

US EPA ARCHIVE DOCUMENT



Statement: Did you know that the air you breathe, the water you drink, and the food you eat can affect the way your body grows and functions? Our bodies are linked to the environment in a variety of ways. By learning about environmental hazards and how they affect our health, we can take charge of our environment. If each person could learn how protecting the environment is linked to their health, they could make a large impact on their life and the lives of family and friends.



Ask question: What does the environment mean to you? When you think of the environment, what kind of images come to mind? *(Call on people in the room)*

Response: *(Most people will likely name images similar to those displayed on the slide-respond accordingly)*

When most people think of the environment, they picture these images- the great outdoors: trees, flowers, mountains, rivers, lakes, and streams. While these are essential components of our environment, the environment is much more than just nature.

Point to convey: The environment is wherever you are and everything around you: inside your home, in the class room, at the mall, or in the doctor's office. Most people spend over 90% of their time indoors. There are many sources of indoor air pollution in any home. Health effects from indoor air pollutants may be experienced soon after exposure or, possibly, years later. Every type of environment needs to be free from harmful environmental exposures whether indoors or outdoors. There is a lot we can do to protect ourselves from exposure to environmental hazards at home, at school, where we work and where we gather as a community (churches, temples, community centers, etc.).

**It is important to protect children
from environmental hazards
where they *live, learn and play.***



**A child's environment is all
around them**

- **Playground**
- **Classroom**
- **Home**

For the presenter: For additional information on children's environmental health, visit epa.gov/children.

Statement: There is more to being environmentally friendly and environmentally conscious than most people think. Polluting our environment not only hurts the earth but can also affect our health – and our children's health. By taking care of our environment, we are also taking care of ourselves by preventing and reducing harmful environmental hazards and exposures.

Ask Question: Can you name a few potential indoor environmental hazards? (*Call on people in the room*)

Response: Lead, pests and pesticides, radon, asbestos, second-hand smoke, etc.

Point to Convey: A child's environment is all around them- whether it be on the playground, in the classroom, or in the home. It is important that we take the proper steps to protect children from environmental hazards where they live, learn and play.

Children are more vulnerable to environmental health hazards than adults.



WHY?

1. Their bodily systems are still developing
2. They eat more, drink more, and breathe more in proportion to their body size
3. Their behavior can expose them more to chemicals and organisms- such as playing on floors or lawns or putting objects in their mouth

Ask question: What makes children different than adults? (*Call on people in the room*)

Response: Children and adults are completely different in size, shape, and most importantly, development.

Point to Convey: These differences make children more vulnerable and susceptible to environmental health hazards than adults. Let's explore these differences in a little more detail.

Highlight the key points on the slide. Explain WHY children are more vulnerable to environmental health hazards than adults.

1. Their bodily systems are still developing: From birth to adolescence, children continue to develop. As their internal systems develop, like the nervous system (brain), respiratory system (breathing), and immune system (protecting the body from sickness), these systems can be impacted by harmful exposures, making it difficult to get rid of harmful toxins in the body.
2. Pound for pound, children eat more, drink more, and breathe more than adults. If the air they breathe or the water they drink is polluted, this means they take in proportionately more toxins than adults.
3. Children's behavior can expose them more to chemicals and organisms: Children are low to the ground and play in areas where they are exposed to greater environmental hazards, such as the floor, grass, or dirt. Children handle and touch objects more often than adults and, as we all know, babies and toddlers put things in their mouth- thus increasing their exposure to certain contaminants.

Understanding these differences provides a greater understanding of why it is so important to protect our children from the harmful effects of environmental hazards.



What are the major issues in children's environmental health?

There are a number of environmental hazards that affect the health of children.

- Lead Exposure
- Secondhand Smoke
- Pests and Pesticides
- Climate Change and Ozone
- UV Exposure

For presenter: We have chosen to focus on these 5 issues in children's environmental health (Lead, Secondhand Smoke, Pests and Pesticides, Climate Change and Ozone, and UV Exposure). It is important to explore additional environmental health issues and to understand how to protect children from the health effects of environmental hazards. For more information, visit epa.gov/children and click on the Potential Environmental Hazards link.

