Moving the Downed Firefighter: Carries and Drags

The process of rescuing a downed firefighter can become extensive and may involve multiple decisions and choices related to techniques that will be necessary in extraction. Often, these operations will take place under severe fire ground conditions. These conditions can include the inability to stand up due to high heat, limited or zero visibility, and working in restricted or confined areas. The conditions present as well as the weight of the downed firefighter will dictate the methods utilized in moving the downed firefighter. A 180-lb firefighter may weigh well over 300 lbs. with turnout gear, SCBA and water from firefighting operations absorbed into the gear. Many of the difficulties experienced in moving the downed firefighter result from the extra weight of the gear. Limited “grab points,” bulkiness, and entanglement points are just a few problems that may be encountered. Moving a downed firefighter is a definite challenge.

Rescue Plan

It is important that the RIC leader develop a rescue plan and ensure that each member of the RIC understands the plan in place prior to initiating a deployment. Communication among the RIC members is a necessity but should be kept in simple and understandable terms. Too much communication will cause confusion, waste time, use up valuable air supply, and slow the rescue process. Communication must also allow the rescuers to be synchronized in their efforts. For example, a firefighter pulling up on one side of the downed firefighter before the rescuer on the other side is ready will result in the downed firefighter not being moved and a wasted effort. Simple terms such as “Ready-Go” or “Set-Lift” should be used. A pause after the first command will give the other rescuer an opportunity to stop the operation if he is not in position or to acknowledge it and proceed. The words, “Stop” or “Ready” should be used for this acknowledgement. Remember, wasted efforts result in wasted time, make certain that members understand each other!

Drastic and unconventional measures may need to be taken to remove the downed firefighter. Safety and the imagination are the only limiting factors when removing a downed firefighter in an expedient manner. The key to all of the methods discussed for moving a downed firefighter is technique. Rescuer brute strength is a great asset but is not required. Rescuers must make certain that they keep their backs straight and use their leg muscles to move the downed firefighter to avoid injury to themselves.

Carries

Carrying a downed firefighter will be easier than dragging if conditions will permit. Carrying instead of dragging the firefighter will allow obstacles and debris located at the floor level to be navigated successfully without slowing down the removal process. Again, conditions will dictate if this is even possible.
Blanket Carry/Tarp Carry

The use of a small salvage tarp or specialty blanket will be required to utilize the blanket carry technique. Advantages of the blanket carry are that it provides a means for the rescuer to be able to hold onto the downed firefighter and can be used in tight or confined spaces. Some manufacturers have even produced specialty blankets that provide carrying handles as well as heat protection.

To perform the blanket carry:

1. Locate and assess the downed firefighter, placing them on their back.
   a. Two rescuers will position themselves to each side of the downed firefighter.
   b. The blanket or tarp is placed to one side of the downed firefighter opposite the side that the downed firefighter will initially be rolled toward.

2. The downed firefighter is rolled to one side by rescuer 1 while rescuer 2 gathers the blanket or tarp beneath the downed firefighter.

3. The downed firefighter will then be rolled back toward rescuer 2, who will take control while rescuer 1 pulls the blanket or tarp from beneath the downed firefighter.

4. Rescuer 1 will gather and take hold of the material on each side of the head (or handles if equipped) while rescuer 2 does the same at the feet of the downed firefighter.

5. The downed firefighter is then lifted and carried over obstacles and debris.
Other Alternative Carry Methods

There are numerous possibilities for carrying a downed firefighter utilizing equipment such as a rescue litter, backboard, or attic ladder. These are difficult to use in situations requiring maneuvering within tight or confined spaces. Of the three listed, the rescue litter provides the most secure measure for removal because its raised sides prevent the downed firefighter from rolling off.

A rescue litter is not designed to hold a firefighter wearing an SCBA. When placing the downed firefighter with SCBA into a rescue litter, the RIC can position the victim in several different ways, depending on time available as well as the surrounding conditions that are present. Removing the downed firefighter’s SCBA completely is very time consuming and should be avoided unless it is absolutely necessary. A simple solution is to loosen or disconnect the waist belt and loosen the shoulder straps of the SCBA harness in order to shift the pack to one side of the downed firefighter. This will enable the downed firefighter to be placed into the rescue litter on the left or right side depending on to which side the pack has been shifted. The RIC can also consider the use of a backboard with this type of packaging if time and conditions permit.

