Sheltering in Place during a Radiation Emergency

The terrorist events of 2001 made many people wonder about the possibility of a terrorist attack involving radioactive materials. People who live near but not in the immediate area of the attack may be asked to stay home and take shelter rather than try to evacuate. This action is called "sheltering in place." Because many radioactive materials rapidly decay and dissipate, staying in your home for a short time may protect you from exposure to radiation. The walls of your home may block much of the harmful radiation. Taking a few simple precautions can help you reduce your exposure to radiation. The Centers for Disease Control and Prevention has prepared this fact sheet to help you protect yourself and your family and to help you prepare a safe and well-stocked shelter.

Preparing a Shelter in Your Home

- The safest place in your home during an emergency involving radioactive materials is a centrally located room or basement. This area should have as few windows as possible. The further your shelter is from windows, the safer you will be.
- Preparation is the key. Store emergency supplies in this area. An emergency could happen at any time, so it is best to stock supplies in advance and have everything that you need stored in the shelter.
- Every 6 months, check the supplies in your shelter. Replace any expired medications, food, or batteries. Also, replace the water in your shelter every 6 months to keep it fresh.
- Make sure that all family members know where the shelter is and what it is for. Caution them not to take any items from that area. If someone "borrows" items from your shelter, you may find that important items are missing when they are most needed.
- If you have pets, prepare a place for them to relieve themselves in the shelter. Pets should not go outside during a radiation emergency because they may track radioactive materials from fallout into the shelter. Preparing a place for pets will keep the radioactive materials from getting inside the shelter.

Preparing Emergency Supplies

- Stock up on supplies, just as you would in case of severe weather conditions or other emergencies. Following is a list of things to consider when preparing your emergency kit. **Food with a long shelf life**—Examples of this include canned, dried, and packaged food products. Store enough food for each member of the household for at least 3 days.
- **Water**—In preparation for an emergency, purchase and store bottled water or simply store water from the tap. Each person in the household will need about 1 gallon per day; plan on storing enough water for at least 3 days.
- **A change of clothes and shoes**—Check clothing every 6 months and remove clothes that no longer fit or are unsuitable for seasonal weather. Remember to include underwear, socks, sturdy shoes or work boots, and winter or summer clothes as needed.

- **Paper plates, paper towels, and plastic utensils**—Store disposable dishware and utensils because you will not have enough water to wash dishes and because community water sources may be contaminated.
- **Plastic bags**—Because you may not be able to leave your shelter for several days, you will need to collect your waste in plastic bags until it can be removed.
- **Bedding**—Store sheets, blankets, towels, and cots for use during the time that you cannot leave your shelter.
- **Battery-operated radio and batteries**—Electrical power may not be on for several days. A battery-operated radio will allow you to listen to emergency messages.
- **Medicines**—Have 2-3 days' dose of your current prescription medicines in a childproof bottle for your shelter medical kit; label with the name and expiration date of the medicine. (Discuss with your doctor the best way to obtain this small amount of extra medicine.) Be sure to check medicines in your kit every 6 months to make sure they are not past the expiration date.
- **Toiletries**—Keep a supply of soap, hand sanitizer, toilet paper, deodorant, disinfectants, etc.
- **Flashlight and batteries**—Electrical power may be out for several days. A flashlight will help you see in your shelter.
- **A telephone or cell phone**—Although cell phone or ground phone service may be interrupted, there is still a chance that you will be able to use a phone to call outside for information and advice from emergency services.
- **Extra eyeglasses or contact lenses and cleaning supplies.**
- **Duct tape and heavy plastic sheeting**—You can use these items to seal the door to your shelter and to seal any vents that open into your shelter for a short period of time if a radiation plume is passing over.
- **Pet food, baby formula, diapers, etc.**—Don't forget the other members of your family. If you have an infant, store extra formula and diapers. If you have pets keep a 3-day supply of pet food.
- **First aid kit**—You can purchase a first-aid kit or prepare one yourself. Be sure to include the following items:
    - Sterile adhesive bandages
    - Sterile gauze pads in 2 inch and 4 inch sizes
    - Adhesive tape
    - Sterile rolled bandages
    - Scissors
    - Tweezers
    - Needle
    - Thermometer
    - Moistened towelettes
    - Antiseptic ointment
    - Tube of petroleum jelly or other lubricant
    - Soap or hand sanitizer
    - Latex or vinyl gloves
    - Safety pins

Source: Centers for Disease Control and Prevention (CDC)

- Aspirin or aspirin free pain reliever
- Antidiarrhea medication
- Laxatives
- Antacids for upset stomach
- Syrup of ipecac to cause vomiting if advised by the Poison Control Center
- Activated charcoal to stop vomiting if advised by the Poison Control Center

- **Games, books, and other entertainment**—Because you may be in your shelter for several days, keep items on hand to occupy your family during that time. Children are likely to get bored if they have to stay in one place for long periods. Think of activities that they will enjoy doing while in the shelter – finger painting, coloring, playing games, etc.

Tips before Entering a Shelter

- If you are outside when the alert is given, try to remove clothing and shoes and place them in a plastic bag before entering the house. During severe weather, such as extreme cold, remove at least the outer layer of clothes before entering the home to avoid bringing radioactive material into your shelter. Leave clothing and shoes outside. Shower and wash your body with soap and water. Removing clothing can eliminate up to 90% of radioactive contamination (see www.bt.cdc.gov/radiation/contamination.asp). By taking this simple step, you will reduce the time that you are exposed and also your risk of injury from the radiation.
- Before entering the shelter, turn off fans, air conditioners, and forced-air heating units that bring air in from the outside. Close and lock all windows and doors, and close fireplace dampers.
- When you move to your shelter, use duct tape and plastic sheeting to seal any doors, windows, or vents for a short period of time in case a radiation plume is passing over (listen to your radio for instructions). Within a few hours, you should remove the plastic and duct tape and ventilate the room. Suffocation could occur if you keep the shelter tightly sealed for more than a few hours.
- Keep your radio tuned to an emergency response network at all times for updates on the situation. The announcers will provide information about when you may leave your shelter and whether you need to take other emergency measures.

For more information, visit www.bt.cdc.gov/radiation, or call CDC at 800-CDC-INFO (English and Spanish)

For additional information, visit www.health.pa.gov or www.emergency.cdc.gov.