

## E06: Non-Traumatic Back Pain

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### Introduction

Approximately 84% of adults will experience back pain at some point in their lives. Episodes of non-traumatic back pain are mostly self-limited, and are most often not indicative of a serious medical condition. Acute non-traumatic back pain, as defined by an episode of pain less than four weeks in length, can generally be managed in the primary care setting. However, a small percentage of patients will have serious, potentially life-threatening causes of back pain; careful history taking and physical examination are required to identify conditions such as cauda equina syndrome, abdominal aortic aneurysmal leak, vertebral infections, and spinal fractures.

### Essentials

- Paramedics must rule out life-threatening causes of back pain. Foremost among these is cauda equina syndrome, but conditions that can produce back pain as a symptom must be considered as well, particularly leaking aortic aneurysms and peritoneal bleeding.
- Patients should receive analgesia wherever possible.

### Additional Treatment Information

- Acetaminophen is considered safe and effective pain management. Nitrous oxide, methoxyflurane, fentaNYL, and ketAMINE may facilitate transport in cases of severe pain and discomfort.

### Referral Information

Patients who are ambulatory, and who, in judgment of paramedics, have non-acute causes of their back pain may be referred to a physiotherapist or general practitioner for further assessment or treatment. Non-ambulatory patients will require transport.

### General Information

- The most serious cause of back pain is *cauda equina syndrome*. This is a condition where the nerve roots in the lower spinal cord become compressed. Cauda equina syndrome can develop quickly; it can also come on more slowly. Signs and symptoms of cauda equina include:
  - "Saddle" anesthesia (an altered sensation around the groin and inner thigh, as would be in contact with a saddle while riding a horse).
  - Leg weakness or numbness (can affect either leg or both).
  - Bowel and bladder incontinence (considered a late finding).
- Infections of the vertebrae should be considered if the patient has a history of fever or recent infection, is immunocompromised, or has used intravenous drugs.

### Interventions

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

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

### Evidence Based Practice

[Mechanical Back Pain](#)

## References

1. Alberta Health Services. AHS Medical Control Protocols. 2020. [\[Link\]](#)
2. Ambulance Victoria. Clinical Practice Guidelines: Ambulance and MICA Paramedics. 2018. [\[Link\]](#)

