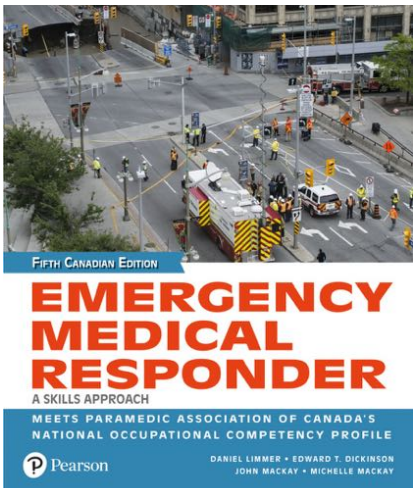
Emergency Medical Responder: A Skills Approach

Fifth Canadian Edition



Chapter 25

Injuries to the Spine

Objectives (1 of 3)

- Describe the implications of not properly caring for potential spinal injuries.
- Relate the six common mechanisms of injury to the type of potential injury to the spine.
- State 10 signs and symptoms of a spinal injury.
- Describe the method of determining whether a conscious or an unconscious patient may have a spinal injury.

Objectives (2 of 3)

- Relate emergency airway techniques to the patient with a suspected spine injury.
- Discuss the sizing and application of a cervical spine immobilization device.
- Describe how to log-roll a patient with a suspected spine injury and how to secure him or her to a long backboard.
- Describe when and how to perform a rapid extrication.

Objectives (3 of 3)

- Discuss the circumstances when a helmet should be removed and outline the steps for the two methods of helmet removal.
- Demonstrate a caring attitude toward the patient and family when dealing with injuries to the spine, while giving priority to the interests of the patient.

Causes of Spinal Injury (1 of 2)

- MVAs
- Motorcycle crashes
- Pedestrian/car crashes
- Falls
- Diving accidents

Causes of Spinal Injury (2 of 2)

- Hangings
- Blunt trauma
- Penetrating trauma – head, neck, torso
- Gunshot wounds
- Speed sports

Signs of Spinal Injury (1 of 2)

- Respiratory distress
- Tenderness at injury site
- Pain along spinal column with movement
- Constant or intermittent pain
- Obvious deformity of the spine
- Soft tissue injuries to the head, neck, shoulders, back, abdomen, or legs

Signs of Spinal Injury (2 of 2)

- Numbness, weakness, tingling in the arms or legs
- Loss of sensation or paralysis in upper or lower extremities or below injury site
- Incontinence
- Priapism

Emergency Care for a Suspected Spinal Injury (1 of 2)

- Take BSI precautions
- Stabilize patient's head and neck
- Do primary assessment and provide treatment

Emergency Care for a Suspected Spinal Injury (2 of 2)

- Provide high flow oxygen via non-rebreather mask
- Perform secondary assessment and provide treatment
- Maintain manual stabilization until patient is completely immobilized

Figure 25-5 and 25-6

Figure 25–5 Manual stabilization means holding the patient's head firmly and steadily in a neutral, in-line position.

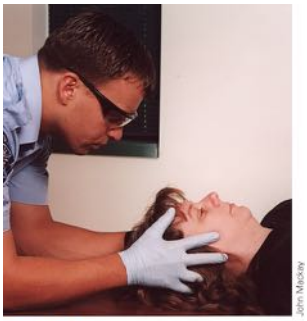


Figure 25–5 Manual stabilization means holding the patient's head firmly and steadily in a neutral, in-line position.

Figure 25–6 If you are allowed, apply a rigid cervical immobilization device to the patient.

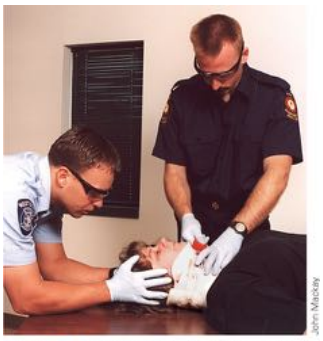


Figure 25–6 If you are allowed, apply a rigid cervical immobilization device to the patient.

