

Scoliosis

What is Scoliosis?

Originally, the term “scoliosis” meant any abnormal deviation of the spine from the midline, but for many years the term has been restricted to an abnormal sideward curvature of the spine away from the midline when viewed from the back. The word comes from the Greek work “scoliosis,” meaning crookedness of a body part.

When relatively straight, the spine behaves much like a column. When viewed from the back, the shoulders and hips are level and there is no twisting of the spine. When deformed, the spine becomes subjected to bending stresses and behaves more like a bending beam or rod than it does a column. Unlike engineered columns of uniform size made of like material, the effects of body weight in an upright position are much more complex to understand or to predict.

The structural faults associated with scoliosis are usually more obvious as physical distortions at the shoulder, chest, and hip levels. In addition, the ribs and shoulder blades are often distorted, but this sign may also be the result of a paralysis or disease process.

The Common Types of Scoliosis

Most scoliotic distortions can be classified into two major types (functional and structural), and each has many subdivisions according to its major cause.

Functional Scoliosis

A functional scoliosis will straighten by voluntary effort or in a non-weight bearing position. There is little change in bone architecture but often considerable change in spinal muscle tone and later in ligament function.

Such an abnormal spinal curvature is generally the effect of gravitational forces and muscles, tendons, and ligaments that vary in their integrity. Some muscles may have tightened and shortened while others have weakened and stretched. Some ligaments may have shortened while others have stretched. Some nerves may have become stretched and irritated while others have become compressed and inhibited. These factors tend to twist (rotate and tilt) the segments of the spine.

When this happens slowly, as occurs in most cases of scoliosis, pain may not be present to warn the individual that their health might be impaired.

The precipitating cause of functional scoliosis can be a spinal injury, a defect in the body’s righting mechanism, an adaptive position forced by pain that has become habit, a “silent” inflammation, poor body weight distribution,

reflection of an emotional disturbance, or a combination of factors. Quite often the cause is found to be a hip misalignment or one leg being shorter than the other, causing the pelvis to dip down on the short side. A fallen longitudinal arch of one foot or a weakened (pronated) ankle may also cause the pelvis to slant towards one side.

Fortunately, a functional scoliosis does not usually progress in severity as rapidly as a structural scoliosis.

Structural Scoliosis

A structural scoliosis will not straighten with voluntary effort. It is quite rigid and the result of bone and other tissue changes.

A structural scoliosis is usually the result of a severe accident, a birth defect, a disease process, or a long-standing functional scoliosis that was not corrected. That is, structural changes sometimes begin as abnormal muscular mechanisms that progress to degenerative changes.

There are two major types of structural curvatures: (1) irreversible spinal curves that exhibit gross changes in the spinal joints; and (2) spinal curves that are the result of possibly reversible tissue changes such as shortened ligaments or spastic or weakened muscles. It is not unusual for a scoliosis to exhibit some functional and some structural components. Corrective care can improve the functional element involved and inhibit further abnormal structural changes.

Effects On Health and Efficiency

Scoliosis may or may not be serious. Sometimes mild curvatures greatly affect body function. Symptoms can manifest almost anywhere in the body. Yet, sometimes quite severe curvatures have no apparent effects on overall health.

When the spinal distortion of scoliosis is recognized, several questions arise. For example, how severe is the distortion? How long has it been present? Is it affecting body function, stamina, resistance to infection?

Other questions also need answers such as: Is the distortion stabilized or progressing? What was the initial cause or causes: poor posture, abnormal muscle tone, a birth defect, a disease process, or a combination of factors? Can it be corrected? How much correction can be expected? How long will it take? How much patient cooperation will be necessary? The direction, location, complexity, stage of progression, severity, and flexibility

of the abnormal spinal curvature or curvatures are just a few of the many factors that must be considered. The first step in answering these questions is a thorough chiropractic examination. Only after all the factors involved have been analyzed can the seriousness of scoliosis be determined.

Chiropractic Care

The primary goals of chiropractic therapy are to relieve spinal stress, achieve spinal balance, and maintain healthy body function. The primary means to achieve this is through chiropractic spinal adjustments. Other procedures sometimes employed include spinal traction, the use of braces, shoe supports, exercises to stretch shortened muscles and strengthen weak muscles, improved nutrition, and numerous other procedures. What procedures and methods are necessary in any individual case will be determined by your doctor of chiropractic after examination.

What can be expected?

There is one thing that most all authorities agree upon: early recognition of scoliosis and corrective care will achieve faster and better results. Most advanced scoliosis is due to neglect. This fact underscores the need for periodic chiropractic examinations.

A fairly accurate estimate of what corrective management will possibly achieve can be made if the natural course of the abnormal curvature has been followed from early childhood. However, this is rarely the case as most people usually seek professional help only when symptoms appear, the postural defect becomes a social concern, or an injury is superimposed on the disorder. Each of us is an individual who presents many variables. Progression of the distortion may be fast, slow, or intermittent, and related dysfunction of internal organs varies from mild to severe.

X-ray signs of changes in the spine, ribs, and spinal cartilages indicate that the problem is serious. An abnormal shift in spinal balance between the upper and lower spinal regions usually indicates abnormal relaxation of the spinal "straps". When these signs are present, progression to deformity is likely unless immediate corrective care is instituted. How the body has attempted to maintain its equilibrium is another important factor in estimating probable results.

Spinal problems affect functions of the body, even when pain is absent. To safeguard optimum health, practice a program of preventative health care. Visit your doctor of chiropractic at regular intervals.

How Does a Chiropractor Treat Scoliosis?

Your doctor of chiropractic is uniquely qualified to improve the health of your spine. Special chiropractic techniques may help reduce or slow the progression of scoliosis.

Spinal Adjustment

To begin treatment, your chiropractor manually applied various degrees of pressure to different joints in your spine. Over time, these adjustments may help improve your spine's alignment and range of motion, while relieving pain and stiffness.

A Balanced Spine

From the front, the spine looks like a straight line from the neck to the hips.



Scoliosis and Your Child

Scoliosis screening or detection should begin in the home. Although adolescent modesty often prevents parents from observing the spines of their children, this problem can be overcome by observation in beachwear, particularly during those times of the year when it is appropriate.

In addition to the standard observation of lateral spine curves from the rear of the child, one should also observe the spine while the child is in the forward bending position with care taken to note any symmetry or bulging on the convexity of the curve. Should these signs be observed, professional advice should be sought since it could indicate the presence of an adolescent idiopathic scoliosis. All authorities agree that the end result of any treatment regiment for adolescent idiopathic scoliosis – including orthotics/ exercise/ manipulation – is significantly dependent upon early recognition.

Your doctor of chiropractic – a primary health care professional – can assist families in scoliosis screening and the determination of the need for appropriate treatment.

An Unbalanced Spine

Vertebrae, the bones in your spine, are curved to the side instead of straight.

Discs, which absorb shock between vertebrae, may bulge, rupture, or wear down.

Nerves, which travel through the vertebrae and carry the body's messages, may be pinched or irritated.

Muscles may be overused on one side of your body and weak on the other side.

The sacrum (the base of your spine) may be tilted instead of level.