Statement: While there are a number of environmental hazards that affect the health of children, we have decided to focus on 5 major issues in children's environmental health.

Highlight the key points on the slide- reading the list of environmental health hazards.

Point to Convey: After this presentation, the audience should have a greater understanding of major issues in children's environmental health, causes of environmental hazards, health effects of environmental hazards on children, and tips and strategies to protect children from environmental hazards.

LEAD EXPOSURE

What is it?

What causes it?

What are the health effects?

What can YOU do to protect children?

For the presenter: For additional background information on lead exposure visit [epa.gov/lead](https://www.epa.gov/lead).

The following questions will be addressed regarding lead exposure.

What is Lead Exposure?



- Lead is a toxic metal that was used for many years in products found in and around our homes.

- Lead exposure can cause a number of health effects, particularly in children who are at the greatest risk of lead poisoning.

For presenter: Prepare information on lead in your community by visiting [cdc.gov/nceh/lead/data/](https://www.cdc.gov/nceh/lead/data/).

The Centers for Disease Control and Prevention (CDC) has compiled state surveillance data for children age <72 months who were tested for lead including the percentage of children tested for lead and the percent of children with elevated blood levels.

Click on the *CDC's State Surveillance Data* link to find information specific to your state and county.

Presenting this information to your community will offer a perspective on how your community is directly affected by the health impacts of lead.

Highlight the information on the slide- defining lead.

Point to convey: Lead poisoning is a serious problem for young children. While blood lead levels have greatly reduced over the years, there are still a large number of children adversely impacted by lead poisoning. It is important for all communities to test children for lead.

What are the Health Effects of Lead?



Children are adversely impacted by lead poisoning.

- Damage to the brain, nervous system, and kidneys
- Learning disabilities, such as hyperactivity, attention deficit disorder, and decreased intelligence
- Speech, language, and behavior problems
- Poor muscle coordination
- Decreased muscle and bone growth
- Slowed growth
- Hearing problems
- Headaches

Ask question: What are some of the health effects of lead? *(Call on people in the room)*

Response: Highlight the information on the slide in response to the question asked on previous slide.

Point to convey: Lead poisoning is one of the most serious health threats for children in and around the home- even small amounts of lead can have damaging effects. 1 in 20 American children have too much lead in their bodies. Children are at greatest risk for lead poisoning- causing a number of problems associated with learning, growth, behavior and development.

Where is Lead coming from?

- ❑ Paint
- ❑ Soil
- ❑ Household dust
- ❑ Drinking water
- ❑ Toys
- ❑ Furniture
- ❑ Jewelry
- ❑ Food and liquors stored in lead-glazed pottery or porcelain
- ❑ Lead smelters or other industries that release lead into the air
- ❑ Hobbies involving pottery, stained glass, refinishing furniture
- ❑ Some herbal remedies

There are a number of places where lead can be found, but the main concern is lead in *paint*, particularly in homes built *before 1978*.

Highlight the information on the slide.

Point to convey: Until recently, paint (available for sale) and water pipes often had a metal in them called lead. Lead was also found in gasoline and was released into the air from car exhaust. It is no longer used in these ways anymore, but there is still plenty of lead around. Most problems with lead exposure come from deteriorated paint that contains lead, particularly in houses built before 1978. You are most likely have lead in your home if you live in an older house or apartment. You can't always tell if you have a lead problem just by looking at it. Lead can be a fine dust from the paint in your house or in dirt tracked inside. Therefore, we must follow a number of precautionary steps to reduce our children's exposure to lead (as discussed on the following slide).

What can *YOU* do to protect children from lead?



Get your child checked, have your home tested, and fix any hazards you may have.

