MAIN AIR POLLUTANTS

Pollutants in the air can be inhaled, and lead to health problems, depending on the pollutant type and length of exposure. Here, we explore some of the most common air pollutants.

PARTICULATE MATTER (PM)

Tiny particles in the air that can be inhaled. They are known as **PM0.1** (ultrafine), **PM2.5** (fine) and **PM10** (coarse) depending on the particle diameter, which can be below 0.1, 2.5 or 10 µm.

PM can reach the lungs and bloodstream, and affect our health, causing respiratory (lung), cardiovascular (heart), and cerebrovascular (stroke) problems.

These particles can include black carbon (soot) from fuel combustion, dust (from deserts or construction), sea salt, liquid droplets and smoke, among others.

These air pollutants come from fuel burned by cars, factories, power plants, and homes (e.g. for heating and cooking), as well as from agriculture, fires and natural sources (e.g. dust storms).

OZONE (O_3)

A gas typically found in the stratosphere (ozone layer), but considered an air pollutant at ground level (troposphere). Along with PM, it is a major component of smog.

Ozone at ground level is mainly formed when other pollutants (e.g. NOx, CO, volatile organic compounds) react in the presence of sunlight. It can cause respiratory problems.

NITROGEN DIOXIDE (NO_2)

A reddish-brown gas released in the air when fuel is burned for transportation, heating, industry, energy etc. It can react to form ozone at ground level.

It is one of the nitrogen oxide (NOx) gases. Exposure can cause irritatation to airways, and respiratory conditions.

CARBON MONOXIDE (CO)

A gas released when burning fuels like wood, petrol, and coal. It mainly comes from motor vehicles. When inhaled, it can damage tissues and cells as it prevents them from taking up oxygen.

It can cause difficulty breathing, dizziness and flu-like symptoms, while high concentrations can be deadly.

SULFUR DIOXIDE (SO_2)

A gas released when burning fossil fuels (such as for industry and energy) and from volcanic activity.

It can cause cause respiratory problems.

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Sources: WHO, EEA, EPA