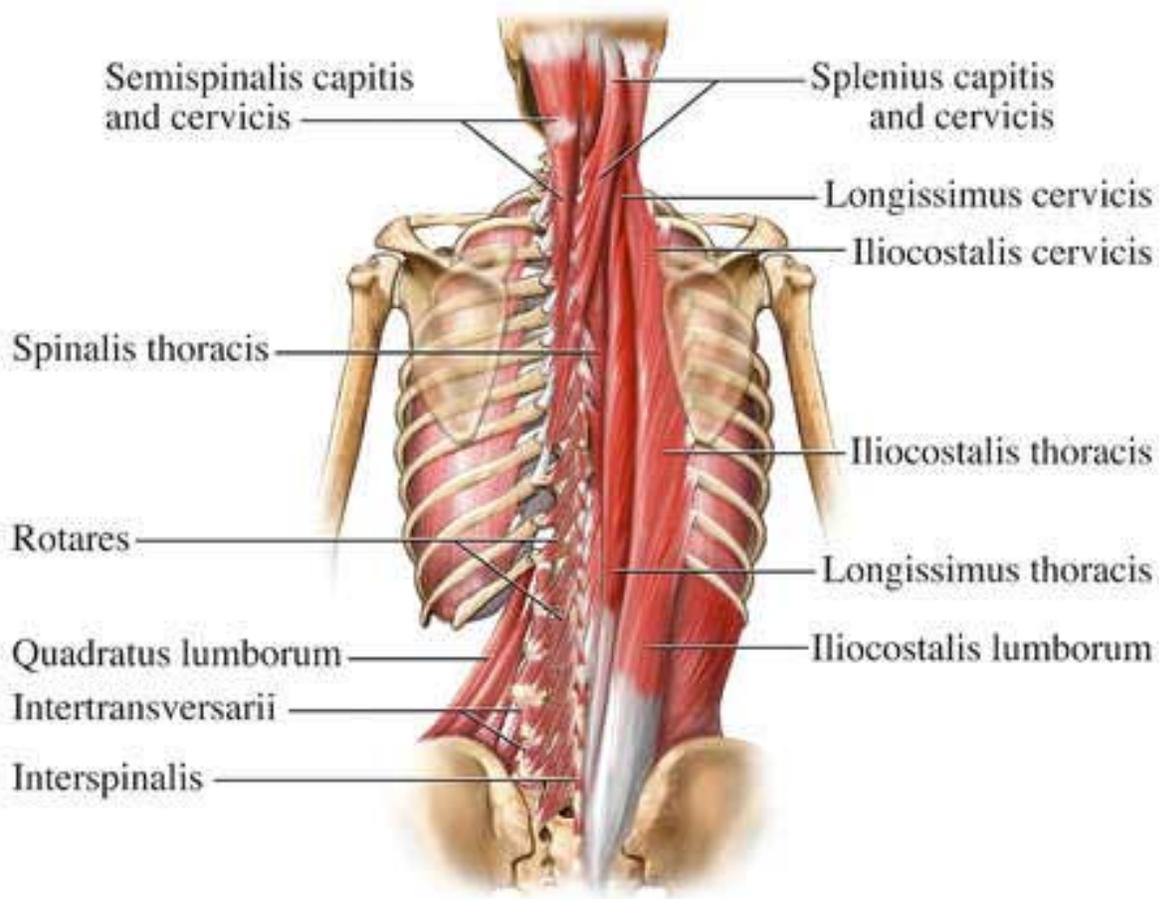


Scoliosis Overview

Scoliosis is a medical condition in which a person's spine has a sideways curve either in a S or C shape and since the days of Hippocrates, orthopedic surgeons and physicians have sought to cure this condition. Mild scoliosis does not generally cause as many issues as severe types which can cause breathing issues 1. and pain is not usually present. It is thought that a combination of genetic and environmental factors are involved and can begin at birth or develop over time. Scoliosis has been described as a bio mechanical deformity, the progression of which depends on asymmetric forces otherwise known as the Heuter-Volkman law.2. In the past it was more commonly caused by TB and poliomyelitis. (polio virus)

Females are typically affected more so than males in about 3% of the population This is the equivalent to approximately 5 to 9 million cases. 3. and occurs commonly between the ages of 10yrs and 20yrs old and due to rapid growth spurts occurring at puberty and when spinal development is most susceptible to genetic conditions and environmental influences. Female teenagers undergo growth spurts before postural musculoskeletal maturity which is why they are affected more than males. Usually this stops after puberty but may continue during late adulthood due to vertebral osteoporosis and weakened musculature.

