

# 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				Later
				
Worse asthma symptoms	More severe respiratory infections	More doctor and hospital visits		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](http://AirNow.gov).  
It's also reported in local news sources:

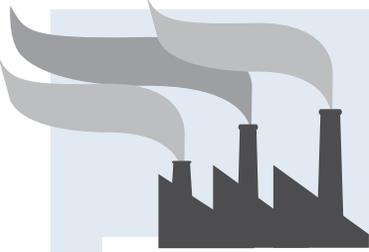


## When AQI is:

## You and your very young child should:

<p><b>1-50</b> GOOD</p>	 Enjoy usual outdoor activities			
<p><b>51-100</b> MODERATE</p>	 Limit time outdoors	 If you have symptoms, play indoors		
<p><b>101-150</b> UNHEALTHY for sensitive groups</p>	 Play indoors	 Plan outdoor activities in the morning, when air quality is usually better	 Keep your fast-acting inhaler nearby (such as albuterol) and contact your doctor if your child is using it often	Traffic pollution is harmful even when AQI is good
<p><b>151-200</b> UNHEALTHY for all</p>				Whenever possible, avoid outdoor air in places with a lot of traffic
<p><b>201-300</b> VERY UNHEALTHY for all</p>				

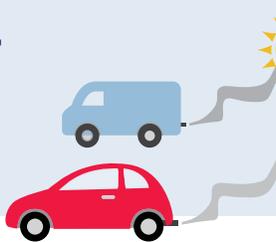
## What causes poor air quality



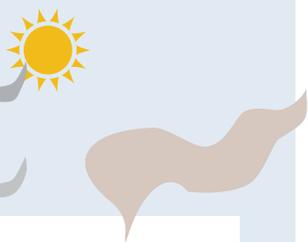
**Smoke stacks**



**Wood burning—  
inside or outside**



**Cars and trucks**



**Blowing dust**

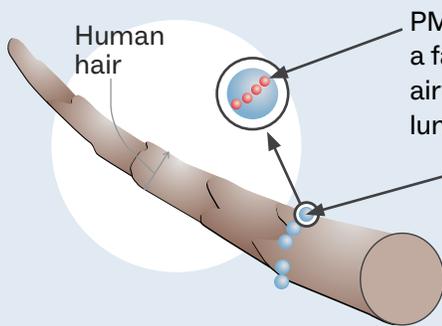
**Both particulate matter and ground-level ozone make asthma worse**

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.

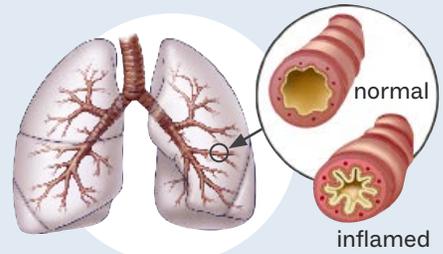
## Particulate matter in your child's lungs

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 it hard to breathe.

## 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.



*Dear teacher,  
My child has asthma...*

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 100.

For samples of letters you can write to teachers and coaches, go to [www.health.utah.gov/asthma](http://www.health.utah.gov/asthma)

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