# ESE FOCUS

# **Radiological Threats**



Radiation is the release of energy from certain natural elements of the earth. Radiation is emitted from space, rocks and soils, and it even occurs naturally in air and some food. It is also applied to useful human purposes, such as medical diagnosis and treatment, nuclear

power production, and scientific research. People can be exposed to radiation from these natural or legitimate sources without negative effects, because their exposure is limited and safeguards are in place.

However, large doses of uncontrolled radiation can be very harmful to people and to the environment. Nuclear weapons are very complex devices that are carefully controlled by international treaties. They are difficult to design and require materials that are closely guarded. A nuclear blast creates an explosion with intense light and heat, a damaging pressure wave, and widespread radioactive fallout that can contaminate the air, water, and ground surfaces for miles around. Experts believe that a nuclear attack is very unlikely at this time.

However, there is another, far less sophisticated type of radiological threat, one that homeland security experts believe is far more likely to be used by terrorists. This is the use of conventional explosives to spread radioactive materials over a targeted area. The term for this kind of weapon is "dirty bomb."

A "dirty bomb" kills or injures people with the impact and debris of the explosives. Additional health risks caused by the radioactive materials would show up over time and would vary according to the amount of exposure. However, the

terrorists would be counting on two additional consequences. First, people who fear they have been exposed could overwhelm the health care system. Second, the area affected by the radiation may have to be isolated for a long time, possibly damaging the local economy and requiring large amounts of money to clean up the environment.

People should remember that there has never actually been a "dirty bomb" attack on the United States, and that government agencies have detailed plans to prevent such an attack and to respond to threats of one.

## TAKE ACTION

On the other side of this sheet, you will find some common sense things you can learn and teach your family about what to do if terrorists ever do use a radiological threat against the United States.

### LEARN MORE

Knowledge is power. The more you understand about radiological threats, the better you can cope with the fear they are intended to spread.

### CHECK THESE WEB SITES

www.fema.gov/kids/nse/radiological.htm (Federal Emergency Management Agency)

www.terrorismanswers.com/weapons/dirtybomb\_print .html (Council on Foreign Relations)

www.howstuffworks.com/dirty-bomb.htm (How Stuff Works)

www.cdc.gov/masstrauma/preparedness/primer.htm (Centers for Disease Control and Prevention)



J U N E

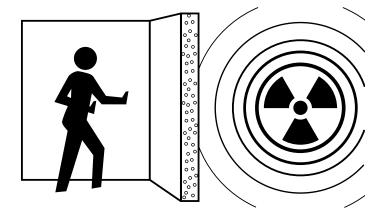
# If you are in the area of any bomb:

- ☐ Take shelter under a desk or a sturdy table.
- ☐ Exit the building as quickly as possible.
- □ Do not use elevators.
- ☐ Check for fire and other hazards.
- ☐ Take your emergency kit if time allows.

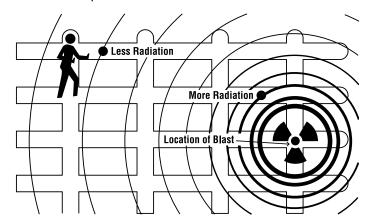
Remember, we cannot see, hear, smell, or taste radiation. Authorities can detect it using special devices. It may take some time for authorities to confirm whether a bomb has also spread radioactive materials.

If you are in the area of a dirty bomb, remember three key words: SHIELDING, DISTANCE, AND TIME:

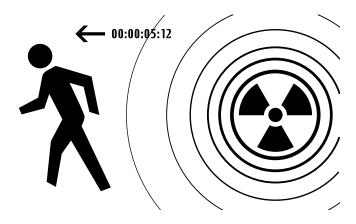
☐ **Shield** yourself from radioactive materials.



☐ Put **distance** between yourself and the source of the exposure.



☐ Minimize the **time** of your exposure.



Look to emergency authorities for information on what is happening and what you should do. Watch TV, listen to the radio, or check the Internet often for official news and information as it becomes available. Remain calm, and follow the advice of authorities about whether to seek medical attention.



This focus sheet is produced as part of the Emergency Survival Program (ESP). ESP is an awareness campaign designed to increase home, neighborhood, business and school emergency preparedness. ESP was developed by the County of Los Angeles. The California Governor's Office of Emergency Services

(OES) and representatives from Imperial, Inyo, Kern, Los Angeles, Mono, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, and Ventura counties, Southern California Edison, the Southern California Earthquake Center and the American Red Cross assist in the development of campaign materials and coordination of the campaign.