

Effects of Air Pollution on Human Health

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Editorial

Air pollution is a major issue in the modern world, with serious toxicological consequences for human health and the environment. Although there are a variety of emission sources, motor vehicles and industrial processes account for the majority of air pollution. Particle pollution, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead are six main air contaminants, according to the World Health Organization. Long and short-term exposure to air-borne toxicants has a variety of toxicological effects on humans, including respiratory and cardiovascular disorders, neuropsychiatric problems, eye irritation, skin diseases, and long-term chronic diseases like cancer. Several studies have found a direct link between poor air quality and an increase in morbidity and mortality, primarily owing to cardiovascular and respiratory disorders. Air pollution is a key environmental risk factor for diseases like asthma, lung cancer, ventricular hypertrophy, Alzheimer's and Parkinson's diseases, psychological difficulties, autism, retinopathy, fetal development, and low birth weight, among others. Air pollution has become a major issue in recent decades, with serious toxicological consequences for both human health and the ecosystem.

The sources of pollution range from single cigarettes to natural sources such as volcanic eruptions, as well as massive volumes of emissions from automotive engines and industrial processes. The long-term impact of air pollution on diseases like respiratory infections and inflammations, cardiovascular dysfunctions, and cancer are generally acknowledged. As a result, air pollution is connected to millions of deaths each year around the world. Male infertility and air pollution are linked, according to a recent study. As a result of industrial activity and a growth in the number of emission sources such as improper automobiles, air pollution has recently emerged in emerging countries [1,2].

Air pollution's effects on living organisms will extend beyond human and animal health to impact the entire environment. Human health and the environment, including animal life, are affected by various geographical situations, global climatic changes, and environmental differences. Air pollution is defined as all harmful effects from any source that contribute to atmospheric pollution and/or ecological degradation. Human involvement and/or natural processes both contribute to air pollution. It is made up of a variety of contaminants, including solid, liquid, and gaseous elements. Air pollutants are any materials in the air that could harm human health or have a significant influence on the environment. Numerous pollutants in the air, such as dust, fumes, smokes, mists, gaseous pollutants, hydrocarbons, Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), and halogen derivatives, create vulnerability to many diseases, including various forms of malignancies, at high concentrations. Particle particles are a significant component of air pollution. They are a mixture of particles found in the air, to put it simply. Particle pollution, often known as PM, has been related to the majority

of respiratory and cardiac illness and mortality. They range in size from 2.5 to 10 meters in length. The size of particle pollution is linked to the beginning and progression of lung and cardiovascular illnesses. Smaller particles enter the lower respiratory tract and hence have a higher risk of triggering lung and heart problems. Furthermore, multiple scientific studies have shown that fine particle pollutants cause early death in persons with heart and/or lung problems, such as cardiac dysrhythmias, nonfatal heart attacks, worsened asthma, and reduced lung function. Particulate pollution can cause mild to serious ailments depending on the level of exposure. The most common clinical symptoms of respiratory disease caused by air pollution include wheezing, coughing, dry mouth, and limitations in activity due to breathing problems.

Long-term exposure to present ambient PM concentrations could reduce life expectancy significantly. The decrease in life expectancy is primarily due to an increase in cardiac and lung cancer mortality. Reduced lung function in children and adults can lead to asthmatic bronchitis and Chronic Obstructive Pulmonary Disease (COPD), both of which have a negative impact on quality of life and life expectancy. Cohort studies provide strong evidence on the effect of long-term exposure to PM on cardiovascular and cardiopulmonary mortality. CO is a colorless and odorless gas created by fossil fuels, especially when combustion is inefficient, such as when coal and wood are burned. CO has a 250-fold higher affinity for hemoglobin (the body's oxygen transport) than oxygen. Mild to severe poisoning might result depending on CO content and exposure time. Headache, dizziness, weakness, nausea, vomiting, and finally loss of consciousness are all symptoms of CO poisoning. Food poisoning or viral diseases have similar symptoms. Carboxyhemoglobin (COHb) levels below 2% have no known health consequences in humans, however levels above 40% can be lethal [3-5].

Conflict of Interest

None.

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