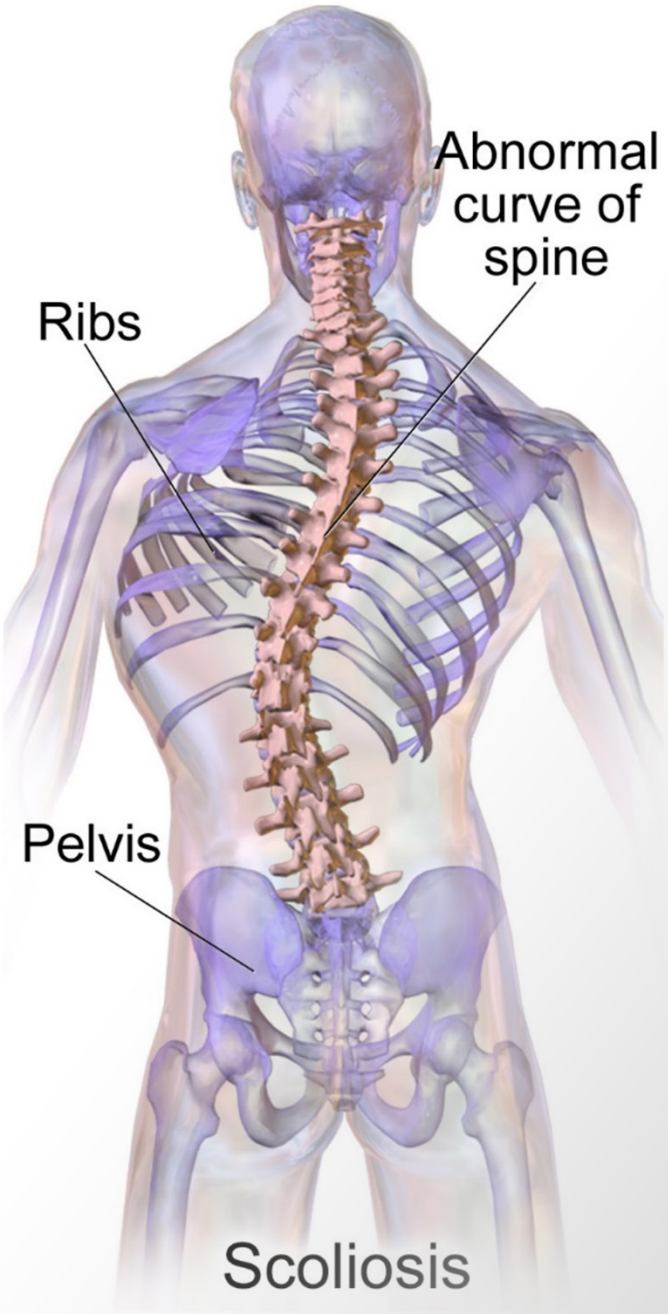
5 THINGS YOU MUST KNOW ABOUT SCOLIOSIS



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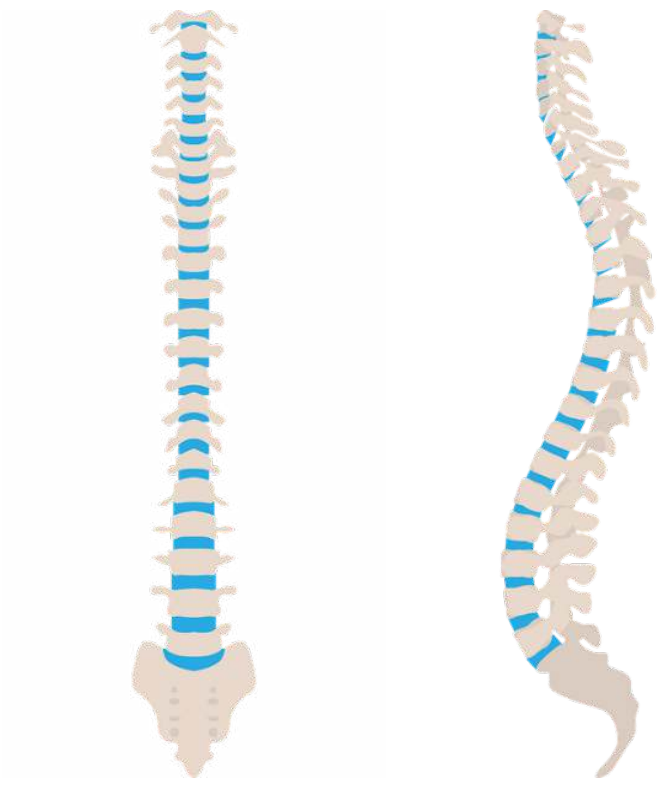
Do you have scoliosis? Or do you know someone else that does? The following are the 5 most important things to know about scoliosis and what to do about it.

