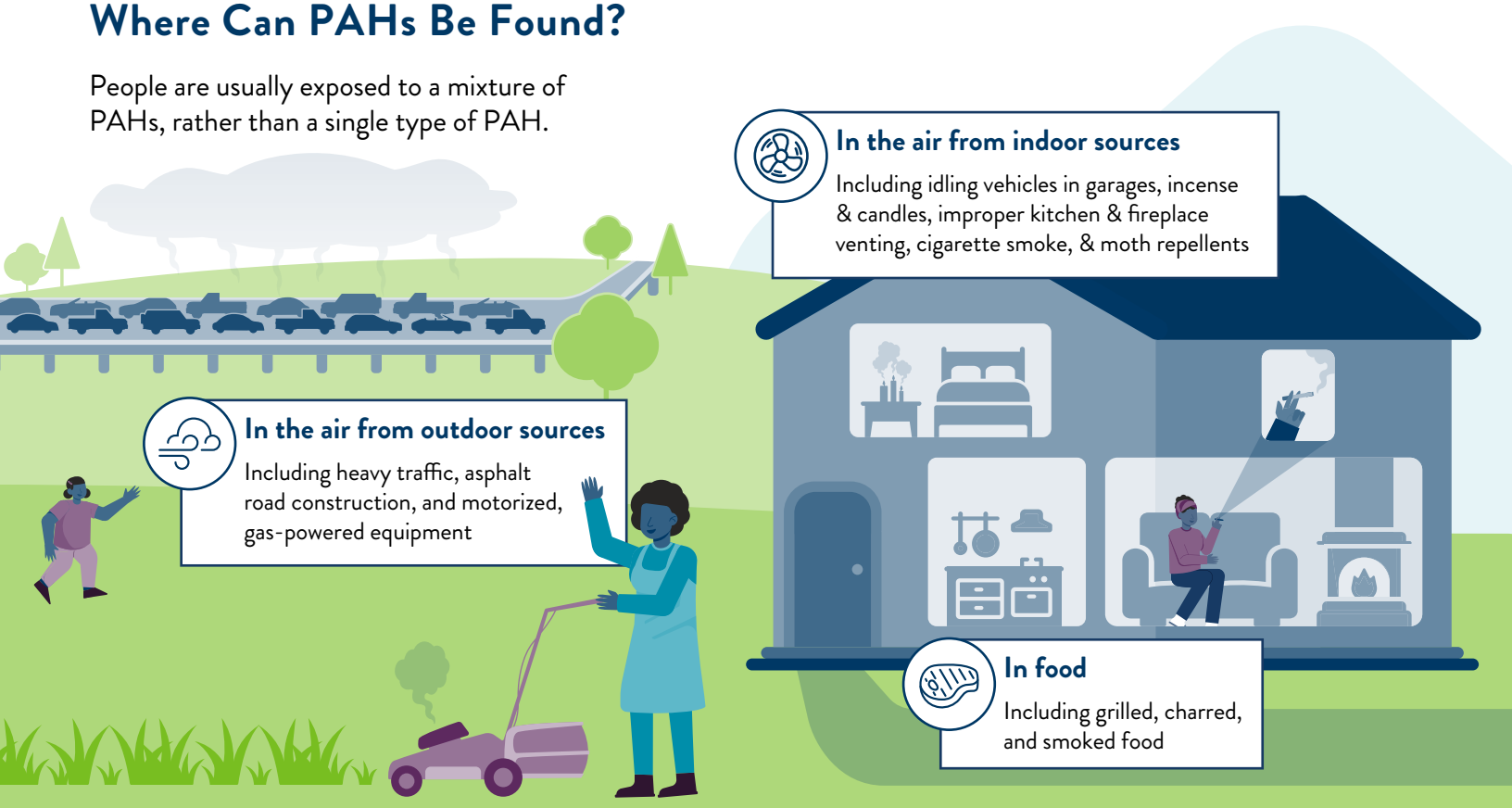
PAHs form as byproducts, the result of burning materials and cooking food certain ways. Most are not made or used on purpose. One PAH, naphthalene, is used in manufacturing and in moth repellents (such as mothballs).

For more information and resources, please visit our webpage:

Healthy Kids MN
health.mn.gov/HealthyKidsChemicals

Where Can PAHs Be Found?

People are usually exposed to a mixture of PAHs, rather than a single type of PAH.



How You Can Lower Exposure to PAHs

Air From Indoor Sources

- Don't idle your vehicle in an attached garage.
- Limit the use of incense and candles around your child. If you use them inside, use good ventilation with fans or open windows.
- Use the kitchen vent fan and/or open windows while cooking.
- Make sure your wood stove and fireplace vent properly.
- If your home has a forced air furnace, replace the filter regularly.
- If you smoke, smoke outside the home or car, and away from your child. For free help to quit smoking, call 1-800-QUIT-NOW or visit www.quitpartnermn.com.
- Avoid areas where your child might breathe secondhand smoke. Ask people not to smoke around your child.
- Instead of using moth repellents, take steps to prevent moths. Use airtight storage containers and bags for clothing and bedding that are not used often. If you must use mothballs, only use them in containers labeled as airtight. Never use them in open spaces like rooms, closets, or attics. Fumes from mothballs can get into the air and cause harmful effects.

Air From Outdoor Sources

- Minimize your child's time around:
  - Heavy traffic areas or idling vehicles
  - Asphalt road construction and tar roofing sites
  - Motorized, gas-powered equipment such as mowers, weed trimmers, and snow blowers
- When driving in heavy traffic, roll up windows and set fan to re-circulate air inside the car.
- Follow air quality alert recommendations at www.airnow.gov. You can download a cellphone app. During an air quality alert, limit your child's outside time and close windows. This is especially important if your child has asthma.
- If you have an air pollution or environmental complaint, you can submit a complaint form to Minnesota Pollution Control Agency: www.pca.state.mn.us/air/have-complaint.

