



M E R T T Patient Handling

notes

ASSESSING THE RISK

At the site of a radiological transportation incident, it is as important to ensure your own safety as it is to ensure the safety of all patients at the scene. Always approach an incident site with caution and look for all hazards. Isolate the area and keep non-essential people away from the scene and outside the safety perimeter. **When handling patients, use Universal Precautions as an approach to infection control** (per 29 CFR 1910.1030).

Questions to consider before entering the incident scene include:

- How much and what type of protection does your personal protective equipment (PPE) provide?
- How much time will it take and what is the best route to rescue patient(s) and avoid radiation or contamination areas? (Planning a strategy before entering the scene may help reduce the time spent near radiation sources).
- What other hazards are present (fire, spilled diesel, downed power lines, etc.)?

Remember that care for the patient takes priority over radiological hazard assessment. Look for the following when entering the area to perform rescue operations:

- How many (if any) patients?
- What types of injuries?
- Are there any packages with visible labels?
- Do any packages look as though they are leaking, or breached?

Remember that dose rates from undamaged packages are considered to have acceptable radiation/contamination levels on the surface of the package.

- What types of packages are present?
Remember that Excepted, Industrial, and Type A Packages contain non-life-endangering amounts of radioactive material.



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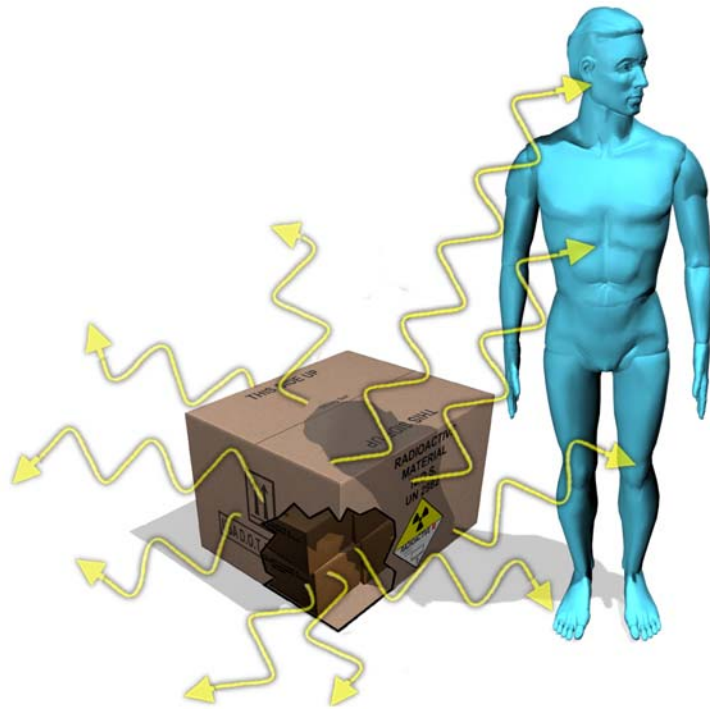
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TYPES OF EXPOSURE

In a radiation incident, you may encounter three general classes of patients who may be classified under one or more of the conditions listed below: *Please note that a patient may experience a **combination** of any of these conditions.*

1. Patient was exposed to radiation from an external source

A patient exposed to radiation alone will not pose a contamination problem. The degree of radiation-induced injury depends on the radiation dose the patient received. Following external exposure, a patient is not radioactive or contaminated and can be handled without fear or concern of spreading contamination to you or the environment.



Treat a patient exposed to external radiation no differently than a person who may have received radiation therapy. If the level of exposure was low, the patient may be viewed as someone who received diagnostic X-rays. If the level of exposure is very high, subsequent treatment at a specialized hospital may be necessary. It is important to remember, however, that no one has ever received a medically significant exposure to radiation during a transportation incident involving radioactive material.



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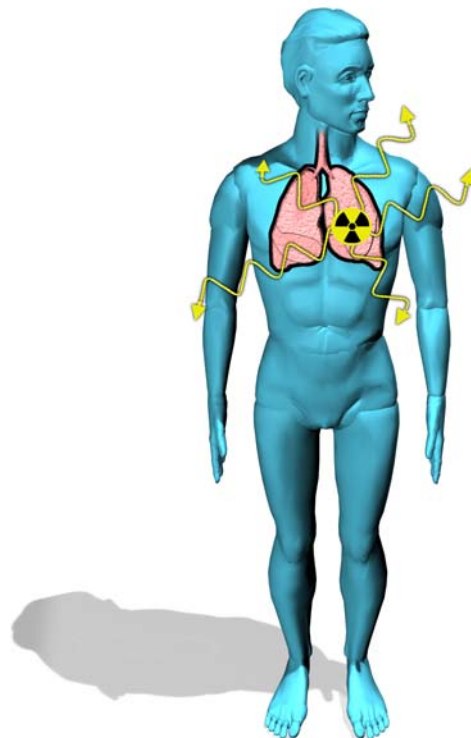
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A patient could have contamination in, or near, a wound. In this case, your primary objective must be to treat the wound and prevent any further spread of radioactive contamination into it. An open cut or wound can allow contamination to enter the body, causing internal contamination.

