



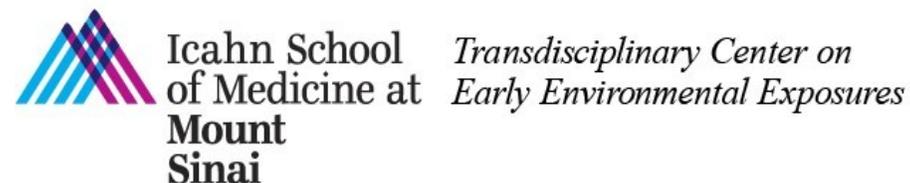
Risk Communication Strategies to Reduce Exposures and Improve Health: Designing and Tailoring Messages

Joseph Wilson Jr., MHS

Region 2 PEHSU (NJ, NY, PR and USVI)
and NYS CHECK Program Coordinator

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Professor, Environmental Medicine and Public Health & Pediatrics
Region 2 PEHSU and NYS Children's Environmental Health Center Co-Director
NIEHS P30 Community Engagement Core Director



A network of experts in reproductive and children's environmental health

Looking for something specific? Search our [Resource Catalog](#)

 ABOUT US

EDUCATION & RESOURCES

FIND AN EXPERT

HEALTH PROFESSIONALS

GENERAL PUBLIC

FAQs

CONTACT



ABOUT PEHSU

We are an interconnected system of specialists located throughout North America who respond to questions from public health professionals, clinicians, policy makers, and the public about the impacts of environmental factors on the health of children and reproductive-age adults.

WHAT'S NEW

APR 27,
2018

New! eLearning Course: Endocrine Disrupting Chemicals in Consumer Products

-- Endocrine Disrupting Chemicals in Consumer Products: An Introduction, Identification and Health Impacts, and Prevention -- The Pediatric Environmental Health Specialty Unit (PEHSU) Program is excited...

QUICK LINKS

-  [PEHSU National Classroom](#)
-  [PEHSU National Resource Catalog](#)
-  [PEHSU Event Calendar](#)
-  [Frequently Asked Questions](#)



AJPH METHODS

Building New York State Centers of Excellence in Children's Environmental Health: A Replicable Model in a Time of Uncertainty



Prescription Healthy Homes



A Missed Connection

Medical Providers



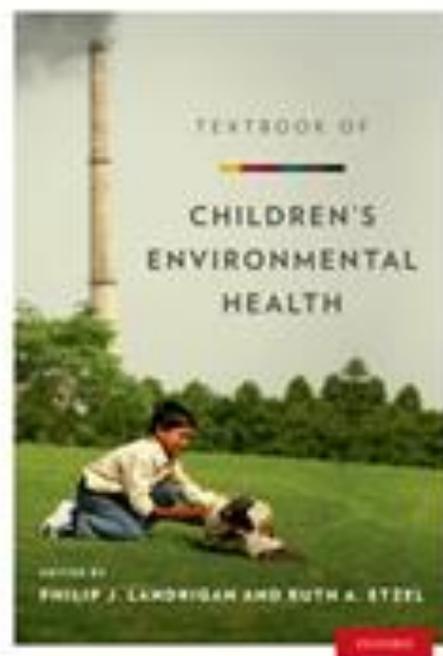
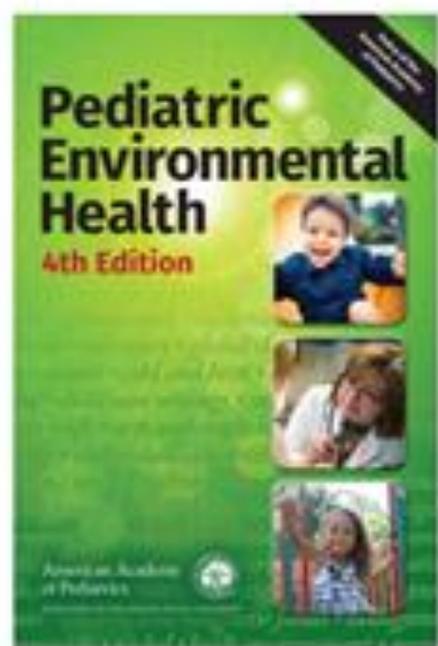
Families



 PRxprescriptions
for Prevention

EH Community Resources







PR_xescriptions for Prevention





Safer Pest Control

Did you know?

The toxic chemicals in pesticides can harm human beings. Since pests can also affect health, it is important to get rid of pests safely!

Action Plan

- Prevent pests without toxic chemicals:
 - Eliminate water sources by fixing leaks and cleaning up spills.
 - Eliminate food sources by removing crumbs, sealing food containers, and emptying trash.
 - Eliminate places where pests may hide.
 - Get rid of their entry points. Seal cracks with caulk.

- If you must use chemical pesticides:
 - Place bait stations in areas inaccessible to children and pets.
 - Choose pesticides with an EPA "Safer Choice" label.
 - Ventilate your home by opening windows.
 - Never use sprays, foggers, or bug bombs.

[more](#) →

Resources

National Pesticide Information Center (NPIC) provides information on safer pest control. Visit their website or call their free hotline:

1-800-858-7378

npic.orst.edu

To learn more about safer pest management:

epa.gov/asthma, select "Asthma Triggers: Gain Control."

health.ny.gov, search "Pesticides" and select "Pests, Pesticides & Repellents" from the search results.

nyc.gov, search "IPM Toolkit" and select "Integrated Pest Management Toolkit" from the search results.

