

Module 5: Search and Rescue

Lesson 5-1: Introduction to Light Search and Rescue

Module Overview

When disaster strikes, everyone naturally wants to help the survivors. Unfortunately, untrained, spontaneous rescuers all too often end up becoming injured. CERT members, on the other hand, are prepared to respond to disasters safely and effectively. They're trained to size up situations, determine the risks involved, and make their own safety the first priority when deciding if they should try to rescue others.

In this module, you'll learn about practices and techniques that CERTs use during search and rescue operations. Following these practices helps keep both rescuers and survivors safe in the wake of a disaster.

It should take you about **1 hour 15 minutes** to complete the three lessons in this module:

- Lesson 5-1: Introduction to Light Search and Rescue — **30 minutes**
- Lesson 5-2: Search Operations — **15 minutes**
- Lesson 5-3: Rescue Operations — **30 minutes**

After completing this module, you should be able to:

- Identify practices that CERTs must follow during search and rescue operations

Lesson Overview

Welcome to Lesson 5-1: Introduction to Light Search and Rescue.

In this lesson, you'll learn about key principles and practices for light search and rescue. Chief among these principles is rescuer safety, including special sizeup issues that apply to search and rescue operations.

After completing this lesson you should be able to:

- Identify CERT practices for light search and rescue
- Identify sizeup issues for CERT search and rescue operations

It should take about **30 minutes** to complete this lesson.

Components of Search and Rescue

CERT search and rescue has three interdependent components:

- Sizeup
- Search Operations
- Rescue Operations

The first component, sizeup, is the information-gathering and decision-making process for determining whether to attempt a rescue and, if so, how to proceed.

As you're doing a search and rescue sizeup, you need to keep in mind that the most important person in a rescue attempt is ...

You — the rescuer — are the most important person in a rescue attempt.

And performing an effective sizeup is an important first step in protecting yourself.

Remember the nine steps of the basic sizeup process:

- Step 1: Gather facts
- Step 2: Assess and communicate damage
- Step 3: Consider probabilities
- Step 4: Assess your situation
- Step 5: Establish priorities
- Step 6: Make decisions
- Step 7: Develop action plans
- Step 8: Take action
- Step 9: Evaluate progress

Later in this lesson, we'll focus specifically on sizeup as it is applied to light search and rescue.

Search operations are the second component in the process. To locate potential survivors, you need to use search techniques that:

- Protect your safety
- Are systematic and thorough
- Avoid duplication of efforts

Lesson 5-2: Search Operations will introduce safe and effective search methods and discuss how to document your search.

Rescue operations are the third component that comes into play after sizeup and search operations have taken place. Rescue involves three main functions:

- Creating a safe environment
- Triaging or stabilizing survivors

- Removing survivors

Lesson 5-3: Rescue Operations will introduce methods such as leveraging and cribbing to create a safe environment and discuss techniques for removing survivors based on their condition, resource availability, and stability of the environment.

Knowledge Review

A CERT will be doing light search and rescue following a flood. What is the team's first priority when it's conducting the search and rescue operations?

- A. Making sure that all survivors are located
- B. Avoiding property damage
- C. CERT member safety
- D. Minimizing time in the structure

Answer:

C

Knowledge Review

Suppose that you're a member of a CERT that's performing light search and rescue in a residential area that has been damaged by a windstorm. Why should you complete a sizeup before you enter a house to search for survivors?

- A. To see if there are fatalities outside that should be addressed first
- B. To determine whether to attempt a rescue and how to proceed
- C. To decide how many CERT members should be on each search and rescue team
- D. To calculate how long CERT members can stay in the structure

Answer:

B

Rescuer Safety

Regardless of the severity of structural damage, rescuer safety is always a CERT's primary concern during search and rescue operations.

The two most frequent causes of rescuer deaths are:

- Disorientation (rescuers become disoriented after entering a structure and lose their way)
- Secondary collapse (all or part of the structure collapses after the rescuers have entered)

Bearing these facts in mind, CERT rescuers perform only light search and rescue; they avoid heavily damaged structures. They also follow four essential safety practices to protect themselves.