You can take immediate steps to reduce your family's risk:

1. Wash children's hands often.
2. Clean paint chips and fine dust when opening and closing windows immediately.
3. Clean floors, window frames, window sills, and other surfaces weekly.
4. Rinse sponges and mop heads after cleaning dirty or dusty areas.
5. Keep play areas clean.
6. Keep children from chewing window sills or other painted surfaces.
7. Clean or remove shoes before entering your home to avoid tracking in lead.
8. Make sure children eat healthy and nutritious meals.
9. Make sure anyone doing painting or remodeling in your home uses lead-safe practices.

Point to convey: Symptoms of lead poisoning and lead exposure are not always noticeable. Have a plan to avoid and reduce exposure to lead and make sure that the plan is done consistently and frequently.

Highlight the key points on the slide.

Number 9 is an important tip to highlight: *Make sure anyone doing painting or remodeling in your home uses safe-lead practices.* In April of 2008, the EPA issued the Renovation, Repair, and Painting Rule (RRPR) requiring lead-safe practices to prevent lead poisoning. Under the rule, contractors performing renovation, repair and painting projects that disturb lead-based paint in homes, child care facilities, and schools built before 1978 must be certified and must follow specific work practices to prevent lead contamination. Contractors must use lead-safe work practices and follow these three simple procedures:

1. Contain the work area
2. Minimize dust
3. Clean up thoroughly

For presenter: For additional background information on the RRP Rule, visit epa.gov/lead/pubs/renovation.htm.

SECONDHAND SMOKE

What is it?

What causes it?

What are the health effects?

What can YOU do to protect children?

For the presenter: For additional background information on secondhand smoke visit epa.gov/smokefree.

The following questions will be addressed regarding secondhand smoke.

What is Secondhand Smoke?



- Secondhand smoke, also known as Environmental Tobacco Smoke (ETS), consists of exhaled smoke from smokers and side stream smoke from the burning end of a cigarette, cigar, or pipe.
- Almost 60% of U.S. children aged 3-11, or almost 22 million children are exposed to secondhand smoke.

Ask Question: Why do you think smoking is banned in most public places in the United States? (*Call on people in the room*)

Response: Studies show that not only is smoking dangerous for your health, but dangerous to the health of others. Non-smokers who breathe in secondhand smoke take in nicotine and other toxic chemicals just like smokers do. The more secondhand smoke you are exposed to, the higher the level of these harmful chemicals in your body. *Highlight the statistic on the slide.* This statistic shows that almost 60% of U.S. children ages 3-11 are being exposed to second smoke. This exposure and inhalation of smoke is predisposing children to future health risks and complications at a young age.

Point to convey: The health risks of smoking are detrimental to not only the smoker, but to those exposed to their smoke as well.

What are the Health Effects of Secondhand Smoke?

- ❑ Asthma in children (increases frequency and severity of new cases of asthma in children who have not previously displayed symptoms)
- ❑ Sudden Infant Death Syndrome (SIDS)
- ❑ Respiratory tract infections
 - ❑ Pneumonia
 - ❑ Bronchitis
- ❑ Middle ear infections, chronic middle ear disease
- ❑ Reduction in lung function

Highlight the key points on the slide.

Ask question: How many of you knew secondhand smoke was dangerous to the health of your children?

Bonus question: Not only are children being exposed to the health effects of secondhand smoke, but new studies have begun to introduce third-hand smoke. What is third-hand smoke?

Answer: "Third-hand" smoke refers to the cigarette byproducts that cling to smokers' hair and clothing as well as to household fabrics, carpets and surfaces even after secondhand smoke has cleared. Doctors coined the term to raise awareness about the danger these invisible tobacco toxins pose to small children.

What can *YOU* do to protect children from Secondhand Smoke?



Take the Smoke-Free Pledge!

1. Choose not to smoke in your home or car and don't allow others to do so.
2. Choose not to smoke in the presence of people with asthma.
3. Choose not to smoke in the presence of children.
4. Talk to your children's teachers and day care providers about keeping the places your children spend time smoke-free.

