Because of the city's industrial past, many people in Pittsburgh think of air quality when talking about pollution. How is our air quality now?

Pittsburgh’s air is better than it was decades ago. The Allegheny County Health Department (ACHD) monitors the air and shows consistent downward trends in recent years at all of the monitors across our area. But the air quality in the city depends on where you are and when you’re there. Air pollution varies across large areas. It depends on whether you’re next to a highway, a power plant, or in a valley. There are different kinds of air pollutants—particles, gases, gases that turn into particles, and so on. Air pollution has a different chemical profile depending on the mix of chemicals, how they’re interacting, and what the weather and wind are doing.

In general, Pittsburgh’s air has improved. But we do have substantial air pollution that’s worth understanding better. We’re still downwind of big power plants in the Ohio Valley. We still have coke works and steel mills in our vicinity, and, like every city, we have a lot of traffic that adds to pollution.

How do exposures to chronic stressors and pollution affect people—children in particular?

We know that stress can affect people’s health in a variety of ways. Kids are more susceptible to air pollution because their bodies are smaller, their lungs are larger in proportion to their bodies than adults, and they’re still developing. Researchers are starting to see some evidence that the combination of stress and air pollution may be more dangerous than pollution by itself. We also anticipate that exposures to major stressors, like violence or poverty, may be higher in exactly the same communities where pollution exposures may be higher (like alongside highways or near industrial areas).

Is there a connection between pollution, asthma, and stressors?

Asthma is a complex illness. There are different triggers for asthma or asthma symptoms that vary for different people. Air pollution is one part of the story. Indoor air pollution, allergen exposure, and stressor exposure are all factors that will affect each person differently. The role of pollution in asthma is not entirely clear. There is a lot of evidence linking air pollution in urban areas to asthma attacks, emergency department visits, and hospitalizations. Pollution is certainly a trigger of asthma symptoms.

What can people do to protect themselves?

Drive less. Support better public transportation in our communities. Spending time in parks and other “clean air” places is a great thing to do. But heed air pollution warnings in the summer, like high ozone alerts. Ozone is a strong respiratory irritant. People are only exposed to it outdoors, so it’s important to limit children’s outdoor play on those days. Also, small children tend to put things in their mouths. Their systems are developing, so try to buy BPA-free (bisphenol A is an industrial chemical) plastic for them. Keep yourself and your children healthy overall—eating nutritious food, getting enough sleep and exercise, managing your stress, and quitting smoking will help to buffer against the effects of pollution or any other exposures.
VOLUNTEERS NEEDED FOR STUDIES

Asthma Study for Children—Ages 12-17 (IRB# 201306823B)
Are you the parent of a child who is 12 or older and has had asthma for at least one year? Does your child take medication to treat his/her asthma on a daily basis? If so, he or she may be eligible for a study that is being done to help answer a safety question about a type of bronchodilator when it is taken in combination with inhaled corticosteroids. Participants will be compensated.

AsthmaNet: SIENA Study—Ages 12-17 (IRB# PRO14010433B)
Do you have a child between the ages of 12-17 who has been diagnosed with mild asthma? If so, your child may be eligible for a study that is seeking to find out if people’s medication should be matched to the type of inflammatory cells in their airway. Eligible participants have a diagnosis of asthma and use a rescue inhaler. Asthma medications and compensation provided.

AsthmaNet: BARD Study—Children ages 5-17 (IRB# PRO13080332A)
Are you the parent of an asthmatic child between the ages of 5 and 17 years old who is of African ancestry? If so, local asthma experts would like to talk with you about a study that aims to improve the health of African American asthmatics. Asthma medications (all FDA approved) and research-related tests are provided at no cost. Compensation provided throughout the study.

Vitamin D and Asthma Study (IRB# PRO13050523)
Does your child have asthma? Is he or she between the ages of 6 and 14? If so, your child may be eligible to take part in a study to help determine if additional vitamin D can safely raise the vitamin D levels in children with asthma who have low vitamin D levels. Requires study visits to home or to Children's Hospital of Pittsburgh of UPMC and phone calls over a five-month period. Compensation provided.

Exercise Programs for Overweight Adolescents—Ages 12-17 (IRB# PRO12080401)
Are you the parent of an overweight child between the ages of 12-17 years old? If so, your child may be eligible for an exercise training study to examine health benefits of physical activity. Study involves personal training for one hour, three times a week, for six months at no cost. Compensation provided.

Vitamin D and Vascular Function in Obese Children—Age 10-17 (IRB# PRO12100034A)
Researchers at Children’s Hospital of Pittsburgh of UPMC are looking for children ages 10-17 to volunteer for a study to examine if increasing the vitamin D levels of vitamin D-deficient children who are obese or overweight will improve their cardiovascular health. Participants will be compensated.

For more information about these studies, please contact the Research Participant Registry office at 1-866-438-8230.

PARENTS: SIGN UP FOR THE RESEARCH PARTICIPANT REGISTRY
The Research Participant Registry is open to people of all ages. You can sign up for the Registry at participating UPMC outpatient office locations, through MyUPMC, or through the Registry website. Please go to http://www.researchregistry.pitt.edu/ for more information.