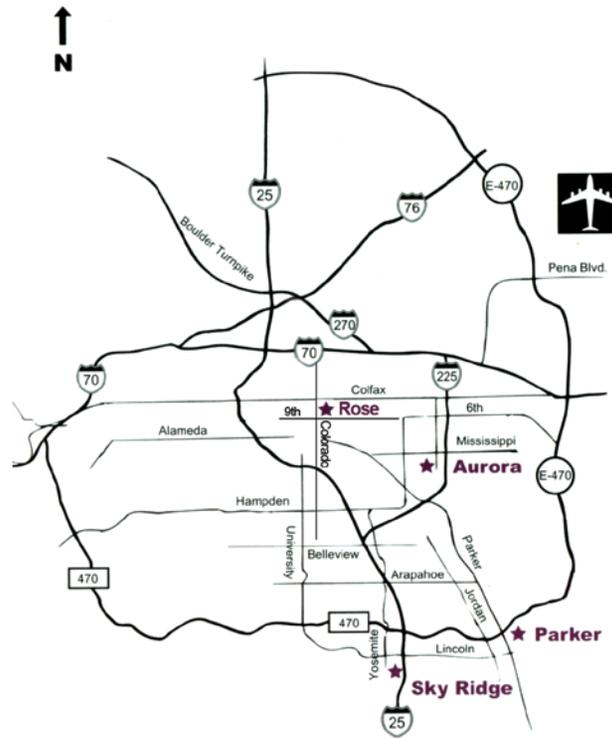


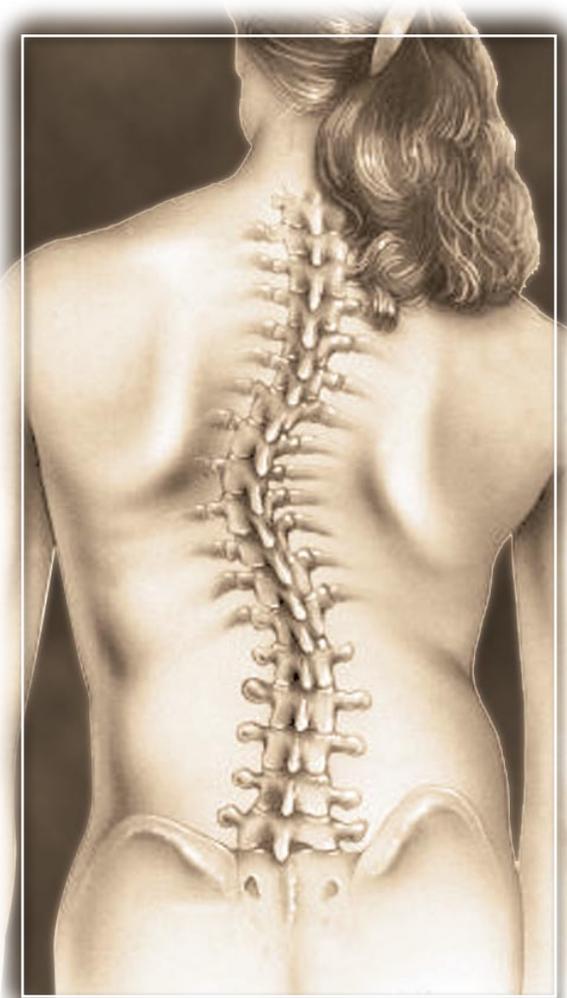
The following organizations can provide more information about scoliosis:

The Scoliosis Research Society
555 East Wells Street, Suite 1100
Milwaukee, WI 53202-3823
(414) 289-9107
www.srs.org

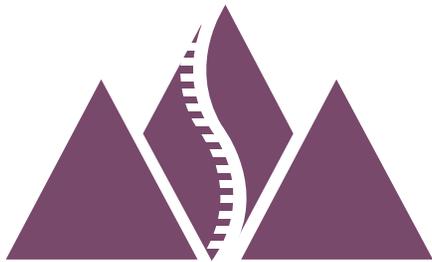
The Scoliosis Association, Inc.
P.O. Box 811705
Boca Raton, FL 33481-1705
(800) 800-0669, (561) 994-4435
www.scoliosis-assoc.org



What You Need to Know About



If you have any further questions or wish to discuss your spinal curvature, please schedule a consultation with us at your convenience.