Landlords are required by New York City law to keep your home free of mold and pests. This includes repairing conditions that cause these problems (such as holes/cracks and water leaks).

Call 311 if your landlord does not fix these issues. For more information, visit nyc.gov/health and search "Local Law 55."

For more information, visit: nyscheck.org/rxs



3 Key Messages

- **What?** Define the problem.
- **So What?** Why do we care about it?
- **Now What?** What can we do about it?

Front of Rx: Action Steps



Prescription for Prevention

Safer Pest Control

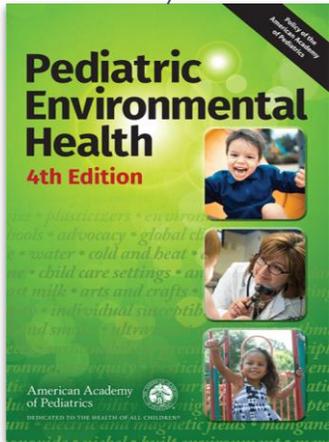
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more
nyscheck.org

Peer-reviewed by a team of experts in pediatric environmental health



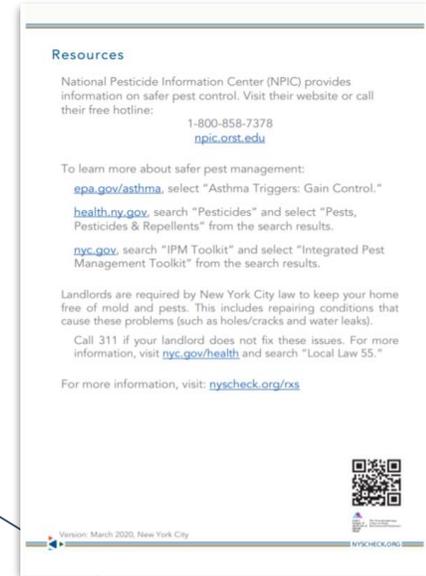
Back of Rx: Resources

Websites

Hotlines

Local Resources

Referrals
(if applicable)



Resources

National Pesticide Information Center (NPIC) provides information on safer pest control. Visit their website or call their free hotline:
1-800-858-7378
npic.orst.edu

To learn more about safer pest management:
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For more information, visit: nyscheck.org/rs

Version: March 2020, New York City



Community Partners

Clinical Practices

Electronic Med Record

Social Media Outreach

Healthy Home Kits

Indoor Air Quality + Asthma

Indoor Air	Mold	COVID-19 Safer Disinfecting in your Home	Green Cleaning
Dust Mites	Noise	Safer Pest Control	Carbon Monoxide

Calidad del aire interior + asma

Calidad del Aire Interior	Moho	Limpieza ecológica	COVID-19 Desinfección más segura
Ácaros	Ruido		

Pests + Pest Control

Safer Pest Control	Cockroaches
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Plagas + Control de plagas

Control de Plagas de Menos Seguro	Plagas Cucarachas
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Home Renovation and Safety

Safer Home Renovations and Repairs	Asbestos	Radon	Lead Paint
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Seguridad y renovación de hogares

Exposiciones del hogar y trabajo	Pintura a Base de Plomo	Asbesto	Gas Radón
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Wood Burning Smoke

Did you know?

Smoke created by burning wood contains gases and particles that can be breathed in and are harmful to your health.

Action Plan

- Burning wood is an important part of practicing our culture and heating our homes.
- There are steps you can take to burn wood more safely:
 - Burn only dry, seasoned wood that has been split and aged for at least 6 months.
 - Use a moisture meter to make sure wood is dry enough to burn (less than 20% moisture).
 - Store wood off the ground in a dry, covered area such as a woodshed.
 - Don't allow fires to smolder.
 - Never burn trash, plastic, particle board, pressure-treated wood, or other household items and building materials.
 - Consider installing an EPA-certified wood burning stove.
- When possible, open windows to provide fresh air during indoor activities and ceremonies that involve wood smoke.
- Consider limiting children's direct exposure to wood smoke, particularly if they have asthma or are prone to respiratory illnesses.
- Install smoke alarms and carbon monoxide detectors.

[more](#) →

Resources

For more information on safer wood burning practices visit [epa.gov/burnwise](https://www.epa.gov/burnwise).