Figure 25-8a and 25-8b

Figure 25–8a Maintain the patient's head and neck in a neutral, in-line position.

Figure 25–8a Maintain the patient's head and neck in a neutral, in-line position.

Figure 25–8b Roll the patient onto the side.

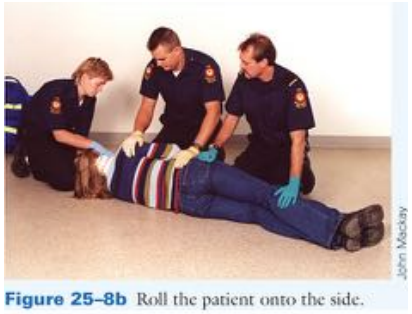


Figure 25–8b Roll the patient onto the side.

Manual Stabilization

Figure 25–8c A bystander or one of the three rescuers should move the long backboard into place.

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Figure 25–8d Lower the patient onto the long backboard.

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Long Backboard Immobilization (1 of 3)

- Immobilize chest, then head, and finally the legs in case you need to turn patient
- early during technique due to vomiting

Long Backboard Immobilization (2 of 3)

Figure 25–10a Immobilize the patient's torso first.

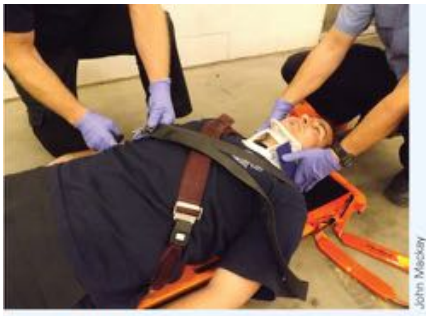

Figure 25–10a Immobilize the patient's torso first.

Figure 25–10b Immobilize the head next.

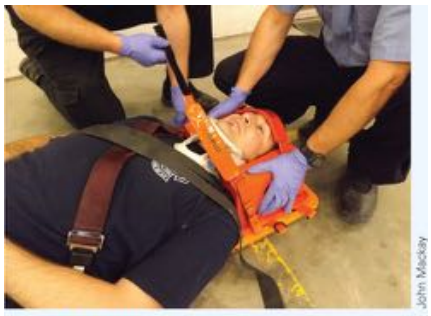

Figure 25–10b Immobilize the head next.

Long Backboard Immobilization (3 of 3)

Figure 25–10c Finally, immobilize the patient's legs and feet.

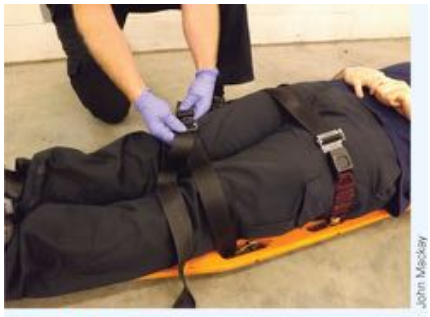

Figure 25–10c Finally, immobilize the patient's legs and feet.

Extraction Vest Immobilization (1 of 2)

Figure 25–11a Manually stabilize the head and neck. Then apply a rigid cervical collar.

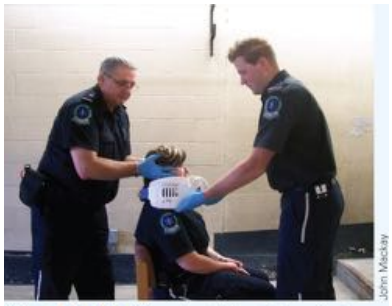

Figure 25–11a Manually stabilize the head and neck. Then apply a rigid cervical collar.

Figure 25–11b Position the extrication vest behind the patient.

Figure 25–11b Position the extrication vest behind the patient.

Extraction Vest Immobilization (2 of 2)

Figure 25–11c Secure the lower two torso and leg straps.

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Figure 25–11d Pad behind the head if necessary and secure the head straps.