The rescue litter is placed behind the downed firefighter with the rescuers rolling the victim into the litter while maintaining the SCBA and securing it to the top of the downed firefighter’s body using the litter straps or webbing. It is not necessary or realistic to take time to strap the victim into the basket by lacing webbing in and through the rails and bars of the litter as you would normally do for a high-angle rescue. Connecting clips, straps, or minimal webbing to accomplish the task of keeping the downed firefighter in the litter is all that is required.
Dragging Downed Firefighters

Dragging a downed firefighter may be necessary when conditions dictate that rescuers remain low or when manpower is limited. Certain types of drags will require the rescuers to stand while others will allow the downed firefighter to be moved from the crawling position. Dragging a downed firefighter from the upright position will be easier than dragging from a crawl. Using leg muscles and principles of physics will make the task of dragging a downed firefighter more manageable.

The most predominant challenge when dragging a downed firefighter is attaining a solid grip on the victim. Turnout gear is especially difficult to grasp when wet. Some manufacturers of turnout gear are now outfitting their gear with handles sewn into the gear that can be easily pulled out for the purpose of rescue.

The SCBA can provide a place to hold onto the downed firefighter while moving them. When moving a downed firefighter, a harness can become a necessity, especially in cases where firefighters must be moved up or down stairs or above/below grade. The back harness on the SCBA can be converted very easily into a body harness when time does not permit or an approved harness is not readily available. This technique of converting the SCBA into a harness, called harness conversion, will also prevent the SCBA from “riding up” or coming off of a downed firefighter who is being dragged.
To perform an SCBA harness conversion:

1. Unbuckle and elongate waist strap of the downed firefighter’s SCBA harness.
2. Lift one leg of the downed firefighter, putting the waist strap on that side behind or underneath the raised leg and running the strap through the crotch. The shoulder straps of the SCBA may have to be loosened to facilitate this step with larger-framed firefighters.
3. Buckle the repositioned waist strap and tighten if possible.
4. Tighten and secure shoulder straps with half-hitch knots to prevent the harness from slipping.
5. If removing the firefighter with rope, be sure to secure the rope or carabineer to the back frame assembly of the SCBA.

Not all SCBA harnesses will be able to be configured in this manner due to their design. Some manufacturer’s units will not have waist and shoulder straps that are long enough to be re-buckled when performing the harness conversion. In these cases, it is recommended to just tighten down the shoulder straps and go.

A Multiple Application Service Tool (MAST) is another quick and useful piece of equipment that can be utilized for helping to move a downed firefighter. The MAST is five large loops connected together in a daisy chain. These loops can be placed over a downed firefighter’s turnout gear. The loops of the manufactured MAST are color-coded to designate which loop is placed where the center loop of the MAST is the most important because it will provide the handle for lifting or pulling. If inside an environment where visibility is limited, the center loop can be easily located by counting the loops.

**Side-by-Side Drag**

The side-by-side drag is very basic and consists of two firefighters moving the downed firefighter by utilizing the shoulder straps of the downed firefighter’s SCBA.
To perform the side-by-side drag:

1. Locate and assess the downed firefighter, placing them on their back.
2. The rescuers will locate themselves at the head of the downed firefighter on opposite sides.
3. Each rescuer will grasp a separate shoulder strap
4. On command, the rescuers will sweep with the free hand forward while driving forward with their legs to move the downed firefighter.

Lift-and-Lead Drag

The lift-and-lead drag is a basic drag that utilizes one firefighter to drag the downed member while a second rescuer provides safety by leading the way out. Conditions must allow the rescuers to stand up to use this method.