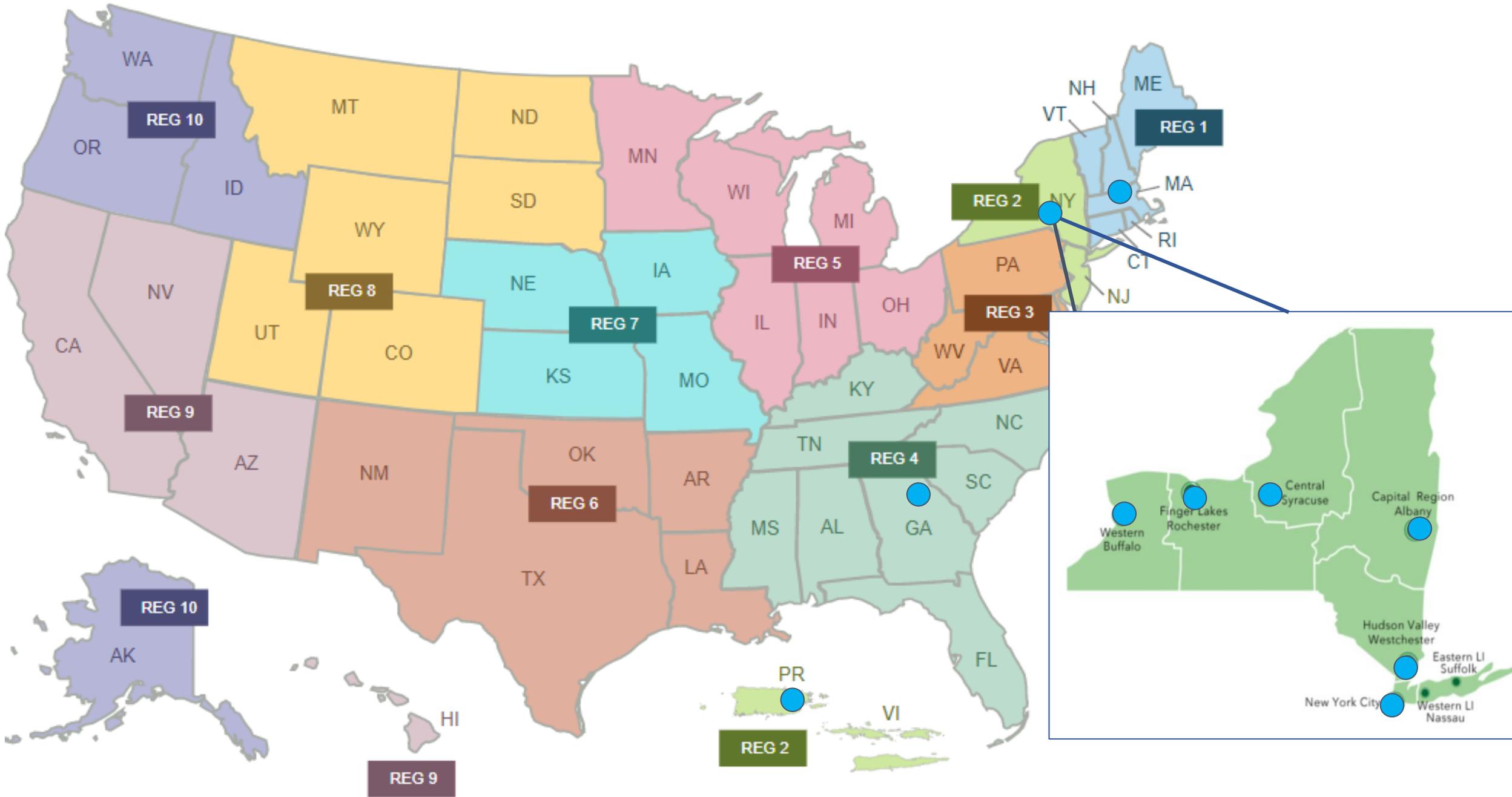
For more strategies to improve your indoor air quality visit [epa.gov](https://www.epa.gov) and search "Indoor Air Quality".

For more information on wood stove change-out programs...

For more information on building a wood storage shed visit <https://www.epa.gov/sites/production/files/2018-10/documents/storageshed2018.pdf>

Insert additional Nation-specific contacts/resources

To speak to a pediatrician with expertise in indoor air quality and children's health, contact the Pediatric Environmental Health Specialty Unit (PEHSU) at PEHSU@mssm.edu or 1 (866) 265-6201.





Avoiding Asthma Triggers

Did you know?

Asthma "triggers" are different for everyone. It is helpful to identify your asthma triggers so that you can try your best to avoid them. If you need help, ask your asthma care provider!

Action Plan

Common asthma triggers and ways to avoid them:

- Secondhand smoke:** Do not allow smoking in your home or car. If you smoke, try to quit. If you need help quitting, see reverse.
- Pests:** Keep surfaces clean of spills or crumbs, seal food containers, and empty trash. Seal any cracks with caulk.
- Dust:** Use zippered dust-proof covers on pillows, mattresses, and box springs. Wash sheets, blankets, and stuffed toys regularly. Wet dust and wet mop regularly.
- Mold:** Reduce moisture and increase ventilation (open windows while showering, use exhaust fans). If you see mold, first eliminate the source of moisture/water; then, scrub mold from hard surfaces with soap and water (and allow the surface to dry completely). PLEASE NOTE: Small areas of mold can be cleaned safely, but larger areas of mold damage may require certified professionals to remove safely.
- Strong Odors/Smells:** Avoid using strongly scented air fresheners, candles, or cleaning products. Use a box of baking soda to absorb odors.
- Seasonal Allergies:** If your child's asthma is triggered at certain times of the year, talk with your child's doctor about how to identify and prevent seasonal allergy symptoms.
- Exercise:** If exercise seems to make your child's asthma worse, talk with your child's doctor about using a rescue inhaler 10-15 minutes before exercising.

[more](#) →

Resources

To learn more about the following topics, visit nyscheck.org/albanyrx or scan the QR code below.

- Secondhand Smoke
- Smoking (including quitting resources)
- Vaping and E-cigarettes
- Safer Pest Control
- Dust Mites
- Mold
- Indoor Air
- Outdoor Air Quality



New York State Healthy Neighborhoods Program can provide home visiting services and resources to combat in-home asthma triggers.

Albany/Rensselaer County: (518) 765-3512

Schenectady County: (518) 386-2818

Columbia County: (518) 828-3358 ext. 1255 or 1260

For help identifying and managing your child's asthma triggers, or to obtain free supplies, contact your local Children's Environmental Health Center:

Albany Medical Center Pediatric Group
391 Myrtle Ave., Suite 3A
Albany, NY 12208

Phone: (518) 262-5588

E-mail: pedsenvironmentalhealth@amc.edu

For more information, visit: nyscheck.org/rxs

Heat Related Illness

Did you know?