Safe Practices

Safe Practice 1: Use Protective Equipment

Always wear personal protective equipment (PPE), including:

- Heavy work gloves
- Goggles
- Dust mask
- Helmet
- Sturdy shoes or boots

The primary cause of rescuer problems after working in a structural collapse is from breathing dust. A dust mask is **essential!**

***Dust mask:** The best type of dust mask is an N95, which will filter particles as small as 3 microns. Dust masks won't filter chemical or biological agents. If chemical or biological agents are suspected to be present, evacuate to an upwind location and notify first responders.*

Safe Practice 2: Work as a Team

Successful search and rescue depends on teamwork! When performing search and rescue:

- **Use a buddy system.** Always work in pairs and have a third person available to act as a runner.
- **Have backup teams available.** Having backup teams allows teams to rotate, prevents fatigue, and makes sure that help is available if a team gets into trouble.

Remember: All teams need to take breaks, drink fluids, and eat to keep themselves fresh.

Safe Practice 3: Put Rescuer Safety First

Rescuer safety always has top priority. When considering a search and rescue attempt:

- Conduct a thorough sizeup.
- Make rescuer safety the number one priority in any decision to attempt a rescue.
- Never enter a structure that you determine has heavy damage.
- Limit the amount of time that CERTs spend in moderately damaged buildings.
- Never search an area that's covered by water.

Safe Practice 4: Be Alert for Hazards

Sizeup is an ongoing process. Look up, down, and all around for safety hazards. Before you enter a building, evaluate its exterior from all sides. Once inside, constantly re-evaluate the situation to identify hazards and changing conditions that could compromise your safety, such as:

- Power lines
- Natural gas leaks
- Hazardous materials
- Sharp objects
- Overhead objects that could fall
- Holes in flooring
- Water
- Smoke

Knowledge Review

Select True or False for each of the following statements to indicate what search procedures and rescue operations CERTs must follow.

1. T F Wear personal protective equipment at all times
2. T F Rescue heavily trapped survivors first
3. T F Avoid searching in areas with standing water
4. T F Enter heavily damaged buildings only after doing a careful sizeup
5. T F Consider their own safety first
6. T F Perform a sizeup before deciding whether to attempt a rescue
7. T F Assign one person per rescue to preserve team resources

Answer

1. T
2. F
3. T
4. F
5. T
6. T
7. F

Search and Rescue Operations Sizeup

Sizeup is an essential component of many CERT procedures. In this lesson, we'll focus specifically on the nine steps of sizeup as they relate to search and rescue.

Sizeup Step 1: Gather Facts

Before you can make a damage assessment, you need to gather the critical facts about the situation. You need to consider the following factors, all of which have the potential to affect search and rescue operations:

- Time of day and the day of the week when the event occurred
- Type of structure involved
- Whether the structure is occupied
- Weather conditions following the event
- Hazards that may be present

Sizeup Step 2: Assess and Communicate Damage

Damage may be:

- Light
- Moderate
- Heavy

The CERT mission changes according to the level of structural damage. Your classroom training in the *CERT Basic Training* course will cover this information more specifically for hazards in your area.

Sizeup Step 3: Consider Probabilities

During sizeup, you need to consider what probably will — or could — happen. Identify potentially life-threatening hazards. Think about:

- How stable is the situation?
- What else could go wrong?

- How would these probabilities, if they occurred, affect search and rescue operations?

Sizeup Step 4: Assess Your Situation

The next step is to assess your situation, drawing on everything you learned in the previous sizeup steps. Your assessment should determine:

- Whether the situation is safe enough to continue
- The risks faced by rescuers if they continue
- Resource requirements for safely conducting the operation
- Resource availability

Resource: Resources for search and rescue include personnel, equipment, and tools, such as those used for lifting, moving, and cutting disaster debris.

Sizeup Steps 5 and 6: Establish Priorities and Make Decisions

Next, prioritize and make decisions about the tasks before you. You should be guided by:

- The underlying CERT priorities
- Your team's evaluation of the current situation

Deploy resources to do the most good while ensuring CERT member safety.

Do tasks that involve removing known dangers before beginning the search or the rescue. For example, turn off leaking gas from outside the building BEFORE searching the building.

Sizeup Step 7: Develop Action Plans

During this step, the Team Leader will decide specifically how personnel and other resources will be deployed and how the team will proceed with the search and rescue operation.

Because incidents requiring search and rescue operations are often somewhat complex, it may be helpful to develop a simple written plan. Written notes can help focus the operation and will provide documentation that your team can share with responding agencies.

Sizeup Steps 8 and 9: Take Action and Evaluate Progress

Sizeup is a continual process. As the search and rescue team takes action, it needs to do ongoing evaluation to maintain a safe environment.

