

# A study on the different aspects of environment and its effect on human health

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## Abstract:

Human health is the level of functional or metabolic efficiency of a human being. The environment influences human health in many ways such as through exposures to physical, chemical and biological risk factors. It also changes in the behaviour to human life cycle factors. According to the WHO, 16 million deaths annually are due to exposure of several types of environmental pollutant. Poor environmental quality has its greatest impact on people whose health status is already at risk.

**Key words:** Environment, Air quality, Water quality, Asthma

## Introduction:

Humans interact with the environment constantly. These interactions affect quality of life, years of healthy life lived, and health disparities. Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment. The physical hazards include those relating to health effects of electromagnetic radiation and ionising radiation. The influence they can exert on our health is very complex and may be modulated by our genetic make up, psychological factors and by our perceptions of the risks that they present. Maintaining a healthy environment is central to increasing quality of life and years of healthy life. Globally, nearly 25 percent of all deaths and the total disease burden can be attributed to environmental factors. Environmental factors are diverse and far reaching.

## Different Major Aspects of Environment:

Poor air quality is linked to premature death, cancer and long term damage to respiratory and cardiovascular systems. Tobacco smoke as an environmental hazard then it probably represents the single biggest known airborne chemical risk to health, whether measured in terms of death rates such as lung cancer, asthma, chronic bronchitis and emphysema, disease of the heart, and of blood vessels. To a much lesser degree of risk, these adverse effects apply to non-smokers exposed passively to side stream tobacco smoke. Incineration of various pollutants can also generate hazardous substances such as cancer producing elements and

nitrogen dioxide generated by gas fires or gas cookers can contribute to an increased respiratory morbidity of those living in the houses (Kinney,2008). Certain modern building materials may liberate toxic gases or vapours such as formaldehyde at low concentration but which might provoke mild respiratory and other symptoms in some occupants (EPA,2008). Many allergens such as grass pollen grains, or faecal material from house dust mites may cause attacks of asthma or hay fever. There is evidence that high exposure to these allergens early in life increases the risk of suffering from asthma later on. An increasing number of studies suggest that airborne chemical pollution can act synergistically with naturally occurring allergens and result in effects on lung function at concentrations lower than those at which either the allergen or the chemical irritant on its own would have produced an adverse effect (Patz,2005).

Water pollution can be an important source of chemical hazards in aquatic regions. Untreated or inadequately treated municipal sewage is a major source of groundwater and surface water pollution in the developing countries. The organic material that is discharged with municipal waste into the watercourses uses substantial oxygen for biological degradation thereby upsetting the ecological balance of rivers and lakes. Sewage also carries microbial pathogens that are the cause of the spread of disease. It produces harmful effect on neurological function and it leads to ataxia (Noji, 2005). These cause changes in DNA structure and leads to cancer in human beings. A majority of people in the area was found suffering from arsenic skin lesions. It was felt that arsenic contamination in the groundwater was due to natural causes. The government is trying to provide an alternative drinking water source and a method through which the arsenic content from water can be removed. Fluoride added to water reduces the risks of caries but can also have unwanted effects such as mottling of the teeth. Water tanks containing lead may increase the burden of this metal in the water, while water softeners may increase its sodium content. Benzene and other petrochemicals can cause cancer even at low exposure levels (Srinivasan et al., 2003). Recreational water which is heavily contaminated with pathogens, notably coliform bacteria has been shown to be associated with an increased risk of gastrointestinal and other infectious illness.

Soil pollution occurs when soil contains chemicals that are toxic or otherwise dangerous for humans and other living things. The chemicals may be foreign to the area, or they may be naturally occurring materials that pollute the soil by being present in dangerously high amounts. Soil pollution can have a number of harmful effects on human health. The harmful effects of soil pollution may come from direct contact with polluted soil or from contact with other resources, such as water, that have come in direct contact with the polluted soil. A pesticide is a substance or mixture of substances used to kill a pest. A pesticide may be a chemical substance, biological agent (such as a virus or bacteria), antimicrobial, disinfectant or device used against any pest.

A number of environmental factors influence the spread of communicable diseases that are prone to cause epidemics. The most important of these are:

- Water supply
- Sanitation facilities

- Food
- Climate.

A lack of safe water, inadequate excreta disposal facilities, poor hygiene, poor living conditions and unsafe food can all cause Jaundice, Diarrhoea, Blue baby syndrome diseases. These diseases are a major cause of suffering and death in an emergency situation in villagers.

Climate can affect disease transmission in a variety of ways. The distribution and population size of disease vectors can be heavily affected by local climate. Flooding after heavy rains can result in sewage overflow and widespread water contamination. In addition, there is some evidence to suggest that pathogens

#### Suggestions:

- ❖ Avoid using chemical pesticides or fertilizers in farm fields. Always use the organic pesticides in agricultural fields.
- ❖ Plant trees and encourage other to plant trees as well.
- ❖ Don't burn any solid waste especially plastics.
- ❖ Use public transport system.
- ❖ Use renewable energy sources such as wind, sun and geothermal; rather than non-renewable such as coal, oil and natural gas. Therefore, environmental health must address the societal and environmental factors that increase the likelihood of exposure and disease.

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