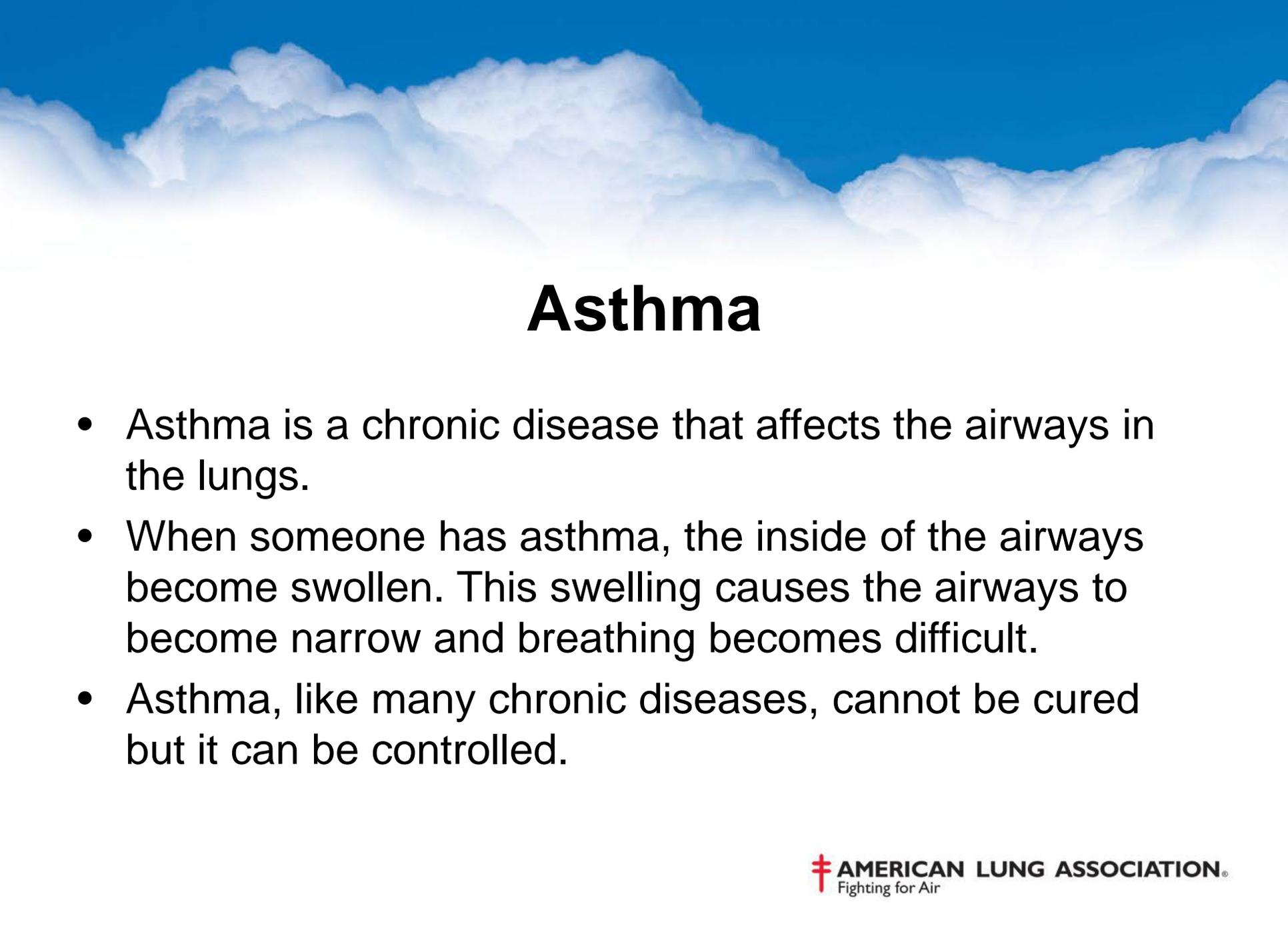


# **Asthma and the Air we Breathe**



# Asthma

- Asthma is a chronic disease that affects the airways in the lungs.
- When someone has asthma, the inside of the airways become swollen. This swelling causes the airways to become narrow and breathing becomes difficult.
- Asthma, like many chronic diseases, cannot be cured but it can be controlled.



## **In Kentucky**

- 10.6% of children 11 years of age and younger
- 8.6% of adults currently have asthma

## **In the US**

- 8.3% of adults
- 10.9% of children



# The Cost of Asthma

- In 2007, there were more than 6,000 asthma-related hospitalizations in KY with costs totaling approximately \$62 million.
- Asthma is the 3rd leading cause of hospitalization among children under the age of 15.