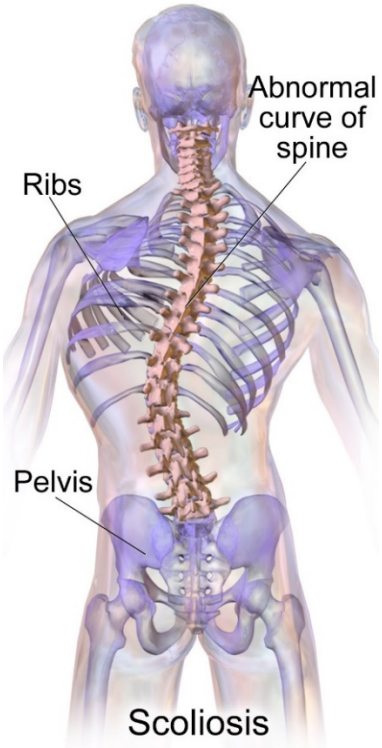
1. WHAT IS SCOLIOSIS?

When viewed from the front, the spine is normally straight. From the side view the spine is supposed to have curves.

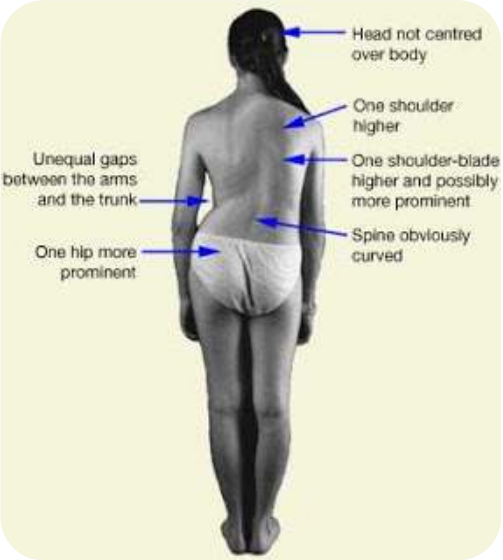


Normal spine from the front and side.

Scoliosis is traditionally defined as an abnormal side-to-side curvature of the spine. But scoliosis is actually a complex 3-dimensional deformity of the spine, ribcage and pelvis; with changes in the side view, as well as twisting or rotation of the spine and ribs as well.



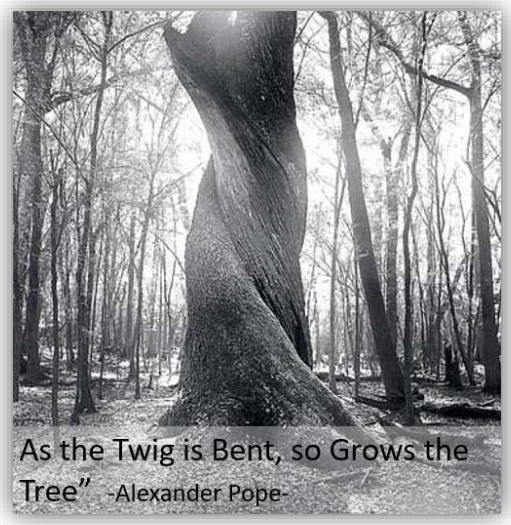
Scoliosis, particularly in adolescents, is a condition that can worsen significantly over time. The effects of scoliosis include: poor posture, shoulder humping, muscle weakness, and pain. Many of the postural abnormalities can be seen quite easily when someone looks for them.