In turn, the information gained through evaluation needs to be fed back into the decision-making process, so that priorities and action plans can be revised when needed.

Knowledge Review

Place the nine steps of the sizeup process for search and rescue in the proper order.

- ___ Develop action plans
- ___ Consider probabilities
- ___ Assess your situation
- ___ Establish priorities
- ___ Assess damage
- ___ Make decisions
- ___ Take action
- ___ Gather facts
- ___ Evaluate progress

Answer:

7, 3, 4, 5, 2, 6, 8, 1, and 9

Knowledge Review

A natural gas explosion that occurred in a restaurant in a shopping center has caused different levels of damage to several buildings. The restaurant and the two stores on either side of it are heavily damaged; a sporting goods store several doors down is moderately damaged; and a clothing store that's across the street from the restaurant is lightly damaged. Which of these structures might a CERT enter to search for survivors, after completing a sizeup? Select all that apply.

- A. The restaurant
- B. The two stores on either side of the restaurant
- C. The sporting goods store
- D. The clothing store

Answer:

C and D

Lesson Summary

In this lesson, you learned about fundamental principles and practices that CERTs must follow to carry out search and rescue operations safely.

Key points covered in this lesson include:

- CERT search and rescue includes initial sizeup, search operations, and rescue operations.
- The goals of CERT search and rescue are to protect rescuer safety and to rescue as many survivors as possible as quickly as possible.
- Search and rescue teams protect rescuer safety by wearing personal protective equipment, working as a team, putting rescuer safety first, doing ongoing sizeup, and remaining alert to changing situations.

REMEMBER! This training does NOT prepare you to perform CERT functions. Proper CERT training requires classroom-based instruction and supervised practice.

You've completed this lesson. You're now ready to begin Lesson 5-2: Search Operations.

Module 5: Search and Rescue

Lesson 5-1: Search Operations

Lesson Overview

Welcome to Lesson 5-2: Search Operations.

In this lesson, you'll learn about practices that CERTs use to conduct search operations safely.

After completing this lesson you should be able to:

- Identify effective methods for conducting search operations
- Identify effective methods for interior search

Later, when you take the classroom *CERT Basic Training* course, you'll be trained in how to actually **perform** these techniques.

It should take you about **15 minutes** to complete this lesson.

Search Sizeup

The first step in a search is to conduct a sizeup of the building to determine if the structure has light, moderate, or heavy damage. During this sizeup process, you:

- Gather more information about occupancy and danger (how many people may be inside, hazardous materials that may be present, etc.)
- Correct outside problems (turn off gas if there is a leak, etc.)
- Determine if you'll enter the building
- Determine a plan of action for the search, if it's safe to enter the building

As part of your sizeup, you may need to talk to bystanders or people who are familiar with the structure to obtain information that will help you plan effectively.

Bear in mind, though, that bystanders may be confused by the disorienting nature of the event. They may exaggerate numbers or may have inaccurate memories of what's happened.

Search Methodology

Search operations involve using an effective search methodology, based on the sizeup, to locate potential survivors.

An effective search methodology:

- Is systematic and thorough
- Avoids unnecessary duplication of efforts
- Documents search results

The classroom-based *CERT Basic Training* course will provide you with detailed information on the various search methods that CERTs use and will give you opportunities to practice the different methods.

For now, we'll briefly review four basic methods for locating survivors and documenting results.

Call Out to Survivors

After completing your sizeup and determining it's safe to begin search operations, start by calling out to survivors.

- Shout something such as, "If anyone can hear me, come to the sound of my voice." Repeat the call a number of times to allow survivors to locate you and respond.
- If any survivors respond, give them further directions, such as "Stay here" or "Wait outside," depending on the condition of the building.
- Ask the responding survivors for any information that they may have about the building or about other survivors who may be trapped.
- Periodically stop all movement and listen for sounds of trapped survivors.

Use a Systematic Search Pattern

To make sure that all areas of the building are covered, search the area systematically, using a consistent search pattern, such as bottom-up/top-down or right-wall/left-wall.

Following a pattern is very important in poorly lit areas. If you must leave the building, turn around and reverse your search to get back to your starting point.

For example, for a systematic right-wall room search, use your right hand to follow the wall throughout the building. If it becomes necessary to leave the area before

the search is completed, turn around and use your left hand to follow the wall back to your starting point.

A right-wall or left-wall search can work equally well. The important thing is for everyone on the search team to know what pattern will be used.