Highlight the key points on the slide.

Point to Convey: The important thing to know is that you can't eliminate smoke exposure in your home by opening a window, using air conditioning or a fan, or allowing smoking in some rooms but not others. If you can smell tobacco smoke even if you can't see it, your children are breathing in toxins. The only way to fully protect your children and nonsmoking adults in your family is to make your home and car smoke-free.

PESTS AND PESTICIDES

What is it?

What causes it?

What are the health effects?

What can YOU do to protect children?

For the presenter: For additional background information on pests and pesticides, visit [epa.gov/pesticides](https://www.epa.gov/pesticides).

The following questions will be addressed regarding Pests and Pesticides.

What are Pests?



Pests are living organisms that are present where they are not wanted or that cause damage to crops, humans or animals.

- *Insects
- *Mice
- *Fungi / Weeds

Highlight the key points on the slide.

Ask Question: What additional pests can you think of and why are they bad?

Response to Question: Bed bugs, cockroaches, biting insects (mosquitoes), stinging insects (bees), ants, weeds, etc.

Point to Convey: A pest is any living thing in the wrong place at the wrong time. While pests are a nuisance and can be harmful to your health, it is important to understand that plants and animals exist for a reason and are necessary to certain functions of every day life. For example, while bees pose a health threat to a child if it is stung, bees are useful in the garden where they pollinate flowers. By understanding the distinction between the role of living things in our environment and when they become pests, we can begin to understand the necessary steps to keep pests in their natural environment and out of ours.

What are Pesticides?



A *pesticide* is any substance or mixture of substances intended for preventing, destroying, repelling, or, mitigating any pest.

- Bug sprays
- Rat poison
- Disinfectants and sanitizers
- Lawn products like weed and feed
- Flea Collars
- Mosquito Repellants

Pesticide residue is found on most fruits and vegetables and in water, so even if you don't use pesticides in your home, you may be exposed to them.

Highlight the key points on the slide.

Points to Convey: Many families are bugged by pests, presented on the previous slide. Cockroaches, flies, rats, and mice all carry disease and can get into our food. Roaches and house dust mites can make allergies and asthma worse. Fleas and ticks can carry disease. Rat and spider bites can make children seriously ill. We often use pesticides to prevent and kill pests, assuming that pesticide uses carries no risk. However, they can be a serious danger if used incorrectly or overused.

It is important to understand that everyone is exposed to pesticides, even if you do not use the products listed on the slide. Pesticide residue is found on most fruits and vegetables and can even be found in water from run-off. Almost one-half of houses with a child under 5 had pesticides stored within reach of a child. We must take proper steps to protect our children from the health effects of pesticides.

What are the Health Effects of Pesticides?

- May affect the nervous system
 - Neurological defects
 - Birth defects
 - Neurodevelopment disorders (ADHD, Autism)
- Irritation of skin and eyes
- Exposure to some pesticides are associated with certain cancers
- May affect the hormone or endocrine systems in the body
 - Fertility
 - Normal body functioning

Highlight the key points of the slide

Point to convey: Almost every household uses pesticides. But most people do not understand that pesticides can be a danger. Bug spray, flea powder, rat poison, and garden weed killer are all types of pesticides. These products have chemicals that kill pests. That also means they can harm you and your family. If they are not used safely, some pesticides may cause serious health problems- poisoning, birth defects, nerve damage, and even cancer (in addition to the health effects presented on this slide).

What can *YOU* do to protect children from Pests?



Follow these steps to protect your children from the health effects of pests.

Make your home less inviting to pests!

1. Don't leave food around the house or eat around the house- assign designated eating areas.
2. Clean up dirty dishes and food items. Store food items in tight containers so pests can't get in.
3. Don't provide shelter for pests- get rid of old newspapers, cardboard, and clutter.
4. Don't leave pet food and water out where pests can eat or drink.

