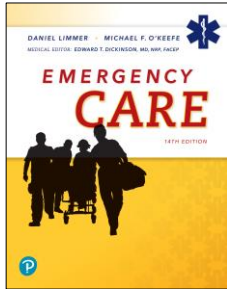


Emergency Care

Fourteenth Edition



Chapter 3

Lifting and Moving Patients

Pearson

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Topics

- [Protecting Yourself: Body Mechanics](#)
- [Protecting Your Patient: Emergency, Urgent, and Non-Urgent Moves](#)

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Protecting Yourself: Body Mechanics

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Protecting Yourself: Body Mechanics (1 of 7)

- The proper use of your body to prevent injury and to facilitate lifting and moving

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Protecting Yourself: Body Mechanics (2 of 7)

- Consider the following before lifting any patient:
 - The object
 - Its weight and whether it would require additional help to lift
 - Your limitations
 - Communication
 - Make a plan and communicate it with your partner.

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Protecting Yourself: Body Mechanics (3 of 7)

- Rules for lifting
 - Position your feet properly.
 - Use your legs.
 - Never turn or twist.
 - Do not compensate when lifting with one hand.

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Protecting Yourself: Body Mechanics (4 of 7)

- Rules for lifting
 - Keep weight as close as possible to your body.
 - Use a stair chair when carrying a patient on stairs whenever possible.



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Rules for Lifting



Moving a stair chair down steps.



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Power Lift and Power Grip



(Left) The power lift and (Right) the power grip.



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Protecting Yourself: Body Mechanics (5 of 7)

- When reaching:
 - Keep back in a locked-in position.
 - Avoid twisting while reaching.
 - Avoid reaching more than 20 inches in front of body.
 - Avoid prolonged reaching when strenuous effort is required.



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Protecting Yourself: Body Mechanics (6 of 7)

- When pushing or pulling:
 - Push, rather than pull, whenever possible.
 - Keep back locked in.
 - Keep line of pull through center of body.
 - Keep weight close to body.



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Protecting Yourself: Body Mechanics (7 of 7)

- When pushing or pulling:
 - If the weight is below your waist, push or pull from kneeling position.
 - Avoid pushing or pulling overhead.
 - Keep your elbows bent and arms close to your sides.



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Protecting Your Patient: Emergency, Urgent, and Non-Urgent Moves

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Emergency Moves (1 of 7)

- Situations
 - The scene is hazardous.
 - Care of life-threatening conditions requires repositioning.
 - You must reach other patients.



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Emergency Moves (2 of 7)



Clothes drag



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Emergency Moves (3 of 7)



Incline drag. Always head first.



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Emergency Moves (4 of 7)



[For long description, see slide 65: Appendix 1](#)

Firefighter's drag. Place patient on his back and tie the patient's hands together. Straddle the patient, crouch, and pass your head through the patient's trussed arms. Raise your body and crawl on your hands and knees. Keep the patient's head as low as possible.



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Emergency Moves (5 of 7)



[For long description, see slide 66: Appendix 2](#)

Blanket drag. Gather half of the blanket material up against the patient's side. Roll the patient toward your knees, place the blanket under the patient, and gently roll the patient onto the blanket. During the drag, keep the patient's head as low as possible.



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Emergency Moves (6 of 7)



[For long description, see slide 67: Appendix 3](#)

One-rescuer assist.



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Emergency Moves (7 of 7)



Two-rescuer assist. Place the patient's arms around the shoulders of both rescuers. They each grip a hand, place their free arms around the patient's waist, and help the patient walk to safety.



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Urgent Moves

- Situations
 - The required treatment can be performed only if the patient is moved.
 - Factors at the scene cause patient decline.
- Usually involves moving the patient to a backboard



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Nonurgent Moves

- No immediate life threat
- Patient can be assessed, treated, and moved in normal way.
- Take all required precautions not to aggravate existing conditions.



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Patient-Carrying Devices (1 of 12)

- Stretcher or any other device designed to carry the patient safely to the ambulance and/or to the hospital
- Wheeled stretchers
 - Power stretchers
 - Manual stretchers
 - Bariatric stretchers
 - Some rated to carry patients weighing 800 pounds or more



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Patient-Carrying Devices (2 of 12)



A wheeled stretcher is carried on every ambulance.