Knowledge Review

After doing sizeup and determining it's safe to go ahead, a CERT enters a lightly damaged building to search for survivors. What should the CERT members do to begin locating survivors?

- A. Shoot a flare into the building to let survivors know that help has arrived
- B. Move directly to the building's exit and then work their way back
- C. Assign each CERT member a specific area to search
- D. Call out to ask survivors who can walk to come to the sound of their voices

Answer:

D

Knowledge Review

A CERT will be doing search and rescue in a lightly damaged three-story office building. What would be an example of a common systematic search pattern the team might use? Select all that apply.

- A. Right-wall or left-wall
- B. Over-and-out
- C. Bottom-up or top-down
- D. Spiral triangulation
- E. Through-and-through

Answer:

A and C

Mark Searched Areas

Search and rescue teams should use a marking system to:

- Show that a team has entered a building

- Prevent duplication of search efforts
- Document the results of the team's search when it leaves the building

You'll learn local marking protocols for your area during the *CERT Basic Training* course.

Report Results

Finally, CERTs should keep complete records of their search and rescue operations, including information about:

- Removed survivors
- People who remain trapped or are dead and their locations

CERTs should report this information to emergency services personnel when those personnel reach the disaster scene.

Knowledge Review

A CERT that's doing search and rescue finds that another CERT has put these markings directly on the exterior of a building. What do the markings indicate? Select all the answers that apply.

- A. A team has entered the building
- B. Other CERTs do not need to search the building
- C. Documentation of the first CERT's search results
- D. Verification that OSHA search regulations have been met

Answer:

A, B, and C

Knowledge Review

You've carefully maintained records of the search and rescue operation that your CERT has just completed. What should you do with these records?

- A. Retain them for protection against future liability
- B. Send them to your local CERT Coordinator
- C. Provide them to emergency services personnel when they arrive on the scene
- D. Destroy them immediately after all the survivors have been rescued

Answer:
C

Lesson Summary

In this lesson, you learned some of the effective methods for safely searching the interior of structures that may have been damaged during a disaster.

Key points covered in this lesson include:

- Search operations should begin with a sizeup of the exterior of the building or structure.
- Effective search methods include calling out, using a systematic search pattern, marking searched areas, and reporting results.

REMEMBER: This training does NOT prepare you to perform CERT functions. Proper CERT training requires classroom-based instruction and supervised practice.

You've completed this lesson. You're now ready to begin Lesson 5-3: Rescue Operations.

Module 5: Search and Rescue

Lesson 5-3: Rescue Operations

Lesson Overview

Welcome to Lesson 5-3: Rescue Operations.

In this lesson, you'll learn about key procedures for safely conducting rescue operations.

After completing this lesson you should be able to:

- Identify safe techniques for debris removal and survivor

extraction. It should take you about **30 minutes** to complete this lesson.

Creating a Safe Environment

Two major efforts in rescue operations involve moving debris and moving survivors. To protect themselves so they can accomplish their mission, rescuers need to create a safe environment by:

- Following standard safety precautions
- Using proper techniques for moving debris and survivors

In this lesson, we'll review the precautions that apply and introduce you to some of the techniques that CERTs use during search and rescue. Later, when you take the classroom *CERT Basic Training* course, you'll be trained in how to actually **perform** these techniques.

Working Within Your Limits

Volunteers have been injured or killed because they didn't pay attention to their physical limitations and their levels of mental fatigue.

During lengthy search and rescue operations, it's important to take breaks to:

- Eat
- Drink fluids
- Rest and relax

Taking care of yourself in this way prepares you to return to the rescue effort with a clearer mind and improved energy.

Using Personal Protective Equipment

ALWAYS use the proper safety equipment for the situation, including:

- Heavy work gloves
- Goggles
- Dust mask
- Helmet
- Sturdy shoes or boots

Following Safety Procedures

During rescue operations, follow established basic safety procedures at all times. These include:

- Work in pairs — never alone.
- Never enter a building with heavy damage, because it's considered an unstable structure. Mark the building to indicate that it's unsafe to enter and then leave immediately.
- Don't try to lift or carry more than is reasonable for you.
- Use proper lifting techniques.
- Carry loads close to the body.

Proper Lifting Techniques

Wait a minute. Refresh my memory. What are the proper techniques for lifting?

