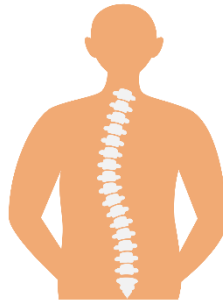




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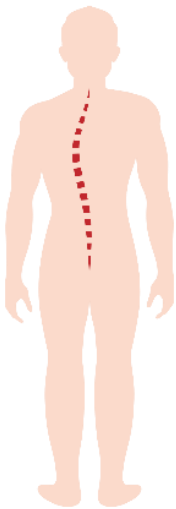
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# Scoliosis



## What is scoliosis?

scoliosis is defined as a three-dimensional deformity of the spine involving lateral curvature, vertebral rotation, and potentially associated changes in the rib cage.

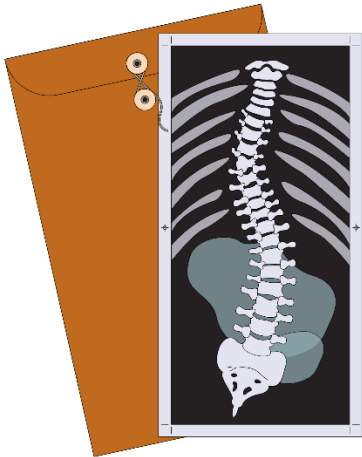


## What are the Symptoms of scoliosis ?

- **Abnormal spine curvature:** The most noticeable symptom is an abnormal sideways curvature of the spine, which can appear as an "S" or "C" shape.
- **Uneven shoulders or waist:** One shoulder or hip may appear higher than the other, leading to an asymmetrical appearance.
- **Uneven waistline:** The waist may appear uneven or have a tilted appearance.
- **Head not centered:** The head may not be centered directly above the pelvis and may appear off-center.
- **Rib prominence:** In more severe cases, the ribs on one side of the body may stick out more prominently than the other side.
- **Back pain:** Some individuals with scoliosis may experience back pain, particularly in the lower back.
- **Limited mobility:** In severe cases, scoliosis can restrict movement and flexibility of the spine.

## What is the diagnosis of scoliosis?

- During the physical exam, the child stands and then bends forward from the waist, with arms hanging loosely, to see if one side of the rib cage is more prominent than the other.
- x-rays can evaluate and measure the curve of the spine.



## What is the treatment of scoliosis?

When considering treatment for scoliosis, doctors take several factors into account. Here are the key considerations:

- Location of the curve in the spine.
- Severity of the curve (mild, moderate, or severe).
- The presence of symptoms related to the curve.
- Growth potential, particularly in children and teenagers.
- Treatment goals, which may include preventing progression, reducing pain, managing respiratory issues, improving posture, and enhancing overall quality of life.
- Specifically, when determining the need for bracing or surgery, the following factors are taken into consideration:

## What is the treatment of scoliosis?

- **Skeletal maturity:** The stage of bone growth, assessed through hand X-rays, helps determine the risk of curve progression and the effectiveness of braces.
- **Curve size:** Larger curves are more likely to worsen over time.
- **Gender:** Girls have a higher risk of curve progression compared to boys.
- **Monitoring:** If the curve is mild and your child is still growing, the doctor may suggest regular visits every few months to observe the spine.
- **Bracing:** Wearing a brace won't cure scoliosis or reverse the curve, but it usually prevents the curve from getting worse.
- **Common brace:** Plastic, contoured to fit the body, nearly invisible under clothing.

## What is the treatment of scoliosis?

- Wear time: 13-16 hours/day, longer wear increases effectiveness.
- **Activity participation:** Few restrictions, removable for sports/physical activities if needed.
- **Duration:** Until growth cessation (avg. girls: 14, boys: 16), varies individually.
- **Recommended for:** Moderate curves in growing children/teens to slow or halt progression.
- **Type of brace:** Customized based on curve severity.
- **Compliance importance:** Crucial for optimal results, consistent wear during growth.
- **Discontinuation:** Determined by doctor after growth completion.

## Surgery:

Surgery recommendation: If scoliosis progresses during growth.

- **Surgery type:** Based on curve location and severity.
- **Risks and benefits:** Discuss with the surgeon.
- **Spinal fusion:** Connects vertebrae using bone or bonelike material and stabilizes with metal rods, hooks, screws, wires, or other hardware, allowing fusion of old and new bone material.
- **Expandable rod insertion:** Recommended for growing individuals, the rod adjusts in length and is lengthened every few months through surgery or using a remote control.





## Surgery:

- **Vertebral body tethering:** Minimally invasive, screws placed along the spinal curve, a flexible cord is tightened to straighten the spine.

Complications of spinal surgery may include bleeding, infection, or nerve damage.

- **Physical therapy:** physical therapy to help strengthen





## Sources and References:

All illustrative images from [www.canva.com](http://www.canva.com)

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## Review and Editing:

The content of this booklet has been reviewed by consultants  
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**Neurosurgery Department**  

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**Health Awareness Unit**  
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