Highlight the key points of the slide.

Point to convey: The tips highlighted on this slide will go a long way to ensuring the safety of your children from pests. What we need to realize is that pests have basic survival needs- food, water, and shelter- just like you! If you deny them of their basic needs, they are less likely to come into your home and you can reduce or even eliminate the need for pesticides.

To put this into perspective, imagine an overweight person who is experiencing a number of health complications including Diabetes, High Blood Pressure, and High Cholesterol. He/she may take pills for reducing the effects of these health conditions. While these pills are certainly helpful, unless the individual takes other steps such as improving eating habits and increasing physical activity, he may not be getting to the root of the problem or doing all he can to address his health issues.

The same principle holds true for managing pests in the home. Holistic approaches work best and can reduce the need for chemicals controls.

What can *YOU* do to protect your children from Pesticides?



Follow these steps to protect your children from the health effects of pesticides.

1. Always store pesticides and other household chemicals, including chlorine bleach, out of children's reach - preferably in a locked cabinet.
2. Read the Label FIRST!
3. Before applying pesticides or other household chemicals, remove children and their toys, as well as pets, from the area until the pesticide has dried or as long as is recommended on the label.
4. If your use of a pesticide or other household chemical is interrupted (perhaps by a phone call), properly reclose the container and remove it from children's reach.
5. Never transfer pesticides to other containers.
6. Wash children's hands, toys, and bottles often.

In case of poisoning, call the Poison Control Center at 1-800-222-1222.

Highlight the key points on the slide.

Point to Convey: These tips will also go a long way in ensuring the safety of your children from pesticides. It is important to be mindful of pesticide use outside your home, such as on playgrounds and athletic fields. Pesticides are often used in these areas to kill weeds and unwanted grasses and often no warnings are provided before they have been used- Be aware of all types of situations in which pesticides are used and limit and reduce pesticide use in your home and around children. If your children are spending time at a friend, aunt, uncle, or grandparent's home, be sure to inform the supervising adult of keeping these products out of reach of children to avoid contact and exposure.

CLIMATE CHANGE AND OZONE

What is it?

What causes it?

What are the health effects?

What can YOU do to protect children?

For the presenter: For additional background information on Climate Change and Ozone, visit epa.gov/climatechange/ and epa.gov/ozone.

The following questions will be addressed regarding Climate Change and Ozone.

What is Climate Change?



Climate change refers to major changes in temperature, rainfall, snow, or wind patterns lasting for decades or longer. Both human-made and natural factors contribute to climate change.

Climate change affects the health of children through extreme weather, air pollution, infectious diseases, and heat.

Ask Question: What is Climate Change?

Response to question: Highlight the key points on the slide

Point to convey: The Earth's climate is changing in ways that could have serious consequences for public health. In addition to the effects of higher temperatures, climate change will greatly impact the number of people experiencing illness, injury, and infectious disease from floods, storms, droughts, and fires. We all have a part to play in reducing green house gases and protecting our children from the health effects of climate change.

What is Ozone?



- Ozone is a colorless gas found in the air we breathe.
- Ozone can be good or bad depending on where it occurs:
 - Good ozone occurs naturally in the Earth's upper atmosphere (the stratosphere), where it shields the Earth from the sun's ultraviolet rays.

Good up high, bad nearby!

Ask Question: What is Ozone?

Response to question: Highlight the key points on the slide

What are the Health Effects of Climate Change?

- Increases in infectious disease and post traumatic mental health and behavioral problems
- Temporary decreases in lung function and lower respiratory tract infections
- Respiratory symptoms
 - Shortness of breath
 - Chest pain when inhaling
 - Wheezing and coughing
 - Decreased lung function
 - Exacerbation of Asthma
 - Development of Chronic Bronchitis
- Water-borne illnesses
 - Inflammation of the stomach and intestines
 - Lyme Disease
- Heat stroke and exhaustion



Highlight the key points on the slide

Ask Question: What are the health effects of Climate Change?