To lift safely:

- Bend your knees
- Keep your back straight
- Push up with your legs

Knowledge Review

Teresa is helping her fellow CERT members remove debris during a search and rescue operation. This requires lifting various objects. What should she do to lift the objects safely? Select all the answers that apply.

- A. Hold the lifted object as far from her body as she can
- B. Bend her knees as she lifts an object
- C. Keep her back straight as she lifts an object
- D. Push up with her legs as she lifts an object

Answer:

B, C, and D

Leveraging and Cribbing

Leveraging and cribbing are two techniques that CERT members use together when they have to lift a heavy object to free a survivor who's pinned beneath the object.

Leveraging is using a lever and fulcrum to move a heavy object. A lever can be a pry bar, a sturdy piece of lumber, or another long, sturdy tool. The fulcrum is the axis point that the lever is placed against.

Cribbing is placing stabilizing material under the lifted edge of the object. Cribbing helps to stabilize fallen material and can be used to create a fulcrum for leveraging.

Leveraging and cribbing is a multi-step process that begins with leveraging.

Step 1: Place a stationary object under the lever to act as a fulcrum.

Step 2: Using the fulcrum, wedge the lever under the object that you need to move.

Step 3: Force the end of the lever down on the fulcrum. This action lifts the wedge end under the object, raising the object.

At this point, cribbing comes into play.

Step 4: Raise the object slowly, and stabilize it with cribbing material as you go. Follow the principle of "lift an inch; crib an inch." Alternately, lift the object and place cribbing materials under the lifted edge to stabilize it. Do this gradually, both for stability and to make the job easier. Be careful to keep your hands and feet out from under the object that's being lifted.

Step 5: When sufficient lift has been achieved, remove the survivor from beneath the object. What do you think needs to be done to finish the job safely?

After you've removed the survivor, slowly lower the raised object by reversing the leveraging and cribbing process. Lever the object and remove one layer of cribbing material at a time until the object is down and stable. Never leave an unsafe condition!

Leveraging, cribbing, and survivor removal is a labor-intensive and time-consuming process. It requires at least five CERT members, and each member of the team plays a specific role in the process.

You'll learn the details of how team members work together to perform leveraging and cribbing in the classroom *CERT Basic Training* course. For now, simply bear in mind that CERTs should remove lightly trapped survivors first, before attempting to free survivors whose rescue will require leveraging and cribbing.

Debris Removal

In some situations, to locate survivors you'll need to remove lighter debris. This doesn't require leveraging and cribbing, but you must still be careful to remove the debris safely. Set up a human chain and pass the debris from one CERT member to the next. Be sure to set up the chain in a position that won't interfere with rescue operations. And don't forget to wear leather work gloves to protect your hands!

Knowledge Review

After first rescuing lightly trapped survivors from an office building, a CERT will attempt to free a survivor who is pinned beneath a fallen cabinet. What technique should the team use to lift the cabinet?

- A. Human chain
- B. Cribbing
- C. Stabilizing
- D. Leveraging
- E. Triaging

Answer:

D

Knowledge Review

A CERT will need to use leveraging and cribbing to free a survivor whose leg is trapped beneath a fallen beam in a damaged house. Which of the following are key safety principles that the team should follow as it performs the rescue?

- A. Lift from the waist, not the knees
- B. Keep hands and feet out from under the object that's being lifted
- C. Always keep the survivor's head elevated during the lift
- D. Lift an inch; crib an inch
- E. Lower the lifted object after removing the survivor

Answer:

B, D, E

Selecting the Survivor Removal Method

You need to take several factors into account when deciding on the best method for removing a survivor.

General stability of the immediate environment: In a structure with light damage, injured survivors should be treated on site by the medical team. In a moderately damaged building, the survivor should be removed as quickly as possible, using a method that's safe for the rescuers and the survivor given the amount of debris and available space.

Number of rescuers available: You can use a variety of techniques to move survivors, depending on how many rescuers can assist. These include one-person and two-person carries, and other carries that require more rescuers to move a survivor.

Strength and ability of the rescuers: Don't attempt to lift more than is reasonable for your size and strength. The one-person arm carry is reserved for a small survivor carried by a physically able rescuer. The distance to be covered should also be considered. Your safety is the number one priority, so opt out of any carry that you're not physically able to do.

Condition of the survivor: Physically able survivors can assist in their own removal. If safety and time permit, a survivor with a suspected closed-head or spinal injury should not be lifted or dragged. If removal is necessary, take every precaution to keep the survivor's spine in a straight line, using a backboard before removing the survivor.

