Health Effects of Air Pollution
Mecklenburg County, North Carolina

Breathing polluted air can affect everyone. Air pollution can affect our health in many ways through both short-term and long-term effects. Health effects vary greatly from person to person. Some high-risk individuals are much more sensitive to pollutants than are others. Elderly people and people with health problems such as asthma, heart and lung disease often suffer more from the effects of air pollution. Children are also at greater risk because they are generally more active outdoors and their lungs are still developing. Short-term effects are usually immediate and often reversible when exposure to the pollutant ends. Long-term effects are usually not immediate and tend not to be reversible when exposure to the pollutant ends.

Examples of short-term effects include irritation to the eyes, nose and throat, and upper respiratory infections such as bronchitis and pneumonia. Other symptoms can include headaches, nausea, and allergic reactions. Short-term air pollution can aggravate the medical conditions of individuals with asthma and emphysema.

Long-term health effects can include chronic respiratory disease, lung cancer, heart disease, and even damage to the brain, nerves, liver, or kidneys. Continual exposure to air pollution affects the lungs of growing children and may aggravate or complicate medical conditions in the elderly.

Ground-level ozone and particulate matter are the primary air pollutants of concern for the health of Mecklenburg County residents.

Inhalation of ozone can trigger a variety of health problems including chest pain, coughing, throat irritation and congestion. It can worsen respiratory conditions such as bronchitis, emphysema and asthma. Exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath. Children, adolescents and adults who exercise or work outdoors, where ozone concentrations are highest, are at the greatest risk of harm.

Particulate matter, especially fine particulate matter (PM$_{2.5}$), also contributes to respiratory problems. These tiny particles in the air can get deep into the lungs and can worsen lung disease, cause asthma attacks, chest discomfort, wheezing, unusual fatigue, and shortness of breath.

Research into the health effects of air pollution is ongoing. Medical conditions arising from air pollution can be very expensive. Healthcare costs, lost productivity in the workplace, and human welfare impacts cost billions of dollars each year.

More information
- [Health Effects of Air Pollution – California Air Resources Board](#)
- [Air Now – Your Health](#)
- [Air Pollution and Respiratory Health](#)
- [What you can do to improve air quality in Mecklenburg County](#)