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Patient-Carrying Devices (3 of 12)



Power stretcher.
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Bariatric Stretcher



An increasing number of emergency departments are being equipped with hydraulic lifts to transfer obese patients onto the hospital cot.



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Patient-Carrying Devices (4 of 12)

- Stair chairs
 - Useful where stretchers cannot be easily maneuvered
- Spine board
 - Short
 - Rarely used in EMS practice
 - Long
 - Primarily for removing patients from vehicles when neck or spine injury is suspected



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Patient-Carrying Devices (5 of 12)



Stair chair.



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Patient-Carrying Devices (6 of 12)



Long spine boards.



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Patient-Carrying Devices (7 of 12)

- Other types of stretchers
 - Portable stretcher
 - Scoop stretcher
 - Basket stretcher
 - Flexible stretcher
 - Vacuum mattress



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Patient-Carrying Devices (8 of 12)



Scoop (orthopedic) stretcher.
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Patient-Carrying Devices (9 of 12)



Basket stretcher.
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Patient-Carrying Devices (10 of 12)



Flexible stretcher.
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Patient-Carrying Devices (11 of 12)



A vacuum mattress may be used to transport a patient.



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Patient-Carrying Devices (12 of 12)



When the patient is placed on the device and air is withdrawn, the mattress becomes rigid and conforming, automatically padding voids.



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Think About It

- How do you choose the appropriate patient-carrying device?



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Moving Patients onto Carrying Devices (1 of 4)

- Patient with suspected spinal injury
 - Immobilize head, neck, and spine before move.
 - Perform manual stabilization.
 - Place a rigid cervical collar.
 - Restrict movement of the neck and spine.



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Moving Patients onto Carrying Devices (2 of 4)

- Patient with no suspected spine injury
 - Extremity lift
 - Used to carry patient to stretcher or stair chair
 - Can be used to lift patient from ground or from sitting position



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Moving Patients with No Suspected Spinal Injury



[For long description, see slide 68: Appendix 4](#)

Extremity Carry



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Moving Patients onto Carrying Devices (3 of 4)

- Patient with no suspected spine injury
 - Direct ground lift
 - Lifting from ground to stretcher



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Direct Ground Lift (1 of 3)



[For long description, see slide 69: Appendix 5](#)

Direct Ground Lift: 1. The stretcher is set in its lowest position and placed on the opposite side of the patient. The EMTs face the patient, drop to one knee, and if possible, place the patient's arms on the patient's chest. The head-end EMT cradles the patient's head and neck by sliding one arm under the neck to grasp the shoulder, moving the other arm under the patient's back. The foot-end EMT slides one arm under the patient's knees and the other arm under the patient above the buttocks.

Note: If a third rescuer is available, that rescuer should place both arms under the patient's waist while the other two slide their arms up to the mid-back or down to the buttocks, as appropriate.



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Direct Ground Lift (2 of 3)



Direct Ground Lift: 2. On signal, the EMTs lift the patient to their knees.



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Direct Ground Lift (3 of 3)



Direct Ground Lift: 3. On signal, the EMTs stand and carry the patient to the stretcher, drop to one knee, and roll forward to place him onto the mattress.



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Moving Patients onto Carrying Devices (4 of 4)

- Patient with no suspected spine injury
 - Draw-sheet method
 - Direct carry method



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Draw-Sheet Method (1 of 2)

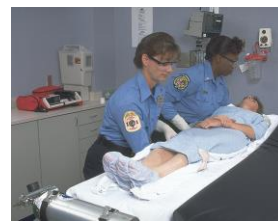


Draw-Sheet Method: 1. Loosen the bottom sheet of the bed and roll it from both sides toward the patient. Place the stretcher, rails lowered, parallel to the bed and touching the side of the bed. EMTs use their bodies and feet to lock the stretcher against the bed.



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Draw-Sheet Method (2 of 2)



Draw-Sheet Method: 2. EMTs pull on the draw sheet to move the patient to the side of the bed. Both use one hand to support the patient while they reach under the patient to grasp the draw sheet. Then they simultaneously draw the patient onto the stretcher.



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Recovery Position



A patient in the recovery position.



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Patient Positioning

- Positioning for shock
 - Place patients believed to be in shock in supine position
 - Do not lower head
 - Do not raise legs



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Transferring the Patient to a Hospital Stretcher

- When you arrive at the hospital, you will move the patient from the ambulance stretcher to the hospital stretcher.
 - Modified draw-sheet method



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Transfer to a Hospital Stretcher (1 of 4)



- Position the raised ambulance cot next to the hospital stretcher. Hospital personnel then adjust the stretcher (raise or lower the head) to receive the patient.



