



Children and Asthma in Detroit:

The Issue and Action Steps for Community Members

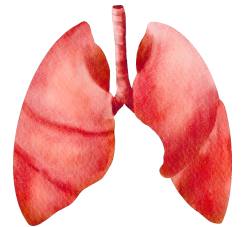
What is asthma?

Asthma is a condition in which your airways narrow and swell and may produce extra mucus. This can make breathing difficult and trigger coughing, a whistling sound (wheezing) when you breathe out and shortness of breath. It is a chronic illness, which means that people live with it long term. People with asthma are sensitive to pollutants in the air that cause breathing difficulties to flare up. It is one of the most common chronic illnesses for children.

What causes asthma?

Scientists don't know for sure. It is likely a combination of factors including:

- Allergies
- Exposure to air pollution
- Genetics
- Certain airway infections caught at a young age



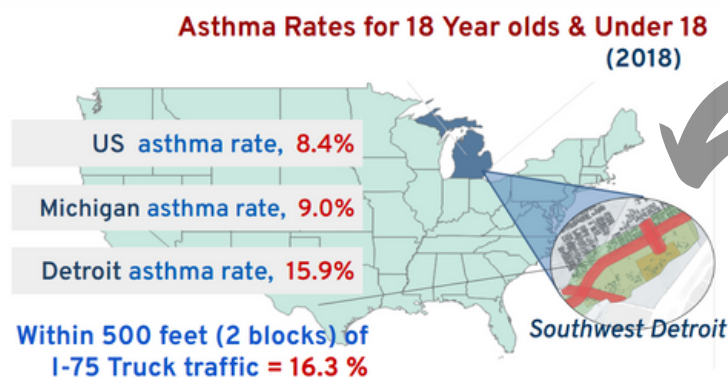
Why is childhood asthma so common in Detroit?

Detroit has a very large number of children with asthma compared to other U.S. cities.

Childhood asthma rates in Detroit may be so high because there are high levels of air pollution. This pollution comes from:

- Factories,
- Heavy traffic on nearby highways, and
- Truck travel through neighborhoods.

These pollution sources are more common in neighborhoods where a majority of the residents are people of color.



As the map here shows, asthma rates are higher for people living within 2 blocks of truck traffic.





Why are children more sensitive to air pollution than adults?

- Children have airways and immune systems that are still growing.
- Children breathe in more air for their size and body weight than adults.

What are the symptoms of asthma?

- Coughing
- Chest pain or tightness
- Shortness of breath
- Difficulty breathing with exercise
- Waking up at night unable to breathe
- Irritability
- Wheezing



Seek medical attention immediately if your child experiences ...

- Intense coughing
- Difficulty breathing
- A blue hue in the face, lips, or fingernails

How is asthma diagnosed?

A doctor can use a variety of tools to diagnose your child with asthma:

- Medical history
- Physical exam
- Trying asthma medications to see if they relieve symptoms

Doctors may also use spirometry (lung function tests), chest x-rays, or allergy or blood tests to determine which allergens trigger an immune response



What are asthma 'triggers'?

Triggers are things that can cause asthma symptoms, such as:

- Allergies and other health issues
- Air pollution
- Exercise
- Weather
- Stress or anxiety
- Some medicines

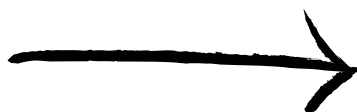
These may vary from person to person.

If your child has asthma...

Work with your doctor to develop an asthma action plan to manage symptoms and reduce asthma attacks.

You asthma action plan might include:

- Strategies to avoid triggers
- Quick-relief medicines
- Control medicines



*If children are exposed to **high levels of air pollution**, they are likely to have worse asthma symptoms, increased visits to the doctor or hospital, and more missed school days.*



How can I protect my child with asthma from air pollution?

Check the air quality index (AQI): airnow.gov.

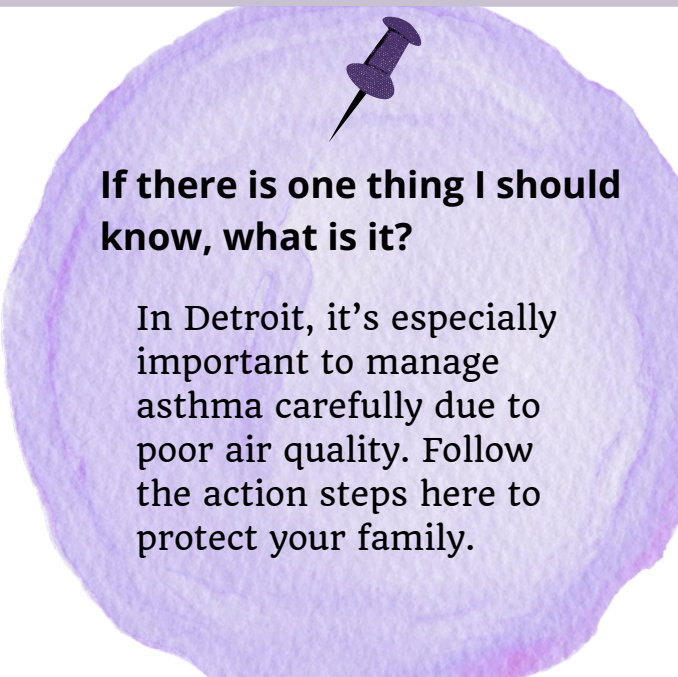
When the AQI is high (**101 or higher**), take action! If your child has severe asthma or other issues, you might take these actions when the AQI is at even lower levels like **51 or higher**.

When indoors:

- Keep doors and windows shut
- Use an air purifier, change air filters as needed
- Depending on the season: turn on your furnace or turn on your air conditioner, if you have one

When outdoors:

- Use an N95 face mask



If there is one thing I should know, what is it?

In Detroit, it's especially important to manage asthma carefully due to poor air quality. Follow the action steps here to protect your family.

How can I support my community?

- If you are a teacher, administrator, or school health staff member, review the Air Quality and Outdoor Activity Guidance for Schools at this link: <https://bit.ly/4fONT2C>
 - This will help you learn when and how to modify outdoor physical activity based on the Air Quality Index
- Attend community events on air quality, like educational workshops and “build your own air filters” from some of these organizations:
 - Eastside Community Network
 - Clear the Air Coalition
 - Green Door Initiative's Detroit Air Quality Advocacy Academy
 - Southwest Detroit Environmental Vision
- If you notice a lot of air pollution coming from a specific source in your community, call this number for the Pollution Emergency Alerting System 1(800) 292-4706 to report what you see.
- Visit linktr.ee/airpollutionresources or scan the QR code with your phone for more resources related to air pollution and how to prevent exposure



Please see http://mleead.umich.edu/Coec_Fact_Sheets.php for the citations included in this factsheet.

This research was supported by the National Institute of Environmental Health Sciences (NIEHS) (#R01ES022616, #R01ES032389) and the Fred A. and Barbara M. Erb Family Foundation, with additional support provided by the Michigan Center on Lifestage Environmental Exposures and Disease (M-LEEaD) (NIEHS #P30ES017885).