- The Earth is warming faster than ever before, leading to stronger heat waves that occur more often. Current rates of greenhouse gas emission leave global estimates of temperature rise by 1.5C by 2030. Exposure to such "extreme heat" is bad for our health – putting us at risk for dehydration, heat related illnesses, and more.

ACTION PLAN

- Dress for success: wear protective clothes (long sleeves, hats, sunglasses, SPF lined)
- Protect your skin: wear sunscreen SPF > 30, reapply frequently (at least every 2 hrs) and after swimming/sweating
- Avoid outdoor activity on extreme weather days during peak sun hours (10a-4p) and seek shade when exposed
- Keep plenty of water and increase fluid intake to prevent dehydration
- Take care of each other: check in on neighbors, elderly, etc. Engage in your local community to establish cooling centers
- Be aware of signs/symptoms of heat related illness (heat cramps, exhaustion)



LEAD

Action Plan

- For homes built before 1978, contact Georgia's Department of Natural Resources (404.363.7026) or call the EPA's National Lead Information Center (1.800.424.LEAD) to learn more about getting your home tested for lead.
- **Renters:** If peeling paint is present in a building built before 1978, talk to your landlord. If you are unsatisfied with their response, talk with your doctor, local health or housing department, or go to georgialegalaid.org to find free legal aid.
- **Homeowners:** Keep your children away from peeling paint. Fix peeling paint and make home repairs safely. Frequently check that all painted surfaces are well maintained and clean with a wet cloth or paper towel. If lead paint is present, consider hiring a professional to minimize exposure.



Did you know?

Lead paint dust in older homes is a major way children are exposed to lead. Even low levels of lead can affect a child's learning and behavior.



Your child should get tested for lead at their doctor visit when they are one and two years old. Older children should also get tested if you are concerned about a potential lead exposure.



For more information →



RESOURCES

If you are concerned about lead paint in your home, please contact your local health department.

Georgia residents: For more information regarding lead, visit dph.georgia.gov and search "Healthy Homes and Lead Poisoning Prevention."

If you think your child may have lead poisoning, please call the Georgia Poison Control Center (1.800.222.1222) and your pediatrician. Your doctor can advise what action is needed to evaluate your child.

If you would like to speak about your concerns regarding lead with a healthcare professional, please call (toll free) 1.877.337.3478 to speak with a member of the Pediatric Environmental Health Specialty Unit at Emory University.

To learn more about lead, please visit epa.gov/lead.

For more information regarding environmental health risk factors like lead, please visit pehsu.net.



Community Partnered Messaging Development

- NIEHS Inter-Center Collaboration Grant
- Geographically Diverse Partners
- Diverse Areas of Expertise
 - Clinicians, Researchers, Public Health, AAP, Community Partners, Families
- Identify Local Clinical Champions across disciplines
 - SW, Asthma Counselors, Trainees, RNs, MDs
- Prioritize Actionable EH Concerns
- Build Relationship with Local Community Partners

Community Partnered Messaging Development

- Evaluation and Quality Improvement
 - # screened, % environmental concerns, % referrals
- Short evaluation survey
- Annual review of Rx resources by Trainees
- Consults available to localize and disseminate

Additional Case Examples

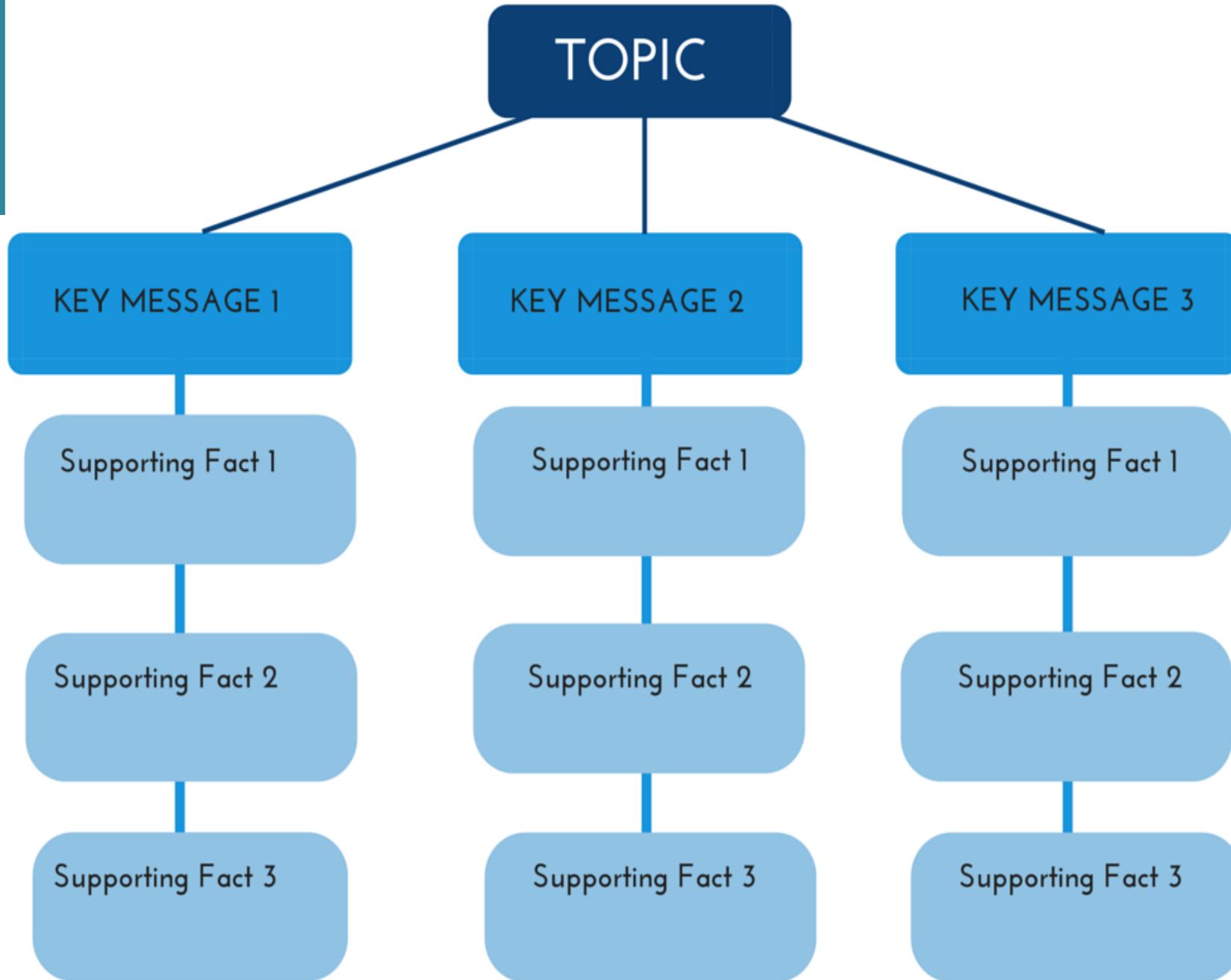
Parents do the best they can with the information they have at the time...

