

## Scoliosis in Adolescents

Normally, a spine when viewed from rear should appear straight but if the spine is lateral or curved or sideways or rotated then it is affected by scoliosis. It gives an appearance as if the person has leaned to a side. According to Scoliosis Research Society the definition of scoliosis is the curving of the spine at an angle greater than 10 degrees on an x-ray. Scoliosis is a kind of spinal deformity and shouldn't be confused to poor posture. Usually there are 4 common kinds of patterns of curves experienced in Scoliosis which are: Thoracic wherein the right side has ninety percent curves, lumbar wherein left side has seventy percent curves, thoracolumbar wherein right side has eighty percent curves and double major where both right and left sides have curves.

In majority of the cases, as high as eight to eighty five percent, the cause of the deformity is unknown, this is also known as idiopathic scoliosis. It is observed that females have scoliosis more commonly than males. According to some established facts 3 to 5 children per 1000 has chances of developing spinal curves which is a number big enough requiring medical treatment. There are three types of scoliosis that can develop in children namely congenital, neuromuscular and idiopathic. Congenital scoliosis is seen in 1 out every 1,000 births which is caused due to vertebrae's failure in normal formation, vertebrae is absent, vertebrae is formed partially and vertebrae is not separated. Neuromuscular scoliosis is linked with various neurological conditions and particularly in children who don't walk like cerebral palsy, muscular dystrophy, spina bifida, tumors in spinal cord, paralytic conditions and neurofibromatosis. The cause of third type of scoliosis called Idiopathic scoliosis is still unknown. It is further divided into infantile, juvenile and adolescent scoliosis. Infantile scoliosis occurs up to the age of 3 years from birth wherein the vertebrae curve is towards left and is more frequently observed in boys. The curve takes normal shape with the growth of child. Juvenile scoliosis is common in children of age three to nine. Adolescent scoliosis is common in kids of age ten to eighteen and this is also the most common form of scoliosis occurring more in girls than boys.

The other possible causes of the deformity include hereditary reasons, different lengths of legs, injuries, infections and tumors. There are numerous symptoms attributed to scoliosis which can vary from individual to individual. The symptoms are: Difference in heights of the shoulders, off-centered head, difference in the height or position of the hip, difference in the position or height of shoulder blade, different arm lengths in straight standing position and lastly different height back sides when the body is bent forward. Other symptoms include leg pain, back pain and change in bladder and bowel habits do not belong to the symptoms of idiopathic scoliosis and require medical checkup

by a doctor. The symptoms may be similar to other problems related to spinal cord or other deformities or could result from an infection or injury and consulting a doctor is the best bet in this situation who may conduct diagnosis to know what exactly it is.

The diagnosis of scoliosis requires thorough medical history of the teenager, diagnostic tests and also physical examination. The doctor asks for entire prenatal history, birth history and also would want to know if anyone in the family has scoliosis. The doctor may also ask for the milestones related with the development of the teenager since some kinds of scoliosis are known to be related to neuromuscular disorders. The delay in development may need additional medical evaluation. Doctor may also prescribe x-ray, CT scan and MRI scan of the back to measure the degree of curvature in the spinal. There are various treatments available for scoliosis which is decided by the physician depending on teenager's age, medical history and health in general. The method of treatment also depends on the extent to which disease has reached. The tolerance of the teenager to certain medicines, therapies and procedures are also taken into consideration. Expectations and opinion of the parents or teenager is also the criteria in deciding the type of treatment. The main aim of the treatment is stop the curve from progressing and avert deformity. The treatments include observation and repetitive examinations, bracing and surgery to correct the defect.

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