

# Scoliosis: An Overview

Daniel Marks\*

Department of Neuroscience, The British University, Cairo, Egypt

## Editorial

Scoliosis is a lateral curve of the spine that is abnormal. It's most common in childhood and early adolescence. The natural curves of the spine occur in the "sagittal" plane in the cervical, thoracic, and lumbar regions. These natural curves help to situate the head above the pelvis and disperse mechanical stress during movement. Scoliosis is described as a curvature of the spine in the frontal (coronal) plane. While the degree of curvature is determined in the coronal plane, scoliosis is a three-dimensional problem involving the following planes: Axial plane, Coronal plane, Sagittal plane. The coronal plane divides the body into anterior (front) and posterior (back) parts by running vertically from head to foot and parallel to the shoulders. The sagittal plane separates the right and left halves of the body. The axial plane is perpendicular to the ground plane and perpendicular to the coronal and sagittal planes [1-3].

Scoliosis affects 2% to 3% of the population in the United States, or approximately six to nine million people. Scoliosis can occur during childhood or infancy. Scoliosis, on the other hand, usually begins between the ages of 10 and 15, and affects both men and women equally. Females are eight times more likely than males to develop to the point where treatment is required. Scoliosis patients visit over 600,000 private physician offices each year, with an estimated 30,000 youngsters receiving braces and 38,000 patients undergoing spinal fusion surgery. Idiopathic, congenital, and neuromuscular scoliosis are the three types of scoliosis. When all other reasons have been ruled out, idiopathic scoliosis is diagnosed, which accounts for around 80% of all instances. Adolescent idiopathic scoliosis is the most prevalent type of scoliosis and is usually diagnosed during puberty.

Congenital scoliosis is caused by an embryological abnormality of one or more vertebrae, and it can affect any part of the spine. Because one section of the spinal column lengthens at a slower rate than the rest, vertebral anomalies induce curvature and other deformities. The rate at which the scoliosis increases in magnitude as the child grows is determined by the geometry and placement of the anomalies. Congenital scoliosis is frequently identified at a younger age than idiopathic scoliosis since these abnormalities are evident at birth.

Scoliosis caused by neurological or muscle problems are known as neuromuscular scoliosis. Scoliosis caused by cerebral palsy, spinal cord damage, muscular dystrophy, spinal muscular atrophy, and spina bifida are all examples of this. This type of scoliosis advances more quickly than idiopathic scoliosis and frequently necessitates surgery.

Scoliosis can manifest itself in a variety of ways. Make an appointment with a doctor if you detect one or more of the following symptoms:

- Shoulders are unbalanced, with one or both shoulder blades protruding.
- The head is not precisely over the pelvis.

**\*Address for Correspondence:** Daniel Marks, Department of Neuroscience, The British University, Cairo, Egypt, E-mail: marckd6@yahoo.com

**Copyright:** © 2022 Marks D. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Received:** 08 March 2022, Manuscript No. jsp-22-65009; **Editor assigned:** 10 March 2022, PreQC No. P-65009; **Reviewed:** 14 March 2022, QC No. Q-65009; **Revised:** 21 March 2022, Manuscript No. R-65009; **Published:** 25 March 2022, DOI: 10.37421/2165-7939.22.11.532.

- The hips are elevated or exceptionally high on one or both sides.
- The heights of the rib cages vary.
- Uneven waistline
- The skin overlaying the spine changes in appearance or texture (dimples, hairy patches, colour abnormalities)
- The whole body is skewed to one side.

According to one study, roughly 23% of people with idiopathic scoliosis had back pain when they were first diagnosed. An underlying ailment such as spondylolisthesis, syringomyelia, tethered cord, herniated disc, or spinal malignancy was discovered in 10% of these patients. If a patient with idiopathic scoliosis is experiencing more than minor back pain, a complete examination for another cause of pain is recommended. Idiopathic scoliosis can compromise pulmonary function due to changes in the form and size of the thorax. Recent studies on pulmonary function tests in people with mild to moderate idiopathic scoliosis found that their lungs were impaired [4,5].

A physical examination, X-ray, spinal radiograph, CT scan, or MRI is commonly used to confirm scoliosis. The Cobb Method is used to determine the severity of the curve, which is determined by the number of degrees. A coronal curvature of more than 10 degrees on a posterior-anterior radiograph indicates a positive diagnosis of scoliosis. A curve that is more than 25 to 30 degrees is often regarded significant. Curves that are more than 45 degrees to 50 degrees are considered severe and require more extensive treatment.

## Acknowledgement

None.

## Conflict of Interests

None.

## References

1. Caragee, E.J., E. Hurwitz, and B.K. Weiner. "A critical review of rhBMP-2 trials in spinal surgery: Emerging safety concerns and lessons learned." *Spine J* 11 (2011): 471-491.
2. Christy, P. Narmatha, S. Khaleel Basha, V. Sugantha Kumari and A.K.H. Bashir, et al. "Biopolymeric nanocomposite scaffolds for bone tissue engineering applications—A review." *J Drug Deliv Sci Technol* 55 (2020): 101452.
3. Cinotti, Gianluca, Alessandro Corsi, Benedetto Sacchetti and Giuseppe Giannicola, et al. "Bone ingrowth and vascular supply in experimental spinal fusion with platelet-rich plasma." *Spine* 38 (2013): 385-391.
4. Comer, Gareth C., Micah W. Smith, Eric L. Hurwitz and Kyle A. Mitsunaga, et al. "Retrograde ejaculation after anterior lumbar interbody fusion with and without bone morphogenetic protein-2 augmentation: A 10-year cohort controlled study." *J Spine* 12 (2012): 881-890.
5. De Oliveira, Rubelisa Cândido Gomes, Cláudio Rodrigues Leles and Rejane Faria Ribeiro-Rotta, et al. "Assessments of trabecular bone density at implant sites on CT images." *Oral Surg Oral Med Oral Pathol Oral Radiol* 105 (2008): 231-238.

**How to cite this article:** Marks, Daniel. "Scoliosis: An Overview." *J Spine* 11 (2022): 532.