- Gather evidence based information
- Err on the side of caution

27 words

9 seconds

3 messages



Communication Strategies

- Reduce perception of risk (Covello and Peters)
 - Give strategies for personal control
 - Choose corresponding comparisons
 - Use historical background when possible
- Build trust
 - Use highly trusted information sources

Trichloroethylene (TCE) at Bronx New School (PS 51)

Mount Sinai PEHSU Summary, August 2011



<http://maps.google.com/maps?ie=UTF8&ll=40.877495,-73.886927&spn=0.000585,0.001671&t=h&z=20>





Construction at PS 29:
Messaging for Children

Every school building needs regular maintenance
to keep the school safe for the people inside.



But work on the building can create a lot of DUST.



While the work is going on it's important to stay
healthy by washing dust off your hands...



...Especially before you
eat and after you've been
playing outside.



When it comes to the health and safety of children, faculty and staff in schools/early learning environments: **VENTILATION MATTERS.**

TAKE ACTION: Identify & control common sources of school air contamination.

- Follow directions when using cleaning products and disinfectants. They can affect air quality if not used properly.
- Educate and train staff on ways to improve indoor air quality.
- Provide guidance on common symptoms in children due to poor air quality.

For more resources: <https://apha.org/nehpc>

Heavy Metals in Baby Foods and Fruit Juices

Advice for Families from Environmental Pediatricians

Reports of heavy metals in baby foods and fruit juices have been featured in news headlines across the United States, leaving families concerned about the health and safety of their children. This document includes useful information on heavy metals in food and drink products as well as strategies to reduce your family's exposure.

Key Points

1. Many common baby foods and fruit juices contain small amounts of heavy metals such as lead and arsenic.
2. The low levels of metals found in food are likely a small part of a child's overall exposure to metals; however, a child's total metal exposure from all sources can pose a risk to health- particularly brain development.
3. The FDA should set strict enforceable guidelines to limit levels of heavy metals in baby food.
4. Parents can reduce heavy metals in their child's diet with simple steps such as feeding them a variety of foods and limiting rice-based products and fruit juices.

AAP Voices Blog

[News Room](#) / [AAP Voices](#) / [Baby Food and Heavy Metals: What Parents Should Know](#)