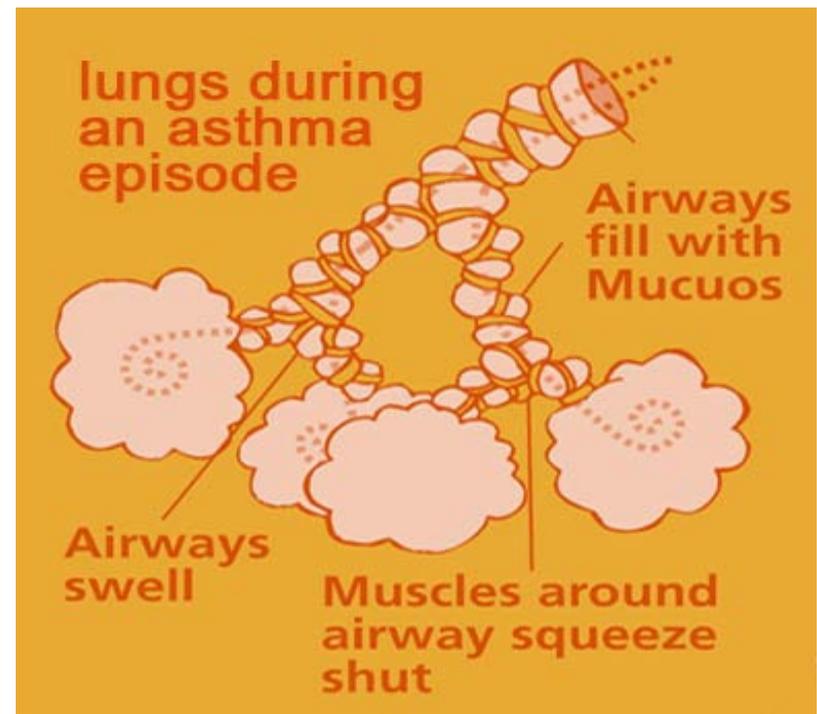


# Asthma and Children

- Asthma is the most common chronic childhood disease
- On average, 3 children in a classroom of 30 are likely to have asthma.
- Asthma is the leading cause of school absenteeism among all chronic diseases.

# An Asthma Attack

1. The lining of the airways become narrow and easily irritated due to swelling or inflammation.
2. The muscles around the airways tighten and make airways narrower.
3. The airways produce a thick mucus.





# Common symptoms of asthma are:

- **Cough** - Sometimes coughing is the only symptom.
- **Wheeze** - A whistling or squeaky sound during breathing.
- **Shortness of breath** - Some people say they can't catch their breath, or they feel breathless, or out of breath.
- **Chest pain or tightness** - This can feel like something is squeezing or sitting on your chest.
- **Symptoms of asthma vary from person to person.**



