

Traction Splint

● SKILL SNAPSHOT

Purpose

- Temporarily aligns and stabilizes an isolated midshaft femur fracture to reduce pain, bleeding, muscle spasm, and tissue injury.

When to use

- Suspected isolated femoral shaft fracture when protocol indications are met and no contraindication exists.

Supplies needed

- Correct traction splint; manual traction; padding; straps; ankle hitch; PPE; trauma shears; neurovascular assessment tools.

● PREP + PATIENT SETUP

- Follow emergency/EMS protocol and obtain appropriate help; manage ABCs and major hemorrhage first.
- Expose and assess entire limb, pelvis, hip, knee, and lower leg for contraindications.

● VAULT TIP

- One clinician owns manual stabilization until mechanical traction is applied and secured.

● STEP-BY-STEP

1. Use standard precautions; stabilize the leg manually in the position found while another clinician completes assessment.
2. Check contraindications: pelvic/hip injury, knee/lower-leg/ankle injury, partial amputation, open femur injury per device protocol, or inability to anchor safely.
3. Control external bleeding and cover open wounds with sterile dressings without pushing bone ends back.
4. Measure and prepare splint against the uninjured leg when possible; preposition straps.
5. Apply ankle hitch/traction strap snugly above malleoli according to device instructions; avoid pressure over injury.
6. Maintain manual in-line traction. If severe resistance, increased pain, or neurovascular decline occurs, stop and follow protocol.
7. Slide/place splint beneath or alongside limb without lifting or twisting the fracture.
8. Secure proximal ischial/groin support in correct position; protect genitalia and pad pressure points.
9. Connect traction mechanism and gradually apply traction until pain/spasm decreases and limb alignment improves; do not exceed device/protocol guidance.
10. Secure remaining straps from thigh to lower leg, avoiding direct pressure over fracture and knee.
11. Reassess distal pulse, motor, sensation, color, temperature, cap refill, pain, and alignment immediately.
12. Secure patient/splint for transport. Recheck after movement and at frequent intervals; adjust only per protocol.

● SAFETY REMINDERS

- Do not delay transport for prolonged splinting.
- Never apply over suspected pelvic, hip, knee, or lower-leg injury unless protocol specifically permits.
- Loss of pulse or worsening neurovascular status requires immediate action.
- Traction splints are generally for isolated midshaft femur fractures.

● COMMON MISTAKES

- Applying before checking pelvis and joints.
- Failing to maintain manual traction.
- Excess traction or straps over fracture.
- No pre/post neurovascular check.

● DOCUMENTATION

- Mechanism, deformity, wounds, pain.
- Indication/contraindication assessment.
- Pre/post distal neurovascular findings.
- Device, traction response, times.
- Reassessments and changes during transport.