

Scoliosis

What is scoliosis?

Scoliosis is a curving of the spine. The curve may be away from the middle or sideways. It can often be viewed when looking at the spine from behind.

What are the signs of scoliosis?

- ▶ One shoulder may be higher than the other
- ▶ One shoulder blade (scapula) may be higher or more prominent than the other
- ▶ Extra space may exist between the arm and the body when arms are hanging at the sides
- ▶ One hip may appear to be higher or more prominent than the other
- ▶ The head is not centered over the pelvis
- ▶ When bending over so the back (spine) is horizontal, one side of the back may appear higher than the other

What causes scoliosis?

- ▶ Most people (85 percent) with scoliosis have the type known as "idiopathic," which means the cause is not known
- ▶ The main reason the spine curves is the asymmetric (uneven) growth of the vertebrae
- ▶ Idiopathic scoliosis is often seen in family members and may be genetic or hereditary
- ▶ Several less common types of scoliosis do have known causes:
 - ▶ Defects of spinal vertebrae already present at birth (congenital scoliosis)
 - ▶ Disorders of the central nervous system such as cerebral palsy or muscular dystrophy
 - ▶ Disorders of connective tissue (eg, Marfan's syndrome)
 - ▶ Chromosome abnormalities (eg, Down syndrome)

Shirray Burnside of Dayton had scoliosis surgery in 2009 and continues to stay active.



Who gets scoliosis?

Scoliosis often affects adolescents as they complete the last major growth spurt. In children, idiopathic scoliosis occurs in both girls and boys. However, as children enter adolescence, girls are five to eight times more likely to have their curves increase in size and require treatment.

Is there anything that can be done to prevent scoliosis?

Currently, there are no proven preventative measures for scoliosis. It is important, though, to stay fit and strong as obesity can lead to pain in the spine.

I have scoliosis.

What happens now?

In 90 percent of cases, curves are mild and do not require active treatment. With adolescents and teens, curves should be monitored for change by pediatric orthopedists and periodic x-rays. Increases in spinal deformity often require evaluation by an orthopedic surgeon to determine if treatment is needed. In a small number of patients, surgical treatment may be necessary.

How do you determine treatment?

- ▶ Age
- ▶ Gender
- ▶ Bone age (bone development is not always the same as the chronological age)
- ▶ Degree of curvature
- ▶ Location of curve
- ▶ Status of menses/puberty
- ▶ Curve progression

What are some treatment options?

Controlled observation Periodic physical exams and x-rays and are continued without specific treatment as long as no increase in the curve occurs, and until full bone maturity is reached.

Brace treatment Brace treatment (orthosis) is recommended for increasing or moderate scoliosis in children and teens who are still growing. Bracing has been found to be very effective in limiting curve progression.

Surgical treatment Surgical procedures involve the fusion of vertebrae and are often done in children and teens in order to control a progressive deformity. Spinal fusion can be an autograft (a person's own) or allograft (someone else's) bone, a bone substitute or a combination of two or more of these.

Post-operative casts or braces Often a brace or cast will be used for a period of time after surgery to help stop the spine from shifting so it heals properly. In young adults and adults, rigid internal fixation may eliminate the need for a cast or brace.

Is it necessary to treat scoliosis?

Yes. A serious spinal curve that goes untreated may get worse as you grow and can cause problems over time. These include:

- ▶ Back pain
- ▶ Arthritis in your back
- ▶ Your body looking twisted
- ▶ Clothes not fitting right
- ▶ Heart and breathing problems (rare)



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