Food

- Serve less grilled, charred, smoked, and fried food. Slow cooking, boiling, or steaming are good alternatives. If you burn food, discard the blackened part before eating.

PAHs Tested in Your Child's Urine

PAHs change into related chemicals once inside the body. We call these "breakdown products." Healthy Kids Minnesota tested for breakdown products of PAHs in your child's urine. PAH breakdown products have long chemical names so we use common abbreviations in this sheet and your child's results table.

PAH Breakdown Products Tested	Full Chemical Name	Original PAH
1-PYR	1-Hydroxypyrene	pyrene
1-NAP	1-Hydroxynaphthalene	naphthalene
2-NAP	2-Hydroxynaphthalene	naphthalene
2-FLUO	2-Hydroxyfluorene	fluorene
3-FLUO	3-Hydroxyfluorene	fluorene
3-PHEN	3-Hydroxyphenanthrene	phenanthrene

www.health.mn.gov
To obtain this information in a different format, email:
health.biomonitoring@state.mn.us

Minnesota Department of Health
Biomonitoring Program
625 Robert St N, PO BOX 64975
St. Paul, MN 55155-2538

For more information and resources, please visit our webpage:
health.mn.gov/healthykidsmn

Organophosphorus Flame Retardants, Phthalates, & Environmental Phenols

Cover Letter, Results, & Info Sheets

DEPARTMENT OF HEALTH

Protecting, Maintaining and Improving the Health of All Minnesotans

Dear family,

Thank you for being part of Healthy Kids Minnesota 2022! Over 540 kids from Northeast Minnesota and St. Paul participated and helped their child provide a urine sample that we tested for different chemicals.

What is in this packet?

- Your child's results for three types of chemicals we tested – organophosphorus flame retardants (OPFRs), environmental phenols, and phthalates – and how their levels compare to other kids in the program.
- Information sheet about the chemicals and tips for reducing exposures.

Why did we measure these chemicals in kids?

Healthy Kids Minnesota gives us a picture of children's exposures across the state. Children's developing bodies are especially sensitive to potentially harmful chemicals that are found in our environment – in our air, water, soil, food, and products we use. Results will help inform families, address community concerns, and work towards policies and programs that reduce childhood exposures.

What can these results tell you about your child?

✓ They **can** show you how your child's results compare to other children's results in Healthy Kids. This can tell you if your child's results are higher or lower than average.

✓ They **can** teach you about common ways that children can be exposed to these chemicals and ways to reduce exposure.

✗ They **can't** tell you whether your child will develop a certain health condition from an exposure. No medical treatment or follow-up is needed.

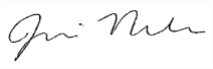
See the other side of this sheet for resources to support you as you follow your child's development. →

✗ They **can't** tell you how your child was exposed.

✗ They **can't** tell you about your child's long-term exposure to these chemicals. Results from urine only show recent exposures.

Please email or call me if you have questions about your child's results. We will send you results for the other chemicals in a separate packet when results are ready. Again, thank you very much for participating in Healthy Kids Minnesota!

Sincerely,



Jessica Nelson, PhD, MPH
Healthy Kids Minnesota Principal Investigator
651-201-3610 | jessica.nelson@state.mn.us

Developmental Resources For All Chemicals

- **The Follow Along Program** (*www.health.state.mn.us/mnfap*)
  This program supports you as you follow your child's development, as an infant, toddler, and young child. It helps you know if your child is playing, talking, growing, moving, and interacting like other children of the same age. The program will connect you to a nurse or other local public health staff members if you have questions or concerns. Program staff will share developmental information and activities, connecting you to other supports and services as needed. You can join in this program at no cost, regardless of immigration and financial status.
- **Help Me Connect** (*helpmeconnect.web.health.state.mn.us/HelpMeConnect)*
  This program is a navigator connecting expectant families, families with young children (birth – 8 years old), and those working with families to services in their local communities that support healthy child development and family well-being.

Healthy Kids Minnesota [Year]

Your Child's Flame Retardants Results

DEPARTMENT OF HEALTH

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

BCEtP

Your child's level: **Not found**

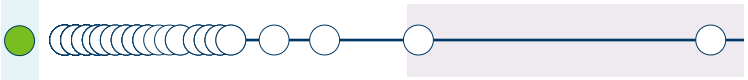
Found in 13% of all kids

Average not given because chemical not found in enough kids

BCPP

Your child's level: **Not found**

Found in 4% of all kids



Average not given because chemical not found in enough kids

BDCPP

Your child's level: **0.2 mcg/L**

Found in 80% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

DBuP

Your child's level: **0.2 mcg/L**

Found in 72% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

DBzP

Your child's level: **1.0 mcg/L**

Found in 97% of all kids

MDHID: 0000000 | DOB: 00/00/0000

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

DCP

Your child's level: **Not found**

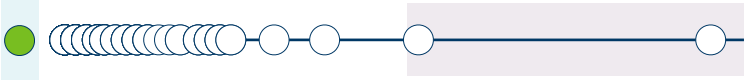
Found in 13% of all kids

Average not given because chemical not found in enough kids

DPhP

Your child's level: **Not found**

Found in 4% of all kids



Average not given because chemical not found in enough kids

TBBA

Your child's level: **0.2 mcg/L**

Found in 80% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

iPPPP

Your child's level: **0.2 mcg/L**

Found in 72% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

tBPPP

Your child's level: **1.0 mcg/L**

Found in 97% of all kids

MDHID: 0000000 | DOB: 00/00/0000

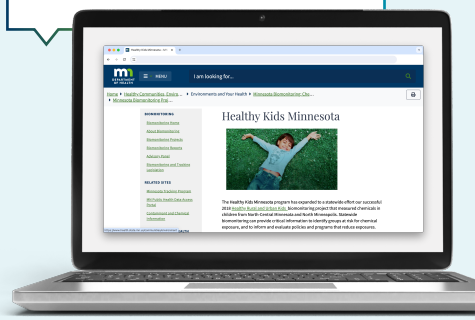
Interpreting Your Child's Results

- Scientists are still learning about what chemical levels in kids' urine are safe.

