

# H13: Soft Tissue Trauma

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Updated: May 25, 2021

Reviewed: March 01, 2021

## Introduction

Paramedics and EMRs/FRs may be called upon to care for patients with a variety of soft tissue injuries related to both minor and major trauma. The term encompasses a broad range of conditions such as contusions, sprains, strains, tendinitis, and bursitis. The most commonly injured soft tissues include muscles, tendons, and ligaments; complex injuries may involve multiple structures. Common causes include falls, sports injuries, motor vehicle collisions, or assaults.

## Essentials

- Paramedics and EMRs/FRs should differentiate between acute and chronic injuries. The latter are likely due to overuse or may indicate a chronic pain syndrome. Acute pain is generally < 6 weeks duration. Careful history taking is recommended.
- In acute injuries, maintain a high index of suspicion for an associated fracture or dislocation.
- If a fracture or dislocation is suspected, apply appropriate splinting and convey promptly.
- Assess for neurovascular impairment and convey promptly if present.
- In the case of a head, back, or neck injury, apply spinal motion restriction guidelines as indicated.

## Additional Treatment Information

- Primary treatment consists of rest, ice, compression, and elevation.
- If open wounds are associated with the injury, irrigate with sterile saline before applying appropriate sterile dressings.
- Consider paramedic or EMR scope appropriate analgesia as indicated.

## General Information

- Conduct ongoing monitoring of neurovascular function and observe for signs of compartment syndrome.
  - The anterior compartment of the lower leg is the most common site for development of compartment syndrome
  - The 6 P's of compartment syndrome are a late sign (pain, pallor, pulselessness, paresthesia, paralysis, and poikilothermia)
- Avoid applying ice packs directly to the skin.
- If the injury involves an ankle, assess using the [Ottawa Ankle Rules](#).
- Patients with minor injuries may meet criteria for a local waiting room pathway upon arrival at destination.

## Interventions

### First Responder

- Provide/maintain position of comfort
- Assess affected area closely and monitor for signs of neurovascular impairment
- Provide spinal motion restriction if indicated
  - → [H05: Spinal Cord Injuries](#)
- Irrigate any associated wounds with sterile saline and dress with appropriate sterile dressings
- If an associated fracture or dislocation is suspected, provide appropriate splinting
- Apply RICE (Rest/Ice/Compression/Elevation) if applicable to anatomical site of injury

**Emergency Medical Responder – All FR interventions, plus:**

- Consider analgesia
  - → [E08: Pain Management](#)

**Evidence Based Practice**

Minor Trauma

**Supportive**

- [Ice](#)

**Neutral****Against****References**

1. Alberta Health Services. AHS Medical Control Protocols. 2020. [\[Link\]](#)
2. Greaves I et al., editors. The trauma care pre-hospital manual. 2018.
3. Campbell JE et al. International trauma life support for emergency care providers. 8th ed. 2016.
4. Ambulance Victoria. Clinical Practice Guidelines: Ambulance and MICA Paramedics. 2018. [\[Link\]](#)