3. Internally contaminated patient

Internally contaminated patients present minimal risk to response personnel. A patient can become internally contaminated if radioactive material is inhaled, ingested, or introduced to the body through a cut or wound.

The internally contaminated patient may also be externally contaminated and, if so, must be treated using the procedures described earlier. The internally contaminated patient will require specialized treatment at a hospital to prevent further uptake of the contaminant and/or to promote its removal from the body.





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The following step-by-step procedure is provided as an example, and can be used as a guideline, for performing gross decon and proper packaging of a potentially contaminated patient.

1. Utilize the ERG to conduct a scene size-up. Establish contamination control zones and, without entering the hot zone, determine essential treatment equipment needed.

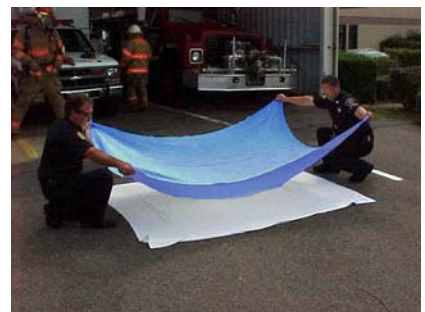
Note: If Incident Command has already been established, EMS care providers should report to the Incident Commander for a scene size-up. If response actions are being initiated by EMS care providers and the scene size-up has been completed, care providers should also consider reducing the possibility of contamination spread by only carrying essential medical equipment inside the hot zone.

2. Prior to entry into the hot zone, prepare the backboard or other device that will be used to remove the patient from the hot zone as follows:

- A. Spread a protective barrier (blanket, sheet, etc.).



- B. Spread a second protective barrier (blanket, sheet, etc.).





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4. Enter the hot zone and place the backboard or other device adjacent to the patient and unroll the protective barriers.



Note: The double blanket method will help reduce the possibility of spreading contamination. The outer blanket will reduce/eliminate responder contact with contaminated surfaces and protect the backboard or other device from contamination. EMS equipment should be placed on the blanket to minimize the potential for equipment to become contaminated. The inner blanket, when wrapped around the patient, will encapsulate any remaining radioactive contamination to the patient.

Life threatening injuries such as severe hemorrhage and airway control should be corrected immediately. Advanced life support should not be attempted in the hot zone. The patient should be promptly packaged and transferred to the clean area for further care.

5. Evaluate the need for reducing contamination on the patient.

Note: Contamination reduction should be considered if the incident/accident scene contains open or breached radioactive material packages.

6. Reduce contamination by very carefully cutting the patients clothing away from the body.



Note: Cut clothing on the center of all body extremities and the trunk. Carefully lay cut clothing open, exposing the patient's body.



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7. Responders should carefully remove their outer pair of latex gloves.

8. Treat non-life-threatening injuries as necessary. If contamination is suspected in or near a wound/injury, the primary option is to treat the wound/injury and prevent additional spread of contamination.



Note: If cleaning of injured area is to be conducted, wipe away from all open wounds or the airway. Only use the wipe(s) one time and handle all waste as potentially contaminated material. Place the wipe(s) in a controlled disposal container so that they can be monitored for radiological contamination by the local radiation authority.

9. Load the patient on to the backboard or other device using standard medical protocols and wrap the inner protective barrier around the patient.



Note: All clothing removed from patient, gloves, and outer blanket should remain inside the hot zone. These items should be handled as radioactive waste. The local radiation authority will coordinate the packaging and removal of waste.

notes

Lined area for taking notes.

Check Your Understanding



1. At the scene of a transportation incident, it is important to approach the site with caution looking for all _____.
2. Some radioactive materials are _____ and may cause chemical burns.
3. Treatment protocols at a radioactive material transportation incident should be based on which of the following:
 - a) Treat for radiation exposure first
 - b) Treat for contamination first
 - c) Treat injuries and medical priorities first
 - d) Withhold treatment until the patient is transported
4. In a radiation incident, you may encounter three general classes of patients. These, either singularly or in combination, are:
 - 1) _____
 - 2) _____
 - 3) _____
5. A patient who has been exposed to _____ alone presents no hazard to emergency care providers.
6. Performing a _____ _____ can dramatically reduce the amount of contaminants on a patient.

M E R R T T



ANSWERS

1. hazards
2. corrosive
3. c
4. See pgs. 4 to 6
5. radiation
6. gross decon