# Asthma Triggers

Infections, like colds or flu

Exercise

Changes in weather/temperature

Strong emotions

Tobacco smoke

Pollution

Scented products

Strong fumes or odors

Diesel bus exhaust

Furred and feathered animals

Pollen from trees and grass

Dust mites

Mice

Cockroaches

Molds – indoors and outdoors

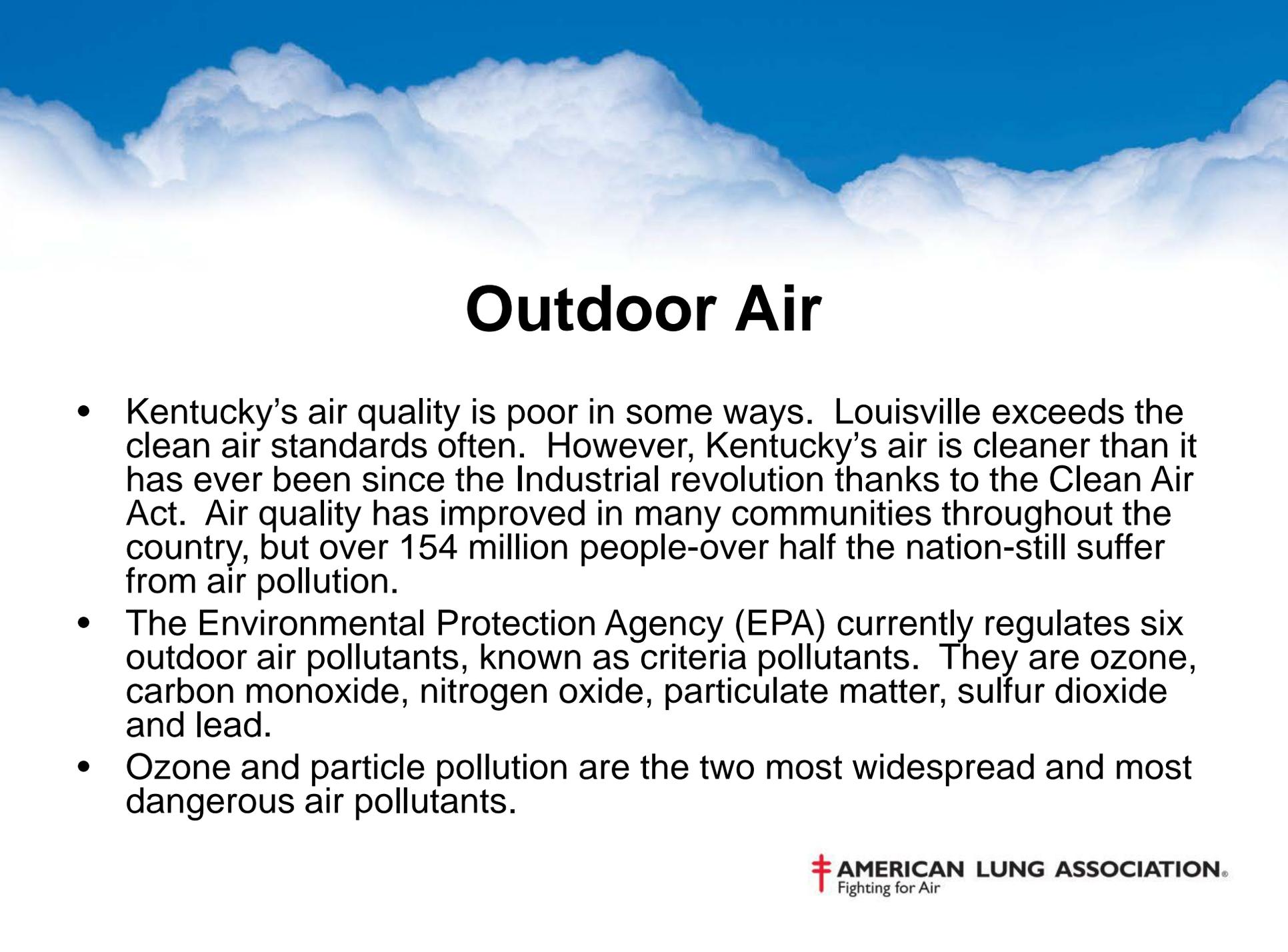
# 5 signs of an asthma attack

- Hard time breathing:
    - Person is hunched over
    - Person is struggling to breathe
    - Chest and neck muscles pull in with breathing
  - Trouble walking or talking
  - Asthma symptoms do not improve 15-20 minutes after medication is taken
  - Stops playing (activity) and can't start again
  - Lips or fingernails are gray or blue
- If you are having an asthma emergency, CALL 911**



# ALA and Asthma

- Kentucky has a law giving school children the right to carry and self-administer prescribed medications on school grounds and during school sponsored activities.
- Asthma Educator Institute
- Asthma 1-2-3
- Educational Materials
- KY Asthma Partnership



# Outdoor Air

- Kentucky's air quality is poor in some ways. Louisville exceeds the clean air standards often. However, Kentucky's air is cleaner than it has ever been since the Industrial revolution thanks to the Clean Air Act. Air quality has improved in many communities throughout the country, but over 154 million people-over half the nation-still suffer from air pollution.
- The Environmental Protection Agency (EPA) currently regulates six outdoor air pollutants, known as criteria pollutants. They are ozone, carbon monoxide, nitrogen oxide, particulate matter, sulfur dioxide and lead.
- Ozone and particle pollution are the two most widespread and most dangerous air pollutants.



# Ozone

- Ozone is also known as **smog**. It attacks lung tissue through a chemical reaction. The raw ingredients for ozone come from motor vehicles, chemical plants, refineries, factories, gas stations, paint and other sources. These ingredients contain nitrogen oxides and hydrocarbons or volatile organic compounds. When **nitrogen oxides and volatile organic compounds** react with **sunlight**, ozone is formed.
- Breathing ozone can shorten your life. It increases the risk of **stroke** and **heart attacks**. It can lead to shortness of breath, chest pain when breathing, coughing and wheezing, **asthma** attacks, increased complications related to lung disease.
- People at risk from ozone are children and teens, anyone 65 and older, people who work or exercise outdoors, people with existing lung disease like, asthma or COPD, and “responders” who are healthy individuals who have a reaction to ozone.



# Particle Pollution

- Particle pollution is also known as **soot or smoke**. Particle pollution is produced through two separate processes—mechanical and chemical. Mechanical processes include breakdown from dust storms, construction and demolition, mining operations, agricultural activities, tire, brake pad and road wear, bacteria, pollen, mold, and plant and animal debris. Chemical processes include burning wood, burning fossil fuels in factories, power plants, steel mills, smelters, and diesel- and gasoline-powered motor vehicles and equipment.
- Breathing particle pollution may trigger illness, hospitalization and **premature death**. It increases **asthma** attacks and causes coughing, wheezing, **heart attacks**, and **stroke**. It also increases the risk of death from **lung cancer**.
- High particle pollution puts everyone at risk. However, particle pollution increases the risk for people with lung disease, the elderly, people with heart disease and children. New research also shows that diabetics are at increased risk.

# What you can do to support clean outdoor air...

- Tell the EPA to clean up hazardous air pollutants from coal-fired power plants and to support stronger standards for ozone and particle pollution.
- Tell the President and Congress that you support the Clean Air Act and they should too.
- Drive less.
- Do not burn wood or trash.
- Advocate for clean school buses.
- Tell Congress to Fund the EPA's Clean Diesel Retrofit Program.
- Encourage EPA to clean up tailpipe exhaust.
- Use less electricity.
- Sign up to be an e-advocate at [www.midlandlung.org](http://www.midlandlung.org)