SCOLIOSIS IN ADOLESCENT CHILDREN

What Is Scoliosis?
The word scoliosis (say: sko-lee-OH-sis) comes from a Greek word meaning crooked. Scoliosis is a musculoskeletal disorder in which there is a sideways curvature of the spine, or backbone. The bones that make up the spine are called vertebrae. There are two types of scoliosis:

Nonstructural (functional) scoliosis. A normal spine that appears curved. This is a temporary, changing curve. It is caused by an underlying condition such as an uneven leg lengths, postural problems, muscular imbalances resulting in back spasm and direct trauma to the spine. The vertebrae or spinal bones are not affected.

Structural scoliosis. Structural scoliosis is much more serious and develops as a result of unequal growth of the two sides of the vertebrae (spinal bones). As noted, structural scoliosis involves both a side-to-side curve and also a twist or rotation in the spine.

What Causes Scoliosis?
Younger children are more susceptible to deformity as the bones in their spine are less mature and stable. Sometimes it is not known why a scoliosis develops. If the specific cause is unknown, it is termed idiopathic. Idiopathic scoliosis is the most common type of scoliosis and affects about two to three per cent of the population. It tends to run in families and is more common in girls than in boys. Most often the scoliosis develops in middle or late childhood during a rapid growth spurt.

How Do Kids Find Out if They Have Scoliosis?
Sometimes scoliosis will be easily noticeable. A curved spine can cause someone's body to tilt to the left or right. Many kids with scoliosis have one shoulder blade that's higher than the other or an uneven waist with a tendency to lean to one side. These problems may be noticed when a kid is trying on new clothes. If one pant leg is shorter than the other, a kid might have scoliosis. It's also possible that the kid does not have scoliosis, but one leg may be slightly shorter than the other or the ribs may be uneven.
How Is Scoliosis Diagnosed?

Physical examination:
The physiotherapist looks at the patient's back, chest, pelvis, legs, feet, and skin. The physiotherapist checks if the patient's shoulders are level, whether the head is centered, and whether opposite sides of the body look level. If your physiotherapist suspects scoliosis, he or she will need to determine which type it is -- functional scoliosis, which is more treatable, or structural scoliosis, which is more severe. To do this, he or she may use a simple forward-bending test. Spinal curves that are present when a patient stands but disappears when he or she lies down or bends forward are normally functional; on the other hand, spinal curves that are evident when a patient stands and persist when he or she lies down or bends forward or sideways are normally structural.

X-ray evaluation:
If scoliosis is suspected, a simple x-ray of the spine can confirm if an abnormal curve is present.
What Are the Treatments for scoliosis? How can physiotherapy help scoliosis?

Muscle imbalance is another source of functional scoliosis your physiotherapist addresses. This asymmetry affects one’s posture, affects one’s appearance and causes pain. Tight or spastic muscles, if severe enough, can cause your spine to bend. This is because muscles in your back and pelvis are attached to the bony parts of your spine. Normally, the muscles on both sides of your spine are in balance with one another, each side pulling equally. When a muscle on one side of the spine is tight and in spasm, it can severely pull on the spine. Your physiotherapist may use exercises to help relax the tight muscles, thus allowing the spine to return to its natural curvature.

Exercises that strengthen core muscles and back muscles will not cause your scoliosis to worsen. Exercise may not completely cure scoliosis. However, it can strengthen your back muscles and in effect help to reduce future spinal issues or progressive curvatures.

Pilates are type of exercises that are specifically designed to improve back health. They can also be helpful in reducing pain caused by scoliosis. Pilates can excel in the long-term training needed to help change the many factors involved in the distorted spine and unbalanced musculature associated with scoliosis.
Maintaining good posture as often as possible is just as important in your child’s rehabilitation program as doing the specific exercises that your therapist prescribes. As gravity is constantly pulling the body downwards, holding one’s body properly when walking, sitting, standing and during regular activities of daily living can make an enormous difference to how the muscles pull on the spine.

We at Physio Rehab, screen and evaluate the children for scoliosis and according to their assessment findings, plan a tailor made treatment protocol which suits their need.

- By Dr. Ketaki Kharkar