

# HOW DOES AIR POLLUTION AFFECT THE HUMAN BODY?



## Skin Diseases

The skin is the largest organ in the human body and, when it is exposed to air pollutants for long periods, several types of disease can develop or existing conditions can 'flare up'. These include eczema, acne, psoriasis, dermatitis and even skin cancer. Ultra-fine particulate matter can diffuse through the skin and enter the body. This can lead to other illnesses.

## Heart Diseases

Even short-term exposure to air pollutants can affect the cardiovascular system by causing increased blood pressure and an irregular heartbeat. Longer-term exposure has been proven to have deadly consequences. One study estimated that 19% of all of the cardiovascular deaths that occurred in 2015 were caused by air pollution.

## Neurological Diseases

Air pollutants have been shown to cause the brain to swell and worsen the symptoms of conditions such as Parkinson's disease, Alzheimer's disease, depression and ADHD.

## Stroke

Strokes occur when something blocks the blood supply to a part of the brain or when a blood vessel in the brain bursts. Inhaling particulate matter leads to heart conditions that can create blood clots that can then travel up to the brain. Particulate matter can also damage the brain's protective blood barrier and cause an increased risk of strokes.

## Pulmonary Diseases

When we inhale polluted air, a lot of particulate matter enters the respiratory system. Depending on the particle size, they can become lodged and deposited in various places. The biggest particles are mostly deposited in the nasal passages and places like the larynx. Smaller ones will reach the alveolar and the very smallest will enter the bloodstream through the lungs. The International Agency for Research on Cancer has classified particulate matter air pollution as carcinogenic (leading to cancer) and it also causes other lung conditions such as asthma and chronic obstructive pulmonary disease (COPD) and causes flare ups of existing conditions.

## Allergies

Air pollution is one of the main factors associated with the development of allergic respiratory disease, which includes allergic rhinitis and allergic asthma, and has been shown to impair lung development in children and adolescents. This is the case particularly when pollens are around. Air pollution changes the pollens and the way the body reacts to pollen, by causing changes to the immune system.