# Outdoor Air Quality and Childhood Asthma

Poor air quality is unhealthy for everyone, but especially for children with asthma. **Children** are more at risk because they **breathe faster**, they **play outside more,** and their **lungs are still developing**. Poor air quality can cause asthma to develop in a child who did not have it before. In a child with asthma, it can be a **trigger** for an asthma attack — and it can make symptoms come on faster and stronger. Here's how poor air quality can affect your child:

## NOW

Worse asthma symptoms

More severe respiratory infections


More doctor and hospital visits

## LATER

Decreased lung growth in children, higher risk of lung cancer and early death

**The Air Quality Index (AQI)** is a number for reporting how clean or unhealthy your air is every day.

You can find it on the Internet at AirNow.gov. It's also reported in local news sources:


## When AQI is: A child with asthma should:

**1–50 GOOD**

Enjoy usual outdoor activities

**51–100 MODERATE**

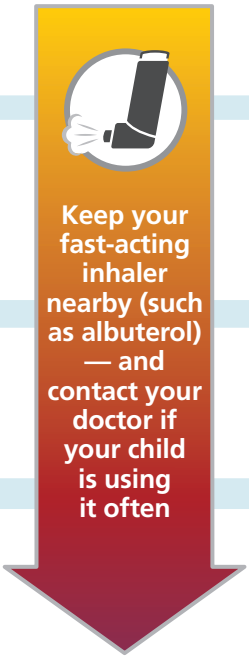
Limit time outdoors

If you have symptoms, play indoors

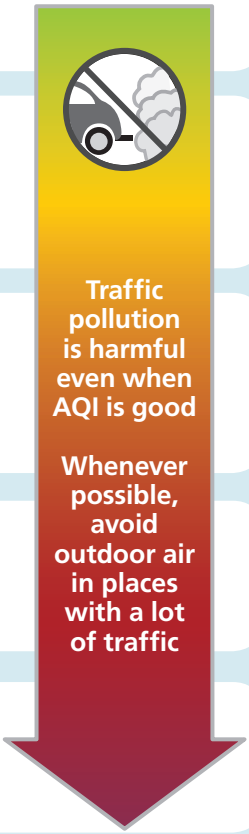
**101–150 UNHEALTHY for sensitive groups**



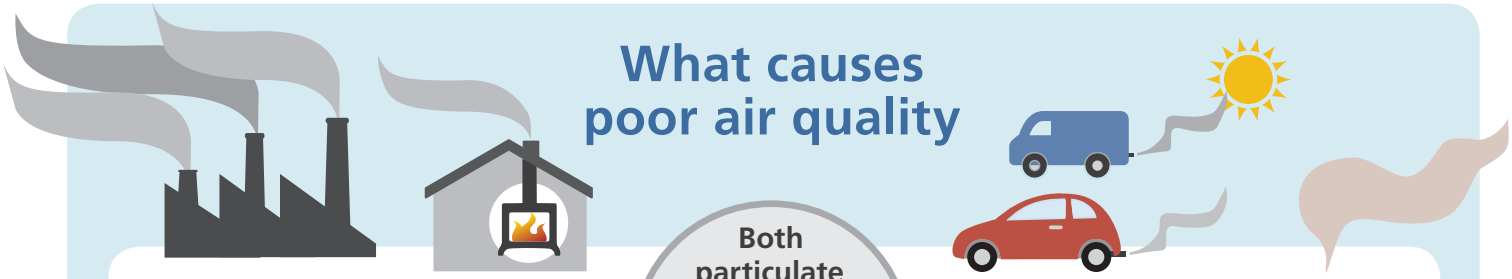
**151–200 UNHEALTHY for all**




**201–300 VERY UNHEALTHY for all**



# What causes poor air quality



Smoke stacks

Wood burning — inside or outside

**Both particulate matter and ground-level ozone make asthma worse**

Cars and trucks

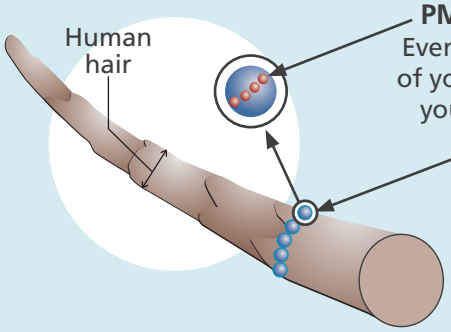
Blowing dust

**Particulate matter** is tiny particles in the air like dust, dirt, soot, and smoke. In northern Utah, it's more common and more problematic in winter months. Symptoms may come several hours after exposure.

**Ground-level ozone** is a colorless gas. It forms when polluted air comes in contact with heat and sunlight. This is more common in summer months and late in the day. Symptoms usually come right away.

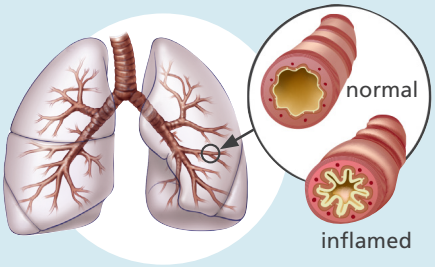
# Particulate matter in your child's lungs

**Particulate matter is sometimes reported as PM 2.5 or PM 10**




**PM 2.5** particles are extremely tiny. Even a face mask won't keep them out of your airways. They can get deep into your lungs and cause inflammation.

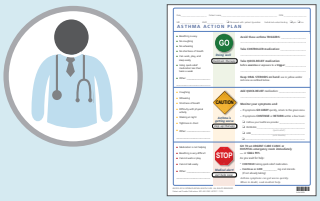
**PM 10** particles are a bit bigger. They include things like dust and pollen. Your nose can filter some of these before they reach your lungs.



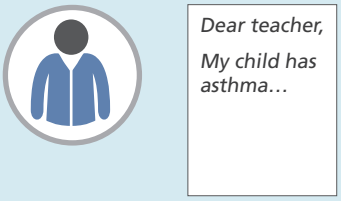

Inflammation in your lungs narrows your airways and makes breathing difficult

# Take action

**Parents and care givers** should pay attention to the child's symptoms and know when to bring the child indoors. Be sure indoor air is free of smoke and chemical fumes.



**Ask your child's doctor** to add air quality to your child's *Asthma Action Plan*. Ask about when to adjust your child's controller medications.




Be sure **your child's school, teacher, and sports coaches** know your child has asthma — and should stay inside for recess or workouts when the AQI is over 150.

*For samples of letters you can write to teachers and coaches, go to* ***www.health.utah.gov/asthma***

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