

Scoliosis

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Overview

- When viewed from the front the alignment of the spinal should remain **straight**. When the spine develops side-to-side curves and twists, the condition is referred to as **scoliosis** (Figure 1).
- Scoliosis can occur in the thoracic region, the lumbar region, or both. The severity of scoliosis is measured in degrees of curvature, ranging from as little as 10 degrees to extreme cases of more than 100 degrees.

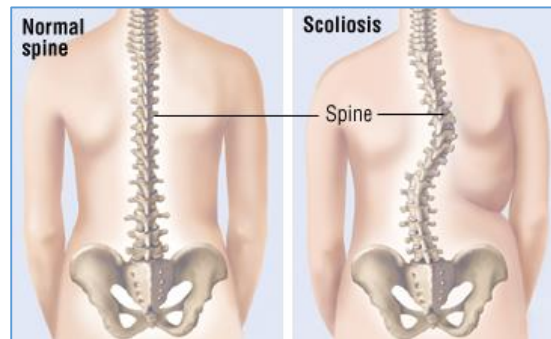


Figure 1

Adolescent Scoliosis

- This refers to the type of scoliosis **typically seen in teenagers**, when rapid growth tends to accelerate the progression of spinal curves. Idiopathic scoliosis represents 80 to 85% of all forms of scoliosis

Adult Scoliosis

- Scoliosis that is first diagnosed in adulthood may actually represent adolescent scoliosis that went untreated during childhood.
- However, scoliosis can also first develop during adulthood. This is termed **degenerative scoliosis** and occurs as a result of **age-related “wear and tear” of the spine**. Degenerative scoliosis usually appears after the age of 40. In older patients, particularly women, it may be related to osteoporosis which weakens the bone leading to deterioration.

What are the symptoms associated with scoliosis?

- Patients with scoliosis may notice a problem in the way their back looks. Indications of possible scoliosis, which become more pronounced and noticeable when bending over, include:
 1. One shoulder or hip that appears higher than the other
 2. One shoulder blade that appears higher and sticks out farther than the other
 3. A "rib hump," a hump on the back that sticks up when the spine bends forward.

- Symptoms may include:
 1. Back pain
 2. Leg symptoms such as weakness, numbness, or pain (sciatica)

How is scoliosis diagnosed?

- Diagnosis always begins with a thorough history and physical examination.
- X-rays are ordered to measure the severity of the scoliosis. Additional imaging such as MRI or CT scan may be indicated as well.

What are the treatment options?

- Treatment for scoliosis is based on the **patient's age, degree of curvature, and the presence of other symptoms such as nerve compression.**
- Once a person has stopped growing, smaller curves tend not to progress, seldom cause significant back pain, and therefore do not require surgery. Treatment options for these minor curves may include physical therapy, medications and/or spinal cortisone injections.
- With medium and larger curves, however, worsening of the scoliosis and nerve-related symptoms become more likely, making surgery a treatment option to consider. Those who would benefit most from surgery include patients with **severe pain, nerve related symptoms, larger curves or progressive deformity.**
- Surgery for scoliosis involves a spinal fusion with instrumentation (Figure 2). This may be done via a posterior approach (back), an anterior approach (front), or a combined approach.
- Because not all spinal surgeons treat scoliosis, it is important to ask your surgeon if treating scoliosis is an important part of his or her practice.



Figure 2