Jackson Hole Fire/EMS Operations Manual

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Title: **Procedure Guidelines: Fracture/Dislocation**
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Fracture and/or Dislocation Reduction
(Procedure Guidelines)

SCOPE OF PRACTICE

All EMT-Intermediates and Paramedics shall operate within their authorized Scope of Practice as limited to those skills and medication approved for use by the Physician Medical Director and Physician Task Force on Pre-Hospital Care as approve and authorized by the Wyoming Board of Medicine

Scope of Practice: Paramedic

INDICATIONS:

- Reduction of a deformed, specified extremity caused by bone fracture or dislocation in order to improve distal circulation or sensation, improve patient comfort, or to facilitate transport to a medical facility.

CONTRAINDICATIONS:

- Patient is experiencing intolerable pain during procedure.
- Resistance is felt during procedure.

PROCEDURE: Reduction of Fracture

1. Identify site of injury.
2. Assess for compromised distal circulation, sensation and motor function.
3. Irrigate open fractures. Use LR/NS or sterile water if available, otherwise potable water.
4. Consider analgesia/sedation.
5. Grasp extremity above and below injury (use two rescuers if available).
6. Apply steady gentle traction below (distal to) injury in direction of long axis of extremity.
7. Continue until patient complains of intolerable pain, resistance is felt, or reduction to anatomic position is accomplished.
8. Apply splint.
9. Reassess distal circulation, sensation and motor function.
10. Document procedure.

Note: Femur fractures may have optimal reduction with the application of a traction splint, continued traction may or may not be needed. Careful reassessment of ankle hitch and proximal site for pressure necrosis.

PROCEDURE: Reduction of Dislocated Digit (finger or toe)

1. Assess other injuries, digits and distal circulation, sensation, and motor function.
2. Confirm indications (ALL must be present):
   - Greater than two hours transport time to hospital or clinic.
   - For all digit/shoulder/patella reductions, base hospital order or documented communication failure.
   - History of "jamming" finger.
   - Clear deformity to proximal or distal interphalangeal joint.
   - Patient with limited ability to bend finger because of pain.
   - Procedure does not delay care and transportation of life-threatening injuries.
3. If laceration or exposed bone, irrigate thoroughly.
4. Grasp distal portion of finger securely with gauze.
5. Stabilize proximal portion of finger and hand per included diagram.
6. Apply gentle, firm, steady, longitudinal traction while gently pushing distal bone back into place.
7. Reduction is confirmed by "clunk", resolution of deformity and pain, and return of motion.
8. If successful, digit should be buddy taped and padded.
9. If unsuccessful or not attempted, finger should be splinted in the position it was found.
10. Reassess distal circulation, sensation and motor function.
11. Document procedure.

PROCEDURE: Reduction of Dislocated Shoulder

1. Assess other injuries, shoulder and distal circulation, sensation and motor function.
2. Confirm indications (ALL must be present):
   - Greater than two hours transport time to hospital or clinic.
   - For all digit/shoulder/patella reductions, base hospital order or documented communication failure.
   - History of indirect "lever-type" trauma to arm rather than blow directly to shoulder.
   - Clear deformity to shoulder (loss of rounded appearance of lateral shoulder).
   - No physical findings of direct shoulder trauma (e.g. shoulder contusions/abrasions).
   - No other suspected fractures to same arm.
   - Patient with limited ability to move shoulder because of pain.
   - Procedure does not delay care and transportation of life-threatening injuries.
3. Place patient on unaffected side.
4. Provide analgesia if available per appropriate PROTOCOL.
5. Continually remind patient to relax shoulder muscles.
6. Apply gentle steady traction away from shoulder by grasping wrist and slowly lifting entire arm away from body to 90 degrees per attached diagram. Slowly lift patient using their body weight for countertraction. This may take several minutes. Maintain traction at all times.
7. Continue steady traction until reduction is felt/heard, patient reports relief, or 5 minutes have elapsed.
8. If reduction is accomplished, arm should be easily moveable into position against body. Apply sling and swath per attached diagram.
9. If reduction is not accomplished, arm should be slowly moved into original position, padding applied in space between arm and body, and arm secured in position for transport.

