Key Air Pollutants That Pose Health Risks		
Key Air Pollutant	**Definition/Description**	**Effect on Health**
Particulate Matter (PM)	PM is a common proxy indicator for air pollution. It affects more people than any other pollutant. The major components of PM are sulfate, nitrates, ammonia, sodium chloride, black carbon, mineral dust, and water. It consists of a complex mixture of solid and liquid particles of organic and inorganic substances suspended in the air. Air quality measurements are typically reported in terms of daily or annual mean concentrations of PM10 particles per cubic meter of air volume (m^3).	Chronic exposure to particles contributes to the risk of developing cardiovascular and respiratory diseases and lung cancers. It also can lead to death.
Nitrogen Dioxide (NO_2)	The major sources of emissions of NO_2 are combustion processes (heating, power generation, and engines in vehicles and ships). NO_2 is a toxic gas if its concentrations exceeded 200 $\mu g/m^3$, which causes significant inflammation of the airways.	Studies have shown that symptoms of bronchitis in asthmatic children increase in association with long-term exposure to NO_2. Reduced lung function growth is also linked to NO_2 at concentrations currently measured (or observed) in cities of Europe and North America.
Ozone (O_3)	Ozone at ground level—not to be confused with the ozone layer in the upper atmosphere—is one of the major parts of photochemical smog. Ozone is formed by the reaction with sunlight (photochemical reaction) of pollutants such as nitrogen oxides from vehicle and industry emissions and volatile organic compounds (VOCs) emitted by vehicles, solvents, and industry. As a result, the highest levels of ozone pollution occur during periods of sunny weather.	Excessive ozone in the air can have a marked effect on human health. It can cause breathing problems, trigger asthma, reduce lung function, and cause lung diseases.
Sulfur Dioxides (SO_2)	SO_2 is a colorless gas with a sharp odor. The main source of SO_2 is the burning of sulfur-containing fossil fuels for domestic heating, power generation, and motor vehicles and the smelting of mineral ores that contain sulfur.	SO_2 can affect the respiratory system and the functions of the lungs, and it causes irritation of the eyes. Inflammation of the respiratory tract causes coughing, mucus secretion, aggravation of asthma, and chronic bronchitis, and it makes people more prone to infections of the respiratory tract. Hospital admissions for cardiac disease and mortality increase on days with higher SO_2 levels. When SO_2 combines with water, it forms sulfuric acid, which is the main component of acid rain. Acid rain is a cause of deforestation.