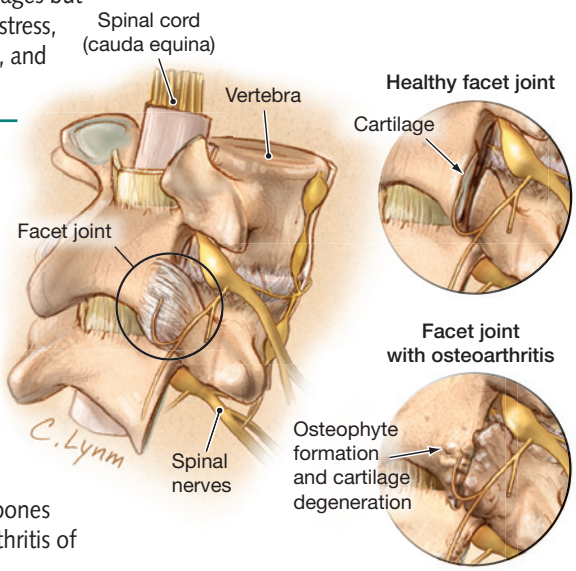
# Osteoarthritis of the Lumbar Spine

Up to 80% of people experience low back pain at some time. **Osteoarthritis**, a common cause of low back pain, involves breakdown of **cartilage** (tissue covering the joint surfaces at the ends of bones). The July 7, 2010, issue of *JAMA* includes an article showing that glucosamine is not effective in treating osteoarthritis of the spine.

## PATHOLOGY

Normal joints move easily because healthy cartilage cushions the bones as they move against each other. In spinal osteoarthritis, the cartilage lining the facet joints (vertebral joints) wears out, allowing the bones to rub together. **Osteophytes** (small bony growths also known as bone spurs) form on facet joints and around vertebrae in an attempt to return stability to the joint. Gradually, the spine stiffens and loses flexibility. Osteophytes sometimes become large enough to cause narrowing of the spinal canal or foramen, irritating or entrapping nerves passing through them (spinal stenosis and foraminal stenosis). Stenosis, while related to osteoarthritis, is a separate medical condition. Osteoarthritis can also be confused with **degenerative disk disease**, a gradual deterioration of disks between the vertebrae, but is a separate medical condition. Osteoarthritis occurs as a person ages but is not a direct result of aging. It may result from repetitive use, high mechanical stress, injury, joint infection, obesity, ligament damage, hormonal problems, pregnancy, and other conditions. Heredity also plays a role.




## SYMPTOMS

Symptoms consist of gradually increasing pain and stiffness. Initially, pain and stiffness occur after periods of inactivity. Later, pain is worse with physical activity and prolonged sitting.

## DIAGNOSIS AND TREATMENTS

Proper treatment of back pain depends on the cause. To diagnose the cause of your back pain, your doctor will take your medical history, do a physical examination, and may order x-rays or other imaging studies of the spine. Treatment is directed at managing pain, maintaining joint mobility, and slowing progression. A treatment plan, which could include exercise, medications, and measures to protect joints, should be developed. You may also be referred to a **rheumatologist** (physician specializing in diseases of the bones and joints), physical therapist, pain doctor, or surgeon. Treatments for osteoarthritis of the lumbar spine include

- Education—the best way to avoid back problems is to know their causes
- Low-impact exercise (walking, biking, swimming) improves muscle strength and flexibility, helping to support the spine. A gradually increasing program is recommended.
- Rest during active inflammation
- Heat and cold to reduce inflammation
- Adequate back support (firm mattress, supportive chair)
- Weight control
- Complementary treatment (such as acupuncture or massage) in addition to standard treatment
- Pain relievers (such as acetaminophen, aspirin, and other nonsteroidal anti-inflammatory drugs), topical creams, and opioids (such as codeine)
- Injections targeting the **epidural space** (narrow space between membranes covering spinal cord and wall of spinal canal), the facet joints or blocking specific spinal nerves
- Surgery (such as fusing affected vertebrae, realigning vertebrae, or disk implant)

## FOR MORE INFORMATION

- National Institutes of Health
  www.nlm.nih.gov/medlineplus/osteoarthritis.html
- Arthritis Foundation
  www.arthritis.org

## INFORM YOURSELF

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*Sources: National Institutes of Health, Arthritis Foundation*

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