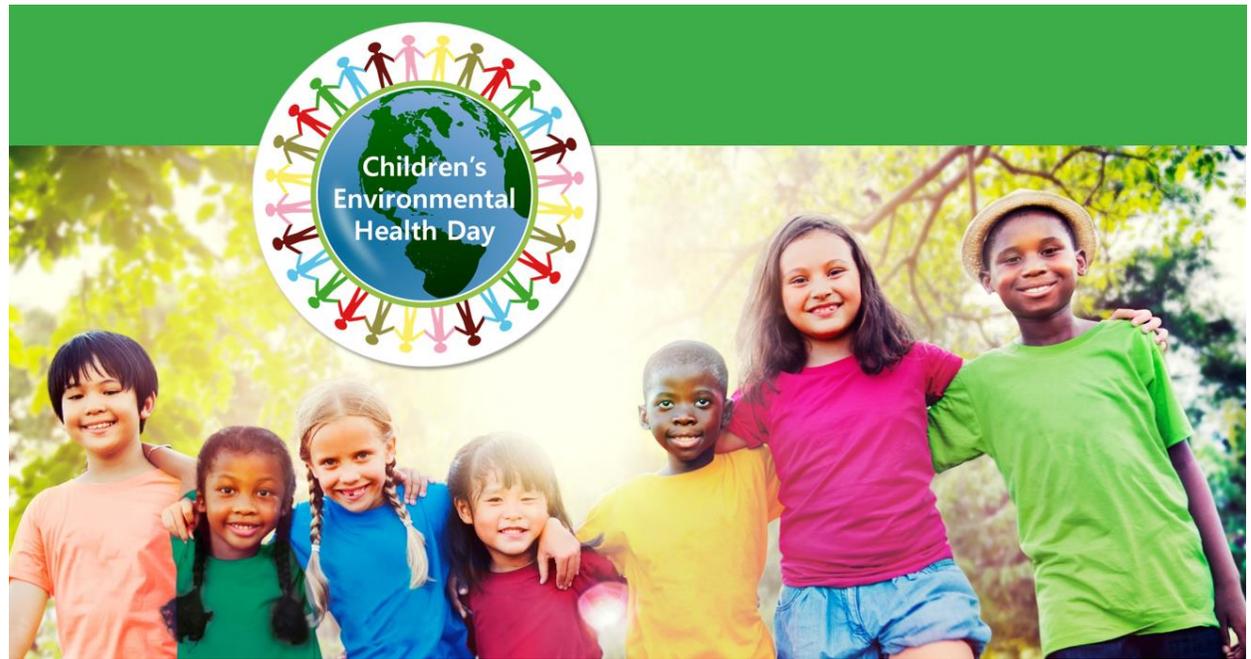
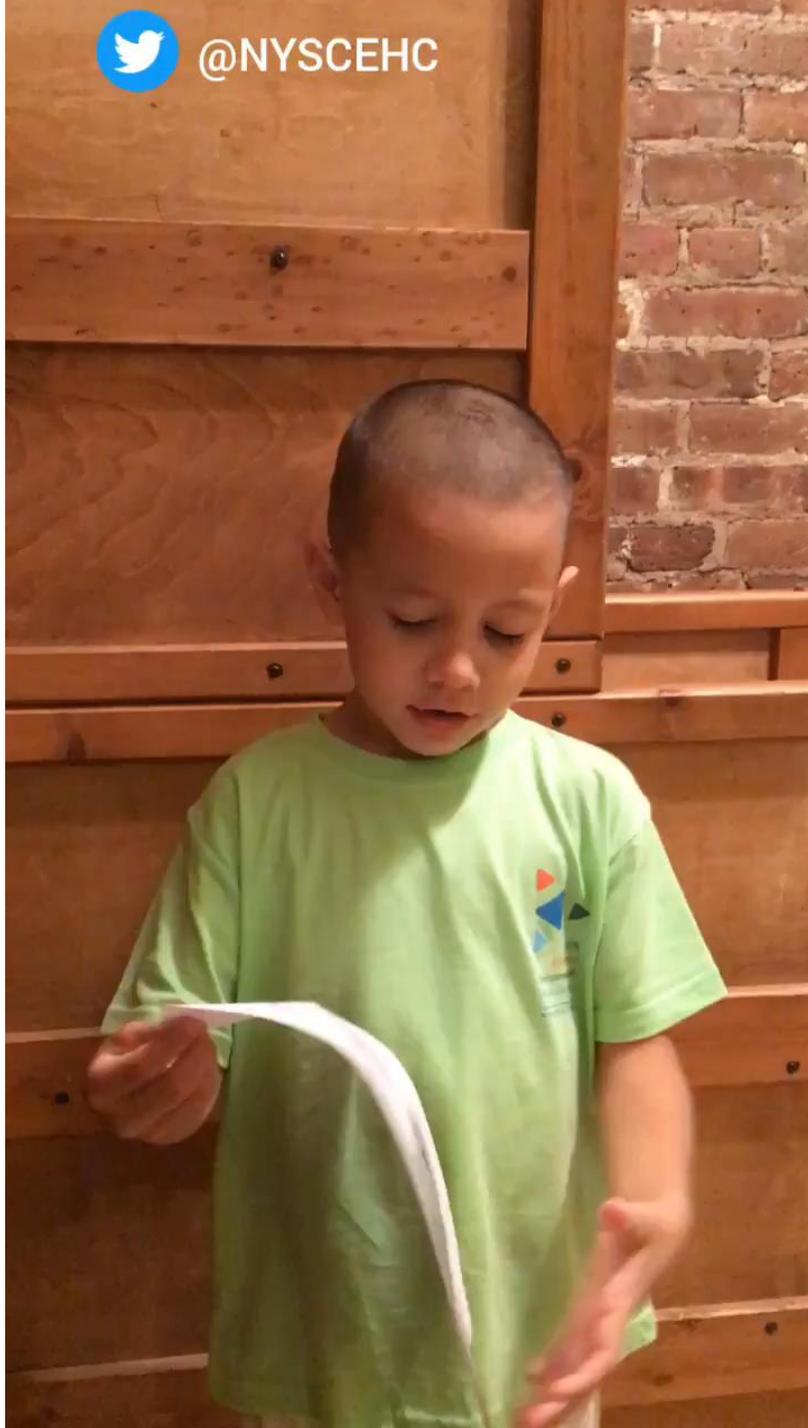
Baby Food and Heavy Metals: What Parents Should Know



Althea Bickley

March 11, 2021

Althea Bickley is a fourth-year medical student at SUNY Upstate Medical University in Syracuse, New York, in collaboration with the New York State Children's Environmental Health Centers (NYSCHECK) and Region 2 Pediatric Environmental Health Specialty Unit (PEHSU).



The aim of Children's Environmental Health Day is to raise awareness about the importance of clean air and water, safe food and consumer products, and healthy environments to children's health and development.