What are the Health Effects of Ozone?

- ❑ Make it more difficult to breathe deeply and vigorously
- ❑ Cause shortness of breath and pain when taking a deep breath
- ❑ Cause coughing and sore or scratchy throat
- ❑ Inflammation and damage the lung lining
- ❑ Make the lungs more susceptible to infection
- ❑ Aggravate lung diseases such as asthma, emphysema, and chronic bronchitis
- ❑ Increase the frequency of asthma attacks
- ❑ Continue to damage the lungs even when the symptoms have disappeared



Highlight the key points on the slide

Ask Question: What are the health effects of Ozone?

What can YOU do to reduce your contribution to Ozone and protect children?

1. Conserve energy at home, work, everywhere. Turn off lights you are not using.
2. Carpool or use public transportation, bike or walk instead of driving.
3. Combine errands to reduce vehicle trips.
4. Limit engine idling.
5. When refueling: Stop when the pump shuts off. Putting more fuel in is bad for the environment and can damage your vehicle. Avoid spilling fuel. Always tighten your gas cap securely.
6. Keep your car, boat, and other engines tuned up.
7. Inflate your car's tires to the recommended pressure.
8. Use environmentally safe paints and cleaning products whenever possible.
9. Follow manufacturers' recommendations to use and properly seal cleaners, paints, and other chemicals so smog-forming chemicals can't evaporate.
10. Refuel cars and trucks after dusk, when emissions are less likely to produce ozone.

Highlight the key points on the slide.

Point to convey: We can't wait for the next person in our home, school, or community to start doing what we know is right to reduce ozone. While climate change is due to both human-made and natural factors, each individual has a personal responsibility to start making changes in their own lives while encouraging others to do the same.

Code Red Days




Air Quality Index (AQI) Values	Levels of Health Concern
0 to 50	Good
51-100	Moderate
101-150	Unhealthy for Sensitive Groups
151-200	Unhealthy
201-300	Very Unhealthy
301 to 500	Hazardous

Code Red days are called when there is a significant threat of unhealthy air due to pollution and weather conditions.

People are warned to limit their outdoor activities, with children, senior citizens and asthmatics especially at risk.

For presenter: For additional background information on AQI, visit airnow.gov.

Highlight the points on the slide and explain the chart: This chart is referred to as the Air Quality Index (AQI). AQI is an index for reporting daily air quality. It tells you how clean or polluted your air is, and what associated health effects might be a concern for you. The AQI focuses on health effects you may experience within a few hours or days after breathing polluted air.

Point to Convey: It is important to understand the AQI and understand that there is a significant threat to children’s health during Code Red days. During these days, it can cause more harm than good to be outside even if you are exercising or a child is playing outside. Take precaution during these days to limit outdoor activity. In addition to limiting outdoor activities on Code Red Days,

ULTRAVIOLET (UV) RADIATION

What is it?

What causes it?

