## Scoliosis



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# DID YOU KNOW?

ldiopathic means a disease of unknown cause. Researchers discovered a gene that is believed to be associated with adolescent idiopathic scoliosis only a few years ago.

Reference: Ogilvie JW, Braun J, Argyle V, Nelson L, Meade M, Ward K. The search for idiopathic scoliosis genes. Spine. 2006;31(6):679–81.

## Scoliosis Surgery with Mazor X<sup>™</sup>

## What is adolescent idiopathic scoliosis?

Adolescent idiopathic scoliosis is an abnormal C-shaped or S-shaped curvature of the spine. The curvature of the spine is measured by the Cobb angle.



A Cobb angle greater than 15° is considered scoliosis.

Small spinal curves occur with similar frequency in boys and girls, but girls are more likely to have a progressively larger scoliotic curve requiring treatment.

#### What are the symptoms?

Symptoms of adolescent idiopathic scoliosis include back pain, unequal leg lengths, uneven hips, uneven shoulders (one shoulder appears higher than the other), abnormal gait, as well as breathing difficulties when the rib cage puts pressure on the lungs. When left untreated, the deformity might progress significantly.

For milder cases, your doctor may recommend nonsurgical treatment such as bracing. Braces are usually worn for several hours daily. This can be effective if the child is still growing and has a Cobb angle between 25° and 45°.

In progressive cases, or when the Cobb angle is greater than 45°, your doctor may recommend surgery to straighten and fixate the spine, by placing implants such as screws, rods, hooks, and wires in and along the spine.

> Surgery treats but does not cure scoliosis. It corrects the abnormal curvature and prevents further progression of the disease.

#### What are the advantages of surgery with Mazor Robotics technology compared to other methods?

Surgical treatment of adolescent idiopathic scoliosis requires planning and precision. Each scoliotic curvature has unique challenges, and often the patient's vertebrae are deformed, twisted and abnormally small, which makes for a challenging surgery.

Mazor's core technology allows surgeons to plan ahead before entering the operating room; Mazor Robotics advanced 3D planning software is used before surgery to create the ideal procedure for each patient's condition. During the operation, the physician does the actual work; Mazor X guides the surgeon's tools according to the predetermined blueprint to place the implants safely and accurately.<sup>1</sup>

### Ask your doctor about the benefits of Mazor Robotics Spine Surgery.

## PLANNING

the surgery

#### **GUIDANCE**

Precise guidance of surgical tools and implants

#### VERIFICATION

Intra-operative verification of the Surgical Arm positioning

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