Removing Survivors

When removing survivors, rescuers must use teamwork and communication among everyone involved in the lift. This is important for rescuer and survivor safety.

You can use a variety of techniques to remove survivors, including:

- Self-removal or assist
- One-person carries
- Two-person carries
- Group carries
- Dragging

We'll briefly review these methods now. Later, when you take the *CERT Basic Training* classroom course, you'll see demonstrations of each method and have opportunities to practice them.

Self-Removal or Assist

It's usually best to allow survivors who are capable of freeing themselves to do so. However, seemingly able-bodied survivors are sometimes weaker and more injured than they think. When survivors are freed, they may need your assistance to exit the structure.

One-Person Carry

The one-person carry should be used only if the survivor is small and you're physically able to carry the person over the required distance to get to safety.

Two-Person Carry

Survivor removal is easier when multiple rescuers are available. With the two-person carry, the person lifting the survivor's feet can face either toward or away from the survivor.

A chair carry is another type of two-person carry. If a sturdy chair is available, two rescuers can seat the survivor on the chair and carry the seated survivor to safety.

Group Carry

A blanket carry, in which a blanket or similar material serves as an improvised stretcher, is an example of a group carry. Six rescuers are recommended for a blanket carry to help make sure that the survivor remains stable during the move. One rescuer must be designated the lead person to ensure teamwork when performing the lift.

Dragging

If there's no other way to remove a survivor from a confined area, you can drag the survivor on a blanket or by the survivor's shoulders or feet.

This method should be used only when it's time-critical to remove the survivor from the structure and no other removal method is available. Do not drag a survivor when debris could cause additional injury.

Knowledge Review

A CERT will be rescuing survivors from a store that has been moderately damaged by a storm. Several survivors are still in the store, but they're not severely injured and they are able to walk. Which of the following would be the best removal technique for the CERT to use to rescue these relatively able-bodied survivors?

- A. Triaged assist with leveraging
- B. Chair carry with cribbing assist
- C. Two-person carry
- D. Self-removal with assistance to exit the structure
- E. Blanket carry with at least five rescuers for each survivor

Answer:

D

Knowledge Review

In which of the following situations is a one-person carry most likely to be an appropriate method of removing the primary survivors of the disaster? Select all that apply.

- A. The roof has collapsed on a factory; the primary survivors are all adults.
- B. A preschool has been damaged by a flood; the primary survivors are all children under the age of 5.

- C. A college dormitory has been damaged by a fire; the primary survivors are all college students between the ages of 18 and 22.
- D. A church has been hit by a tornado during a religious service; the primary survivors include adults of all ages, teenagers, and small children and infants.

Answer:

B and D

Search and Rescue Scenario

A hurricane recently hit a coastal city. Wind and rain have caused damage across the area. The hurricane changed paths and was stronger than expected, catching office workers off guard. A local CERT has been activated to search for the survivors.

Scenario Question 1

The team surveys the buildings in the area to determine which one is safe for them to search. Read the descriptions below and select which one you think the CERT could safely search?

- A. Building with entire first floor collapsed
- B. Building surrounded by water with a lot of water inside
- C. Building with debris but little visible damage

Answer:

C

Scenario Question 2

Before the CERT members begin their search, they discuss the safety precautions they should take. What safety precautions do you think the team should take?

- A. Wear personal protective equipment at all times.
- B. Enter heavily damaged buildings only after a careful sizeup.
- C. Assign one person per search and rescue to preserve team resources.
- D. Conduct a sizeup before entering any building.

Answer:
B and D

Scenario Question 3

The team has begun its search using a proper search methodology. In what order should the following search methods be done?

- Report results of search.
- Use a systematic search pattern.
- Call out to survivors.
- Mark entrance to searched areas to indicate search activities.

Answer:
3, 2, 1, 4

Scenario Question 4

After calling out for survivors, the CERT members think they hear someone, but they aren't sure. They begin a search pattern to sweep the house. Which of the following statements concerning search patterns is true?

- A. The team should use a search pattern only if the house is poorly lit.
- B. The team should use a bottom-up or top-down pattern and a right-wall or left-wall pattern.
- C. The team should use a right-wall or left-wall pattern only if it plans to leave the same way it entered.

Answer:
B

Scenario Question 5

The first person the CERT come to is Beverly, who is trapped under a couch. Beverly is conscious and in good spirits. She has some pain and may be injured. She is talkative and just wants to get herself and her co-workers out of the building. Should the CERT members attempt this rescue?

