What is Scoliosis?
Scoliosis in adults is an abnormal sideways curve in the spine. When viewed from the front or back, a normal spine is straight, with the head over the middle of the pelvis. There are several types of scoliosis in adults.

Types of Scoliosis
The most common type of scoliosis is degenerative scoliosis, and it occurs at a later age (40-50). These patients have a straight spine as young adults but develop a curve as they age. The curve results from lop-sided and uneven changes (arthritis) of the discs between the vertebral bodies: one side of the spine collapses faster than the other side, eventually causing a curve in the spine. This type of scoliosis is mostly located at the lumbar spine (lower back) and can be associated with nerve compression. Degenerative scoliosis can also be associated with “Flatback syndrome”: a significant straightening of the normal backwards curve in the lumbar spine as mentioned above.

A second type of scoliosis seen in adults is adult idiopathic scoliosis (AIS). Its exact cause is unknown. This type of scoliosis begins during the teenage years and symptoms develop during late adulthood. The curve seen in AIS is usually larger than degenerative scoliosis, and it can be located at the lumbar spine, thoracic spine (upper back), or both. AIS may progress as an adult and/or begin to worsen with age.
Other less common types of scoliosis are those occurring after a fracture, infection, tumor, or after surgery.

**Symptoms of Scoliosis**

Scoliosis in adults may not have symptoms. Many patients, especially those with small curves, don’t know they have scoliosis.

When present, symptoms most commonly include back pain, leg pain, and difficulty standing straight. Rarely, especially in large curves, adult patients might seek medical care due to an abnormal appearance of the back/torso: they report an unequal waistline, shoulder, or a prominent rib cage on one side.

There are several causes of back pain in patients with scoliosis. Pain can be caused by arthritic changes seen in both degenerative and idiopathic scoliosis. The pain is often associated with lower back movement and can be present when standing, sitting, or lying down. Postural back pain is also a common complaint of patients with scoliosis. These patients have difficulty maintaining an upright position due to straightening of their normal lumbar backwards curve. They report back muscle pain when standing or walking for a long time. The pain usually lessens when seated or when lying down. Sometimes supportive aids like canes or walkers are used for long walks.

Leg, thigh, or foot pain is also a common complaint in patients with scoliosis and typically results from nerve compression in the lumbar spine. The pain usually travels from the back to the thighs and /or legs and involves one or both sides. The pain can be constant or **made worse by standing/walking**. The type and severity of the leg pain is often related to the location and extent of nerve compression at the lumbar spine. Occasionally, lower extremity pain can be related to numbness or weakness.

A less common form of lower extremity pain is the thigh pain seen in those patients whose flat back prevents them from maintaining a natural upright posture. They often must bend their knees and rotate their hips backwards to stand upright. This results in thigh pain.

**Treatment of Scoliosis**

Scoliosis in the adult can first be treated without surgery. Non-surgical options include physical therapy, medications (anti-inflammatory medications, muscle relaxants, acetaminophen), and several types of injections. These treatment options are meant to control pain and improve function. Bracing might be used sparingly for pain control. However, it does not correct a curve or prevent curve progression in adults and can cause further core muscle weakness, pain, and bone loss, with long term use.

Surgery can be considered in patients who continue to have disabling pain due to their scoliosis despite trying conservative (non-surgical) treatments. Surgery can include simple nerve decompression with or without

![Anterior/Posterior Fusion](image-url)
fusion. It can also involve a more extensive fusion and reconstruction to correct the scoliosis.

The type of surgery recommended is dependent on several factors and very patient specific. Discuss your options with your provider.

**Questions**
The CORE Institute is dedicated to your outcome. If any questions or concerns arise, please call The CORE Institute at 1.866.974.2673.