

Kent County Health Department
Radiation Fact Sheet



What is radiation?

Radiation is a form of energy that is all around us. Different types exist, some of which have more energy than others.

How can exposure occur?

People are exposed to small amounts of radiation every day. Some comes from naturally occurring sources such as elements in the soil or cosmic rays from the sun. Other sources are man-made and include some types of electronic equipment (microwave ovens and television sets), medical sources (x-rays, certain diagnostic tests, and treatments) and nuclear weapons testing.

About 80% of human radiation exposure comes from natural sources. The remaining 20% comes from man-made sources – mainly x-rays.

Contamination occurs when particles of radioactive material are deposited where they are not supposed to be such as on an object or a person’s skin. Internal contamination refers to radioactive material that is taken into the body through breathing, eating or drinking.

Exposure occurs when radiation enters the body such as when a person has an x-ray taken.

What happens when people are exposed to radiation?

Radiation can affect the body in a number of ways. Effects can range from mild (skin reddening) to serious (cancer and death) and 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 was exposed. The effects of exposure may not show up for many years.

How can I prepare for a radiation emergency?

Each community should have a plan in place in case of a radiation emergency. In addition, you should develop your own family emergency plan so every family member knows what to do. Your plan should include the name and phone number of an emergency contact person and at least one place outside of your home where all family members can meet.

You should also have a disaster supplies kit. The kit should include:

- A flashlight with extra batteries
- A portable radio with extra batteries
- Bottled water
- Canned and packaged food
- A hand-held can opener
- A first-aid kit and essential prescription medications
- Personal items such as paper towels, garbage bags and toilet paper
- Cash and coins

For more information on what to include in your disaster supplies kit, visit www.accesskent.com/Health/HealthDepartment/EmergencyPrep/Fact_Sheets.htm

How can I protect myself during a radiation emergency?

Time, Distance, and Shielding

Following the release of radioactive material, people should:

- Limit the time they are exposed to the radiation materials.

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- Maximize their distance from the source.
- Shield themselves from external exposure and inhalation of radioactive material.

Practical Steps

People near the release site of radioactive material should:

- Walk inside a building with closed doors and windows as quickly as possible.
- Listen for information from emergency responders and authorities.
- Stay away from any obvious plume or dust cloud.
- Cover their mouth and nose with a tissue, filter, or damp cloth to avoid inhaling or ingesting the radioactive material.
- Remove contaminated clothing as soon as possible. Clothing should not be pulled off over the head; cut it off if necessary.
- Place the items in a sealed container such as a plastic bag. Clothing could be used later to estimate a person's exposure.
- Remove eyeglasses or contact lenses*. Place glasses in a pan of 10 parts water to 1 part household bleach for five minutes, then rinse thoroughly with clean water.
*Dispose of contact lenses.
- Gently wash skin and hair with soap and warm water to remove possible contamination then rinse thoroughly. Do not scrub or scrape harshly.
- Make sure no radioactive material enters the mouth or is transferred to areas of the face where it could be easily moved to the mouth and ingested.

If you are told to shelter-in-place (which means to stay in your home or office), you should:

- Close and lock all doors and windows.
- Turn off fans, air conditioners, and forced-air heating units that bring in fresh air from the outside.
- Close fireplace dampers.
- If possible, bring pets inside.
- Move to an inner room or basement.
- Keep your radio tuned to the emergency response network or local news to find out what else you need to do.

If you are told to evacuate, follow the directions provided by local officials. You should also:

- Take your disaster supplies kit
- Take your pets only if you are using your own vehicle and going to a place you know will accept animals.
Emergency vehicles and shelters usually will not accept animals.
- Keep your radio tuned to the emergency response network or local news to find out what else you need to do.