- A. Yes
- B. No

Answer:

A

Scenario Question 6

The couch is removed, and Beverly is no longer trapped. She is alert, with a bruised and possibly sprained ankle and a sore back. The room is stable, and several other CERT members have arrived. How should the CERT members remove her?

- A. A blanket carry, since they have at least six people.
- B. Dragging method, since she has a hurt leg.
- C. Self-removal, as long as her leg isn't broken.

Answer:

A

Scenario Question 7

George is also trapped. He is in a back office where a portion of the ceiling has collapsed on him. George is conscious but having trouble breathing and thinks his leg may be broken. Should the CERT members attempt this rescue?

- A. Yes
- B. No

Answer:

B

Scenario Question 8

Christina is also trapped, in another office. She's surrounded by light debris, mainly the contents of a bookcase and some rubble. She is conscious and talking and is more shocked than physically injured. Should the CERT members attempt this rescue?

- A. Yes
- B. No

Answer:
A

Scenario Question 9

Since Christina is trapped only by light debris, the team will set up a human chain to remove the debris around her. Which of the following are true about debris removal? Select all that apply.

- A. Use a human chain only if you have fewer than five people.
- B. Wear leather work gloves to protect hands.
- C. Set up the chain away from rescue operations.
- D. Remove all debris from room before conducting rescue.
- E. Hand off debris from one person to the next.

Answer:
B, C, and E

Scenario Question 10

After the CERT members have removed the debris, they are ready to remove Christina. She doesn't appear to have any injuries and is just a little dazed. The room is stable, and four CERT members are with her. They have to walk through two more rooms to move her to safety. One of the rooms has not been cleared of debris. Which of the following removal methods could be used with Christina?

- A. Two-person carry
- B. Blanket carry
- C. Self-removal and assist
- D. One-person carry
- E. Dragging

Answer:
C

Scenario Question 11

Once a building is searched and survivors are removed, the CERT members should prepare to mark the building and report their findings. Is the following statement true or false: Mark a building only if survivors were found and a rescue took place.

- A. True
- B. False

Answer:

B

Lesson Summary

In this lesson, you learned about key procedures CERTs follow for safely conducting rescue operations.

Key points covered in this lesson include:

- The goals of rescue operations are to maintain rescuer safety and rescue survivors as quickly as possible while minimizing additional injury to them.
- Rescuers can create a safe environment by:
 - Working within their limits
 - Using personal protective equipment
 - Following safety procedures
 - Using leveraging and cribbing to move and stabilize debris
 - Using safe methods to remove survivors

You've completed this lesson.

CAUTION!!

Although you've completed this lesson on search and rescue, you haven't been trained to perform CERT functions. Only the classroom-based *CERT Basic Training* course provides the instruction and supervised practice that are required to do leveraging, cribbing, and survivor removal safely.

Do **NOT** try to use the procedures introduced in this lesson until you have completed the CERT classroom training on search and rescue.

Now let's review what you learned in this module and find out what you can expect to learn in the next module.

Module Summary

In Module 5: Search and Rescue, you learned about practices that CERTs use to carry out search and rescue operations safely.

Key points that were covered include:

- CERT search and rescue includes initial sizeup, search operations, and rescue operations.
- The goals of CERT search and rescue are to protect rescuer safety and to rescue as many survivors as possible as quickly as possible.
- Search and rescue teams protect rescuer safety by wearing personal protective equipment, working as a team, putting rescuer safety first, doing ongoing sizeup, and remaining alert to changing situations.
- Search operations should begin with a sizeup of the exterior and interior of the building or structure.
- Effective search methods include calling out, using a systematic search pattern, marking searched areas, and reporting results.
- The goals of rescue operations are to maintain rescuer safety and rescue survivors as quickly as possible while minimizing additional injury to them.
- Rescuers can create a safe environment by:
 - Working within their limits
 - Using personal protective equipment
 - Following safety procedures
 - Using leveraging and cribbing to move and stabilize debris
 - Using safe methods to remove survivors

What's Next?

Now that you've completed this module, you're ready to move on to Module 6: Course Summary. In that module, you'll review the main concepts that we've covered in this training and prepare for the end-of-course test. You'll also find out what you need to do to take the test, print your completion certificate, and go on to take the classroom-based *CERT Basic Training* course.