

## Scoliosis

### What is scoliosis?

Scoliosis is an abnormal side to side curvature of the spine. Normally the individual bones of the spine are aligned in a straight line. In scoliosis the bones of the spine are in a "C" or "S" shape

instead of a straight line. Adolescent idiopathic scoliosis usually begins between the ages 8 and 10. It is often not noticed until the early teenage years.



### What causes scoliosis?

In 80% of the cases of scoliosis a cause is not identified. These cases are referred to as idiopathic scoliosis. In the remaining 20% there is an underlying neuromuscular condition such as cerebral palsy, spina bifida, Marfan syndrome, neurofibromatosis or muscular dystrophy. These are all types of true structural scoliosis. A flexible reversible type of scoliosis can also be seen on an xray. This type of scoliosis is often related to abnormal positioning during xrays, muscle spasm, or a leg length discrepancy.

### Are there risk factors for developing scoliosis?

Yes. Those with a family history of scoliosis are at a higher risk of developing the condition. The likelihood of developing a significant curvature that would require treatment is also higher in females.

### What are the symptoms?

Most children with scoliosis do not have symptoms. The incidence of back pain in children with scoliosis is not higher than children the same age without scoliosis. In adults scoliosis may cause back discomfort or difficulty breathing for large curves.

**How is scoliosis treated?**

Most cases of scoliosis are mild and can be treated with observation. While your child is growing this typically involves a visit every 4-6 month for an examination and possible xrays. If your child has a moderate sized curve (25-45 degrees) bracing may be recommended. The goal of bracing is to prevent further progression of the curve and avoid surgery. The brace is only effective during the time while your child is growing. For large curves (over 50 degrees) surgery may be recommended. The goal of surgery is to help correct a portion of the curvature but also to prevent the curvature from worsening. This is done by placing metal implants in the spine and holding the spine in a corrected position. There is not good evidence that exercises, manipulations, of electrical stimulation can alter the progression of scoliosis.