

Radiological Threats

What Is Radiation?

Radiologic threat agents are radioactive materials or radiation released that have adverse health effects that may not be apparent for many years.

Radiation is a form of energy that is naturally present all around us.

Different types of radiation exist, some of which have more energy than others.

Radiation can affect the body in a number of ways from mild effects, such as skin reddening, to serious effects such as cancer and death.

Radiological Effects

Radioactive contamination and radiation exposure could occur if radioactive materials are released into the environment as the result of an accident, an event in nature, or an act of terrorism. Such a release could expose people and contaminate their surroundings and personal property.

Possible Health Effects of Radiation Exposure and Contamination:

Symptoms of Acute Radiation Syndrome may include nausea, vomiting, headache, and diarrhea. If you experience these symptoms after a radiation emergency, seek medical attention as soon as it is safe.

Radiation emergencies can cause emotional and psychological distress.

People who receive high doses of radiation could have a greater risk of developing cancer later in life.

How Can Exposure Occur?



People are exposed to small amounts of natural radiation every day such as:

Elements in the soil

Rays from the sun.

Man-made sources include:

Electronic equipment (such as older television sets)

Medical sources (such as x-rays, certain diagnostic tests, and treatments)

Nuclear weapons testing





Radiation Emergencies



Radiation emergencies may be intentional or unintentional.

Unintentional radiation emergencies include nuclear blasts, nuclear reactor accidents, and transportation accidents like a spill of radioactive material from a truck or train.

Intentional acts can include:

Contaminating food and water with radioactive material,

Spreading radioactive material into the environment,

Using conventional explosives (e.g., dynamite) – also called a dirty bomb,

Using wind currents or natural traffic patterns,

Bombing or destroying a nuclear reactor,

Causing nuclear material to spill while in transit,

Exploding a nuclear weapon

What to do?

If a radiation emergency occurs,
follow these steps

Get Inside

Close and lock all windows and doors. Go to the basement or the middle of the building. Radioactive material settles on the outside of buildings; so stay as far away from walls and the roof of the building as you can. If possible, turn off fans, air conditioners, and forced-air heating units that bring air in from the outside. Close fireplace dampers. Bring pets inside.

The walls of your home can block much of the harmful radiation. Because radioactive materials become weaker over time. Staying inside for at least 24 hours can protect you and your family until it is safe to leave the area.

Stay Inside

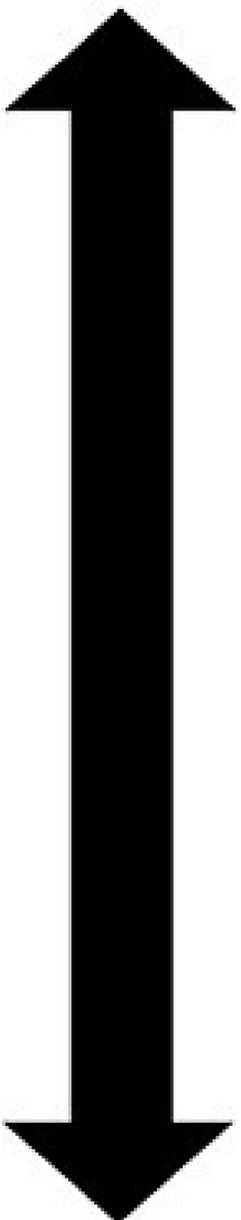
Stay Tuned

Stay updated on instructions from public health officials. As officials learn more about the emergency, they will be communicating the latest information to the public.

Radiation Hazard Scale

The Centers for Disease Control and Prevention has developed the Radiation Hazard Scale as a tool for communication in nuclear and radiological emergencies. The scale provides a frame of reference for relative hazards of radiation.

More
Radiation



Less
Radiation

Category

5

Death may occur in days to weeks

4

Increased risk of radiation sickness, but death is not likely (symptoms may appear in hours to days)

3

Increased risk of cancer later in life (symptoms may take decades to appear)

2

Above the range of normal, everyday radiation levels, but no health effects expected

1

Within the range of normal, everyday radiation levels

[Click here for more information.](#)