

Air pollution. risk factor for multiple health conditions assignment

[Environment](#), [Air](#)



Air pollution is a significant risk factor for multiple health conditions including respiratory infections, heart disease, and lung cancer, according to the WHO. The health effects caused by air pollution may include difficulty in breathing, wheezing, coughing and aggravation of existing respiratory and cardiac conditions. These effects can result in increased medication use, increased doctor or emergency room visits, more hospital admissions and premature death.

The human health effects of poor air quality are far reaching, but principally affect the body's respiratory system and the cardiovascular system. Individual reactions to air pollutants depend on the type of pollutant a person is exposed to, the degree of exposure, the individual's health status and genetics. [citation needed] The most common sources of air pollution include particulate matter, ozone, nitrogen dioxide, and sulfur dioxide. Both indoor and outdoor air pollution have caused approximately 3.3 million deaths worldwide.

Children aged less than five years that live in developing countries are the most vulnerable population in terms of total deaths attributable to indoor and outdoor air pollution. [15] The World Health Organization states that 2.4 million people die each year from causes directly attributable to air pollution, with 1.5 million of these deaths attributable to indoor air pollution. [16] "Epidemiological studies suggest that more than 500,000 Americans die each year from cardiopulmonary disease linked to breathing fine particle air pollution.. "[17] A study by the University of Birmingham has shown a strong correlation between pneumonia related deaths and air

pollution from motor vehicles. CA] Worldwide more deaths per year are linked to air pollution than to automobile accidents. Citation needed] Published in 2005 suggests that 310, 000 Europeans die from air pollution annually. [citation needed] Causes of deaths include aggravated asthma, emphysema, lung and heart diseases, and respiratory allergies. Citation needed] The US EPA estimates that a proposed set of changes in diesel engine technology (Tier 2) could result in 12, 000 fewer premature mortalities, 15, 000 fewer heart attacks, 6, 000 fewer emergency room visits by children with asthma, and 8, 900 fewer respiratory-related hospital admissions each year in the United States. [citation needed] The worst short term civilian elution crisis in India was the 1984 Bhopal Disaster-[19] Leaked industrial vapors from the Union Carbide factory, belonging to Union Carbide, Inc. U. S. A. , killed more than 25, 000 people outright and injured any” here from 1 50, 000 to 600, 000. The united Kingdom suffered its worst air pollution event when the December 4 Great Smog of 1952 formed over London. In six days more than 4, 000 died, and 8, 000 more died within the following months. [citation needed] An accidental leak Of anthrax spores from a biological warfare laboratory in the former USSR in 1 979 near Spillover is lived to have been the cause of hundreds of civilian deaths. Citation needed] The worst single incident of air pollution to occur in the united States of America occurred in Donor, Pennsylvania in late October, 1948, when 20 people died and over 7, 000 were injured. [20] A new economic study of the health impacts and associated costs of air pollution in the Los Angels Basin and San Joaquin Valley of Southern California shows

that more than 3800 people die prematurely (approximately 14 years earlier than normal) each year because air pollution levels violate federal standards.

The number of annual premature deaths is considerably higher than the fatalities related to auto collisions in the same area, which average fewer than 2,000 per year. [21] Diesel exhaust (DE) is a major contributor to combustion derived particulate matter air pollution. In several human experimental studies, using a well validated exposure chamber setup, DE has been linked to acute vascular dysfunction and increased thrombus. This serves as a plausible mechanistic link between the previously described association between particulate matter air pollution and increased cardiovascular morbidity and mortality.

Control devices The following items are commonly used as pollution control devices by industry or transportation devices. They can either destroy contaminants or remove them from an exhaust stream before it is emitted into the atmosphere. **Particulate control** o **Mechanical collectors** (dust cyclones, multifunction) **electrostatic precipitation** An electrostatic precipitator (ESP), or electrostatic air cleaner is a particulate collection device that removes particles from a flowing gas (such as air) using the force of an induced electrostatic charge.

Electrostatic precipitation are highly efficient filtration devices that minimally impede the flow of gases through the device, and can easily remove fine particulate matter such as dust and smoke from the air stream. O

Backhouses Designed to handle heavy dust loads, a dust collector consists of

a blower, dust filter, a filter-cleaning system, and a dust receptacle or dust removal system (dust collectors from air cleaners which utilize disposable filters to remove the dust). Particulate scrubbers scrubber is a form of pollution control technology'. The term describes a variety of devices that use pollutants from a furnace flue gas or from other gas streams. In a wet scrubber, the polluted gas stream is brought into contact with the scrubbing liquid, by spraying it with the liquid, by forcing it through a pool of liquid, or by some other contact method, so as to remove the pollutants.

Main articles: Ocean acidification and Greenhouse effect The greenhouse effect is a phenomenon whereby greenhouse gases create a condition in the upper atmosphere causing a trapping of heat and leading to increased surface and lower troposphere temperatures. Carbon dioxide emissions from combustion of fossil fuels are a source of greenhouse gas emissions. Other greenhouse gases include methane, hydrocarbons, halocarbons, chlorofluorocarbons, nitrogen oxides, and ozone.

This effect has been understood by scientists for about a century, and technological advancements during this period have helped increase the breadth and depth of data relating to the phenomenon. Currently, scientists are studying the role of changes in composition of greenhouse gases from natural and anthropogenic sources for the effect on climate change. A number of studies have also investigated the potential for long-term rising levels of atmospheric carbon dioxide to cause increases in the acidity of ocean waters and the possible effects of this on marine ecosystems.