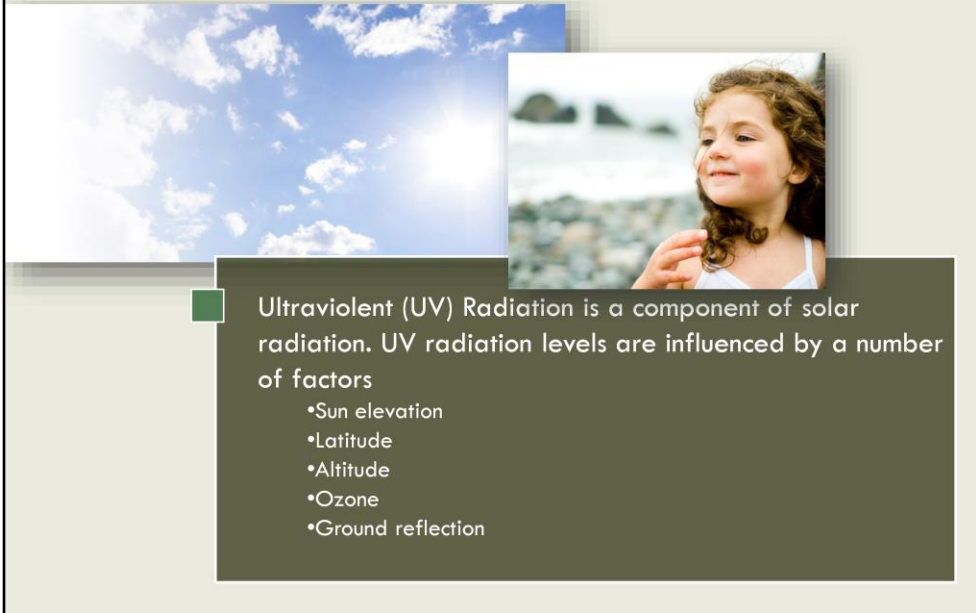
What are the health effects?

What can YOU do to protect children?

For the presenter: For additional background information on UV Radiation, visit [epa.gov/sunwise](https://www.epa.gov/sunwise).

The following questions will be addressed regarding UV Radiation.

What is UV Radiation?



Ultraviolet (UV) Radiation is a component of solar radiation. UV radiation levels are influenced by a number of factors

- Sun elevation
- Latitude
- Altitude
- Ozone
- Ground reflection

Highlight the key points on the slide.

Ask Question: Should all children be concerned about UV exposure or just light or fair skinned people?

Response to Question: All children should protect themselves from UV exposure. Lighted skinned people are more susceptible, but anyone can be harmed by UV exposures.

Point to convey: It doesn't matter if you are African American, White, Asian, Native American, or Hispanic, or if you are fair skinned or dark skinned, we all need to protect ourselves from harmful UV radiation.

What are the Health Effects of UV Radiation?

- ❑ Skin cancer
 - ❑ Melanoma
 - ❑ Nonmelanoma skin cancers
- ❑ Other skin damage
- ❑ Eye damage
- ❑ Immune suppression



Children and adolescents are particularly vulnerable to the harmful effects of UV radiation. Excessive sun exposure in children is likely to contribute to skin cancer in later life. About 80% of a person's sun exposure occurs *before* age 18.

Highlight the key points on the slide.

What can *YOU* do to protect children from UV Radiation?



Follow these tips to protect your children from the harmful effects of UV Radiation.

1. Limit sun exposure from 10am to 2pm on hot and sunny days
2. Dress infants in lightweight long pants, long-sleeved shirts, and brimmed hats. Parents can also apply sunscreen to small areas like the face and back of hands if protective clothing and shade are not available
3. Apply and reapply sunscreen to all exposed areas

Highlight the key points on the slide.

Point to convey: It is important that kids are outside to get physical activity- moving, running, and playing. However, sun safety and the tips highlighted on this page are very important for protecting children from the harmful effects of UV exposure.

Re-emphasize the point of how children can damage their skin early in life (under 18 years old) and that everyone needs to protect themselves

Many environmental hazards lead to asthma, the *single* most common chronic condition among children today.

Almost all of the environmental hazards we have discussed throughout this presentation can lead to greater health complications and diseases among children, including Asthma. Asthma is one of the most chronic diseases among children today.

ASTHMA

What is it?

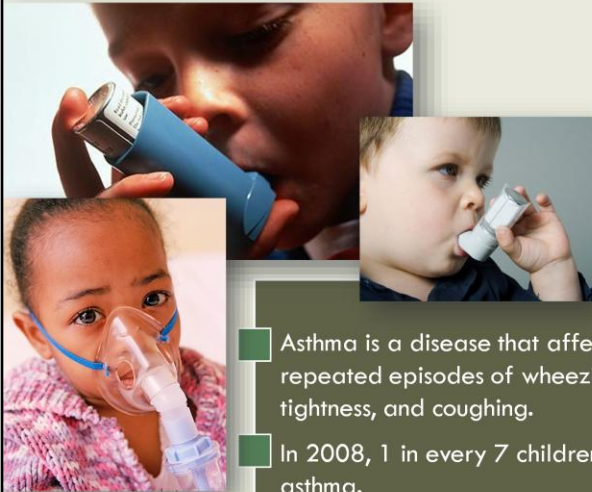
What triggers it?

