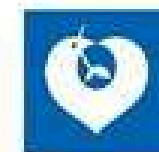




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AMBASSADE
DE FRANCE
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*Liberté
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Lao PDR Integrated Emergency Response Training 2025

LIFTING TECHNIQUES

Topic

- **Protecting Yourself:**
 - **Body Mechanics**
- **Protecting Your Patient:**
 - Emergency, Urgent, and Non-Urgent Moves**



Protecting Yourself: Body Mechanics

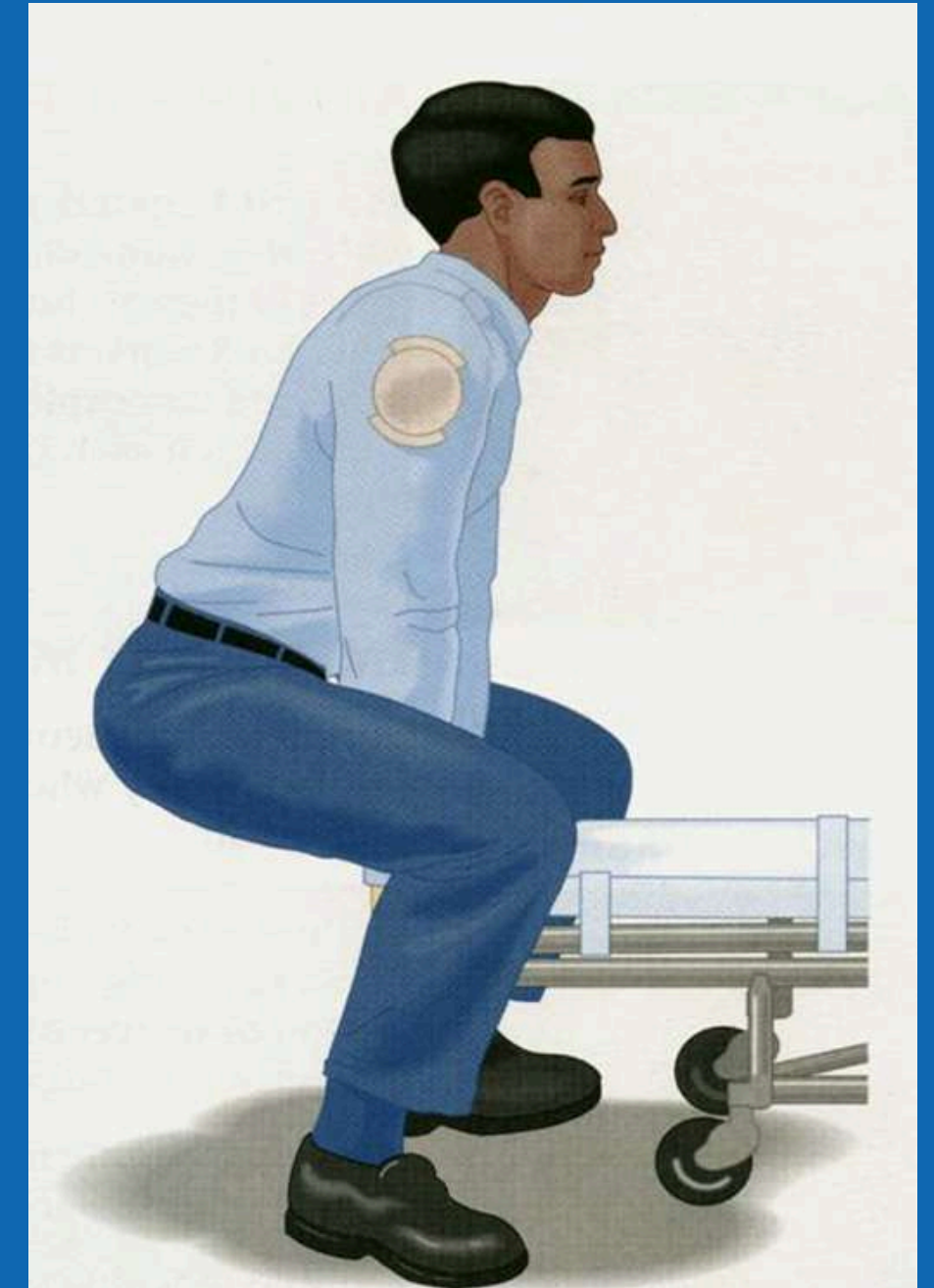


- The proper use of your body to prevent injury and to facilitate lifting and moving
- Consider the following before lifting any patient:
 - The object
 - • Its weight and whether it would require additional help to lift
- Your limitations
- Communication
 - Make a plan and communicate it with your partner.



