



Office of Health Emergency Management

The Facts on DIRTY BOMBS and RADIATION

Because of recent terrorist events, people have expressed concern about the possibility of a terrorist attack involving radioactive materials, possibly through the use of a “dirty bomb,” and the harmful effects of radiation from such an event. The Office of Health Emergency Management (OHEM) has prepared this fact sheet to help people understand what a dirty bomb is and how it may affect their health.

What is a “dirty bomb”?

A dirty bomb, or radiological dispersion device, is a bomb that combines conventional explosives, such as dynamite, with radioactive materials in the form of powder or pellets. The idea behind a dirty bomb is to blast radioactive material into the area around the explosion. This could possibly cause buildings and people to be exposed to radioactive material. The main purpose of a dirty bomb is to frighten people

and make buildings or land unusable for a long period of time.

Where could terrorists get the radioactive material for a dirty bomb?

The most harmful radioactive materials are found in nuclear power plants and nuclear weapons sites. However, increased security at these facilities makes obtaining materials from them more difficult.

What kind of radiation could be used in a dirty bomb?

Because of the dangerous and difficult aspects of obtaining high-level radioactive materials from a nuclear facility, there is a greater chance that the radioactive materials used in a dirty bomb would come from low-level radioactive sources. Low-level radioactive sources are found in hospitals, on construction sites, and at food irradiation plants. The sources in these areas are used to diagnose and

treat illnesses, sterilize equipment, inspect welding seams, and irradiate food to kill harmful microbes.

What are the possible dangers if a dirty bomb is detonated?

If low-level radioactive sources were to be used, the primary danger from a dirty bomb would be the blast itself. Gauging how much radiation might be present is difficult when the source of the radiation is unknown. However, ***at the levels created by most probable sources, not enough radiation would be present in a dirty bomb to cause severe illness from exposure to radiation.***

What should I do if there is a radiological explosion?

Radiation cannot be seen, smelled, felt, or tasted by humans. Therefore, if you or others are present at the scene of an explosion, you will not know whether radioactive materials were involved at the time of the

explosion. If people are not too severely injured by the initial blast, everyone should do the following:

LEAVE THE IMMEDIATE AREA ON FOOT. DO NOT PANIC. DO NOT TAKE PUBLIC OR PRIVATE TRANSPORTATION SUCH AS BUSES, SUBWAYS, OR CARS BECAUSE IF RADIOACTIVE MATERIALS WERE INVOLVED, YOU COULD CONTAMINATE CARS OR THE PUBLIC TRANSPORTATION SYSTEM.

GO INSIDE THE NEAREST BUILDING. STAYING INSIDE WILL REDUCE YOUR EXPOSURE TO ANY RADIOACTIVE MATERIAL THAT MAY BE ON DUST AT THE SCENE.

REMOVE YOUR CLOTHES AS SOON AS POSSIBLE, PLACE THEM IN A PLASTIC BAG, AND SEAL IT. REMOVING CLOTHING WILL REMOVE MOST OF THE CONTAMINATION CAUSED BY EXTERNAL EXPOSURE TO RADIOACTIVE MATERIALS. SAVING THE CONTAMINATED CLOTHING WOULD ALLOW TESTING FOR EXPOSURE WITHOUT INVASIVE SAMPLING.

TAKE A SHOWER OR WASH YOURSELF AS BEST YOU CAN. WASHING WILL REDUCE THE AMOUNT OF RADIOACTIVE CONTAMINATION ON THE BODY AND WILL EFFECTIVELY REDUCE TOTAL EXPOSURE.

BE ON THE LOOKOUT FOR INFORMATION. ONCE EMERGENCY PERSONNEL CAN ASSESS THE SCENE AND THE DAMAGE, THEY WILL BE ABLE TO TELL YOU WHETHER RADIATION WAS INVOLVED.

Even if you don't know if radioactive materials were present, following these simple steps can help reduce injury from other chemicals that might have

been present in the blast.

Can taking potassium iodide (KI) help if I have been exposed to radiation?

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 radioactive materials or protect other parts of the body from exposure to radiation. It must be taken prior to exposure (for example, if people hear that a radioactive cloud is coming their way) or immediately after exposure to be effective. Since there is no way to know at the time of an incident whether radioactive iodine was used in the explosive device, taking KI would probably not be beneficial. Also, KI can be dangerous to some people. Taking KI is not recommended unless there is a risk of exposure to radioactive iodine.

Where should I go if there has been a radiological explosion?

Keep televisions or radios tuned to local news networks. OHEM or other state agencies will be giving frequent updates and information on where people should go radiation monitoring and blood tests. These tests will determine whether they were ex-

posed to the radiation, and healthcare providers on scene can advise as to what steps you can take to protect your health.

What is the risk of developing cancer if I've been exposed to radiation from a dirty bomb?

Some cancers can be caused by exposure to radiation. Being at the site where a dirty bomb exploded does not guarantee that people were exposed to the radioactive material. Until doctors are able to check people's skin with sensitive radiation detection devices, it will not be clear whether they were exposed. Just because people are near a radioactive source for a short time or get a small amount of radioactive material on them does not mean that they will get cancer. Doctors will be able to assess risks after the exposure level has been determined.

For more information on emergency health preparedness, contact the Office of Health Emergency Management (OHEM) at 505/476-7701 or visit our website at www.health.state.nm.us/ohem