

1. Environmental risks

Everything that is not me" or "Everything that surrounds anything" or All the physical, chemical, biological, and social factors that may affect the origin, growth, development, and survival of an organism in a given setting is known as environment.

The environmental impact on human health may stem either from "traditional risks," which are normally associated with low levels of socioeconomic development, or "modern risks," which tend to be associated with development processes that damage the environment. The changing pattern of environmental risks that have impact on health, characterized by a shift from traditional to modern risks progresses, is known as "the risk transition". The transition from traditional to modern risks may be affected by the emergence of new diseases (such as AIDS), the presence of diseases in areas where they have never existed (often as a result of a change in the environment), or the reemergence of diseases that were thought to be under control. An example of this latter phenomenon is the reemergence of tuberculosis in certain areas, due, among other things, to poverty, overcrowding, and resistance to the treatments commonly administered.

1.1. Traditional Risks

As a rule, traditional risks rapidly manifest themselves as disease. For example, if a child drinks contaminated water, there is a high probability that he will rapidly develop diarrhea; likewise, if the air in the home is highly contaminated, the child will undoubtedly soon suffer from respiratory problems.

Some of the traditional risks associated with poverty and underdevelopment are:

- Lack of access to drinking water
- Inadequate excreta and refuse disposal
- Unhealthy conditions in housing and the community
- Air pollution in the home from dust, fungi, and smoke from coal or other fossil fuels used in cooking or heating
- Food contaminated with pathogens
- Drinking water polluted with wastewater
- Natural disasters including droughts, floods, and earthquakes
- Lead contamination in housing from ceramics and paints
- Occupational accidents and diseases in agriculture, industry, and the informal Sector

1.2. Modern Risks

A special characteristic of modern risks is that their harmful effects usually appear relatively long after exposure. Some of the carcinogens in pesticides, for example, may produce symptoms only after several years, and even then, it may be several decades before a sizable tumor appears.

Modern risks are associated with rapid development unaccompanied by mechanisms to protect health; they are also associated with excessive and unsustainable consumption of natural resources.

Such risks include:

- Accumulation of hazardous solid waste,
- Air pollution from industry and vehicle emissions in urban areas,

- Pollution of water resources with industrial and agricultural waste and urban sewerage,
- Improper use of chemical or radioactive substances linked with new agricultural and industrial technologies,
- Traffic accidents,
- Emerging or reemerging infectious diseases,
- Climate and atmospheric changes, such as the thinning of the ozone layer and the greenhouse effect,
- Violence and the psychosocial effects of the urban environment,
- Smoking and drug abuse.

2. Exposure to hazards and its adverse effect on the reproductive health.

Drugs and environmental chemicals can adversely affect the reproductive system. Currently, available data indicate that the consequences of exposure depend on the nature of the chemical, its target, and the timing of exposure relative to critical windows in development of the reproductive system. The reproductive system is designed to produce gametes in far greater excess than would seem to be necessary for the survival of species. Ten to hundreds of millions of spermatozoa are generated daily by most adult male mammals, yet very few of these germ cells succeed in transmitting their genetic material to the next generation. Although the number of oocytes produced in mammalian females is more limited, and their production occurs only during fetal life, most ovaries contain several orders of magnitude more oocytes than ever will be fertilized. Toxicant exposures may affect critical events in the development of the reproductive system, ranging from early primordial germ cell determination to gonadal differentiation, gametogenesis, external genitalia, or signaling events regulating sexual behavior. Exposure to certain hazardous substances or hazardous, home, school, and work conditions can affect reproductive health before or after conception takes place. Some hazards, particularly certain chemicals and radiation, can seriously affect a developing embryo or fetus. Adverse effects due to exposure can also occur after birth, affecting the development of a baby or child. While these effects are not considered reproductive hazards, it is important to know that newborns and children are particularly vulnerable to the effects of hazardous substances.

2.1. Adverse effects health during Preconception exposure

Some exposures can prevent conception. Exposure to certain substances or combinations of substances can cause changes in the sex drive of either men or women, damage to the eggs or sperm, changes in the genetic material carried by the eggs and sperm, or cancer or other diseases in the reproductive organs of men or women.

2.1.1. Changes in the sex drive.

Exposure to some chemicals or to stressful conditions can cause both male and female workers to experience a decrease in their desire (libido) or ability to have sex. For example, chemicals which have depressant effects, such as certain solvents, may suppress the sex drive. Occupational exposures can also cause menstrual problems, which may prevent ovulation from taking place. Stress, rotating shifts, or exposure to