Rules for lifting

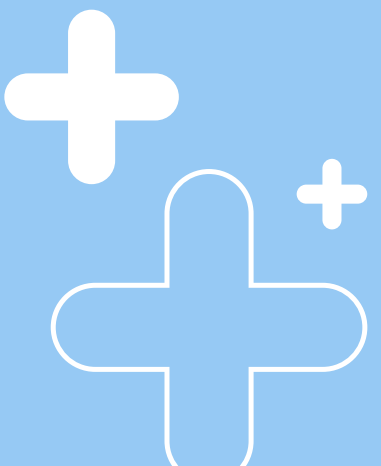
- Position your feet properly.
- Use your legs.
- Never turn or twist.
- Do not compensate when lifting one hand.
- Keep weight as close as possible to your body.
- Use a stair chair when carrying patient on stairs whenever possible.



Rules for lifting



Moving a stair chair down steps.



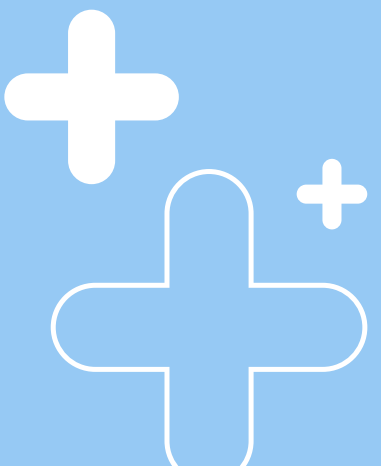
Power Lift and Power Grip



Protecting Yourself: Body Mechanics

- **When reaching:**

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



Protecting Yourself: Body Mechanics

- **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.**

Protecting Yourself: Body Mechanics

- **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.**

Protecting Your Patient

Emergency Moves

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

Emergency Moves



CLOTHES DRAG

Emergency Moves



INCLINE DRAG. Always head first.

Emergency Moves



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

Emergency Moves



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

Emergency Moves



ONE-RESCUER ASSIST.

Emergency Moves



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 him walk to safety.

Urgent Moves

- **Situations**
 - **Therequired treatment can be performed only if the patient is moved.**
 - **Factors at the scene cause patient decline.**

Urgent Moves

- **Moving a patient onto a long spine board**
 - **Used if immediate threat to life and suspicion of spine injury**
 - **Patient supine, log-roll onto side**
 - **Place spine board next to body; log-roll onto board.**

Urgent Moves

- **Moving a patient onto a long spine board**
 - **Lift onto stretcher.**
 - **Secure to stretcher; load into ambulance.**

Urgent Moves

- **Rapid extrication**

- **Used when taking time to immobilize the patient with short backboard or vest before moving patient may cause a deadly delay**
 - **Stabilize spine manually as patient is moved onto a long spine board.**

Non-Urgent Moves

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

Patient-Carrying Devices

Patient-Carrying Devices

- 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
 - Somerated to carry patients weighing 800 pounds or more

Patient-Carrying Devices



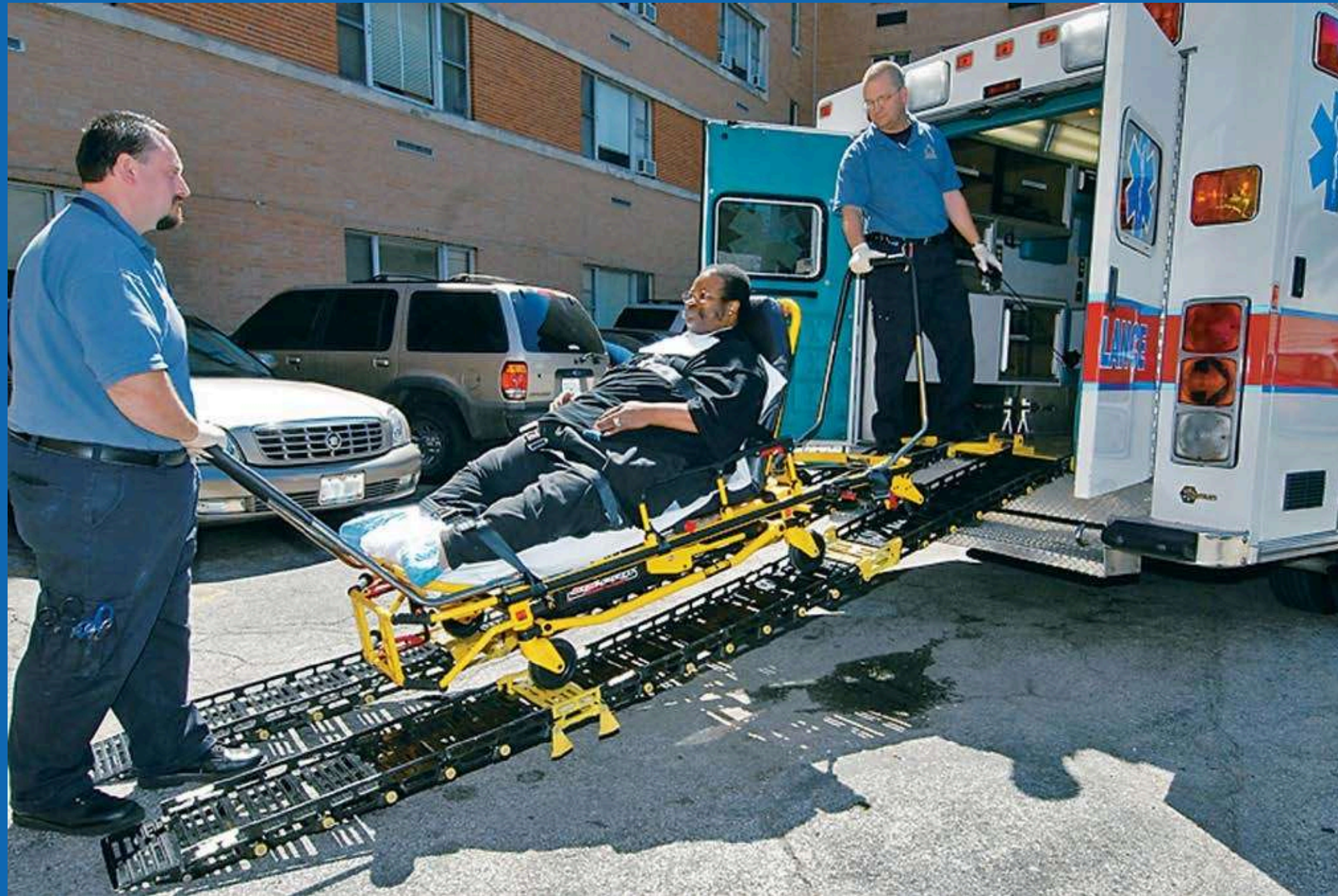
A wheeled stretcher is carried on every ambulance.

