



## Orthopedic Associates OF PORT HURON

### **The Low Back Defined**

Your lower back is a complex structure of vertebrae, discs, spinal cord and nerves. In your lower back there are:

- Five bones called lumbar vertebrae. These bones connect the upper spine to the pelvis.
- Six shock absorbers called discs. The intervertebral discs act both as cushions and stabilizers to protect the lumbar vertebrae.
- Spinal cord and nerves. These “electric cables” travel through a central canal in the lumbar vertebrae, connecting your brain to the muscles of your legs.
- Small joints called facet joints. These joints allow for functional movement while also providing stability in the spine.
- Muscles and ligaments, which provide strength and power while at the same time also providing support and stability.

### **Common Causes of Low Back Pain**

Low back pain can be caused by a number of factors from injuries to the effects of aging:

#### **Low Back Sprain and Strain**

The muscles of the low back provide power and strength for activities such as standing, walking, and lifting. A strain of the muscle can occur when the muscle is poorly conditioned or overworked. The ligaments of the low back act to interconnect the five vertebral bones and provide support or stability for the low back. A sprain of the low back can occur when a sudden, forceful movement injures a ligament, which has become stiff or weak through poor conditioning or overuse.

These injuries, or sprains and strains, are the most common causes of low back pain. Frequently, a combination of other factors may increase the likelihood of injury or disease:

- Poor conditioning
- Improper use
- Obesity
- Smoking

### Age

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. Although you cannot totally halt the progress of these effects, they can be slowed by regular exercise, utilizing proper ways to lift and move objects, understanding and practicing proper nutrition as well as the avoidance of smoking.

Wear and tear and inherited factors will cause degenerative changes in the disc, called degenerative disc disease, and arthritic changes in the small joints, these changes occur to some degree to 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 for most people it causes little pain or loss of function.

### Osteoporosis and Fractures

All bones lose bone strength over time and the lumbar vertebrae, particularly in postmenopausal women, can be fractured or compressed from a fall or even from the stress of lifting or everyday activities.

### Protruding disc

The disc 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 disc. These may be the source of back pain. If the crack extends out of the disc, material from the disc may push out or rupture. This often is referred to as a herniated or slipped disc. If the protruded disc presses a nerve, it may cause pain in the leg.

### Treatment

Most low back pain can be safely and effectively treated following an examination by your orthopedic surgeon or physiatrist and a prescribed period of activity modification and some medication to relieve the pain and diminish the inflammation. Although a brief period of rest may be helpful, most studies show that light activity speeds healing and recovery. It may not be necessary for you to discontinue all activities. We believe in "active rest". That is, to continue to stay as active as possible without reproducing the pain symptoms.

Once the initial has eased, a rehabilitation program may be suggested to increase your muscle strength in your low back and abdominal muscles as well as some stretching exercises to increase your flexibility. Weight loss if you are overweight and quitting smoking if you are a smoker, also will decrease the changes of a recurrence of your low back pain. The best long-term treatment is

**We Keep You on the Move!**

## Orthopedic Associates of Port Huron, P.C.

an active prevention program of maintaining your physical condition and observing proper lifting and postural activities to prevent further injuries.

### When is Surgery Needed?

Most low back pain, whether acute or chronic, almost always can be treated without surgery. The most common reason for surgery on the lower back is to remove the pressure from a “slipped disc” when it causes nerve and leg pain and has not responded to other treatments, including epidural steroid injections. Some arthritic conditions of the spine, when severe, also can cause pressure and nerve irritation, and often can be improved with surgical treatment.

### Prevention is the Key

The normal effects of aging that result in decreased bone mass, and decreased strength and elasticity of muscles and ligaments, can't be avoided. However, the effects can be slowed by:

- Exercising regularly to keep the muscles that support your back strong and flexible.
- Using the correct lifting and moving techniques; get help if an object is too heavy or an awkward size.
- Maintaining your proper body weight; being overweight puts a strain on your back muscles.
- Avoid smoking
- Maintaining a proper posture when standing and sitting; don't slouch.

If you have any questions regarding the information presented here, please contact Orthopedic Associates.

## **We Keep You on the Move!**

940 River Centre Drive, Port Huron, Michigan 48061-5031  
(810)985-4900 or 1-888-OAPH-911  
[www.oaph.com](http://www.oaph.com)