> If your child's result is above average or higher than expected, this does not mean their health will be affected. Healthy Kids staff will call families whose kids' levels are unusually high. Read the information sheet included and see if there are ways to reduce your child's exposure.

- If you would like to compare your child's levels to more results from Healthy Kids Minnesota (like the 95th percentile), visit: health.mn.gov/HealthyKidsResults
- It is not necessary to share these results with your child's health care provider but you can do so if you choose. Resources for provider:
  1. Show them this packet
  2. Visit our provider web page: health.mn.gov/HealthyKidsProvider
  3. Contact us at 651-201-6733

Healthy Kids MN:
health.mn.gov/healthykidsmn



Visit our website for more information and resources:

- Explanation of Results
- FAQs
- Chemical Information and Resources
- Information for Healthcare Providers

MDHID: 0000000 | DOB: 00/00/0000

Healthy Kids Organophosphorus Flame Retardants Information

DEPARTMENT OF HEALTH

Flame retardants are chemicals added to many kinds of products to make it harder for them to catch on fire. Organophosphorus flame retardants (OPFRs) are one type of flame retardant. Due to their widespread use, OPFRs are commonly found in indoor and outdoor environments.

Scientists are still studying how these flame retardants affect people's health. Some may interfere with the body's natural hormones, which can affect development in infants and children. Some may harm the nervous system, reproductive system, or cause cancer.

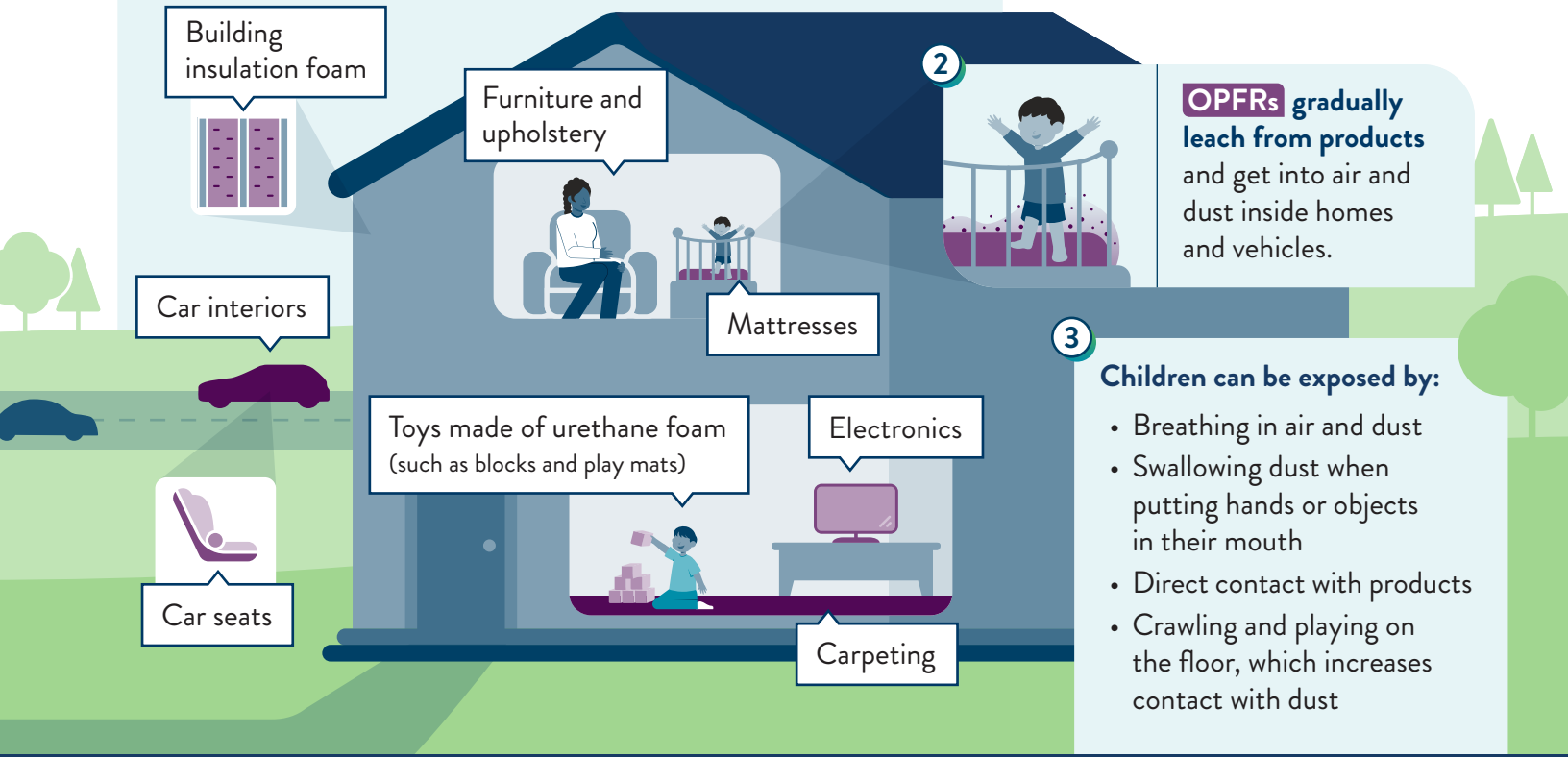
> Finding OPFRs in children's urine is common and does not mean their health will be affected. Scientists are still learning what levels may be unsafe.

For more information and resources, please visit our webpage:

Healthy Kids MN
health.mn.gov/HealthyKidsChemicals

Where Can OPFRs Be Found?

1 **To reduce flammability, OPFRs are added to products like:**



2 **OPFRs gradually leach from products** and get into air and dust inside homes and vehicles.