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Transfer to a Hospital Stretcher (2 of 4)



- You and the hospital personnel gather the sheet on either side of the patient and pull it taut to transfer the patient securely.



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Transfer to a Hospital Stretcher (3 of 4)



- Holding the gathered sheet at support points near the patient's shoulders, mid-torso, hips, and knees, you and the hospital personnel slide the patient in one motion onto the hospital stretcher.



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Transfer to a Hospital Stretcher (4 of 4)



- Make sure the patient is centered on the stretcher and the stretcher rails are raised before turning the patient over to the emergency department staff.



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Chapter Review



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Chapter Review (1 of 5)

- The process of lifting and moving patients is a task that requires planning, proper equipment, and careful attention to body mechanics to prevent injury to your patient and to yourself.



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Chapter Review (2 of 5)

- The most important rule in lifting is to lift with your legs, not your back. Keep your feet shoulder-width apart and keep your knees bent. Rules for lifting are for patients as well as equipment.
- Emergency moves are those that may aggravate spine injuries and, therefore, are reserved for life-threatening situations.



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Chapter Review (3 of 5)

- Urgent moves are used when the patient must be moved quickly but there is time to provide quick, temporary consideration toward preventing or aggravating spinal injury.



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Chapter Review (4 of 5)

- Nonurgent moves are normal ways of moving a patient to a stretcher after performing a complete on-scene assessment and restricting movement of the spine when necessary.
- Positioning the patient for transport should take into account the patient's comfort, medical needs, and safety.



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Chapter Review (5 of 5)

- Remember the importance of correct lifting and moving techniques on every call. Protect your patient and protect yourself from injury to maintain a long and positive EMS experience.



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Remember (1 of 2)

- Proper lifting technique is an important wellness strategy.
- Biomechanics and rules of lifting help prevent injuries associated with lifting.
- Many different patient-carrying devices exist. Choose the correct device based upon the particular patient and needs of particular movement.



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Remember (2 of 2)

- Use proper technique to move patients onto patient-carrying devices and position them for transport based upon their condition.



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Questions to Consider

- Why are body mechanics so important when lifting and moving patients?
- Why is using the appropriate patient-carrying device an important consideration?
- When would an emergency move be necessary?
- In what ways can proper positioning help a patient's condition?



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Critical Thinking

- You arrive at a vehicle crash and find an elderly driver slumped over the wheel. Upon examination you determine the patient is in respiratory arrest, but not trapped in the vehicle. Which move would be appropriate for this patient?



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Appendix 1

Place patient supine and tie the patient's hands together. Straddle the patient, crouch, and pass your head through the patient's trussed arms. Raise your body and crawl on your hands and knees. Keep the patient's head as low as possible.

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Appendix 2

Gather half of the blanket material up against the patient's side. Roll the patient toward your knees, place the blanket under the patient, and gently roll the patient onto the blanket. During the drag, keep the patient's head as low as possible.

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Appendix 3

Place the patient's arm around your neck, grasping the patient's hand in yours. Place your other arm around the patient's waist. Help the patient walk to safety. Be prepared to change your movement technique if the level of danger increases. Be sure to communicate with the patient about obstacles, uneven terrain, and so on.

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Appendix 4

Place the patient on the patient's back with knees flexed. Kneel at the patient's head. Place your hands under the patient's shoulders. The second EMT kneels at the patient's feet, grasps the patient's wrists, and lifts the patient forward. At the same time, slip your arms under the patient's armpits and grasp the patient's wrists. The second EMT can grasp the patient's knees while facing, or facing away from, the patient. Direct the second EMT, so you both move to a crouch, and stand at the same time. Move as a unit when carrying a patient. If the patient is found sitting, crouch and slip your arms under the patient's armpits and grasp the patient's wrists. The second EMT crouches then grasps the patient's knees. Lift the patient as a unit.

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Appendix 5

The EMT's face the patient, drop to one knee, and if possible, place the patient's arms on the patient's chest. The head end EMT cradles the patient's head and neck by sliding one arm under the neck to grasp the shoulder, moving the other arm under the patient's back. The foot end EMT slides one arm under the patient's knees and the other arm under the patient above the buttocks.

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