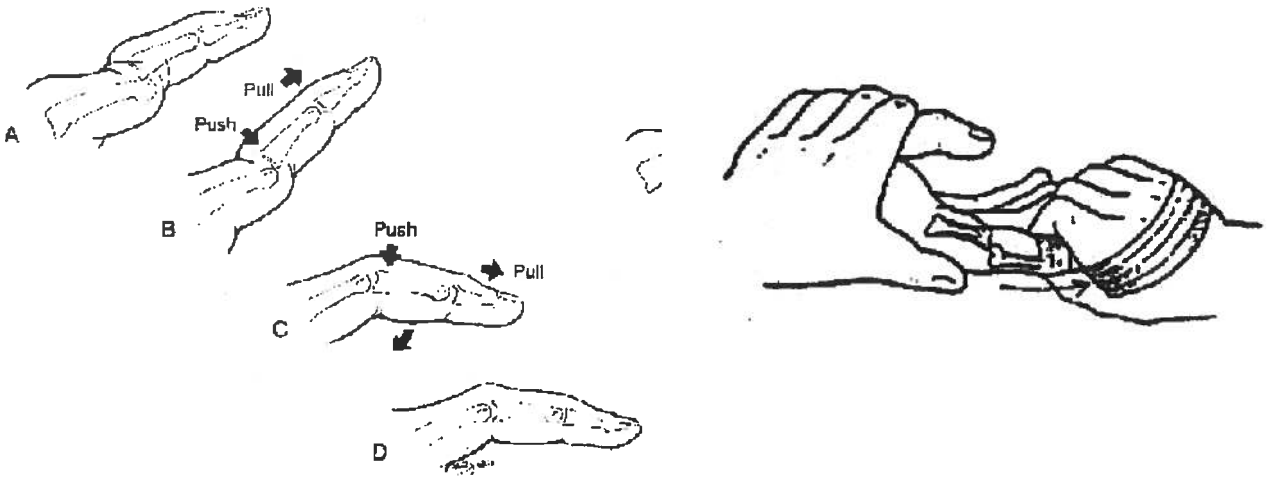
10. Reassess distal circulation, sensation and motor function.
11. Document procedure.

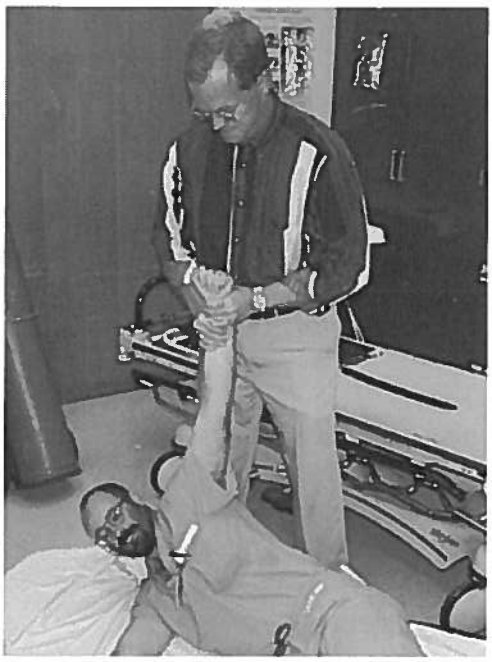
PROCEDURE: Reduction of Dislocated Patella (kneecap)

1. Assess other injuries, knee and distal circulation, sensation and motor function.
2. Confirm indications (ALL must be present):
   - Greater than two hours transport time to hospital or clinic.
   - For all digit/shoulder/patella reductions, base hospital order or documented communication failure.
   - History of indirect "lever-type" trauma to knee rather than direct blow.
   - Obvious lateral displacement of knee cap to outside.
   - Knee held flexed (bent) and patient with limited ability to straighten knee voluntarily because of pain.
   - No physical findings of direct knee trauma (e.g. knee lacerations/contusions/abrasions).
   - Procedure does not delay care and transportation of life-threatening injuries.
3. Apply steady, gentle pressure from lateral (outside) to medial patella and simultaneously straighten leg.
4. If successful, knee should be immobilized in extension (straight).
5. If there are no other extremity injuries that prevent walking, patient may ambulate with immobilization (e.g. ensolite pad wrapped and secured around leg). Minimize walking unless necessary to facilitate evacuation and patient states there is no significant pain.
6. If unsuccessful, time/injuries do not permit reduction, or all indications not met, knee should be immobilized in the position it was found.
7. Reassess distal circulation, sensation and motor function.
8. Document procedure.

Notes

- Deformities (fractures and/or dislocations) with distal neurovascular compromise should be reduced in an attempt to regain circulation.
- Deformities (fractures and/or dislocations) with **NO** distal neurovascular compromise should be splinted in position unless reduction needed for transport.
- The only three types of joints in which dislocation reduction may be attempted with intact distal neurovascular exams are shoulders, digits, and patellae.





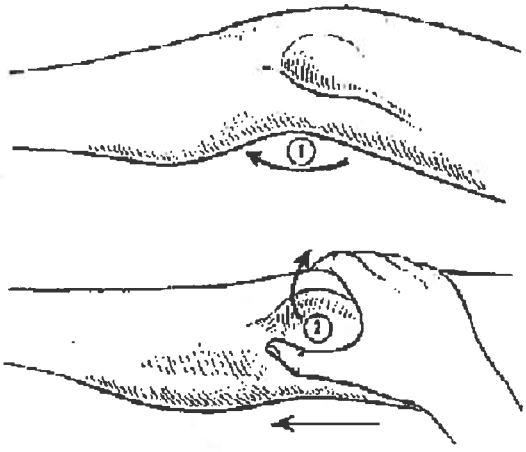


Figure 52–44 Manipulative reduction of a lateral patellar dislocation. Extend the knee gradually (1) while medially directed pressure is applied on the patella (2), pushing it over the lateral femoral condyle. (From DePalma AF: Management of Fractures and Dislocations. Philadelphia, WB Saunders, 1970, p 1665. Reproduced by permission.)