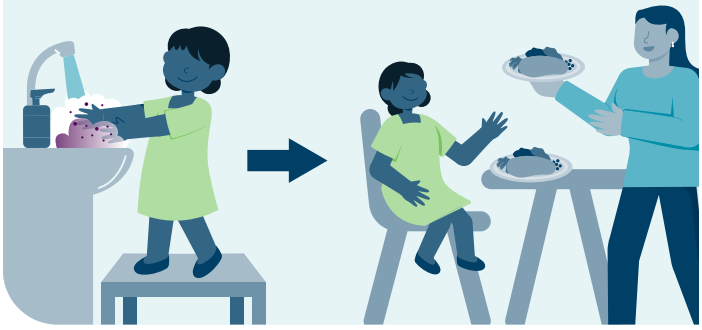
3 **Children can be exposed by:**

- Breathing in air and dust
- Swallowing dust when putting hands or objects in their mouth
- Direct contact with products
- Crawling and playing on the floor, which increases contact with dust

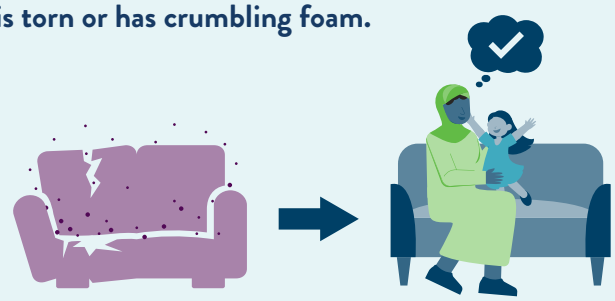
How You Can Lower Exposure to OPFRs

Regularly clean floors and surfaces in your home to keep dust from building up.

Have your child wash their hands before eating.

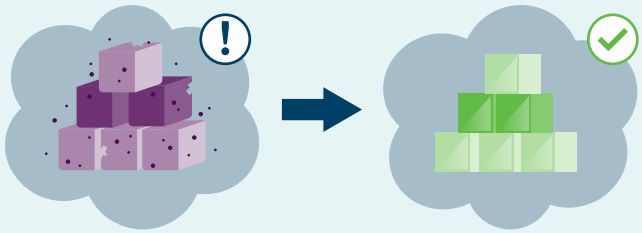


Replace upholstered furniture that is torn or has crumbling foam.



Furniture may have an attached label indicating whether the upholstery contains added flame retardant chemicals (but not which ones). For other products, you can contact the company to ask about added flame retardants.

Consider replacing old products for children that contain urethane foam.



Since 2019, Minnesota law has restricted the amount of certain OPFRs in children's products, mattresses, and residential upholstered furniture. Older products (before this restriction) may contain higher levels of some OPFRs.

OPFRs Tested in Your Child's Urine

OPFRs change into related chemicals once inside the body. We call these "breakdown products." Healthy Kids Minnesota measured breakdown products of OPFRs in your child's urine. Flame retardants and their breakdown products have long chemical names so we use common abbreviations in your child's results sheet.

BCEtP | BCPP | BDCPP | DBuP | DBzP
DCP | DPhP | TBBA | iPPPP | tBPPP

For more information on the full chemical names, please visit:
health.mn.gov/HealthyKidsResults

www.health.mn.gov
To obtain this information in a different format, email:
health.biomonitoring@state.mn.us

Minnesota Department of Health
Biomonitoring Program
625 Robert St N, PO BOX 64975
St. Paul, MN 55155-2538

For more information and resources, please visit our webpage:
health.mn.gov/healthykidsmn

Your Child's Phthalates Results

DEPARTMENT OF HEALTH

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

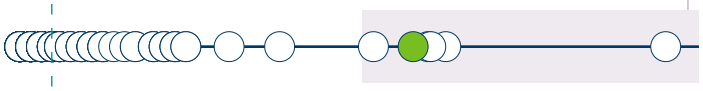
Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

MMP

Your child's level: **3.3 mg/L**

Found in 96% of all kids

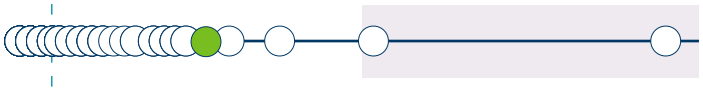


Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

MEP

Your child's level: **13.1 mcg/L**

Found in 88% of all kids



Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

MnBP

Your child's level: **0.2 mcg/L**

Found in 80% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

MiBP

Your child's level: **1.1 mcg/L**

Found in 72% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

MHiBP

Your child's level: **1.0 mcg/L**

Found in 97% of all kids

MDHID: 0000000 | DOB: 00/00/0000

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

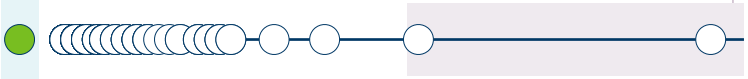
Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

MBzP

Your child's level: **Not found**

Found in 0% of all kids



Average not given because chemical not found in enough kids

MCHP

Your child's level: **Not found**

Found in 100% of all kids

MECPP

Your child's level: **0.2 mcg/L**

Found in 96% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

MEHHP

Your child's level: **0.2 mcg/L**

Found in 86% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

MEHP

Your child's level: **1.0 mcg/L**

Found in 10% of all kids

Average not given because chemical not found in enough kids

MEOHP

Your child's level: **0.2 mcg/L**

Found in 86% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

MDHID: 0000000 | DOB: 00/00/0000

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

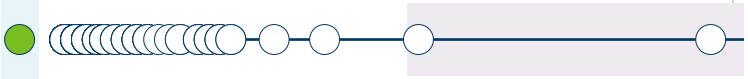
Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

