



Dirty Bombs

A radiological dispersal device (RDD) is a device or mechanism that spreads radioactive contamination. When explosives are used to spread radioactive powder or pellets, it is known as a *dirty bomb*. A *dirty bomb* is not the same thing as a nuclear weapon — it does not produce the tremendous force and destruction of a nuclear blast.

What are the main dangers of a dirty bomb?

The main danger from a dirty bomb is from the explosion, which may cause serious injuries and property damage. It is **very unlikely** that radioactive materials used in a dirty bomb or RDD would cause immediate serious illness related to radiation exposure unless people are extremely close to the blast. However, victims who are contaminated by or inhale or ingest radioactive dust may be at an increased risk of illness.

What actions should I take to protect myself, family, friends and pets if we are in the immediate vicinity of a dirty bomb?

Because people cannot see, smell, feel or taste radiation, you should take immediate steps to protect yourself and your loved ones. The most important steps you can take include:

- **Follow the directions, advice and recommendations of local and state authorities.**
- **Stay together and notify authorities of your location, name, and accompanying family members and friends. In addition, notify authorities of any serious injuries or medical problems.**
- **Reduce the amount of time you are exposed to or contaminated by radioactive dust or material as quickly as possible.**
- **Seek safe shelter to protect and shield you from radiation exposure:**
 - If you are in a building, stay there as long as it is not damaged.
 - If you are outside, seek a safe building for shelter. Avoid damaged buildings.
 - Shelter in the interior of the building.
 - Close all windows and doors.
 - Turn off fan systems, such as heating and air conditioning, which may bring radioactive dust into the building.
 - *Do not leave safe shelter until advised by first responders and authorities.*
- **Reduce radioactive contamination:**
 - Avoid inhaling radioactive dust by covering your mouth and nose with a cloth until you are in a safe location away from the dirty bomb incident site and have discarded contaminated clothes.
 - Discard any outer clothing which may be contaminated with radioactive material and place the clothes into a plastic bag, if available. Store the contaminated clothes away from people.
 - After discarding outer clothing, go to a safe internal area in the building.
 - Avoid eating and drinking any food or fluids that could be contaminated by radioactive dust. Eating or drinking food and water in sealed containers is permitted once the outer surfaces have been cleaned of contamination.
 - At the first opportunity, wash exposed skin or shower to reduce external contamination on your body.

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If you are in a car when the incident happens:

- Close the windows and turn off the air conditioner, heater and vents.
- Cover your nose and mouth with a cloth to avoid breathing radioactive dust or smoke.
- If you are close to your home, office or a public building, go there immediately and go inside quickly.
- If you cannot get to your home or another building safely, pull over to the side of the road and stop in the safest place possible. If it is a hot or sunny day, try to stop under a bridge or in a shady spot.
- Turn off the engine and listen to the radio for instructions.
- Stay in the car until you are told it is safe to get back on the road.

What should I do about my children and family?

- If your children or family are with you, stay together.
- If your children or family are in another home or building, they should stay there until you are told it is safe to travel.
- Schools have emergency plans and shelters. If your children are at school, they should stay there until it is safe to travel. Do not go to the school until public officials say it is safe to do so.

How do I protect my pets?

- If you have pets outside, bring them inside if it can be done safely.
- Wash your pets with soap and water to remove any radioactive dust.

Should I take potassium iodide?

- 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 types of radioactive materials or protect other parts of the body from exposure to radiation.
- State and local authorities will advise you about taking KI following a dirty bomb incident.

Will food and water supplies be safe?

- Authorities will monitor food and water quality for safety and keep the public informed.
- Food and water supplies most likely will remain safe. However, any unpackaged food or water that was out in the open and close to the incident may have radioactive dust on it.
- The food inside of cans and other sealed containers will be safe to eat. Wash the outside of the container before opening it.

How do I know if I've been exposed to radiation or contaminated by radioactive materials?

- You may not know whether you have been exposed. Police or firefighters will quickly check for radiation by using special equipment to determine how much radiation is present and whether it poses any danger in your area.
- Low levels of radiation exposure (like those expected from a dirty bomb situation) do not cause any symptoms. Higher levels of radiation exposure may produce symptoms, such as nausea, vomiting, diarrhea, and swelling and redness of the skin.

For more information on public health and emergency preparedness, visit the Office of Preparedness and Response's website at <http://preparedness.dhmh.maryland.gov> and follow us on Facebook at www.facebook.com/MarylandOPR.