



# Impact of fossil fuels on the human health

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## DESCRIPTION

Fossil fuels are hydrocarbon substances formed underground from dead animal and plant debris that are extracted by humans, burned, and released energy for use. The main fossil fuels are coal, oil and natural gas, which humans extract by mining and drilling. Fossil fuels can be burned for heat for direct use (such as cooking), powering motors (such as the internal combustion engine of a car), or for power generation.

The main origin of fossil fuels is the anaerobic decomposition of buried dead organisms containing organic molecules formed by ancient photosynthesis. The transition from these raw materials to high carbon fossil fuels typically require millions of years, sometimes 650 million years or more of geological processes.

Fossil fuels cause serious environmental damage at every stage of use, including fuel extraction, transportation and consumption, and have a direct negative impact on the community. Most importantly, burning fossil fuels produces about 35 billion tonnes (35 gigatons) of carbon dioxide (CO<sub>2</sub>) annually. This represents about 89% of total carbon dioxide emissions. Natural processes on Earth (mainly due to uptake into the ocean) can absorb only a small portion of this amount, adding billions of tonnes of atmospheric carbon dioxide each year. Fossil fuels are a major source of greenhouse gas emissions that cause global warming and ocean acidification, as carbon dioxide is a greenhouse gas that increases radioactive forcing. In addition, most deaths from air pollution are caused by the combustion products of fossil fuels. This pollution costs more than 3% of the world's GDP, and it is estimated that the phasing out of fossil fuels will save 3.6 million lives each year.

## IMPACTS ON HUMAN HEALTH

### Asthma

For example, ozone, particulate matter, and other compounds released when burning coal can contribute to the development of asthma. The World Health Organization estimates that 300 million people worldwide suffer from the disease each year and 20 million in the United States have the disease. Asthma is inflammation and narrowing of the airways in the lungs. People who suffer from it may have difficulty breathing and may wheeze when breathing. The inflammatory response is so severe that airway obstruction can lead to emergency treatment.

### Pneumonia

Studies have connected exposure to air pollution with pneumonia in older adults. Researcher teams from McMaster University in Canada found that exposure to sulfur dioxide, nitrogen dioxide, and fine particulate matter from traffic pollution, which are all also associated with the burning of fossil fuels, increase the risk of older adults being hospitalized for pneumonia. The study was conducted between 2003 and 2005. This lung infection can be caused by germs, particles, or chemicals and is especially a risk for young children and the elderly.

### Upper Respiratory and Eye Irritation

Ozone, specially the secondary formation of the gas, can reason considerable eye and throat irritation. Hydrogen chloride, hydrogen fluoride, and different acidic gases can accomplish that as well. These can irritate the nostril and pores and skin too, and reason a variety of breathing problems. The irritants now no longer usually attain the frame from the particles; a mixture of nitrogen oxides and sulfur dioxides with atmospheric factors can create acid rain, which could damage trees, fish, and wildlife.

### **Immune System Problems**

Several pollutants released when fossil fuels are burned are associated with reduced immune function. These include aromatic compounds, dioxins, heavy metals, lead, and hydrocarbons. In children, the immune system is immature, so any substance that affects it can have more dire consequences.

### **Cancer**

Polycyclic aromatic hydrocarbons are also known in

scientific communities as mutagenic and carcinogens. If these harmful substances achieve a fetus from the placenta, it is possible to have high risk of cancer risk. Inhalation of toxic organic compounds and chemicals of each age can increase lung cancer risk. Benzene, formaldehyde, cadmium, arsenic, manganese and lead are known for carcinogenicity. Dioxin was bound to lymphoma, soft tissue sarcoma and gastric cancer.