Simple Steps to a Healthy Home Environment

CHILDREN'S ENVIRONMENTAL HEALTH CENTER at the MOUNT SINAI INSTITUTE FOR EXPOSOMIC RESEARCH

1 Ventilate



2 Wash hands with plain, fragrance-free soap and water



3 Support companies that reduce the use of toxic chemicals and disclose all ingredients

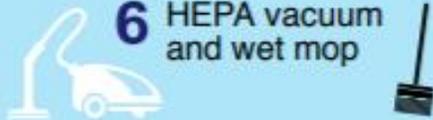


4 Shop smart; Read labels

5 Leave your shoes at the door



6 HEPA vacuum and wet mop



7 Make your own cleaners
Use white vinegar, baking soda, and lemons



Don't use unnecessary products



Don't smoke



Don't use aerosolized sprays and fragrance



Don't use 3, 6 and 7 plastics

10 SIMPLE STEPS TO A HEALTHIER LIFESTYLE

1 Ventilate to improve indoor air quality



2 Avoid antibacterial soap



3 Support companies that reduce the use of toxic chemicals and disclose all ingredients



4 Leave shoes at the door to avoid tracking in toxics



5 Shop smart; Read labels + ask questions



6 HEPA vacuum+ wet mop



7 Make your own cleaners
Using ingredients like white vinegar, baking soda + lemon



9 Don't smoke indoors (or ever)



8 Don't use plastics 3, 6 and 7



10 Don't use aerosole sprays and fragrances.



ALL ABOUT TOOTH LEAD LEVELS

Date

Dear <participant>,

We appreciate your family's participation in the PROGRESS study. We are contacting you to give you information on some of the study results. You may remember that you gave us one or more of your child's teeth so we could study them. The researchers analyzed your child's teeth to see how much lead they were exposed to before and after birth, and in this document we will report these results to you.

This package consists of (Figure 1)

- 1) Report Back Results
- 2) An Introduction to Lead Information Sheet
- 3) A Daily Checklist to Stay Lead Free
- 4) A List of Ingredients to help you keep lead out

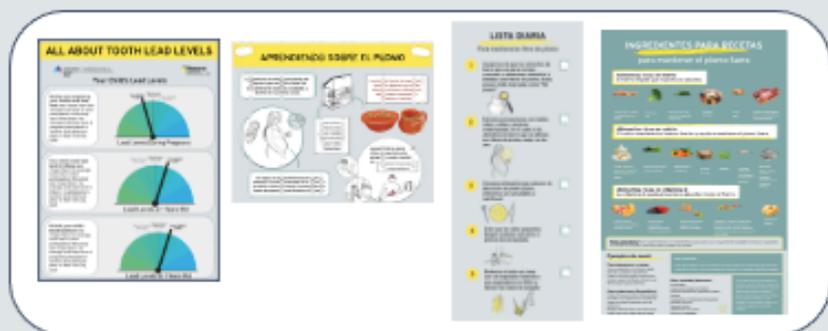


Figure 1

What is Lead?

Lead is a metal that can be found in the environment and in everyday products, for example in clay utensils used to cook, serve, and store food and beverages. Lead exposure in children can affect their behavior and learning ability, so it is important to know if your family is at risk for lead exposure so that you can take steps to prevent it.

ALL ABOUT TOOTH LEAD LEVELS

How do you measure lead?

Doctors can determine if you or your child have recently been exposed to lead by measuring lead in your blood. In our study, we can measure the lead your child was exposed to in the past, even before birth, by testing their teeth. Your child's teeth began to grow before they were born. As teeth grow, a new layer is added each day, like rings on the tree trunks.

Some of the chemicals that entered your body through the food you ate, the air you breathed, and the products you used have deposited on your baby's tooth. As your child's tooth continued to grow after birth, the chemicals they were exposed to also settled on the tooth.



Figure 2

Lead is one of these chemicals that gets deposited on teeth as they develop. In our laboratory, we can identify when a person was exposed to lead by the location of the lead on the tooth. For example, the lead your child was exposed to before they were born will be located in a different part of the tooth than the lead they were exposed to when they were one year old.

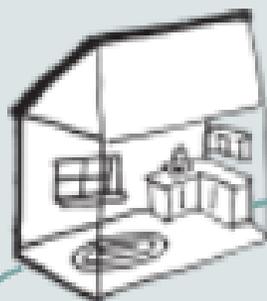
What does it mean if lead is found in my child's tooth?

Elevated lead content in the tooth means that your child had elevated lead exposure during the time when the tooth was growing. It is important for you to know that finding lead in your child's tooth does not mean that they will have health problems. In this study we compared the lead in your child's tooth to the lead in other participants in the study. We also compared your child's tooth lead to the average tooth lead in a study of children living in New York City where lead exposure is typically lower than it is in Mexico. More research is needed to understand the relationship between lead measured in teeth and health problems.

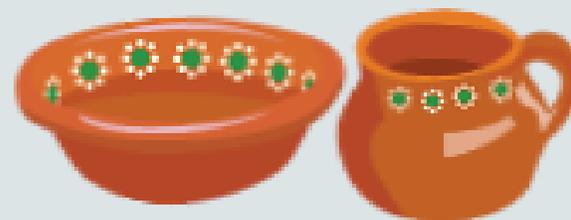


APRENDIENDO SOBRE EL PLOMO

El plomo es un metal que puede ser peligroso para nuestra salud. Se encuentra en nuestras ciudades y dentro de nuestras casas.



La principal fuente de exposición a plomo en México es el uso de utensilios de barro vidriado con plomo para el consumo de alimentos y bebidas.