MCPP

Your child's level: **Not found**

Found in 0% of all kids



Average not given because chemical not found in enough kids

MONP

Your child's level: **Not found**

Found in 100% of all kids

MINP

Your child's level: **0.2 mcg/L**

Found in 96% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

MCOP

Your child's level: **0.2 mcg/L**

Found in 86% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

MCiOP

Your child's level: **1.0 mcg/L**

Found in 10% of all kids

Average not given because chemical not found in enough kids

MCNP

Your child's level: **0.2 mcg/L**

Found in 86% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

MDHID: 0000000 | DOB: 00/00/0000

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

MECPTP

Your child's level: **Not found**

Found in 0% of all kids

Average not given because chemical not found in enough kids

MEHHTP

Your child's level: **Not found**

Found in 100% of all kids

MCOCH

Your child's level: **0.2 mcg/L**

Found in 96% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

MHNCH

Your child's level: **0.2 mcg/L**

Found in 86% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

MDHID: 0000000 | DOB: 00/00/0000

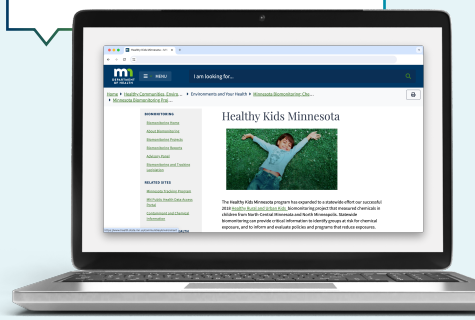
Interpreting Your Child's Results

- Scientists are still learning about what chemical levels in kids' urine are safe.

> If your child's result is above average or higher than expected, this does not mean their health will be affected. Healthy Kids staff will call families whose kids' levels are unusually high. Read the information sheet included and see if there are ways to reduce your child's exposure.

- If you would like to compare your child's levels to more results from Healthy Kids Minnesota (like the 95th percentile), visit: health.mn.gov/HealthyKidsResults
- It is not necessary to share these results with your child's health care provider but you can do so if you choose. Resources for provider:
  1. Show them this packet
  2. Visit our provider web page: health.mn.gov/HealthyKidsProvider
  3. Contact us at 651-201-6733

Healthy Kids MN:
health.mn.gov/healthykidsmn



Visit our website for more information and resources:

- Explanation of Results
- FAQs
- Chemical Information and Resources
- Information for Healthcare Providers

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Healthy Kids Phthalates Information

DEPARTMENT OF HEALTH

Phthalates are a family of chemicals that are used to make plastics more flexible and durable. They also have uses in personal care products and a wide range of other product types. Some phthalates have been banned for use in certain children's products and other chemicals have replaced them.

Many phthalates are considered "endocrine-disrupting" chemicals. This means that they can affect the body's natural hormones. Hormone changes can affect development in infants and children.

> Finding phthalates in a child's urine is common and does not mean your child's health will be affected. Scientists are still learning what levels may be unsafe.

For more information and resources, please visit our webpage:

Healthy Kids MN
health.mn.gov/HealthyKidsChemicals

Where Can Phthalates Be Found?

In Personal Care Products and Fragrances

Applies to: MMP MEP MnBP MiBP MHiBP

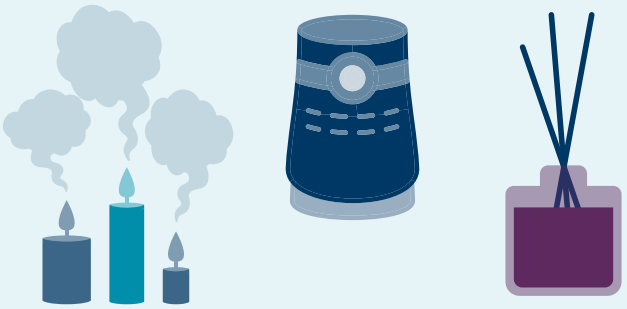
Main Uses:

- Commonly added to personal care products, cosmetics, and consumer products, added as solvents or scent stabilizers

Common Ways Kids Are Exposed:

Using shampoo, soap, lotion, nail polish, and other personal care products

Breathing in air fresheners, scented cleaning products, candles, and incense



Where Can Phthalates Be Found? *(cont.)*

In Plastics and Building Materials

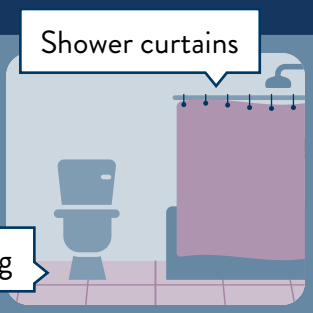
Applies to: Phthalates MBzP | MECPP | MEOHP | MCPP | MONP | MINP | MCOP | MCiOP | MCNP
Phthalate replacements MECPTP | MEHHTP | MCOCH | MHNCH

1

Phthalates are in consumer products made of flexible plastics and home and building products such as:

Clothing like shoes and rain jackets

Vinyl toys



Shower curtains

Vinyl flooring

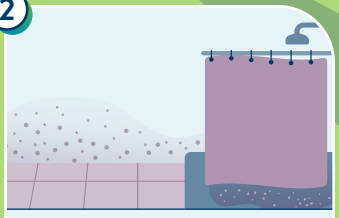
Car interiors

Paints, wallpaper, adhesives and sealants

Processed and pre-packaged food

Inflatables

2



Phthalates gradually leach from products and get into food, air, and dust inside homes and vehicles.

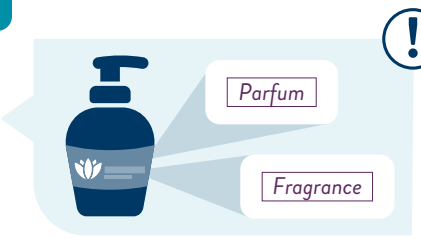
3

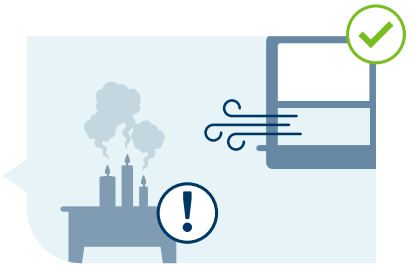
Children can be exposed by:

