The Impact of Air Pollution on our Health

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Through technological advancements man has developed ways to purify the water and food we consume, but there is still no easy way to purify the air that we breath.

Most of the time people who work in risky environments are asked to wear heavy cumbersome masks. Therefore, it becomes very important to be aware of the air pollutants, their sources and the health effects of air pollution to protect our atmosphere and our health.

Pollutants can remain in the atmosphere as a gas or as a suspension of very fine solid particles or liquid droplets. Well known examples are sulphur oxides formed in volcano eruptions and some industrial activities, nitrogen oxides produced in high temperature combustion and thunder storms, as well as carbon monoxide emitted from incomplete combustion of natural gas and fossil or bio fuel, methane, benzene etc.

Other than air pollution in general, indoor air pollution has a bigger impact on health because a person would breathe that air for longer periods of time. Radon emissions from certain parts of earth, formaldehyde from plywood and carpets, lead from wall paints, carbon monoxide from fire wood are some of the important indoor pollutants.

Important organic allergens lead to asthma, while catarrh and allergies are the result of excreta of house dust mite, pollen of house plants and indoor mold.

Children below 5 years of age are highly susceptible to lung damage by polluted air. WHO estimates that there are 2.4 million deaths occurring annually due to illnesses directly related to air pollution of which the commonest organ to be affected is the lung, which is followed by the cardiovascular system.

Common lung diseases due to air pollution are bronchial asthma, Chronic Obstructive Pulmonary Disease (COPD), bronchiectasis, and recurrent pneumonia. These chronic diseases will lead to loss of working days due to cough, shortness of breath, wheeze and sputum production. When the problem becomes severe it results in hospital visits, admissions, permanent disability and premature death.

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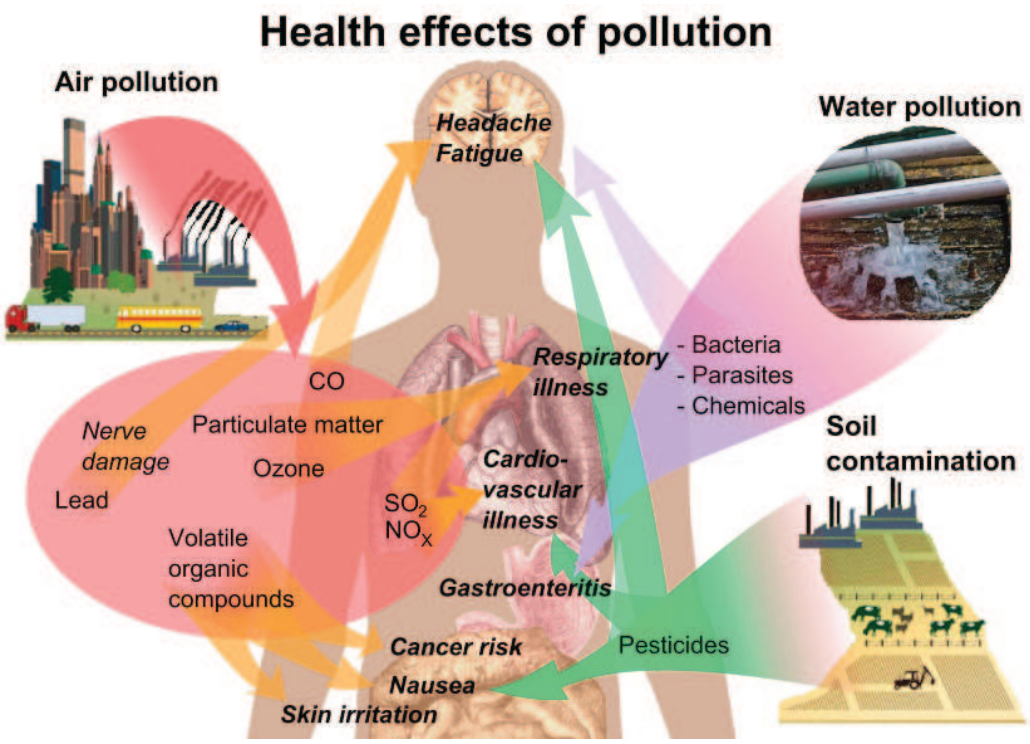
Asthma is a temporary obstruction to air ways occurring due to transient narrowing of bronchial lumen by constriction of the smooth muscles around



the air way . This can occur repeatedly in response to environmental pollutants but after some time the process can continue without the offending agent.

COPD is irreversible obstruction of air way due to chronic damage to air ways. Commonly this condition is due to cigarette smoking but at the same time fire wood fumes and diesel and petrol combustion fumes also can cause similar damage. Bronchiectasis is abnormal dilatation of bronchial tubes resulting in abnormal collections of mucus along the bronchial tree. This rich protein material can get infected easily with microorganisms resulting in recurrent chest infections and further lung damage.

Now there is conclusive evidence to prove that exposure to fine particulate matter shorten the life expectancy and increase the risk of lung cancer.

Exposure to asbestos dust cause chronic lung damage leading to permanent shortness of breath and lung cancer. Similarly dust generated in coal mines, silica from metal crushing sites and dust from graphite mines can cause chronic lung damage.

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Other than the effects related to the lung, air pollution is also a risk factor for coronary artery disease and stroke.

Air pollution can lead to cancers in other parts of the body like uterine cervix and brain.

In order to achieve targets of clean air, industrial work needs to be done with modern instruments designed to reduce pollution. Particulate control devises would prevent the workers from getting over exposed to hazardous fumes.

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Public awareness about types of air pollution and the methods to avoid or minimize the risks, along with a proper and effective legal system is mandatory in controlling air pollution.

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