



## Acute Low Back Pain

### Overview

Back pain results when the spine is stressed by injury, disease, wear and tear, or poor body mechanics. Acute low back pain is abrupt, intense pain that subsides after a period of days or weeks. It typically resolves with rest, physical therapy, and other self-care measures. You play an important role in the prevention, treatment, and recovery of back pain. However, if chronic, pain will persist despite treatment and need further evaluation.

### Types of low back pain

Supporting the weight of your body, the lumbar spine can be prone to injury and pain (Fig. 1). Back pain ranges from mild to severe depending on the amount of injury, and can be acute or chronic.

- **Acute low back pain** occurs suddenly and usually heals within several days to weeks. The source of pain is usually in the muscles and ligaments, joints, or discs. Sometimes mechanical back pain is caused, not by a pinched nerve, but by tight muscles, degenerative discs, and inflamed facet joints.
- **Chronic back pain** persists for more than 3 months; it may be felt all the time or worsen with certain activities. Although its source may be hard to determine, contributing factors may include nerve damage, tissue scarring, arthritis, or emotional effects of pain. People with chronic symptoms may be referred to a pain specialist.

### What are the symptoms?

Signs and symptoms of low back pain may be stiffness, tightness, aching, burning or stabbing or shooting pains, pressure, or tingling. The pain may spread to the buttocks, thighs, or knees. People may also experience muscle spasms. The symptoms are more noticeable when bending or arching the back, when lifting heavy objects, or when sitting or standing for long periods of time.

Seek medical help immediately if extreme leg weakness or loss of bladder or bowel function develops, a condition called cauda equina syndrome.

### What are the causes?

Excess weight, lack of exercise, poor posture (e.g., slouching) and improper lifting stress the spine and make injuries more likely. Causes of acute low back

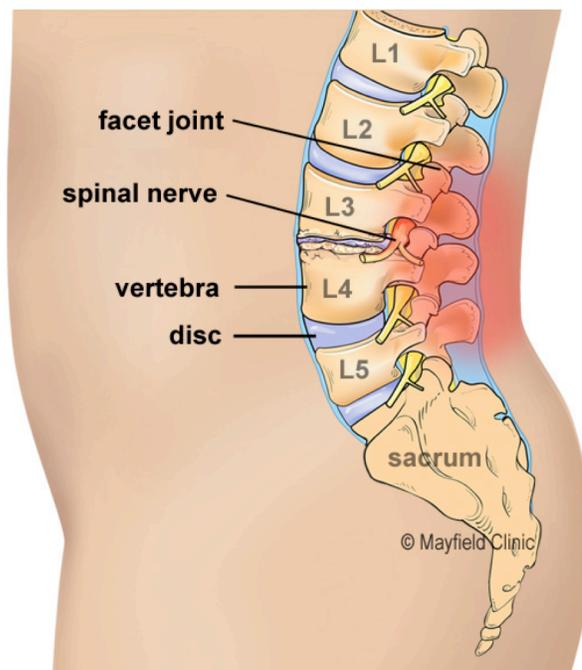


Figure 1. (side view) The low back region is called the lumbar spine. Protected within the bones of the lumbar spine are the spinal cord and nerves. The five lumbar bones (vertebrae) are numbered L1 to L5. Each bone is separated and cushioned by shock-absorbing discs. The spinal nerves pass through bony canals to branch out to the body and legs.

pain are identified only 20% of the time. Although the specific cause may not be found, some conditions that cause back pain are:

- **Muscle strain:** A sports injury, fall, or strenuous activity can strain muscles and ligaments. Lack of exercise increases the risk.
- **Bulging disc:** The gel-like center of a spinal disc can bulge or rupture through a weak area in the disc wall and compress nerves.
- **Stenosis:** Narrowing of the bony canals in the spine can compress the spinal cord and nerves.
- **Osteoarthritis:** As discs naturally age they dry out and shrink. Small tears in the disc wall can be painful. Bone spurs can form. The facet joints enlarge and ligaments thicken.

### How is a diagnosis made?

A careful medical exam will attempt to determine the type and cause of your back problem, and the best treatment options. A diagnostic evaluation

includes a medical history and physical exam. Sometimes imaging scans (e.g., x-ray, CT, MRI) and tests to check muscle strength and reflexes are used.

### What treatments are available?

Healing begins with self-care and nonsurgical strategies (Fig. 2). The goal is to correct the problem, restore function, and prevent re-injury.

**Self care:** Back pain often resolves with rest, ice or heat, massage, pain relievers, and gentle stretches. Reduce muscle inflammation and pain using an ice pack for 20 minutes several times a day during the first 48 to 72 hours. Thereafter, a warm shower or heating pad on low setting may be added to relax the muscles. A short period of bed rest is okay, but more than a couple of days does more harm than good. If self-care treatments aren't working within the first couple of days, see your doctor.

**Medication:** Many people get pain relief with over-the-counter nonsteroidal anti-inflammatory drugs (NSAIDs) such as aspirin, ibuprofen or naproxen. A muscle relaxant may be prescribed for spasms. If pain is severe, an analgesic may be prescribed that can be taken with the NSAID or muscle relaxant.

Steroids can reduce the swelling and inflammation of the nerves. They are taken orally as a Medrol dose pack tapered over a five-day period or by an injection directly into the pain source (see epidural steroid injections and facet injections). Steroids may provide immediate pain relief within 24-hours.

**Physical therapy / exercise:** For most back pain, we recommend a nearly normal schedule from the onset. Physical therapy can help you return to full activity as soon as possible and prevent re-injury. Physical therapists will show proper lifting and walking techniques, and exercises to strengthen and stretch your back, leg, and abdominal muscles. Massage, ultrasound, diathermy, heat, and traction may also be recommended for short periods. People may also benefit from yoga, chiropractic manipulation, and acupuncture.

**Surgery:** Surgery is rarely needed unless you have muscle weakness, a proven disc herniation, severe stenosis, cauda equina syndrome, or severe pain that does not resolve after a reasonable course of nonsurgical treatment.

### Recovery and prevention

Most people with acute low back pain respond to treatment. 90% are symptom-free within 1 to 2



Figure 2. Most people with acute low back pain respond rapidly to non-surgical treatment. Exercise, strengthening, and ideal weight are key elements to your treatment. Make these a part of your life-long daily routine.

weeks and 10% recover within 3 months. A positive attitude, regular activity, and a prompt return to work are all very important elements of recovery. If regular job duties cannot be performed initially, modified (light or restricted) duty may be prescribed for a limited time.

Prevention is key to avoiding recurrence:

- Proper lifting techniques
- Good posture during sitting, standing, sleeping
- Regular exercise with stretching and strengthening
- An ergonomic work area
- Good nutrition, healthy weight, lean body mass
- Stress management and relaxation techniques
- No smoking

### Sources & links

If you have questions, please contact Springfield Neurological and Spine Institute at 417-885-3888.

### Links

- <http://www.spine-health.com>
- <http://www.spineuniverse.com>



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