

# H08: Pelvic Trauma

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Reviewed:

## Introduction

Pelvic trauma represents a serious injury and can be associated with high mortality, and is the third most common cause of death in blunt trauma after head and chest injuries. The pelvis is formed by the articulation of the ilium, ischium, pubic bones and sacrum, and can be fractured by several different mechanisms. Pelvic fractures are often associated with other major traumatic injuries; careful examination and urgent transport are key principles of management in these patients.

Paramedic management of pelvic trauma includes: early recognition, early application of pelvic binding, rapid transport and treatment of other associated traumatic injuries.

## Essentials

- Pelvic binding is not indicated for an isolated femoral neck fracture (hip fracture)
- Paramedics should be highly suspicious of pelvic fractures in all patients who have sustained trauma from a high-energy mechanism
- Apply a pelvic binder early – pelvic splinting should be considered a hemorrhage control intervention
- Handle the patient gently. Avoid log rolling if possible and transport using a clamshell stretcher.
- Examine the abdomen and pelvis gently. Do not rock pelvis to check stability.

## Additional Treatment Information

- Pelvic binders are most beneficial in anterior-posterior pelvis fractures (i.e., open book pelvic fractures)
- Tranexamic acid should be considered in all patients with suspected pelvis fractures

## General Information

- The pelvis is typically fractured through one of three primary mechanisms:
  - Anterior-posterior fractures, or open book pelvis fractures, occur when force is applied anteriorly to the iliac crests, as might happen in a motorcycle accident where the patient strikes the handlebars.
  - Lateral compression fractures occur when force is applied to the sides of the pelvis. Side-impact motor vehicle incidents, or pedestrians struck by vehicles can cause these kinds of forces.
  - Vertical shear fractures occur when a patient falls from a height and force is transmitted to the pelvis from the lower extremities
- All mechanisms of pelvic fractures can be associated with injury to major blood vessels, viscera and nerves.

## Interventions

### First Responder

- Keep the patient warm and prevent further heat loss
- Supplemental oxygen as required
  - → [A07: Oxygen and Medication Administration](#)
- Maintain a high index of suspicion for pelvic trauma in patients who have sustained a high mechanism of injury
  - → [H01: Principles of Major Trauma](#)

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

- Bind pelvis if indicated using a commercial or improvised pelvic binder
  - → [PR02: Pelvic Binders](#)

- Transport urgently in accordance with provincial triage and destination guidelines
- Consider higher level of care intercept

**Primary Care Paramedic – All FR and EMR interventions, plus:**

- Consider vascular access
  - [→ D03: Vascular Access](#)
- Consider antifibrinolysis:
  - [Tranexamic acid](#)

**Critical Care Paramedic – All FR, EMR, PCP, and ACP interventions, plus:**

- Consider administration of blood products if available

## Evidence Based Practice

[Pelvic Trauma](#)

## References

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