Patient-Carrying Devices



Power stretcher.

Bariatric Stretcher



Many EMS services are now equipped with specially constructed stretchers and loading equipment for obese patients.

Patient-Carrying Devices

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

Patient-Carrying Devices



Stair chair.

Patient-Carrying Devices



Short spine board.

Patient-Carrying Devices



Long spine boards.

Patient-Carrying Devices

- **Other types of stretchers**

- ☐ **Portable stretcher**
- ☐ **Scoop stretcher**
- ☐ **Basket stretcher**
- ☐ **Flexible stretcher**
- ☐ **Vacuum mattress**

Patient Immobilizing Devices



Vest-Type Extrication Device

Patient-Carrying Devices



Scoop (orthopedic) stretcher.

Patient-Carrying Devices



Basket stretcher.

Patient-Carrying Devices



Flexible stretcher.

Patient-Carrying Devices



A vacuum mattress may be used to transport a patient.

Patient-Carrying Devices



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

Moving Patients on to Carrying Devices

Moving Patients on to Carrying Devices

Patient with suspected spine injury

- Immobilize head, neck, and spine before move
- Perform manual stabilization.
- Place a rigid cervical collar.
- Maintain manual stabilization until the
- Patient is immobilized to spine board.



Moving Patients onto Carrying Devices

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



Moving Patients on to Carrying Devices

**Patient with no
suspected spine
injury**



Extremity lift



Moving Patients on to Carrying Devices

**Patient with no
suspected spine
injury**

Direct ground lift

- Lifting from ground to
stretcher



Moving Patients on to Carrying Devices



Direct ground lift

- Lifting from ground to stretcher

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 his 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, he 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.



Moving Patients on to Carrying Devices



Direct ground lift

- Lifting from ground to stretcher

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



Moving Patients on to Carrying Devices



Direct ground lift

- Lifting from ground to stretcher

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.



Moving Patients on to Carrying Devices

**Patient with no
suspected spine
injury**

- **Draw-sheet method**
- **Direct carry method**



Moving Patients on to Carrying Devices



- **Draw-sheet method**

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.



Moving Patients on to Carrying Devices



- **Draw-sheet method**

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 him to grasp the draw sheet. Then they simultaneously draw the patient onto the stretcher.



Moving Patients on to Carrying Devices

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**



1. 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.



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



3. 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.



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



Recovery Position



A patient in the recovery position.



Recovery Position



A patient in the recovery position.

Chapter Review

Chapter Review

ขั้นตอนในการยกเคลื่อนย้ายผู้ป่วย จำเป็นต้องมีการวางแผน , เลือกอุปกรณ์ที่เหมาะสม และเคลื่อนย้ายผู้ป่วยอย่างระมัดระวังเพื่อป้องกันการบาดเจ็บทั้งผู้ป่วยและผู้ทำการช่วยเหลือ

Chapter Review

- 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, the refore, are reserved for life-threatening situations.

Chapter Review

- **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.**

Chapter Review

- **Non-urgent moves are normal ways of moving a patient to a stretcher after performing a complete on-scene assessment and completing any needed spinal stabilization and immobilization.**
- **Positioning the patient for transport should take into account the patient's comfort, medical needs, and safety.**

Chapter Review

- **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.**

Remember

- **Proper lifting technique is 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 particular patient and needs of particular movement.**

Remember

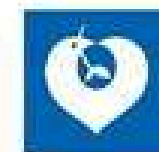
- **Use proper technique to move patients onto patient-carrying devices and position them for transport based upon their condition.**

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?**

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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Q & A