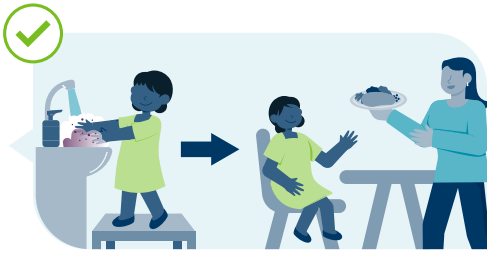
- Eating processed and pre-packaged foods
- Biting or sucking on soft plastic toys not made for teething
- Breathing in air and dust
- Swallowing dust when putting hands or objects in their mouth
- Crawling and playing on the floor, which increases contact with dust

How You Can Lower Exposure to Phthalates

- Buy unscented personal care products like lotion and shampoo when possible. Products with "fragrance" or "parfum" in the ingredient list may contain phthalates.
- Some products may be labeled as "phthalate free." You can also contact the company to ask if a product contains phthalates.
- Be aware that air fresheners, plug-ins, sprays, and other scented home products may contain phthalates. Consider limiting their use.
- Limit the use of incense, scented candles, and scented cleaning products. If you use them inside, use good ventilation with fans or open windows.
- Do not allow children to chew on plastic objects not made for that purpose.
- Clean floors and surfaces in your home to keep dust from building up.
- Have your child wash their hands before eating.
- Choose minimally processed foods when possible. Foods that are pre-packaged, including fast food, may contain phthalates.







Phthalates and Phthalate-Replacements Tested in Your Child's Urine

MMP | MEP | MnBP | MiBP | MHiBP | MBzP | MCHP | MECPP | MEHHP | MEHP | MEOHP

MCPP | MONP | MINP | MCOP | MCiOP | MCNP | MECPTP | MEHHTP | MCOCH | MHNCH

Phthalates and their replacements change into related chemicals once inside the body. We call these "breakdown products." Healthy Kids Minnesota tested for 21 breakdown products in your child's urine. Phthalates and phthalate-replacements have long chemical names so we use common abbreviations in this sheet and your child's results table.

For more information on the full chemical names, please visit:

health.mn.gov/HealthyKidsResults

www.health.mn.gov
To obtain this information in a different format, email:
health.biomonitoring@state.mn.us

Minnesota Department of Health
Biomonitoring Program
625 Robert St N, PO BOX 64975
St. Paul, MN 55155-2538

For more information and resources, please visit our webpage:
health.mn.gov/healthykidsmn

Healthy Kids Minnesota [Year]

Your Child's Environmental Phenols Results

DEPARTMENT OF HEALTH

Watch a walkthrough of how to read your results: **health.mn.gov.us/HealthyKidsVideo**

Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

Benzophenone-3

Your child's level: **69.2 mg/L**

Found in 96% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

Bisphenol A

Your child's level: **0.6 mcg/L**

Found in 88% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

Bisphenol F

Your child's level: **0.2 mcg/L**

Found in 80% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

Bisphenol S

Your child's level: **1.1 mcg/L**

Found in 72% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

Triclosan

Your child's level: **1.0 mcg/L**

Found in 97% of all kids

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Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

Triclocarban

Your child's level: **Not found**

Found in 0% of all kids

Average not given because chemical not found in enough kids

Methyl paraben

Your child's level: **Not found**

Found in 100% of all kids

Ethyl paraben

Your child's level: **0.2 mcg/L**

Found in 96% of all kids

Your child's result is higher than expected compared to other kids. See info sheet. No medical treatment needed.

Propyl paraben

Your child's level: **0.2 mcg/L**

Found in 86% of all kids

Healthy Kids staff will call you to discuss exposure sources. See info sheet. No medical treatment needed.

Butyl paraben

Your child's level: **1.0 mcg/L**

Found in 10% of all kids

Average not given because chemical not found in enough kids

MDHID: 0000000 | DOB: 00/00/0000

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Chemical not found in your child's sample

Average level from all kids

Your child's level

Other kids' levels

Results show micrograms (mcg) of chemical per liter (L) of urine

Levels in the shaded area mean your child's exposure was on the **high end**

2,4-Dichlorophenol

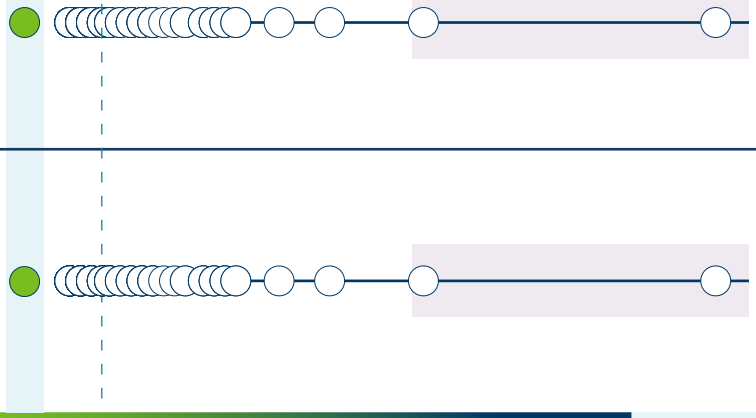
Your child's level: **Not found**

Found in 94% of all kids

2,5-Dichlorophenol

Your child's level: **Not found**

Found in 96% of all kids



Interpreting Your Child's Results

- Scientists are still learning about what chemical levels in kids' urine are safe.

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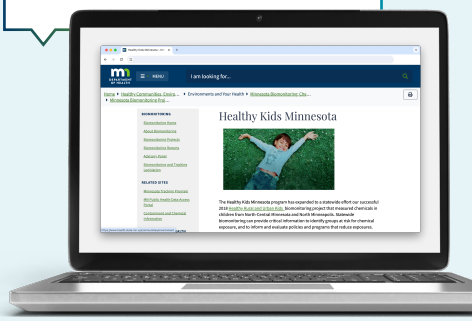

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Healthy Kids
Environmental Phenols Information

DEPARTMENT OF HEALTH

Environmental phenols are a group of chemicals with many different uses. They are commonly found in the products we buy, household materials, and food and beverage packaging.

