



NORTHWEST INDIANA
CLEAN AIR

Think Green. Breathe Easy.

Air Quality Awareness and Children's Health



While several groups of people are particularly sensitive to ozone, children — with lungs that are still developing — are at a higher risk from exposure because they often play outdoors in warmer weather when ozone levels are higher. Chronic exposure to air pollutants may trigger health problems.

Ozone may induce coughing, throat irritation, chest tightness or shortness of breath. Children with asthma or other respiratory illnesses may be especially vulnerable to attacks when air quality reaches harmful conditions.

What is ozone?

Ozone is a gas found in the air we breathe. Ozone can be good or bad, depending where it occurs. Harmful ozone forms near the ground when pollutants (emitted by sources such as cars, power plants, refineries, etc.) react chemically in sunlight. Ozone pollution is more likely to form during warmer months when weather conditions — and lots of sun — are optimal to form ground-level ozone.

What are the health effects?

Ozone can affect the lungs and respiratory system in many ways, including:

- Irritating the respiratory system, causing coughing, throat soreness or chest pain when taking a deep breath
- Reducing lung function, making it more difficult to breathe normally, especially while exercising
- Inflaming and damaging cells that line the lungs
- Making the lungs more susceptible to infection
- Aggravating asthma and other chronic lung diseases

What is particle pollution?

Particle pollution (also known as “particulate matter”) consists of a mixture of solids and liquid droplets. Some particles are emitted directly; others form when pollutants emitted by various sources react in the atmosphere. Sources of particle pollution include motor vehicles, power plants and residential wood and agricultural burning, and

are found in a wide range of sizes. Those less than 10 micrometers in diameter are so small that they can get into the lungs and sometimes the blood stream.

What are the health effects?

Particles smaller than 10 micrometers in diameter can cause or aggravate a number of health problems, including:

- Causing people with heart disease to experience chest pain, palpitations, shortness of breath and fatigue
- Irritating the respiratory system, causing coughing, throat soreness or chest pain when taking a deep breath
- Reducing lung function, making it more difficult to breathe normally, especially while exercising
- Making the lungs more susceptible to infection
- Aggravating asthma and other chronic lung disease

What can you do to improve air quality?

Air pollution can negatively affect our health any day, but especially on Air Quality Action Days. Everyone has a role in improving northwest Indiana’s air quality, not only on action days, but year-round. Do your part by:

- Reducing vehicle idling
- Conserving energy in your home by turning off appliances and lights when not in use
- Carpooling or using public transportation
- Refueling vehicles after 6 p.m.
- Restricting use of chemicals and paints that contain volatile organic compounds. Many paints, cleaning supplies, pesticides and glues contain high concentrations of these chemicals.

Did you know that indoor air quality can affect children’s health, too? Indoor air pollution sources that release gases or particles into the air are the primary cause of indoor air quality problems in homes. Inadequate ventilation and high temperature and humidity levels can increase the concentration of indoor pollutant levels. Three strategies to improve indoor air quality include:

- Eliminating or reducing sources of pollution, such as gas stoves, household cleaners and asbestos
- Improving ventilation by increasing the amount of outdoor air coming indoors
- Using air cleaners to help eliminate pollutants (Note: air cleaners’ effectiveness varies widely)

Air Quality Index (AQI) Guide for Children

AQI value	Level of concern	Actions to protect your health from ozone	Action to protect your health from particle pollution
Good (0-50)	Poses little or no health risk	None	None
Moderate (51-100)	May pose a moderate health concern for vulnerable populations	Unusually sensitive people should consider reducing prolonged or heavy outdoor exertion	Unusually sensitive people should consider reducing prolonged or heavy outdoor exertion
Unhealthy for sensitive groups (101-150)	Sensitive groups may experience health effects; general public is unlikely to be effected	Reduce prolonged or heavy outdoor exertion	Reduce prolonged or heavy outdoor exertion
Unhealthy (151-200)	Sensitive groups may experience more serious health effects	Avoid prolonged or heavy outdoor exertion	Avoid all outdoor exertion
Very unhealthy (201-300)	Health alert triggered, and everyone may experiences more serious health effects	Avoid all outdoor exertion	Remain indoors, and keep activity level low
Hazardous (>300)	Health warnings triggered, and everyone is likely to be effected	Remain indoors, and keep activity level low	Remain indoors, and keep activity level low

About NWI Clean Air Program

Northwest Indiana Clean Air is a partnership between the people and businesses of northwest Indiana to help all residents Think Green & Breathe Easy — understanding and inspiring actions to improve the air quality of this unique region. Learn more at www.NWICleanAir.com.

To learn more about what you can do to improve our air quality, visit www.NWICleanAir.com.