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

**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**

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

**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**

**Effects on Cardiovascular Function**
- Low oxygenation of red blood cells
- Abnormal heart rhythms
- Altered autonomic nervous system control of the heart

**Reduce your risk by using the Air Quality Index (AQI) to plan outdoor activities – www.airnow.gov**

<table>
<thead>
<tr>
<th>AQI Levels of Health Concern</th>
<th>AQI Values</th>
<th>What Action Should People Take?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>0-50</td>
<td>Enjoy Activities</td>
</tr>
<tr>
<td>Moderate</td>
<td>51-100</td>
<td>People unusually sensitive to air pollution: Plan strenuous outside activities when air quality is better</td>
</tr>
</tbody>
</table>
| Unhealthy for Sensitive Groups | 101-150 | Sensitive Groups: Cut back or reschedule strenuous outside activities  
  - Particle Pollution: People with heart or lung disease (including diabetes), older adults, and children  
  - Ozone: Active children and adults 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 |