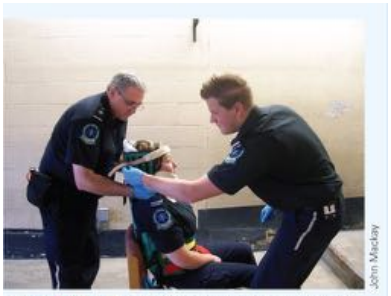

Figure 25–11d Pad behind the head if necessary and secure the head straps.

Rapid Extrication (1 of 3)

Figure 25–12a Bring the patient's head into a neutral, in-line position.

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Figure 25–12b Apply a rigid cervical immobilization device.

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Rapid Extrication (2 of 3)

Figure 25–12c Rotate the patient into position.

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Figure 25–12d Bring the long backboard in line with the patient.

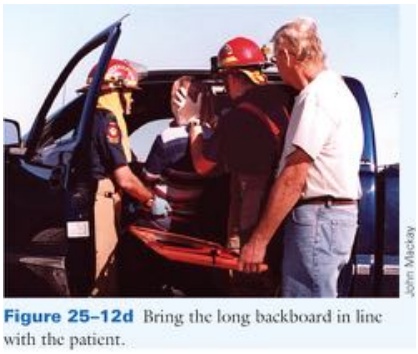

Figure 25–12d Bring the long backboard in line with the patient.

Rapid Extrication (3 of 3)

Figure 25–12e Lower the patient onto the long backboard.

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Figure 25–12f Slide the patient into position in small steps and secure the patient to the backboard.

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Helmet Removal (1 of 3)

Figure 25–13a Stabilize the helmet, head, and neck to prevent movement.

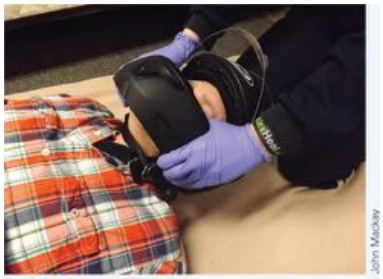

Figure 25–13a Stabilize the helmet, head, and neck to prevent movement.

Figure 25–13b The second rescuer loosens or cuts the chin strap while the first maintains manual stabilization (helmets lose their CSA approval after a crash.)

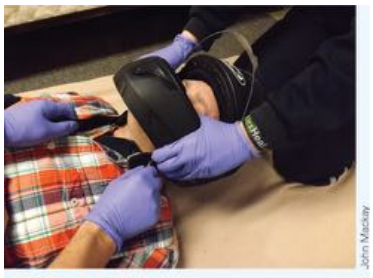

Figure 25–13b The second rescuer loosens or cuts the chin strap while the first maintains manual stabilization (helmets lose their CSA approval after a crash.)

Helmet Removal (2 of 3)

Figure 25–13c Transfer stabilization to the second rescuer.

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Figure 25–13d Slip off the helmet about halfway while the second rescuer maintains an in-line position of the head.

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Helmet Removal (3 of 3)

Figure 25–13e The second rescuer adjusts his or her hands to maintain manual stabilization.

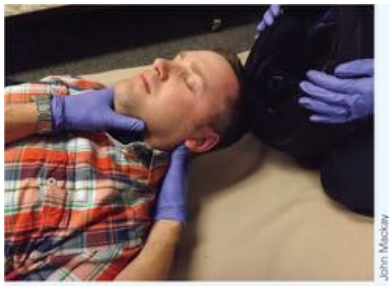

Figure 25–13e The second rescuer adjusts his or her hands to maintain manual stabilization.

Figure 25–13f When the helmet is completely removed, transfer manual stabilization to the rescuer at the head.

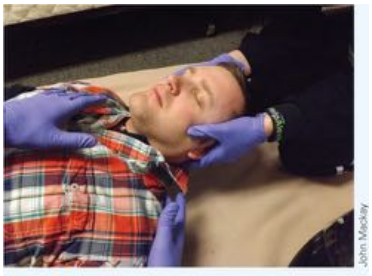

Figure 25–13f When the helmet is completely removed, transfer manual stabilization to the rescuer at the head.