

Radiological Information



Radiation

Radiation is a form of energy. It comes from sources such as x-ray machines, the sun, and materials such as uranium in the soil.

The Health Effects of Radiation

Radiation can affect the body in a number of ways and the effects may be immediate or not be seen for years. The health effects may be mild such as nausea or severe such as cancer and death. All these factors depend on the amount of radiation absorbed by the body, the type of radiation, the route of exposure, and the length of time a person is exposed.

Potassium Iodide (KI)

Potassium iodide, also called KI, only protects a person's thyroid gland from exposure to radioactive iodine. KI will not protect a person from other radioactive materials or protect other parts of the body from exposure to radiation. Since there is no way to know at the time of an incident whether radioactive iodine was used in the explosive device, taking KI would probably not be beneficial. Also, KI can be dangerous to some people. Taking KI is not recommended unless there is a risk of exposure to radioactive iodine.

Dirty Bombs

A dirty bomb is a bomb that combines conventional explosives such as dynamite with radioactive material in the form of powder or pellets. The purpose of a dirty bomb is to blast radioactive material into the environment around the explosion site. The main purpose of a dirty bomb is to scare people and make buildings or land unusable for a long period of time. A dirty bomb is not a nuclear device and will not cause a nuclear explosion, but the blast from a dirty bomb may be large enough to cause significant damage or injury.

What to do Following an Explosion of a Dirty Bomb

Radiation cannot be seen, smelled, felt, or tasted by humans. If people are present at the scene of an explosion, they will not know whether radioactive materials were dispersed at the time of the explosion. They should:

- Leave the immediate area as soon as possible in order to prevent long-term exposure.
- Wait in a safe location, but try to stay in one place to avoid contaminating multiple locations.
- Wait for first responders to arrive and follow any recommended decontamination procedures.

Nuclear Blast

A nuclear blast is produced by the explosion of a nuclear bomb and involves the joining or splitting of atoms to produce an intense wave of heat, light, air pressure, and radiation. When a nuclear device is detonated, a large fireball is created. Everything inside of this fireball vaporizes, including soil and water, and is carried upwards. This creates a mushroom cloud that is associated with a nuclear blast. Radioactive material from the nuclear device then falls back to the earth and is called fallout. Fallout can be carried by the wind for miles and can contaminate anything on which it lands including food and water supplies.

Protecting You and Your Family During a Nuclear Blast

In the event of a nuclear blast, a national emergency response plan would be activated and would include federal, state, and local agencies. Following are some steps recommended by the World Health Organization if a nuclear blast occurs:

