

BACK PAIN: WHAT YOU SHOULD KNOW

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LOWER BACK PAIN

Nearly everyone at some point has back pain that interferes with work, recreation and routine daily activities. Four out of five adults experience significant low back pain sometime during their life. In fact, low back pain is the #2 reason Americans see their doctor—second only to colds and flus.

Most people who experience back pain suffer from acute or short-term pain that generally lasts from a few days to a few weeks and gets better on it's own. Most short-term back pain results from trauma to the lower back or a disorder such as arthritis. Pain from trauma may be caused by a sports injury, work around the house or in the garden, or a sudden jolt such as a car accident or other stress on spinal bones and tissues.

If you are a person who has suffered from back pain for more than three months, you most probably have a chronic pain syndrome. *Chronic* back pain is measured by duration—pain that persists for more than 3 months is considered chronic. Chronic pain often gets worse over time and the cause can be difficult to determine.

YOUR BACK-PUTTING IT ALL TOGETHER

The spine provides you with both mobility and strength. The mobility allows movements such as turning, twisting or bending; and the strength allows you to stand, walk, and lift.

The lower back or lumbar spine is a complex structure that connects your upper body (including your chest and arms) to your lower body (including your pelvis and legs). The vertebrae, disks, spinal cord, and nerves that make up your lumbar spine are:

- ❖ **Five bones called lumbar vertebrae**—stacked one upon the other, connecting the upper spine to the pelvis and often referred to as the spinal column.
- ❖ **Six shock absorbers called disks**—acting much like shock absorbers, both as cushion and stabilizer to protect the lumbar vertebrae.
- ❖ **Spinal cord and nerves**—the “electric cables” which travel through a central canal in the lumbar vertebrae, connecting your brain to the muscles of your legs. These nerves enter and emerge from the spinal cord through spaces between the vertebrae.
- ❖ **Small joints**—allowing functional movement and providing stability.
- ❖ **Muscles and ligaments**—hold the vertebrae in place, providing strength and power and at the same time support and stability.

WHY DOES IT HURT?

It won't necessarily be one event that actually causes your pain. You may have been doing many things improperly—like standing, sitting, or lifting—for a long time. Then suddenly, one simple movement, like reaching for something in the shower or bending from your

waist, leads to the feeling of pain from a sprain, strain, or spasm in one of the muscles or ligaments in the back. Low back pain from any cause usually involves spasms of the large, supportive muscles alongside the spine. The muscle spasm and stiffness accompanying back pain can feel particularly uncomfortable.

The specific structure in your back responsible for your pain is hardly ever identified. However, there are several possible sources of low back pain:

- ❖ Muscle spasm (very tense muscles that remain contracted)
- ❖ Strain or tears to the muscles or ligaments supporting the back
- ❖ Poor alignment of the vertebrae
- ❖ Small fractures to the spine from osteoporosis
- ❖ Ruptured or herniated disk
- ❖ Degeneration of the disks
- ❖ Spinal stenosis (narrowing of the spinal canal)
- ❖ Spine curvatures (like scoliosis or kyphosis), which may be inherited and seen in children or teens
- ❖ Other medical conditions like fibromyalgia

Common Trauma and Chronic Pain Conditions:

Low back pain may occur as a result of an injury and/or degeneration to the discs, bones and joints from age or degenerative disease. Additionally, scar tissue created when the injured back heals itself as less strength and flexibility than normal tissue. Buildup of scar tissue from repeated injuries eventually weakens the back and can lead to more serious injury. As with most bruises, sprains and breaks, injuries to the back heal much more slowly in older persons. The chance of a traumatic condition becoming chronic increases with age conditions that cause back pain.

The natural effects of normal aging on the body, in general, and low back, in particular, are osteoporosis or decreased amount of bone; decrease in strength and elasticity of muscles; and decrease in elasticity and strength of ligaments. These changes occur to some degree in everyone. When severe, they can cause low back stiffness and pain. Arthritic bone spurs and inflamed joints can cause nerve irritation and leg pain. Almost everyone develops “wear and tear” changes in their low back as they age. Although you cannot totally halt the progress of these effects, they can be slowed by regular exercise, knowing the proper way to lift and move objects, proper nutrition, and avoidance of smoking.

Chronic Low Back Pain Conditions:

Protruding Disk-The disk is composed of a soft center or nucleus, which, in children and young adults, is jelly-like. A tougher outer portion called the annulus surrounds the nucleus. With normal aging, the nucleus begins to resemble the annulus. During middle-age, fissures or cracks may occur in the disk. These may be the source of back pain. If the crack extends out of the disk, material from the disk may push out or rupture. This often is referred to as a herniated or slipped disk. If the protruded disk presses a nerve, it may cause pain in the leg.

Spinal degeneration from the disc wear and tear can lead to a narrowing of the spinal canal. A person with spinal degeneration may experience stiffness in the back upon awakening or may feel pain after walking or standing for a long time.

Spinal stenosis related to congenital narrowing of the bony canal predisposes some people to pain related to disc disease.

Osteoporosis is a metabolic bone disease marked by progressive decrease in bone density and strength. Fracture of brittle, porous bones in the spine and hips results when the body fails to produce new bone and/or absorbs too much existing bone. Women are four times more likely than men to develop osteoporosis. Caucasian women of northern European heritage are at the highest risk of developing the condition.

Skeletal irregularities produce strain on the vertebrae and supporting muscles, tendons, ligaments, and tissues supported by the spinal column. These irregularities include *scoliosis*, a curving of the spine to the side; *kyphosis*, in which the normal curve of the upper back is severely rounded; *lordosis*, an abnormally accentuated arch in the lower back; *back extension*, a bending backward of the spine; and *back flexion*, in which the spine bends forward.

Fibromyalgia is a chronic disorder characterized by widespread musculoskeletal pain, fatigue, and multiple “tender points,” particularly in the neck, spine, shoulders, and hips. Additional symptoms may include sleep disturbances, morning stiffness, and anxiety.

Spondylitis refers to chronic back pain and stiffness caused by a severe infection to or inflammation of the spinal joints. Other painful inflammations in the lower back include *osteomyelitis* (infection in the bones of the spine) and *sacroiliitis* (inflammation in the sacroiliac joints).

Back pain from organs in the pelvis or elsewhere include:

- ❖ Bladder infection
- ❖ Kidney stone
- ❖ Endometriosis
- ❖ Ovarian cancer
- ❖ Ovarian cysts
- ❖ Testicular torsion (twisted testicle)

CALL YOUR DOCTOR IMMEDIATELY:

Occasionally, low back pain may indicate a more serious medical problem, not directly related to a spinal injury. Call your local emergency number (such as 911) if you have lost bowel or bladder control.

Otherwise, call your doctor if you have any of the following symptoms:

- ❖ Unexplained fever along with your back pain

- ❖ Your back pain started after a severe blow or fall
- ❖ There is redness or swelling on the back or spine
- ❖ The pain travels down your legs below the knee
- ❖ You have weakness or numbness in your buttocks, thigh, leg, or pelvis
- ❖ You have burning with urination or blood in your urine
- ❖ You have been losing weight unintentionally
- ❖ You use steroids or intravenous drugs
- ❖ Your pain is worse when you lie down or pain awakens you at night
- ❖ Your pain is very sharp
- ❖ You have never had or been evaluated for back pain before
- ❖ You have had back pain before but this episode is distinctly different
- ❖ This episode of back pain has lasted longer than four weeks

BEFORE YOU GO TO THE DOCTOR'S OFFICE

As a person with pain, you have certain rights. You have the right to have your pain taken seriously, to be thoroughly assessed, and to get clear and prompt answers to your questions. (See the pain Care Bill of Rights)

You also have the right and responsibility to actively participate in decisions about how to manage your pain. In order to make this happen, you must offer the doctor more information than, "My back hurts."

Listed below are suggestions for questions you can answer and bring in to help the physician better understand the degree and location of your pain. The American Pain Society has developed a pain diary that will also assist you in your research about YOUR specific kind of back pain.

Types of Pain

Medical practitioners describe different types of pain in certain ways and learning the lingo will help you communicate better with your healthcare team. Each type of pain is managed with specific medicine and physical therapies.

ACUTE PAIN comes on suddenly, usually from an injury or surgery. It usually lasts for short periods of time. CHRONIC PAIN lasts beyond the usual healing time of three months. It can go away completely, or remain constant. INTERMITTENT PAIN occurs in waves or patterns. Be certain to note what you are doing when this pain begins. PERSISTENT PAIN lasts for 12 or more hours every day for more than three months. BREAKTHROUGH PAIN comes up quickly and "breaks through" the medicine you are taking to relieve your persistent pain. It can occur many times during the day.

Questions to ask yourself before the visit to the doctor:

- ❖ Is your pain on one side only or both sides?
- ❖ What does the pain feel like? Is it dull, sharp, throbbing, or burning?
- ❖ Is this the first time you have had back pain?
- ❖ When did the pain begin? Did it start suddenly?
- ❖ Did you have a particular injury or accident?
- ❖ What were you doing just before the pain began? Were you lifting or bending? Sitting at your computer? Driving a long distance?
- ❖ If you have had back pain before, is this pain similar or different? In what way is it different?
- ❖ Do you know the cause of previous episodes of back pain?
- ❖ How long does each episode of back pain usually last?
- ❖ Do you feel the pain anywhere other than your back, like your hip, thigh, leg, or feet?
- ❖ Do you have any numbness or tingling? Any weakness or loss of function in your leg or elsewhere?
- ❖ What makes the pain worse? Lifting, twisting, standing, or sitting for long periods of time?
- ❖ What makes you feel better?
- ❖ Are there any symptoms present? Weight loss? Fever? Change in urination? Change in bowel habits?