Many environmental phenols are considered "endocrine disrupting" chemicals. This means that they affect the body's natural hormones. Hormone changes can affect development in infants and children.

> Finding environmental phenols in a child's urine is common and does not mean your child's health will be affected. Scientists are still learning what levels may be unsafe.

For more information and resources, please visit our webpage:

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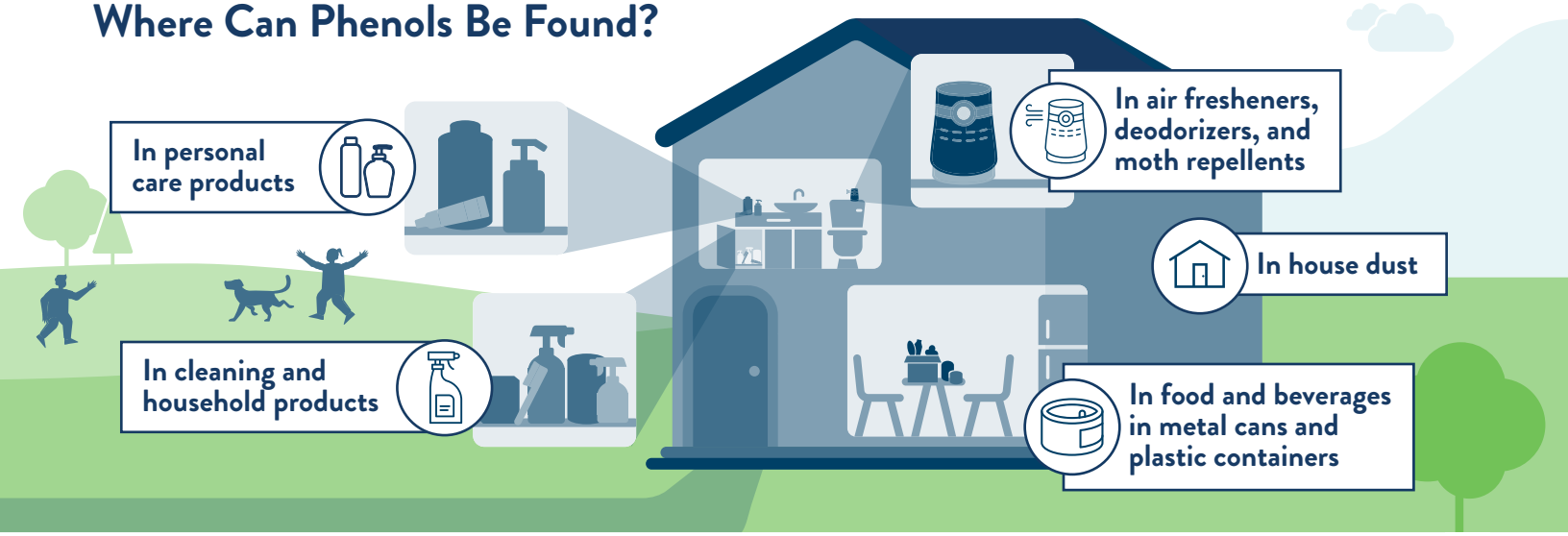
Where Can Phenols Be Found?



Phenols Tested in Your Child's Urine

Healthy Kids Minnesota tested for twelve environmental phenols in your child's urine.

Name	Main Uses	Common Ways Kids Are Exposed
Benzophenone-3 (also called oxybenzone)	• Some sunscreens • Personal care products (such as body washes, moisturizers) • Plastics • Varnish and oil-based paints	Using certain sunscreen Using certain personal care products

Phenols Tested in Your Child's Urine *(cont.)*

Name	Main Uses	Common Ways Kids Are Exposed

Triclosan
Triclocarban
	• Used to slow the growth of bacteria, fungi, and mildew in:
	  • Toys, sporting goods, clothing
	  • Some personal care products (like toothpastes, soaps, lotions)
	  • Housewares/home furnishings
		Using antibacterial and antimicrobial products

Bisphenol A
Bisphenol F
Bisphenol S
	• Used as a protective coating in metal food and drink cans and bottle tops
	• Some paper receipts
	• Used in plastics for:
	  • Housewares (such as plastic dinnerware, food storage containers)
	  • Reusable water bottles
	  • Building materials (like grout, laminate flooring)
	  • Some dental sealants/fillings
		Eating canned food or drinking canned beverages
		Consuming food and/or water stored or microwaved in certain plastic containers

Methyl paraben
Ethyl paraben
Propyl paraben
Butyl paraben
	• Used as preservatives in:
	  • Personal care products (such as lotions, sunscreens, shampoos, skin cleansers, baby wipes, cosmetics)
	  • Some household products (like stain removers, pet shampoos)
	  • Certain foods and food packaging
	  • Some medications
		Using personal care products
		Eating certain foods

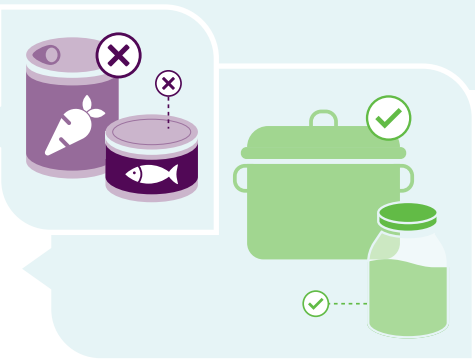
2-4-Dichlorophenol **2-5-Dichlorophenol**	• 2,4-dichlorophenol is used to make other chemicals. It is also a breakdown product of triclosan and the pesticide 2,4-D. • 2,5-dichlorophenol is a breakdown product of a chemical used in moth repellents (moth balls, crystals, flakes, and bars) and also used in some room, trashcan, and toilet deodorizers. • Formed during some types of manufacturing and from burning trash, coal, and wood. • Small amounts may be present in drinking water disinfected with chlorine.	Using room, trashcan, and toilet deodorizers and moth repellents Drinking small amounts in water or breathing small amounts in air