To perform the lift-and-lead drag:

1. Locate and assess the downed firefighter, placing them on their back.
2. The rescuer will locate himself at the head (rescuer #1) of the downed firefighter.
3. Rescuer #1 will wrap his arms around the downed firefighter, grasping the downed firefighter’s wrists.
4. The rescuer will utilize their legs to stand up while lifting the downed firefighter.
5. Once the downed firefighter is lifted, rescuer 2 will place a hand on rescuer 1 to guide them around obstacles to safety.
Tool Drag

Two rescuers dragging a downed firefighter by pulling on the SCBA straps may be difficult due to the rescuers being too close to one another. A tool drag enables rescuers to be spaced apart while allowing a secure place to grip the downed firefighter. A tool such as a Halligan bar or closet hook works best for the tool drag. However, the tool must not be so big that it prevents extraction through tight spaces, narrow hallways, and staircases.

To perform the tool drag:

1. Locate and assess the downed firefighter, placing them on their back.
2. The rescuers will locate themselves at the head of the downed firefighter and place the downed firefighter in a seated position.
3. The tool is inserted through the shoulder straps of the SCBA, providing a handle for both rescuers to hold onto. Make certain that the pick end of any tool is rotated away and facing down toward the floor to avoid injury in case the rescuer slips or falls.
4. On command, the rescuers will drag the downed firefighter to safety.

Blanket Drag

The use of a small salvage tarp or specialty blanket will be required to carry out the blanket drag. Similar to the blanket carry, advantages of the blanket drag are that it provides a means for the rescuer to be able to hold onto the downed firefighter and can be used in tight or confined spaces.

To perform the blanket drag:

1. Locate and assess the downed firefighter, placing them on their back.
2. The blanket or tarp is placed to one side of the downed firefighter, opposite the side that the downed firefighter will initially be rolled toward.
3. The downed firefighter is rolled to one side while gathering the blanket or tarp beneath the downed firefighter.

4. The downed firefighter will then be rolled back. The blanket or tarp is then pulled from beneath the downed firefighter.

5. The rescuer will gather and take hold of material on each side of the head (or handles if equipped).

6. The downed firefighter's torso is then lifted off the floor, enabling him to be dragged.

**Webbing and Drags**

Webbing is a versatile piece of equipment for the RIC. It can be used in establishing anchor points, tying rescue harnesses, performing emergency escape maneuvers, setting up search tethers can also be used to create handles and slings assist in removing a downed firefighter. A 15 to 20-foot piece of looped webbing secured by a girth hitch to a downed firefighter's SCBA harness can provide a sling to pull the downed firefighter like a horse would pull a cart. Whenever webbing is used as a sling, it important to keep in mind that the longer the distance from the downed firefighter to the rescuer, the more difficult controlling and dragging the downed firefighter will be.

Webbing tied into a harness or formed into a girth hitch around the chest is a very effective option when an SCBA is not present or able to be used on the downed firefighter for any reason.

Webbing as well as rope can be used to tie a handcuff knot on the downed firefighter for dragging. When used in this manner, the downed firefighter's arms are raised above the head, lowering their profile and thus allowing them to fit through a tight opening such as wall studs or obstacles in a collapse area. Again, when using the handcuff knot, make certain that it is cinched down on the forearms of the downed firefighter—injuries to the wrist can occur if secured improperly.
Rescue Loops

An 8-mm Prussik cord tied into loops utilizing the double fisherman’s knot can be very useful in helping to move the downed firefighter. Rescue loops are only limited in use by the imagination. The Phoenix Fire Department began experimenting with the concept of utilizing these loops to establish handles and grab points to move downed firefighters. Placing the loops into a girth hitch on the extremities of the downed firefighter provides points that enable multiple rescuers to move a downed firefighter above obstacles and debris. The loops can also be used to form a sling for dragging the downed firefighter, as is done with webbing.

Staircases

Moving a downed firefighter up or down a set of stairs can be one of the most challenging scenarios presented to a RIC on the fire ground. The strongest rescuers will be unable to move a downed firefighter up or down stairs unless proper technique is used. Teamwork and clear communication will be required to move a downed member up or down a flight of stairs.

The cylinder valve of the SCBA is the most common piece of equipment that can cause difficulties when moving a downed firefighter up or down stairs. Consider what difficulties can arise when moving on staircases and make the necessary adjustments to overcome them.

Multiple Rescuer Staircase Lift

Move a downed firefighter up a staircase using the multiple rescuer staircase lift:

1. Locate and assess the downed firefighter, placing them on their back.
2. Convert the SCBA into a body harness if possible. If the SCBA harness is unusable for any reason, a looped piece of webbing can be wrapped under the downed firefighter’s arms to provide a lifting point.