What can YOU do to protect your children?

For the presenter: For additional background information on Asthma, visit epa.gov/asthma.

This is what we will cover regarding asthma.

What is Asthma?



- Asthma is a disease that affects the lungs and causes repeated episodes of wheezing, breathlessness, chest tightness, and coughing.
- In 2008, 1 in every 7 children- 10.2 million children- had asthma.
- Asthma is the third ranking cause of hospitalization among children today.

For presenter: The demonstration below requires stirring straws. Come prepared with enough for the audience to participate in the demonstration.

Ask question: How many of you have asthma or know someone who has asthma? (Ask for a show of hands.) Now, ask one or two people in the room to describe what an asthma attack feels like or if they ever witnessed someone having an asthma attack. (Allow about 2 minutes for their stories)

Response to question: Highlight information on the slide.

Conduct demonstration to show what an asthma attack feels like: You will need a container of stirring straws. Have your audience run in place or do jumping jacks as fast as they can for one minute. Encourage them to go faster as you approach the minute mark. At one minute have them put the straw in their mouth and pinch their nose real tight. The goal is to only breathe through the straw. Take notice of the difficulty your audience has breathing through the straw. Explain to them this is what an asthma attack feels like.

What Triggers Asthma?

- ❑ Secondhand smoke
- ❑ Dust mites
- ❑ Mold
- ❑ Cockroaches
- ❑ Pet dander
- ❑ Nitrogen Dioxide
- ❑ Outdoor air
- ❑ Pollution from industrial emissions and automobile exhaust- wood and coal smoke



We don't know what causes asthma, but we know what triggers an asthma attack. We call these ***Asthma Triggers***.

Ask Question: What triggers asthma? (*Call on people in the room*)

Response to Question: Highlight information on slide. "We don't know what causes asthma, but we know what triggers an asthma attack"

Point to convey: We have the ability to prevent asthma attacks by knowing what triggers asthma. It is important to recognize that not everyone has the same asthma triggers.

What can *YOU* do to protect children from Asthma?



Stay away, control, and reduce asthma triggers

1. Use zippered, dust proof covers on pillows and mattresses.
2. Wash bedding in hot water weekly.
3. Wash pets frequently.
4. Use easy to clean finishes and furnishings.
5. Keep indoor humidity below 50%.
6. Remove carpets and upholstered furniture from infant's bedrooms.
7. Don't smoke in your home or car.

Highlight the information on the slide.

Express that steps 1 and 2 can reduce exposure to dust mites, specifically.

Point to convey: Have a plan to avoid and reduce exposure to asthma triggers. Make sure the plan is done consistently because dust can build up fast, moisture quickly produces mold, and being exposed to chemicals can trigger acute attacks. The more consistent the plan, the more you can protect your children from asthma triggers. Your doctor can help you to determine which triggers affect your asthma and develop a specific plan to reduce your triggers. Go to epa.gov/asthma/triggers.html to view an asthma action plan.

Wrap-Up



- A child's environment is all around them where they *live, learn* and *play*.
- It is important to identify the causes and health effects of environmental health hazards and to take the proper steps to reduce the impacts of these hazards on children.
- Children are 20% of our population, but 100% of our future.

Contact Information



Office of Children's Health Protection
US Environmental Protection Agency
1301 Constitution Avenue, N.W.
Washington, D.C. 20460
(202) 564- 2188
www.epa.gov/children

Highlight the information on the slide.