

Ionizing Radiation

What is it:

Ionizing radiation is a type of energy released by atoms in the form of electromagnetic waves or particles.

Greater Detail: The spontaneous disintegration of atoms is called radioactivity, and the energy that is emitted from this is a kind of ionizing radiation. The unstable elements that break down and emit ionizing radiation are called radionuclides.

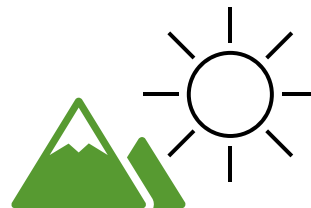
How is it used:

Ionizing radiation has many beneficial applications, including uses in medicine, industry, agriculture and research.

Greater Detail: There are many uses ranging from nuclear power generation to medical devices. The most common human sources of ionizing radiation are medical devices, including x-ray machines and Computed Tomography (CT) scanners.

Radiation Sources

There are both human-made sources, such as mentioned above, and naturally occurring sources. Natural radiation can come from more than 60 natural radioactive materials that may be found in soil, water or air. For example, radon is a naturally occurring gas that emanates from rock and soil. Every day people inhale and ingest radionuclides from the air, food, and water. People also receive natural radiation due to cosmic rays, which is generally greater at higher altitude.



How do you know you have been exposed:

Radiation may damage healthy tissues and cells. Acute effects include skin redness, hair loss, and radiation burns when exposure is at very high levels. Consistent exposure over longer durations may increase the risk of cancer.



How can you reduce the risk of exposure:

The most effective way to protect yourself and your family is to know the sources of radiation and avoid locations of known radiation.

