

SKELETAL INJURIES

(Fractures, Dislocations, Sprains, Strains)

I. General Considerations

- A. While generally not life threatening, musculoskeletal injuries are important. If they are not properly cared for, long term disability can result.
 - B. Treatments should not worsen the injury. Proper selection of immobilizing devices and adequate padding are important.
 - C. Where any suspicion of a fracture, strain, sprain or dislocation exists, the affected part should be immobilized.
 - D. It is important to determine the distal pulse, sensation, capillary refill and ability to move injured areas both before and after splinting.
 - E. Fractures of the femurs, the pelvis and long bones can be associated with significant blood loss. Splinting these injured areas may not only prevent further injury, but may help to control blood loss.
 - F. If circulation distal to a fracture is compromised, or if adequate immobilization cannot be accomplished in the position in which the patient is found, gentle movement to a more anatomical position is indicated.
 - G. Should bone ends be protruding through the skin, no attempt should be made to replace them into the skin.
 - H. While cold application may be helpful, be careful not to cause a cold injury in the treatment.
 - I. Be sure not to overlook other associated injuries.
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II. History

Perform a focused history and physical exam with particular attention to:

- A. Ask the patient to describe how and when the injury occurred (what was the mechanism of injury? What forces were involved?).
 - B. Determine if the patient lost consciousness and for how long.
 - C. Does the patient have any pain, numbness or tingling anywhere?
 - D. Has the patient moved himself or been moved?
 - E. Is the patient chemically impaired? (alcohol, drugs, etc)
 - F. Has the patient ever injured, fractured or dislocated this part before?
 - G. Obtain a past medical history.
 - H. What medications has the patient been, or is the patient supposed to be, taking (including over the counter medications)?
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III. Physical Exam

- A. Perform an initial assessment.
 - B. Perform a focused history and physical exam.
 - C. Note any swelling, discoloration, joint tenderness, crepitation, abnormal movement.
 - D. Carefully determine distal capillary refill, pulse, sensation, and movement.
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IV. Treatment

{If other conditions are present, follow the appropriate protocol(s).}

Basic

- A. Establish an airway, maintain as indicated, suction as needed.
- B. Consider administration of high concentration oxygen.
- C. Immobilize the affected part and joints above and below if possible. If bone ends are

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- protruding from the skin, cover them with a moistened, sterile dressing prior to splinting.
- D. Monitor distal sensation, capillary refill and pulses before and after splinting.
- E. *If the patient complains of pain or tenderness in the pelvis or has multiple lower extremity fractures, EMTs should seek medical direction regarding use of PASG.*

Intermediate

- F. Secure IV access for suspected fractures of pelvis, femur or when an open fracture exists.

Paramedic

- G. *For isolated skeletal injury associated with significant pain, consider use of nitrous oxide or narcotic pain management of medical direction's choice.*