It is interesting to note that from an evolutionary perspective the human spine is different from chimpanzees or gorillas in whom scoliosis has not been found and it has been hypothesized that scoliosis may be related to morphological differences from these apes. 4. As humans we have an elongated spine and more susceptible to deviation than the primates whose spines remain in place due to far larger erector spinae muscles which are those that keep the spine steady. 5. Our bipedalism stance is highly mobile and the S shaped curve with lumbar lordosis in the low back supports our upright body. Theories such as traveling longer distances, protection from predators, hunting and gathering for feeding etc. makes sense when you think about our development as humans. There are even fossil records that indicate longer spine formations in the past which shortened over time perhaps to reduce the risk of scoliosis. 6.



Western medicine diagnoses Scoliosis by the *Adams forward bend test* and if deviation is noted, a further X-ray will be performed. Gait assessment and exams for other abnormalities such as spina bifida, *cafe au lait* spots which would indicated neurofibromatosis and abdominal reflexes and muscle tone for spasticity are also checked and lordosis (convex lower back) kyphosis (rounded upper back) and measured by the Cobb angle which is the angle between two lines drawn perpendicularly from the upper to the lower affected vertebrae.

Management of Scoliosis is usually done with bracing in children as a means to prevent progression, surgery in more severe cases greater than 45 - 50 degrees and medication in adults to relieve pain. The average cost of surgery in 2010 was \$30,000 to \$60,000 per patient in 2010. 7

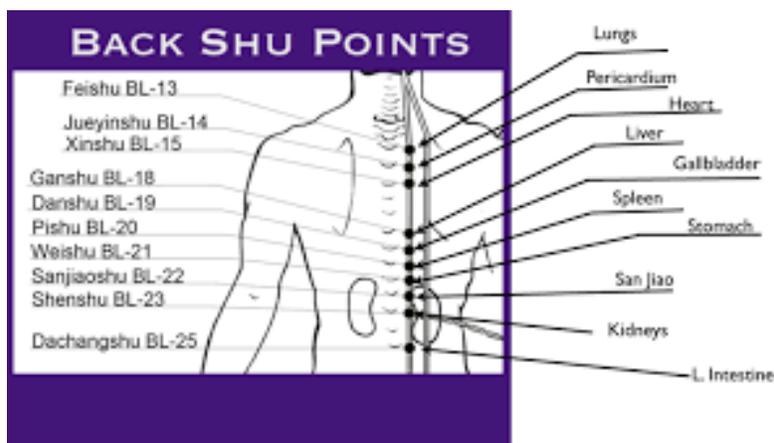
As an alternative, many people try Doctors of Chiropractic for treatment or a method known as Rolfing to help straighten the spine or at least provide pain relief. Rolfing is an interesting practice that is concerned with structural integrity similar to that of Seitai Shinpo and requires ten sessions to retrain the body with various manipulatory techniques. Personally, I think that ten treatments is a good rule of thumb for chronic conditions, though four treatments gives us a lot of information to either move forward or try another type of treatment.

Structural Alignment acupuncture also addresses Scoliosis and while clinically I have seen very few cases of complete correction, I have most definitely seen pain reduced and comfort

restored in patients due to relaxation of the muscles and innervation of the organs, particularly the Lung and Kidney. In those patients with SOB or breathing difficulties due to thoracic cavity deformity, acupuncture has remarkably alleviated such symptoms.

Because the treatment is softening hyper compressions (tight knots) along the spine and the deeper erector spinae muscles of the back, the framework of the body begins to shift to correct itself in some cases but in most cases it is in improving blood circulation that allows for stagnant blood to move and in turn relieve pain. As many of my patients have been the elderly with scoliosis, tonification of all organ systems is essential which is where moxa cone application further enhances the treatment.

The back Shu points of the spine are what we call in TCM the major players in tonifying in cases of hypofunction or sedating in cases of hyperfunction of the organs of the body.



Back Shu points are called the Associated points, or Para vertebral Reflex points and are primarily used for chronic conditions. Points often are tender to palpation when there is a disorder with their associated organs. Spontaneous pain indicates a disorder in the meridian. Tenderness with light palpation indicates the meridian is deficient *yin condition* in energy and hypo function of the associated organ. Tenderness with heavy palpation indicates the meridian is in excess (Yang condition) of energy and hyper function of the associated organ. Associated points are considered points of sedation. Treatment of these points have a general sedating effect of the entire body promoting the parasympathetic nervous system to calm down gently.

So in treatment of conditions such as scoliosis, not only are mechanical issues addressed but the entire body as a complete unit functioning as a whole and healing as a whole. Patients report improved quality of life, more energy and much less pain.

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