



Diagnosing Back Pain



After the common cold, back pain is the problem that most often brings people to a doctor's office. It is often difficult to pinpoint the exact cause of back pain because so many different body structures can be involved.

- The good news is that about 90% of back pain episodes will clear up with little or no treatment in about six weeks. This reduces the need for medical intervention.
- You can safely try proven self-treatment measures as long as you are not having severe back pain or other symptoms.
- Severe symptoms may indicate cancer, infection, cauda equina syndrome (extreme pressure or swelling of the nerves), or an abdominal aortic aneurysm (enlargement of important blood vessel that delivers blood to the rest of the body).

Severe symptoms that may indicate an underlying disease include:

- Severe nighttime pain or pain that worsens when lying down
- Weight loss
- Bowel or bladder dysfunction
- Fever

Back pain due to muscle injury often completely goes away in about six to eight weeks. Back pain that lasts longer than this is most likely due to spinal column changes and a visit to a doctor is in order.

Signs and symptoms

Few back-pain episodes require immediate medical treatment. However, to rule out the possibility of a dangerous condition, doctors still need to ask certain routine questions. For example, a doctor will ask if you can relieve the pain by changing your position and if you feel pain when you're not moving.

Back pain history

Some of the best clues to the cause of your back pain will come from your description of the pain. Obtaining an accurate account is a doctor's primary method of tracking down the cause and determining if and what type of treatment is necessary. Questions your doctor will ask include:

- Where is the pain located? Is it confined to the lower back or does it radiate to the buttocks or legs? (These questions check for sciatica.)
- How severe is the pain? For example, is the pain so excruciating that any movement is difficult or impossible? Can you go about your normal daily activities, even though the pain prevents vigorous exercise or activities associated with a lot of bending and twisting, such as gardening or golf? (A good description of pain intensity can help the doctor determine its cause.)
- When did the pain begin? Was it related to an activity or an injury? (If the pain follows an injury, it is less likely to be due to a slowly progressing condition, such as spinal stenosis.)
- What makes your back feel better or worse? For example, does lying down make it feel better? Does bending forward to tie a shoe increase the pain? (The pattern of pain may indicate whether a nerve is involved, possibly because of a disc herniation.)
- Have you had a prior episode of back pain? If so, how was it treated and how effective was the treatment? (The condition may have recurred.)
- Does coughing, sneezing, or straining worsen leg pain? There's good reason to suspect a damaged disc or compressed nerves. Coughing, sneezing, or straining puts pressure on the nerve root, which is likely to cause pain in the leg, but not the back.
- Do you have any other health problems? (Weight loss and poor appetite, for example, raise the concern that cancer has spread to the vertebrae. In addition, some disorders, such as hyperthyroidism, can cause osteoporosis.)
- What medications do you take? (Certain drugs, such as corticosteroids and anticonvulsants, can affect spinal bone mass.)
- What do you do for a living, and what kinds of exercise or other activities do you do? In what ways is the pain disabling? (Muscle injury is frequently related to a particular activity.)

Physical examination

During a physical exam:

- Your doctor will often focus on your back, legs, and feet.
- The doctor will look at your posture and curvature of the spine.
- A hands-on examination of areas that are sore may provide clues to the origin of the pain.
- To observe muscles and joints during movement, the doctor may ask you to sit, stand, walk, twist, or bend forward or sideways.

A neurological exam will be done as well. Such an exam will include tests of:

- Sensation
- Strength
- Reflexes

These tests are important to detect disorders such as disc herniation and spinal stenosis. The nerves emerging from each level of the spine are responsible for sensation and muscle strength in specific parts of the body. For example, the nerve issuing from under the fifth lumbar vertebra (L5) is responsible for sensation in a narrow band that runs down the upper leg and wraps around to the front of the lower leg and the top of the foot.

By detecting loss of sensation in a particular area or diminished strength in certain muscles, the doctor may be able to discover what part of the spine is causing the pain. Reduced reflexes at specific areas also can provide vital clues to the source of back pain.



Another important component of the physical examination is the straight-leg raise test. This exam can help the doctor find out if disc herniation is responsible for the pain. During this exam:

- You lie on your back while the physician lifts each leg separately without bending the knee.
- The test is positive if raising the leg causes pain or tingling below the knee.
- The straight-leg raise test is also helpful in monitoring the progress of treatment once a diagnosis has been made.

Last, a rectal examination may be done to assess the nerve function of the anus. The anal nerves arise from the lower lumbar spine.

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