How You Can Lower Exposure to Phenols

Food and Beverages

Applies to: Bisphenol A | Bisphenol F | Bisphenol S

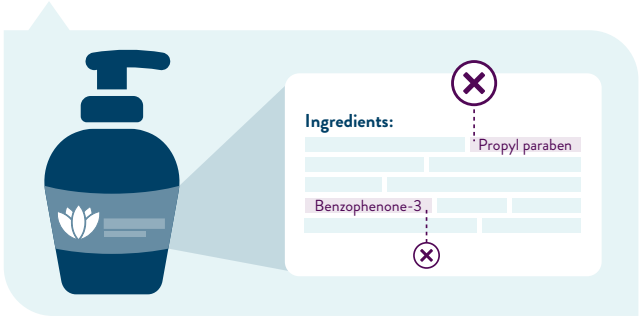
- Choose fresh or frozen food rather than canned food, if possible.
- Choose food or drinks in glass containers rather than metal cans. Do not heat food in metal cans.
- Store leftovers in glass or stainless steel containers instead of plastic.
- Microwave foods in ceramic or glass dishes instead of plastic containers.



Personal Care Products

Applies to: Benzophenone-3 | Triclosan | Triclocarban | Methyl paraben | Ethyl paraben | Propyl paraben | Butyl paraben

- Read the labels on personal care products. Choose ones that do not include parabens, benzophenone-3 (oxybenzone), triclosan, or triclocarban in the ingredient list.

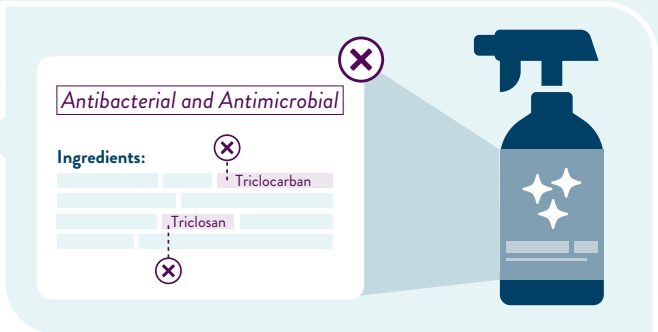


- Choose sunscreens with zinc oxide and/or titanium dioxide as active ingredients, which physically (rather than chemically) block the sun.

Cleaning and Household Products

Applies to: Triclosan | Triclocarban | 2,4-Dichlorophenol

- Read the labels on cleaning products. Choose ones that do not include triclosan or triclocarban in the ingredient list.
- Avoid or limit use of household products or clothing marketed as “antimicrobial” or “antibacterial”.

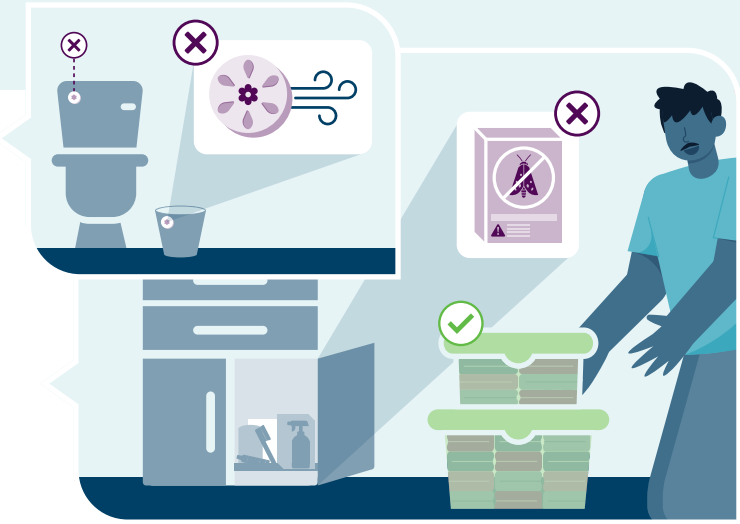


How You Can Lower Exposure to Phenols *(cont.)*

Air Fresheners, Deodorizers, and Moth Repellents

Applies to: 2,5-Dichlorophenol

- Avoid or limit use of air freshening products and block deodorants in trashcans and toilets.
- Instead of using moth repellents, take steps to prevent moths. Use airtight storage containers and bags for clothing and bedding that are not used often.
- If you must use mothballs, only use them in containers labeled as airtight. Never use them in open spaces like rooms, closets, or attics. Fumes from mothballs can get into the air and cause harmful effects.

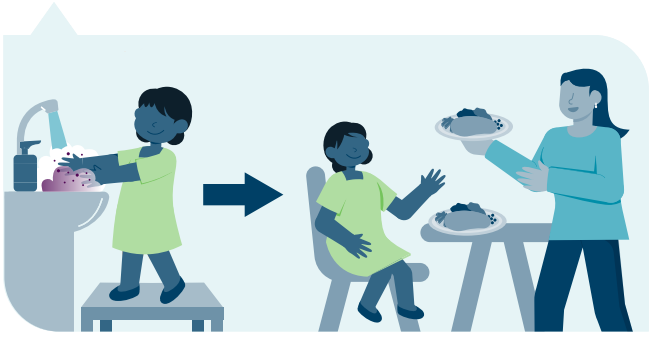


House Dust

Applies to: Benzophenone-3, Bisphenol A, Bisphenol F, Bisphenol S, Triclosan, Triclocarban, Methyl paraben, Ethyl paraben, Propyl paraben, Butyl paraben, 2,4-Dichlorophenol, 2,5-Dichlorophenol

Environmental phenols in consumer products and building materials can gradually leach from products and end up in house dust:

- Clean floors and surfaces in your home to keep dust from building up.
- Have your child wash their hands before eating.



www.health.mn.gov
To obtain this information in a different format, email:
health.biomonitoring@state.mn.us

Minnesota Department of Health
Biomonitoring Program
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St. Paul, MN 55155-2538

For more information and resources, please visit our webpage:
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