3. Drag the downed firefighter to the base of the staircase, positioning them facing away from the stairs on the third tread. A rescuer may have to lift the downed firefighter to accomplish this.

4. Rescuer 1 will be positioned behind the downed firefighter on the stairs. This rescuer will lift the downed firefighter from the straps of the SCBA. The downed firefighter should be pulled straight up to clear the SCBA cylinder valve from being caught on the stairs.

5. Rescuer 2 will be positioned at the feet to the inside of the downed firefighter’s legs with their face high into the groin area; the downed firefighter’s legs will need to be positioned over the rescuer’s shoulders. Do not let the downed firefighter’s legs slip off the shoulders.

6. Rescuer 1, who is located at the head of the downed firefighter, will give the command for the extraction. They should be kept in simple terms such as, “Ready? —Go!” with a pause in between to give the other rescuer the opportunity to stop the procedure if not ready.

7. On command, rescuer 1 will pull the downed firefighter up while rescuer 2 will push. Moving the downed firefighter will be difficult and it will be necessary to stop every few steps. Just remember that if conditions in the lower level were bad, the staircase will be even more formidable so move quickly but in a controlled manner.

If the staircase is wide enough and a third rescuer is available, they can be positioned at the head with rescuer 1. Each rescuer at the head will then have the ability to each grab a shoulder strap of the downed firefighter’s SCBA harness.

**Stair Raise with a Tool**

If the width of the staircase will allow, a tool can be used as a handle for two firefighters to lift and carry the downed firefighter using the stair raise with a tool technique.
To perform the stair raise using a tool:

1. Locate and assess the downed firefighter, placing them on their back.
2. Drag the downed firefighter to the base of the staircase, positioning them facing away from the stairs.
3. The rescuers will locate themselves at the head of the downed firefighter and place the downed firefighter in a seated position.
4. The tool is inserted through the shoulder straps of the SCBA, providing a handle for both rescuers to hold onto. Make certain that the pick end of any tool is rotated away and facing down toward the floor to avoid injury in case the rescuer slips or falls.
5. On command, the rescuers will pull the downed firefighter up above the stair treads with the downed firefighter’s lower extremities dragging behind. It is important to make certain that the downed firefighter is lifted high enough to have the SCBA cylinder valve clear the stair tread. If a third rescuer is available, they can control the lower extremities by being positioned at the feet to the inside of the downed firefighter’s legs with their face high into the groin area and with the downed firefighter’s legs positioned over the rescuer’s shoulders. They will drive the downed firefighter up, helping to clear the stair treads.

Stair Raise Using the Handcuff Knot

The handcuff knot can be utilized in moving a downed firefighter up stairs. It is especially useful when the staircase is narrow.

To perform the stair raise using the handcuff knot:

1. Locate and assess the downed firefighter, placing them on their back. Drag the downed firefighter to the base of the staircase, positioning them facing away from the stairs.
2. Rescuer 1 will locate themselves at the head of the firefighter and place the handcuff knot on the forearms.
3. Rescuer 1 will then pay out the rope or webbing until they are located at the landing or top of the staircase. Keep in mind that conditions can be horrific at the landing or top of the staircase as heat and products of combustion will be present if the fire in the lower level has not been controlled.

4. Rescuer 2 will be positioned at the feet to the inside of the downed firefighter’s legs with their face high into the groin area; the downed firefighter’s legs will need to be positioned over the rescuer’s shoulders. The downed firefighter should be rotated slightly to one side to allow the SCBA to slide up the stairs.

5. Rescuer 1 will call out the command and take up slack in the rope or webbing, pulling the downed firefighter up the stairs.

6. Rescuer 2 will use his legs to drive the downed firefighter up the stairs, making certain that the cylinder valve of the SCBA clears the stair treads.

**Using Rescue Loops to Carry a Downed Firefighter up Stairs**

Rescue loops are another option to assist the RIC in moving a downed firefighter up a staircase. A minimum of two firefighters will be needed to use rescue loops.

