

E06: Non-Traumatic Back Pain

Christiana Gregory and Marc Gessaroli

Updated: February 04, 2022

Reviewed: February 04, 2022

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 and EMRs/FRs 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 whenever possible.

Additional Treatment Information

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

Referral Information

Eligible patients may be referred to Urgent and Primary Care Centres in specific areas using the [Non-Traumatic Back Pain assess, see, treat and refer pathway](#).

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 have a fast or slow onset. 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

First Responder

- Assist patient to position of comfort
- Consider ice/heat packs

Emergency Medical Responder – All FR interventions, plus:

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

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

- See procedural analgesia

Evidence Based Practice

Mechanical Back Pain

Supportive

- [Ketamine](#)
- [Morphine](#)
- [Fentanyl](#)
- [Nitrous Oxide](#)

Neutral

- [Benzodiazepines](#)

Against**References**

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

Practice Updates

- 2022-02-03: Added Non-Traumatic Back Pain ASTaR information.