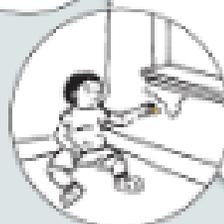
Otras fuentes de exposición a plomo son el reciclaje de baterías, soldadoras, basura electrónica, pinturas, algunos dulces y polvo contaminado.



En etapas de alta desmineralización como el embarazo, el plomo acumulado en los huesos de la madre se libera a la sangre constituyendo una fuente de exposición para el bebé en formación.

La exposición a plomo en niños es especialmente peligrosa y puede resultar en:

Problemas de aprendizaje y comportamiento



ENVIRONMENTAL JUSTICE CHRONICLES: BOOK 1

MAYAH'S LOT



Written by Charlie La Greca
& Rebecca Bratspies
Art by Charlie La Greca

NIH National Institute of Environmental Health Sciences



Film Festival



The Environmental Health Science FEST

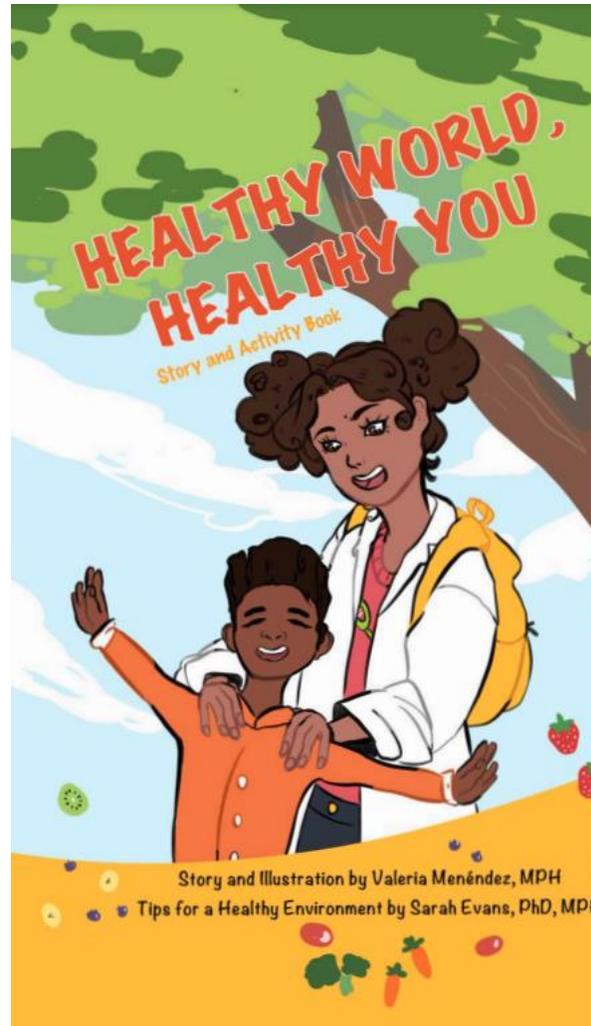
Your Environment. Your Health. Advancing environmental health sciences for another 50 years.

#EHSFEST

National Institutes of Health • U.S. Department of Health and Human Services



Healthy World, Healthy You: Bringing EH to the classroom



Healthy World, Healthy You Module 1: What is the Environment? (p.5)

On her way to Brooklyn Bridge Park, Isabella talks to her brother about how the environment impacts health (p.4-5).

Big Ideas for Students: This module explores what the environment is and how the environment impacts health.

Learning Objectives:
Answer the question "What is the environment?"
Understand the connections between their environment and their health.
Connect actions to health outcomes.
Define and understand key terms.

Key Concepts for Discussion:

- The environment is everything around us, both outdoors or indoors!
- Air, water, food, people, plants, and animals are all part of our environment.
- Where we live, what we eat, and what air we breathe all affect how our bodies work and whether we feel sick or well.
- Understanding the environment helps us to better understand our health and the health of others in our communities.
- There are steps that we all can take to make our environments healthier.

Lesson

Directions for Guided Discussion:

Pre-discussion: Activate prior knowledge by asking students review questions about the book:
Example: "What do you remember from the book? What do Isabella and Joel do to protect the environment?"

1. Read the text on p.5 aloud to students.
2. Begin a class discussion (either as a whole class or in small groups) using these guiding questions:
 - a. What is the environment? Is it inside, outside, or both? What is in my environment?
 - b. Does the environment affect how I feel? How?
 - c. What does a healthy environment look like?
 - d. What can I do to make my environment better for my health?
 - e. Flag any more questions that students might have and write them down.

1

K-2

- 7 module K-5 curriculum based on HWHY Volume 1
- Aligned with NYC science standards
- Teacher curriculum and take-home caregiver guides
- Created with summer intern Merideth Marden (Columbia)
- In consultation with PS29 3rd grade teacher Lynn Manna



For more information:

www.nyscheck.org

- [PEHSU](#) @R2PEHSU
- [NIEHS PEPH](#) @NIEHS_PEPH
- [NYS CEHC](#) @NYSCEHC
- [Mount Sinai TCEEE](#) @SinaiCEHC



Acknowledgements

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- APA Env SIG, Obesity SIG
- BCERP U01ES019454
- BCERC U01ES012771
- NIH/NIEHS P01ES009584
- EPA RD83171101
- P30 ES023535
- CTSA 5UL1TR001433-05
- NIEHS New Investigator Award
- NYS Empire Clinical Research Investigator Program
- NYSDOH NYS Children's Environmental Health Centers
- Regional EPA Supplements