In rare cases scoliosis can lead to heart and lung problems. Traditionally, a scoliosis is defined by measuring an angle of spinal curvature on a front-to-back view X-ray. To qualify as a scoliosis the curve must exceed 10 degrees. This simple measurement, called the "Cobb angle" implies that scoliosis is a problem of the spine in just one view. However, once again, scoliosis is really a complex 3-D change of the spine, ribcage and pelvis. It takes dozens of measurements to accurately measure and evaluate a scoliosis. Any doctor who relies on ONE number, is over-simplifying the problem.

2. WHAT CAUSES SCOLIOSIS?

The exact cause of scoliosis is unknown, or "idiopathic". There are many theories that have been studied trying to identify the cause of scoliosis, but none have been completely accepted. However, it is known that once a scoliosis starts, the unstable alignment of the spine predisposes it to worsen. As the saying goes, "as the twig is bent, so grows the tree".



It is also well known that there is a genetic tendency for scoliosis. Scoliosis tends to run in families, particularly among females. But this does not mean that scoliosis worsening is inevitable. A significant body of research evidence now shows that even cases with a traditionally poor prognosis can be successfully managed and surgery can often be avoided.

Scoliosis can affect people of ALL ages. Once scoliosis is present, it only goes away in very rare circumstances.

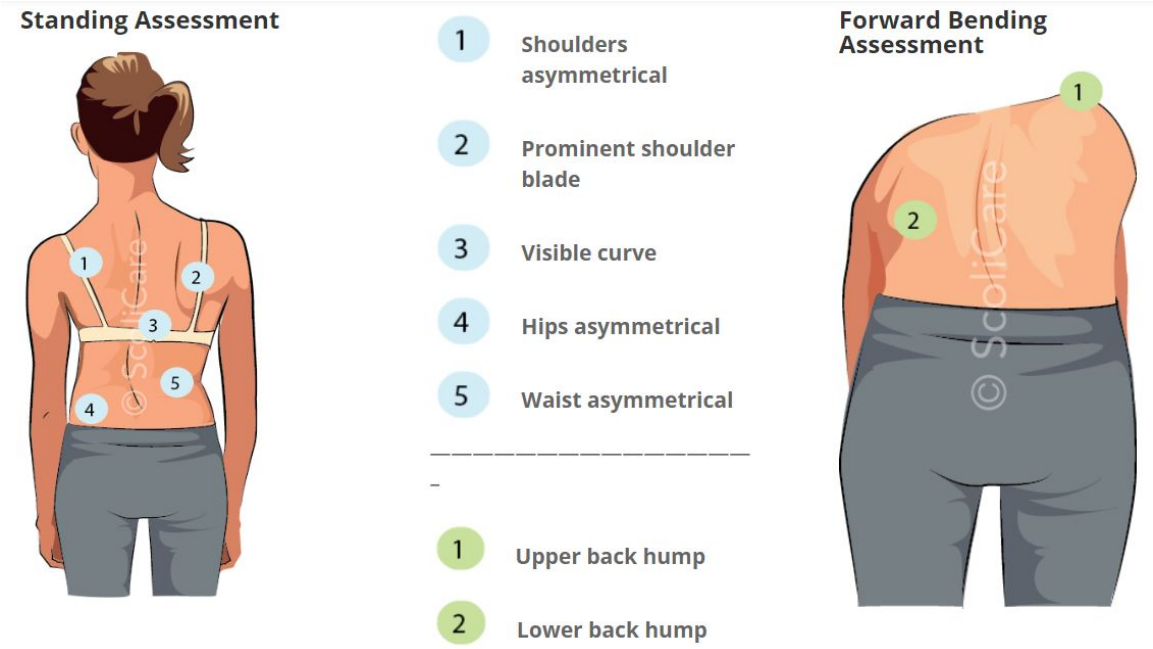
The most common type of scoliosis is detected in adolescence. It is also during this span of time when scoliosis is also known to worsen at a faster rate due mostly to growth spurts. It was once thought that when a person with scoliosis reaches the end of growth, that the scoliosis would not worsen. This is now known to be untrue, particularly for curves over 30˚. Long term outcomes in adults with curves over 50˚ are particularly poor.

The patient with scoliotic spine is known to develop more arthritis as they age. Additionally, a person with scoliosis is also at risk for more severe back pain in adulthood. This pain can be managed non-surgically in most cases.

