



Radiation Emergencies

If a radiation emergency occurs, take actions to protect yourself, your loved ones and your pets.

- Get Inside.
- Stay Inside.
- Stay Tuned.

About Radiation Emergencies

Radiation emergencies can be intentional acts designed to hurt others, like a terrorist attack, or they can be accidents that occur when using radioactive material. A nuclear power plant accident, nuclear explosion or a dirty bomb are examples of radiation emergencies!

Intentional acts that use radioactive materials include:

- **Improvised Nuclear Devices (IND) and Nuclear Weapons** – Nuclear weapons use a nuclear reaction to create an explosion. An IND is a type of nuclear weapon. Nuclear explosions produce fallout, a collection of radioactive material that can deposit on the ground, structures and buildings, or be carried by the wind.
- **Dirty Bomb or Radiological Dispersal Device (RDD)** – A dirty bomb uses a combination of explosives and radioactive materials to produce an explosion. Typically, the aim of this explosion is to spread radioactive materials into the surrounding area.

Unintentional acts, or radiation accidents, can include:

- **Nuclear Power Plant Accident** – An accident at a nuclear power plant could release radioactive material into the air or water surrounding a nuclear power plant.
- **Transportation Accident** – Radioactive materials can be transported by sea, rail, roadway or air. Traffic accidents or other incidents could cause shipments to release radioactive materials over an area.

Rules and Guidance

Federal, state and local governments have plans and trained teams of people prepared to respond to radiation emergencies. The role of each federal agency is defined in the National Response Framework's Nuclear/Radiological Incident Annex (Nuc/Rad Annex).

STATE AND LOCAL RESPONDERS

State and local governments and responders are responsible for making decisions regarding public safety for the people in their communities, including evacuation decisions, and food and water safety decisions.

U.S. DEPARTMENT OF HOMELAND SECURITY (DHS)

In the event of a terrorist attack, natural disaster or other large-scale emergency, the Department of Homeland Security has primary responsibility for ensuring that emergency responders are prepared. DHS coordinates the federal response to emergencies that require the response of many different federal agencies.

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA plans for and responds to radiological emergencies. The Agency works with other federal agencies and state and local responders to monitor and clean up radioactive material from radiation emergencies. EPA also develops Protective Action Guides (PAGs)ⁱⁱ to help state and local responders make public safety decisions during radiation emergencies.

U.S. DEPARTMENT OF ENERGY (DOE)

DOE leads the response when there is a nuclear or radiological release at a DOE facility or involving DOE materials. This could be while using, storing or shipping a variety of radioactive materials, or during the production, assembly, and shipment of nuclear weapons and special nuclear materials. DOE also coordinates the collection and organization of radiation data related to radiation emergencies.

U.S. NUCLEAR REGULATORY COMMISSION (NRC)

NRC is responsible for ensuring that each nuclear power plant in the United States has plans for responding to emergencies at the plant. NRC leads the federal response to a radiation release from nuclear power plants and other types of NRC regulated facilities,

What you can do

During a radiation emergency, the goal is to keep your exposure to radiation as low as possible. It's important to listen for guidance on how to respond to keep you, your family and your pets safe.

Get Inside – During a radiation emergency, you may be asked to get inside a building and take shelter for a period of time instead of leaving. The walls of buildings 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 inside until you are told to leave by the police, fire department or government official. While you are inside you can take simple steps to remove any radioactive material that might be on your body. Taking off the outer layer of clothing (like jackets and pants), gently washing your skin with water and putting on clean clothes will remove radioactive material.

Stay Tuned – Once you get inside, it will be important to stay tuned for updated instructions from emergency response officials. As officials learn more about the emergency, they will communicate the latest information to the public. Television, radio, and social media are some examples of ways that you may receive important safety information.



Get Inside. Stay Inside. Stay Tuned.

Source: U.S. Centers for Disease Control and Prevention (CDC)

Where to learn more

You can learn more about radiation emergencies by visiting the resources available on the following webpage: <http://www3.epa.gov/radtown/emergencies.html#learn-more>.

ⁱ <http://emergency.cdc.gov/radiation/typesofemergencies.asp>

ⁱⁱ <http://www2.epa.gov/radiation/rert/pags.html>