



## FACT SHEET

# Casualty Management After a Deliberate Release of Radioactive Material

This document contains recommended immediate actions for policemen, firefighters, and emergency medical technicians who may be faced with a nuclear terrorist act.

## The Situation

A conventional explosion has scattered radioactive material, saboteurs blew up a truck carrying radioactive material, or an aerosol containing radioactive material has been spread over a large area. There may be some injured people, and in the latter situation there may be hundreds of contaminated or exposed people.

## Protecting Yourself

- Approach the release site with caution. Position personnel, vehicles, and command post at a safe distance upwind and uphill of the site, if possible. Ensure your own physical safety. Look for fires, exposed high-voltage wires, sharp or falling objects, tripping hazards, or hazardous chemicals. Be alert for changing conditions.
- Wear a mask to reduce the dose from inhalation of radioactive dust. Ideally the mask should be a full face mask with a HEPA filter, but even breathing through a wet handkerchief or cloth will help. There will be little danger from radioactive gases, so a self contained breathing mask, while effective, is not necessary unless there are other gasses or toxins present.
- Dust will collect on your clothes. Remove and discard it after you leave the area. Bag the clothing for later disposal. If you fail to remove it you will continue to receive radiation and expose others. Wear loose fitting clothes covering as much of your body as possible. Any removable garment that will prevent the dust from coming into direct contact with your skin will suffice.
- Open wounds or abrasions must be protected from radioactive contamination.
- If running water or showers are available, full body rinsing with lukewarm water is advised. Even a fire hose may remove most contamination not already removed with the outer clothing.
- Do not eat, drink, or smoke while exposed to potentially radioactive dust or smoke. Drinking water may be necessary for people working in high temperatures with bulky protective clothing. If absolutely necessary to drink water, drink from a canteen or other closed container. Beware of heat strain.
- If radiation measuring instruments are available, place them in plastic bags to prevent their contamination and use them to map the areas leading up to the highest dose rates. Do not enter the areas of highest dose rate except to save lives, and then make the entry as brief as possible.

## Protecting The Injured And Exposed

- Seriously injured people should be removed from the source of radiation, stabilized, and sent to hospitals first.
- After treatment of serious physical injuries, preventing the spread of the radioactive material or unnecessary exposure of other people is paramount. Carry out the following immediate response actions without waiting for any radiation measurements.

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- Establish an exclusion zone around the source. Mark the area with ropes or tapes. Reroute traffic. Limit entry to rescue personnel only. Detain uninjured people who were near the event or who are inside the control zone until they can be checked for radioactive contamination, but do not delay treatment of injured people or transport to a hospital for this purpose.
- Take action to limit or stop the release of more radioactive material, if possible, but delay cleanup attempts until radiation protection technicians are on the scene.
- Tell nearby hospitals to expect the arrival of radioactively contaminated and injured people.
- Everyone near the scene should be checked for radioactive contamination. As soon as you can obtain radiation measuring equipment, establish a decontamination area for this purpose. Decontaminate people whose injuries are not life-threatening (broken arms, etc) before sending them to hospitals. Do not send people without physical injuries to hospitals.
- Record keeping is as important for the long term health of the victims as it is for the emergency responders. Use the form attached to this brochure to record contact information for all exposed people so they can be given medical examinations later. The Department of Health and Human Services will request this information later.

### For More Help

In the event of a radiation emergency, you should notify your state Radiation Control Program Director. Telephone numbers for each state may be found at <http://www.crcpd.org/Map/map.asp>

Notify the CDC Emergency Preparedness Branch at their 24-hour telephone number: (770) 488-7100.

### Other Information

The North American Emergency Response Guidebook (Publication A70-010) and its Pocket Edition (A70-010P) contain supplemental information on dealing with radioactive material. These books may be ordered from:

UNZ and Co  
700 Central Avenue  
New Providence, NJ 07974  
Phone: 800 631-3098

For some important lessons learned regarding selection and use of protective clothing from the World Trade Center and Oklahoma City events, see Jackson, B; D.J. Peterson, J. Bartis; T. LaTourette; I. Brahmakulam; A. Houser, J. Sollinger; Protecting Emergency Responders: Lessons Learned from Terrorist Attacks (NIOSH Workshop Proceedings), ISBN: 0-8330-3149-X  
CF-176-OSTP, at <http://www.rand.org/publications/CF/CF176/>

**Download the following form (PDF) to collect information from persons in the affected area.**

### Additional Links for First Responders & Physicians

[>>Casualty Management After Detonation of a Nuclear Weapon In an Urban Area](#)

[>>Acute Radiation Syndrome \(for Physicians\)](#)

For information on other radiation emergency topics,  
visit [www.bt.cdc.gov/radiation](http://www.bt.cdc.gov/radiation), or call the CDC public response hotline  
at (888) 246-2675 (English), (888) 246-2857 (Español), or (866) 874-2646 (TTY)