

Detonation of a nuclear bomb will cause a fallout cloud to travel downwind for many miles. At first, this fallout will contain very high levels of radiation. It will decay rapidly to levels which will not pose an immediate health hazard, but will still exceed regulatory limits. People living in the affected region should listen to news and react as directed by public health authorities. It is possible, however, that public health authorities may be unable to react in time due to disruptions in communications systems or lack of appropriate emergency plans if the event takes place in a region that is not near a nuclear facility.

People need to protect themselves from three ways of receiving radiation from the fallout:

Receive radiation directly from the fallout as it passes by, or from the fallout that has been deposited on the ground.

Receive radiation from fallout contaminating skin, clothing, or possessions until people have washed, changed their clothing, and washed all contaminated material.

Receive internal radiation from breathing contaminated air; or eating or drinking contaminated food.

Protection from direct radiation:

If you hear on the news that a nuclear weapon has been detonated in your region and the fallout appears to be moving in your direction, the best action is to evacuate.

If you will not have time to evacuate before arrival of the plume, however, it would be better to remain in your home with windows closed, staying near the interior of the home, rather than travel when radiation from the fallout is most intense.

Protection from fallout contamination:

Close the doors and windows to your home. Turn off all fans, air conditioners, furnaces, and ventilation systems. Do this whether you evacuate or remain in the home.

If you must remain in your home, set up a screened change station at the door with changes of clothing. Anyone coming in from outside should remove their clothes at this door. Place the potentially contaminated clothing in a plastic bag and seal it.

It is possible that some people attempting to evacuate will be unable to clear the affected area before the arrival of the fallout. If this happens, close the windows on your vehicle and stop ventilation from outside. When you arrive at your destination, take care not to touch the outside of your vehicle until it has been hosed down.

Protection from internal contamination:

If you must be outdoors after the event wear respiratory protection. A full face mask with a high efficiency filter would be ideal, but even breathing through a wet

handkerchief or cloth would help.

Local water supplies may be contaminated. As soon as people have news of the attack they should draw and save drinking water in any containers available. This is important for both people seeking shelter in their homes and people evacuating.

If you are not able to procure food checked for contamination, a few simple precautions will provide adequate protection. Wash any fresh fruit or vegetables before eating. Wash cans or bottles before opening to ensure you do not ingest any external contamination on them. Drink milk from sheltered cows. Eat eggs from chickens kept indoors and fed from stored food.

#### Other considerations

When evacuating, take a flash light, portable radio, batteries, a first aid kit, a supply of sealed food and water, essential medicines, and cash and credit cards.

Take a pet with you only if you are using a personal vehicle and proceeding to a location you know will accept animals. Emergency vehicles and emergency shelters usually will not accept animals.

The health risk from the radiation may very well be less than the health risk posed by attempting to move people with health problems. Evacuation of elderly people from nursing homes or critical care units in hospitals is not recommended.

Sheltering instead of evacuation during extreme weather conditions should be considered.

#### Agricultural considerations:

To prevent the contamination of farm animals, especially those used to produce food like dairy cows or chickens, farmers should put them in shelters with a supply of food for two or three days.

If time permits, crops stored outdoors should be moved into a barn or covered.

#### The effects of exposure to radiation:

Exposure to a large amount of radiation can cause radiation sickness within a few days. Exposure to a small amount will not cause any apparent symptoms, but will increase your risk of cancer later in life.

The first symptoms of radiation sickness are changes in your blood detectable only by a complete blood count (CBC) at a hospital. These changes will be followed by possible nausea, vomiting, diarrhea, hair loss, or reddening of the skin.

If you may have been exposed to radiation:

Keep a record of where you were and how long you were in each location. This will help doctors estimate your dose and plan treatment.

If you experience any of the symptoms of radiation sickness described above see a doctor immediately. Give the doctor your record of where you were. Make sure you state that you are concerned about the possibility of radiation sickness, because these some of these symptoms can also be caused by flu or other common illnesses.

For more help:

To learn more about fallout, see Chapter 2 of CDC's report on the internet:

<http://www.cdc.gov/nceh/radiation/fallout/falloutreport.pdf>

For guidance in advance preparation for disasters, see FEMA's disaster planning information:

<http://www.fema.gov/pte/>