**To use rescue loops to help move a firefighter up a staircase:**

1. Locate and assess the downed firefighter, placing them on their back.

2. Drag the downed firefighter to the base of the staircase, positioning them facing away from the stairs in a seated position.

3. Rescuer 1 will take position behind the downed firefighter and will grasp both shoulder straps of the downed firefighter’s SCBA.

4. Rescuer 2 will take a rescue loop and place it in a girth hitch on the downed firefighter’s leg as high up in the groin area as possible. This will be repeated for the second leg also.

5. Rescuer 2 will position themselves inside the downed firefighter’s legs, grasping a rescue loop in each hand.

6. On command, rescuer 1 will pull straight up on the SCBA shoulder straps while rescuer 2 will pull straight up on the rescue loops. At this point, the SCBA of the downed firefighter should be up high enough to clear the stair treads easily.
The rescuers should be able to navigate the stairs quite easily with proper execution of this maneuver. If needed, they can stop periodically to regroup or get a better hold. Just remember, once committed to going up the staircase, it must be performed quickly—the staircase is a ventilation outlet for any conditions on the lower level!

**Using 2-to-1 Mechanical Advantage to Move a Downed Firefighter**

A simple mechanical advantage system can be an aid in moving a downed firefighter. The simplest mechanical advantage system can be made using just one rope and a carabiner, however, for a more efficient system consider adding a pulley to reduce friction.

**Raise a downed firefighter up a staircase using a simple 2-to-1 mechanical advantage:**

1. Rescuer 1 will position the downed firefighter in the best position and attach a carabiner to a suitable point on the firefighter.
2. Rescuer 2 will find a suitable anchor point at the top of the staircase and attach the end of the rescue rope to the anchor point.
3. Form a bight in the rescue rope and place the bight into the carabiner on the downed firefighter. If a pulley is available run the rope through the pulley and attach the pulley to the downed firefighter.
4. Rescuer 2 and 3 pull on the free end of the rescue rope while Rescuer 1 assists positioning the downed firefighter as needed as they are raised.

**Moving a Disabled Firefighter Down a Flight of Stairs**

Moving the downed firefighter down a flight of stairs is not as difficult as going up because gravity will assist to a degree, but it is still not an easy task by any means. The most important thing to consider when going down stairs with a downed firefighter is to prevent the downed firefighter from sustaining additional injuries to the head and neck.
The simplest way of removing a downed firefighter from an upper floor using a flight of stairs is to drag the firefighter headfirst.

1. To drag a downed firefighter down a flight of stairs:
   Locate and assess the downed firefighter, placing them on their back.
   a. Drag the downed firefighter to the top of the staircase, positioning them face up.
   b. Rescuer 1 will position themselves on the stairs behind rescuer 2. Rescuer 1 will guide rescuer 2 and the downed firefighter.

2. Rescuer 2 will roll the downed firefighter slightly to the right or left to keep the SCBA from getting caught on the stairs when dragging.

3. Rescuer 2 will lift on the SCBA shoulder straps of the downed firefighter while cradling the back of the head and neck on their forearm.

4. The rescuers will proceed down the stairs with the upper body of the downed firefighter supported by rescuer 2. The downed firefighter’s lower body will drag down along the stairs.

Another option when moving the downed firefighter down a flight of stairs is to use a tool to assist in lifting the downed member over the stairs. Two rescuers can be positioned at the head of the downed firefighter while a Halligan bar or other tool is placed through the shoulder straps of the SCBA. This will allow the team members to grasp each side of the Halligan bar while raising the head and upper torso of the downed firefighter when bringing him down the stairs. If a third rescue member is available, he can help guide the rescuers down the stairs.

Summary

Extracting a downed firefighter from a hazard area may require the utilization of multiple techniques—such as the extremity, cradle, or blanket carry and the lift-and-lead, or blanket drag; depending on the circumstances. Drastic and unconventional measures, such as the harness conversion, may need to be taken to remove the downed firefighter. Safety and the imagination are the only limiting factors when removing a downed firefighter in an expedient manner. The key to all of the methods discussed for moving a downed firefighter is technique. Practice and training is the only way to find out what works best and what adjustments can be made to make the operation more efficient.