



Physical Therapy Treatment for Scoliosis

Scoliosis is a three-dimensional, asymmetrical dysfunction of the spine. Hippocrates was the first to both recognize scoliosis and recommend treatment for scoliosis (1). Early treatment options included bracing, exercise and use of mechanical devices including the “rack” in the dark ages (1). We still employ some of these treatment techniques today.

Scoliosis is the most common spinal condition in children and adolescents and affects 68% of adults over the age of 60 (2). There are many theories to the causal factors for idiopathic scoliosis including the normal innate asymmetries of the human body (3).

Early detection is critical to minimize asymmetries and thus long-term deformity that can result from untreated scoliosis. These asymmetries can lead to a variety of dysfunction throughout the body including tendonitis, bursitis, strains, strains and organ dysfunction most notably difficulty with respiration.

Current treatment options include exercise, bracing and surgery. A detailed understanding of your curve(s) is essential in the treatment process. With this understanding you are best able to position yourself during all activities including sleep, school, and recreation to help reduce and protect your curves.

90% of all idiopathic curves are right thoracic and left lumbar curves (4). This pattern is consistent with normal human asymmetries and dominance patterns. Adult-onset curves are less predictable and more variable in pattern.

X-ray evaluation is useful in the understanding and treatment of scoliosis regardless of the age of onset. It is a particularly important tool in monitoring curve progression during growth spurts. However, other evaluation methods including height, Adams forward bend test with use of scoliometer, respiratory tests with spirometry, and physical alignment tests such as hip, shoulder and trunk range of motion are used to fully evaluate your scoliosis (4).



Scoliosis treatment includes instruction in spine precautions, shoe recommendations, general exercise, breathing exercises, and scoliosis specific exercises.

Spine precautions for those with scoliosis include:

- Limit the load your spine carries. This includes reducing the weight of backpacks or the use of rolling bags.
- Avoid repetitive bending and extending. This may require modifications to activities such as gymnastics, gardening and yoga, in addition to postural changes such as how you sit during the school day.
- Sleep on your back, not your stomach.
- Wear supportive shoes.

Those with scoliosis are encouraged to be active. This can be formalized sports activities such as basketball or volleyball, general childhood play such as climbing at the neighborhood playground, or the utilization of a consistent gym routine for older teens and adults.

Seek out treatment from a physical therapist trained in the treatment of scoliosis. Your physical therapist will educate you about the specifics of your curve, help you implement spinal precautions for daily life and recreation and guide you on specific sleep postures to minimize your curve while you sleep. In addition, your physical therapist will instruct you in breathing exercises to minimize the asymmetries of your rib cage and maximize your respiratory capacity.

Finally, your physical therapist will teach you scoliosis specific exercises. These exercises are designed to elongate your spine, minimize asymmetries throughout your body and maximize the use of supporting joints such as your hips.

You are the best advocate for yourself and your child. You do not need to live with pain of untreated scoliosis, and you can prevent the progression of your curve as you age. Postural Restoration Institute (PRI) physical therapists are ideally positioned to treat scoliosis as they are experts in the treatment typical body asymmetries. PRI trained PT's are well suited to treat children with mild scoliosis or adults with any level of scoliosis or age of onset. Schroth trained physical therapists are extensively trained in scoliosis and typically treat children with significant scoliosis.

Scoliosis is a dynamic spine condition. It can change as you age and as you grow, and thus it is important for you to advocate for the proper evaluation and treatment of your spine.

References

1. FARKAS, ALADÁR PHYSIOLOGICAL SCOLIOSIS, *The Journal of Bone & Joint Surgery*: July 1941 - Volume 23 - Issue 3 - p 607-627.
2. Schwab F, Dubey A, Gamez L, El Fegoun AB, Hwang K, Pagala M, Farcy JP. Adult scoliosis: prevalence, SF-36, and nutritional parameters in an elderly volunteer population. *Spine (Phila Pa 1976)*. 2005 May 1;30(9):1082-5. doi: 10.1097/01.brs.0000160842.43482.cd. PMID: 15864163.
3. Mangino L, Masse J, Henning S, Ed. *A Three-Dimensional Approach for the Conservative Treatment of Scoliosis*. Strater Scoliosis Institute.
4. Konieczny MR, Senyurt H, Krauspe R. Epidemiology of adolescent idiopathic scoliosis. *J Child Orthop*. 2013;7(1):3-9. doi:10.1007/s11832-012-0457-4.