

# OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Edwin Lau

## Chiropractic Care for Scoliosis

*Scoliosis is an abnormal curvature of the spine. This condition affects about three to five of every 1,000 people, and is most frequently seen in adolescent girls. Fortunately, most cases of scoliosis are minor and only require careful monitoring by a doctor of chiropractic, like Dr. Lau.*

*For more severe or worsening cases, bracing or even surgery may be necessary. But promising new case studies and research suggest that alternative treatments, including chiropractic adjustments, may eliminate the need for surgery in some severe cases. Read on for details on scoliosis and how chiropractic can help manage this condition.*

### What Is Scoliosis?

When viewed from the front on x-ray, a normal spine appears straight. When viewed from the side, it has two S-shaped curves. In scoliosis, the spine curves to the side in one or more places when viewed from the front.

### Who Gets Scoliosis?

Scoliosis affects girls twice as often as it affects boys, and usually emerges in adolescence, although it has been seen in younger children and even infants.

Scoliosis runs in families, but doctors often don't know the cause. When a cause can't be identified, scoliosis is called idiopathic.

Adults can develop scoliosis too, but it is often a worsening of an untreated or undiagnosed condition that began in childhood. In other cases, scoliosis may result from a degenerative joint condition in the spine.



Sometimes, an underlying disease that affects the neuromuscular system, a leg-length discrepancy or a birth defect may cause scoliosis. Scoliosis can also begin during fetal development. Congenital scoliosis is a type of birth defect that affects the development of the vertebrae and may occur with other congenital problems, such as heart or kidney abnormalities.

### How Is Scoliosis Detected?

Early detection of scoliosis is vital, since it's important to stop or slow a progressing curve to avoid surgical intervention. The curve generally progresses while a child is still growing, and stops once the child reaches skeletal maturity. During these crucial and high-risk growth years (10 to 14 years), it's vital for youngsters to be regularly screened by a doctor of chiropractic, such as Dr. Lau, who is trained to provide accurate and thorough screening for this condition.

Many states also have in-school scoliosis screenings, which school nurses or physical education teachers typically perform. In some cases, other volunteers administer the screenings. However, since these screenings are often performed by people who are not spine experts, or even by people with little to no medical training, they



have a high rate of inaccuracy. These screenings also frequently use inaccurate evaluation techniques.

As part of one experiment published in the *Journal of the American Medical Association (JAMA)*, investigators sifted through data on 2,242 subjects who attended kindergarten or first grade in Rochester, Minn. between 1979 and 1982. All participants underwent annual in-school scoliosis screenings in grades five through nine.

A total of 92 children were referred for further evaluation, although only 74 percent of these students received chiropractic or medical follow-up. Altogether, 27 of the students referred for evaluation were diagnosed with scoliosis by age 19. However, only five of these subjects were treated for the disorder. The study's authors concluded that in-school scoliosis screening is not effective. Instead, they stress that parents and health-care practitioners should monitor youngsters for signs of scoliosis (*JAMA* 1999; 282:1427-32).

Your child's physician may also screen for scoliosis; however, nothing can replace a screening by Dr. Lau.

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## How Is Scoliosis Treated?

Chiropractors undergo in-depth training in spinal health. Therefore, your doctor of chiropractic should be your first line of defense against scoliosis. In most cases of minor scoliosis, chiropractors will closely monitor the curve to ensure it isn't worsening or causing any other health problems. Spinal curves are measured in degrees, and curves that measure 25 degrees or less in a patient who is still growing are not considered severe.

For other cases, your chiropractor may recommend a partnership between himself or herself and an orthopedic specialist or other professional, such as a physical therapist. Curves that progress rapidly or are over 30 degrees usually require treatment. If left untreated, severe scoliosis can cause a variety of problems such as:

- A difference in shoulder height
- Muscular prominence on one side
- Breathing problems
- Heart problems

For severe or worsening curves, traditional treatment options include bracing or surgery.

Fortunately, new research and case studies continue to show that there are alternative treatments, including chiropractic and specific exercises, which may eliminate the need for surgery in some cases. Read on for details.

### Spinal Manipulation for Scoliosis

A 2008 case study published in the *Journal of Alternative and Complementary Medicine* concludes that in "at least some severe and progressive cases of scoliosis, chiropractic treatment including spinal manipulation may decrease the need for surgery." (*J Altern Complement Med* 2008;14:749-51.)

The case study followed a 15-year-old girl who had right thoracic scoliosis (46 degrees) for four years. She received regular rehabilitation and brace treatment for four years, but the curvature of the spine still progressed. Surgical intervention was suggested to

prevent significant deformity, which could be accompanied by cardiopulmonary compromise.

This patient was treated with chiropractic adjustments two times per week for six weeks at the outset, which was gradually decreased in frequency. After 18 months of consecutive treatment, follow-up radiographs and examinations revealed that the angle of the curve had decreased by 16 degrees.

Another study that examined two cases found that chiropractic adjustments could control back pain and curve progression in patients with mature idiopathic scoliosis (*J Manipulative Physiol Ther* 1994;17:253).

### Spinal Manipulation Plus Additional Therapies for Scoliosis

Recent research has also revealed promising results for a combination of spinal manipulation and other therapies.

In one recent study, investigators focused on the combination of spinal manipulation, positional traction and neuromuscular re-education in the treatment of idiopathic scoliosis. After four to six weeks, the treatment group averaged a 17-degree reduction in their curves. None of the curves increased. The researchers concluded that "the combined use of spinal manipulation and postural therapy appeared to significantly reduce the severity of the curve in all 19 subjects. These results warrant further testing of this protocol." (*BMC Musculoskeletal Disord* 2004;5:32.)

Finally, another case study revealed exciting results after chiropractic adjustments plus neuromuscular stimulation for progressive adolescent idiopathic scoliosis. The patient's curve had been progressing at the rate of 1.0 degrees/month for nine months. In the first three months of care, the patient's curvature was successfully stopped at 27 degrees and then reversed to 17 degrees. After nine months of nighttime electrical stimulation to the muscles surrounding the spine, the curvature of the spine still progressed. Surgical intervention was suggested to

## Specific Exercises and Physical Therapy for Scoliosis

Your doctor of chiropractic may also recommend specific exercises or physical therapy for scoliosis. New research reveals that targeted exercises may be an additional nonsurgical option for scoliosis.

A recent literature review of studies that encompassed 1,654 treated patients and 688 controls concluded that, "Apart from one ... all studies confirmed the efficacy of exercises in reducing the progression rate (mainly in early puberty) and/or improving the Cobb angles [used to measure spine curve] (around the end of growth). Exercises were also shown to be effective in reducing brace prescription." (*Disabil Rehabil* 2008;30:772-85.)

Another recent study that looked at 112 patients with adolescent idiopathic scoliosis found that bracing plus exercises reduced the rate of surgery compared with bracing alone. The study concludes, "The treatment produced a statistically significant reduction in the worst curves, and the best results have been obtained in the curves over 40 degrees. Provided the use of a complete conservative approach, there is very little doubt that it is possible to reduce the rate of surgery in AIS [adolescent idiopathic scoliosis] treatment." (*Stud Health Technol Inform* 2008;135:395-408.)

### Turn to Chiropractic First

If you are concerned about scoliosis, make sure to schedule a chiropractic checkup before turning to more aggressive treatment options, that may have adverse effects.

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