Chapter 6
Lifting and Moving Patients

Overview
- Body Mechanics
  - Lifting
  - Carrying
  - Reaching
  - Pushing and Pulling
- Principles of Moving Patients
  - Emergency Moves
  - Urgent Moves
  - Nonurgent Moves
- Equipment

Body Mechanics
- The principles of effective movement used in lifting and moving patients

Use of proper body mechanics reduces the EMS provider’s chances of being injured.
Lifting Techniques

- Safety precautions
  - Use legs, not back, to lift
  - Keep weight as close to body as possible
  - Consider weight of patient and need for additional help
  - Know physical ability and limitations
  - Lift without twisting
  - Have feet positioned properly
  - Communicate clearly and frequently with partner

Improper Lifting Technique

- Improper lifting technique with back twisted

Proper Lifting Technique
Proper Lifting Technique

Know the weight limitations of the devices!

Guidelines for Stretchers

- When possible use a stair chair instead of a stretcher, if medically appropriate

Guidelines for Stretchers

- Know or find out the weight to be lifted
- Use at least two people
- Ensure enough help available
- Use an even number of people to lift so that balance is maintained
- Know or find out the weight limitations of equipment being used
Guidelines for Stretchers

- Using power-lift or squat-lift position
- Use power grip to get maximum force from hands
- Lift while keeping back in locked-in position
- When lowering cot or stretcher, reverse steps
- Avoid bending at the waist

Video Clip: The Squat Lift for Lifting a Stretcher

Carrying

- Precautions for carrying—whenever possible, transport patients on devices that can be rolled

It is always best to let the equipment perform the work.
Guidelines for Carrying

- Know or find out the weight to be lifted
- Know limitations of the crew’s abilities
- Work in a coordinated manner and communicate with partners
- Keep the weight as close to the body as possible

Guidelines for Carrying

- Keep back in a locked-in position and refrain from twisting
- Flex at the hips, not the waist; bend at the knees
- Do not hyperextend the back (do not lean back from the waist)

Correct Carrying Procedure

- Use correct lifting techniques to lift the stretcher
- Partners should have similar strength and height
One-Handed Carrying Technique

- Pick up and carry with the back in the locked-in position
- Avoid leaning to either side to compensate for the imbalance

Carrying Procedure on Stairs

- When possible, use a stair chair instead of a stretcher
- Keep back in locked-in position
- Flex at the hips, not the waist; bend at the knees
- Keep weight and arms as close to the body as possible

A stair chair provides more flexibility for handling and transporting patients in narrow or steep areas.
Reaching Guidelines

- Keep back in locked-in position
- When reaching overhead, avoid hyperextended position
- Avoid twisting the back while reaching

Reaching Techniques

- Avoid reaching more than 15–20 inches in front of the body
- Avoid situations where prolonged (more than 1 minute) strenuous effort is needed to avoid injury

Correct Reaching for Log Rolls

- Keep back straight while leaning over patient
- Lean from the hips
- Use shoulder muscles to help with roll
Pushing and Pulling Guidelines

- Push, rather than pull, whenever possible
- Keep back locked-in
- Keep line of pull through center of body by bending knees
- Keep weight close to the body

Pushing and Pulling

- Push from the area between the waist and shoulder
- If weight is below waist level, use kneeling position
- Avoid pushing or pulling from an overhead position if possible
- Keep elbows bent with arms close to the sides

Principles of Moving Patients

- Emergency moves
- Urgent moves
- Nonurgent moves
Emergency Moves

- There is an immediate danger to the patient if not moved
  - Fire or danger of fire
  - Explosives or other hazardous materials
  - Inability to protect the patient from other hazards at the scene
- Inability to gain access to other patients in a vehicle who need lifesaving care
- Lifesaving care cannot be given because of the patient’s location or position

Urgent Moves

- Altered mental status
- Inadequate breathing
- Shock (hypoperfusion)
Nonurgent Moves

- If there is no threat to life, the patient should be moved when ready for transportation (nonurgent move)

Emergency Moves

- Clothes drag

- Blanket drag
Emergency Moves

- Pulling the patient under the arms

Nonurgent Moves

- Direct ground lift

Video Clip: Direct Ground Lift (No Suspected Spine Injury)
Nonurgent Moves

- Extremity lift

Video Clip: Extremity Lift (No Suspected Spine Injury)

Nonurgent Moves

- Stretcher to bed transfer
Video Clip: Transfer of Supine Patient from the Stretcher to the Bed by the Direct Carry Method

Video Clip: Transfer of a Supine Patient from the Stretcher to the Bed by the Draw Sheet Method

Equipment

Stretchers and Cots
Long Backboard

Seated Spinal Devices

Patient Positioning
- Supine
Patient Positioning

- Fowler’s

Patient Positioning

- Recovery

Patient Positioning

- Pregnant patient
Patient Positioning

- Children should be secured in car seats for transport

Summary

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  - Lifting
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  - Nonurgent Moves
- Equipment