

Effects of Common Air Pollutants

RESPIRATORY EFFECTS



Symptoms:

- Cough
- Phlegm
- Chest tightness
- Wheezing
- Shortness of breath

Increased sickness and premature death from:

- Asthma
- Bronchitis (acute or chronic)
- Emphysema
- Pneumonia

Development of new disease

- Chronic bronchitis
- Premature aging of the lungs



Alveoli filled with trapped air

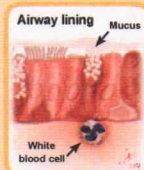
How Pollutants Cause Symptoms

Effects on Lung Function

- Narrowing of airways (bronchoconstriction)
- Decreased air flow

Airway Inflammation

- Influx of white blood cells
- Abnormal mucus production
- Fluid accumulation and swelling (edema)
- Death and shedding of cells that line airways



Increased Susceptibility to Respiratory Infection



Normal



Lung with respiratory infection

CARDIOVASCULAR EFFECTS



Symptoms:

- Chest tightness
- Chest pain (angina)
- Palpitations
- Shortness of breath
- Unusual fatigue

Increased sickness and premature death from:

- Coronary artery disease
- Abnormal heart rhythms
- Congestive heart failure

How Pollutants May Cause Symptoms



Normal heart rhythm

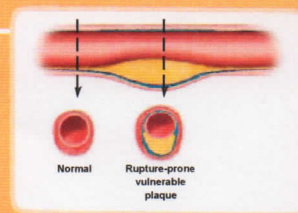
Abnormal heart rhythm

Effects on Cardiovascular Function

- Low oxygenation of red blood cells
- Abnormal heart rhythms
- Altered autonomic nervous system control of the heart

Vascular Inflammation

- Increased risk of blood clot formation
- Narrowing of vessels (vasoconstriction)
- Increased risk of atherosclerotic plaque rupture



Normal

Rupture-prone vulnerable plaque

WHAT CAN ONE PERSON DO?

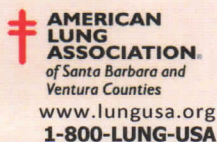
Avoid breathing dirty air, and help keep our air clean!

- Kids: stay away from the smoke coming out of the back of the school bus or any vehicle – you don't want to breathe that!
- Reduce exercise outdoors when the air is smoky or smoggy. Call us or check our website for smog levels – and use common sense.
- Drive less (walk, bike, carpool or take the bus more)!
- When you do drive, combine car trips, keep your car tuned up, and don't top off your tank.

Visit our websites, or contact us for more information.



Santa Barbara County
Air Pollution Control District
www.sbcapcd.org
805-961-8800



AMERICAN LUNG ASSOCIATION
of Santa Barbara and Ventura Counties
www.lungusa.org
1-800-LUNG-USA



REDUCE YOUR RISK BY USING THE AIR QUALITY INDEX (AQI) TO PLAN OUTDOOR ACTIVITIES—WWW.AIRNOW.GOV

AQI Levels of Health Concern	AQI Values	What Action Should People Take?
Good	0-50	Enjoy Activities.
Moderate	51-100	People unusually sensitive to air pollution: Plan strenuous outside activities when air quality is better.
Unhealthy for Sensitive Groups	101-150	Sensitive Groups: Cut back or reschedule strenuous outside activities. Particle Pollution: People with heart or lung disease (including diabetics), older adults, and children. Ozone: Active children and adults and people with lung disease. Sulfur Dioxide: Active children and adults with asthma. Carbon Monoxide: People with heart disease and possibly fetuses and infants.
Unhealthy	151-200	Everyone: Cut back or reschedule strenuous outside activities. Sensitive groups: Avoid strenuous outside activities.
Very Unhealthy	201-300	Everyone: Significantly cut back on outside physical activities Sensitive groups: Avoid all outside physical activities.