Rocky Mountain Spine Clinic, P.C.
303-225-8120
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“Orthopaedic surgeons specializing in both conservative and surgical care of the spine”

Scoliosis

scol-i-o-sis

noun

abnormal lateral curvature of the spine

What is Scoliosis?

Scoliosis is a lateral (toward the side) curvature in the normally straight vertical line of the spine. The normal spine curves gently backward (kyphosis) in the upper back and gently inward in the lower back (lordosis). When a person with a normal spine is viewed from the side, a mild roundness is normally present in the upper back and a degree of swayback is present in the lower back. When a person with a normal spine is viewed from the front or back, the spine appears to be straight. When a person with scoliosis is viewed from the front or back, the spine appears to be curved.

Is Scoliosis A Recently Discovered Condition?

No, scoliotic spinal deformities have been depicted in Stone Age cave art. Hippocrates, the father of medicine who lived in Greece around 400 B.C., is credited with coining the term “skoliosis” to describe this spinal abnormality. While the condition has been around for thousands of years, it was not until this century that effective surgery (1914) and effective bracing (1946) were first performed. Our ability to treat the condition has made dramatic advances even in the last 10 years.

What Causes Scoliosis?

There are many types of scoliosis and many causes for curvature. Congenital scoliosis is a result of a bone abnormality which is present at birth. Neuromuscular scoliosis is a result of abnormal muscles or nerves and is frequently seen in patients with spina bifida, or cerebral palsy. Degenerative scoliosis may result from traumatic bony collapse, previous major back surgery or osteoporosis. Certain types of spinal cord abnormalities can also cause scoliosis. The most common type of scoliosis, called idiopathic scoliosis, has no specific identifiable cause. Many theories have been formulated but none have found to be all-encompassing. There is, however, definitely a strong genetic link in idiopathic scoliosis.

Who is Affected by Scoliosis?

The prevalence of scoliosis in the American population at age 16 is 2 to 3%. Less than 0.1% have curves measuring greater than 40 degrees, which is the magnitude of



curvature when surgery becomes a consideration. Girls are affected overall 3.6 times more commonly than boys. Girls with curves over 30 degrees outnumber boys ten to one. Idiopathic scoliosis is most commonly a condition of adolescence affecting ages 10 through 16. Idiopathic scoliosis may progress during the “growth spurt” years, but usually will not progress in adulthood in most cases.

How is Scoliosis Diagnosed?

Most curves are initially detected on school scoliosis screening exams, by a child’s pediatrician or family doctor, or by a parent when summer swim season (bathing suit time) starts. The diagnosis of scoliosis and the determination of the type of scoliosis is then made by a careful orthopaedic exam and an x-ray to evaluate the magnitude of the curve.

Many signs of scoliosis can be physically noticed in a person and may include the following:

- Difference in shoulder height when standing
- Prominence in one part of the back of the chest (thorax)
- Prominence in the lower back when standing or bent over
- Appearance of an S-shaped curve in the back while standing

What is the Treatment for Scoliosis?

The majority of adolescents with idiopathic scoliosis are observed at regular intervals (usually every 4 to 6 months) by a physical exam and a low radiation x-ray. Bracing is the usual treatment choice for adolescents who have a spinal curve over 25 to 30 degrees - particularly if their bones are still maturing and if they have at least two years of growth remaining. Those who have or develop curves beyond 45 to 50 degrees are often candidates for surgery.

What Do Bracing & Surgery Do for the Curvature?

The purpose of bracing is to halt progression of the curve. It may provide a temporary correction but usually the curve will assume its original magnitude when bracing is eliminated. Surgery utilizes metallic implants to correct some of the curvature and hold it in the correct position until bone graft placed at the time of surgery consolidates and creates a rigid fusion in the area of the curve.

In recent years, effective minimally invasive surgery has also been used to treat scoliosis. This surgery eliminates painful, abnormal motion, reduces nerve irritation and increases function in most patients. A thin, telescope-like instrument called a laparoscope, and spinal cages (hollow, metal cylinders) are placed between the vertebrae through puncture incisions in the abdomen to fuse the spine. Most patients having this surgery can leave the hospital in 2-3 days.

Do Electrical Stimulation, Exercise Programs or Manipulation Help?

Many studies have shown that electrical stimulation, exercise programs and manipulation are of no benefit in preventing the progression or “curing” scoliosis. Patients should be encouraged to be active and stay fit. Like many other disorders, understanding and education about scoliosis is the most important tool with which to manage and prevent complications.