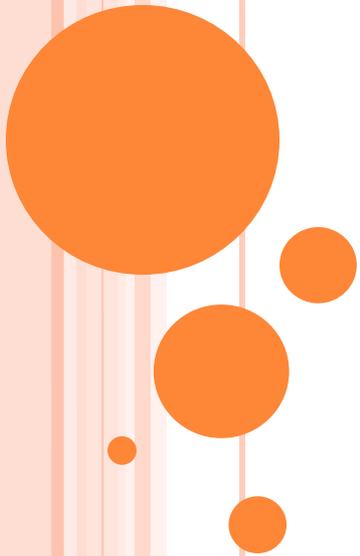


NUCLEAR HAZARDS



WHAT IS NUCLEAR HAZARDS

- Radioactive substances are present in nature. They undergo natural radioactive decay in which unstable isotopes spontaneously give out fast moving particles, high energy radiations or both, at a fixed rate until a new stable isotope is formed.



Sources of Radioactivity

Various sources of radioactivity can be grouped into

(i) Natural sources and (ii) Anthropogenic (man made) sources.

(i) **Natural Sources:** Sources of natural radioactivity include cosmic rays from outer space, radioactive radon-222, soil, rocks, air, water and food, which contain one or more radioactive substances.

(ii) **Anthropogenic sources:** These sources are nuclear power plants, nuclear accidents, X-rays, diagnostic kits, test laboratories etc. where radioactive substances are used.



Effects of Radiations

Ionisation radiations can affect living organisms by causing harmful changes in the body cells and also changes at genetic level.

(i) Genetic damage is caused by radiations, which induce mutations in the DNA, thereby affecting genes and chromosomes. The damage is often seen in the offsprings and may be transmitted upto several generations.

(ii) Somatic damage includes burns, miscarriages, eye cataract and cancer of bone, thyroid, breast, lungs and skin.



CONTROL OF NUCLEAR POLLUTION

- (i) Siting of nuclear power plants should be carefully done after studying long term and short term effects.

- (ii) Proper disposal of wastes from laboratory involving the use of radioisotopes should be done.