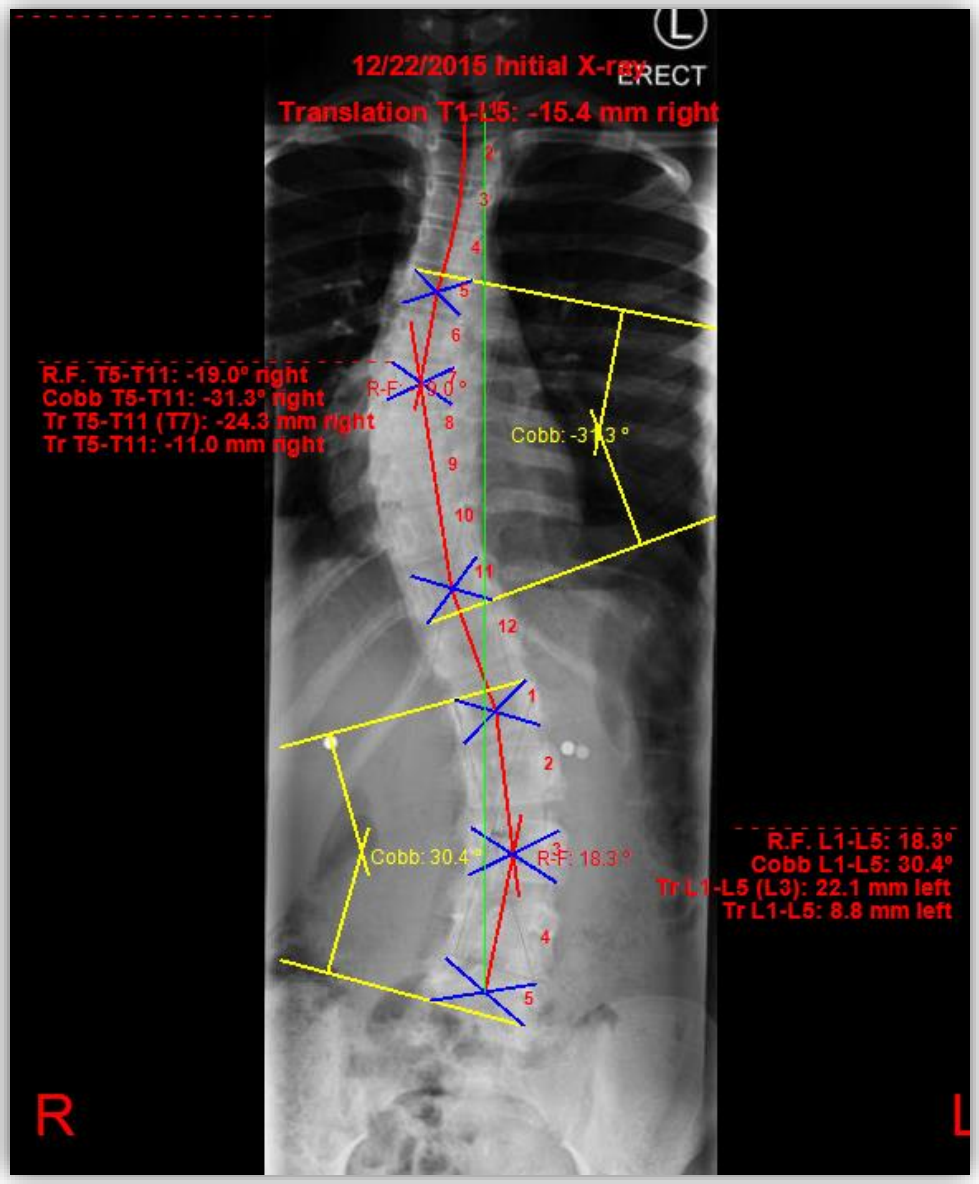
3. SCREENING PROCEDURES TO IDENTIFY SCOLIOSIS

The first step in a proper scoliosis evaluation is to look at the posture. Is there a high shoulder on one side? Is the ribcage asymmetrical? Is one shoulder blade sticking out further from the back? Is the waistline asymmetrical right to left? These are common outward signs of scoliosis. Any of these abnormal postures in a child or adolescent should be evaluated by a professional well-trained in scoliosis analysis and detection.

There is also a simple examination procedure, called the "Adam's" forward bending test to check for scoliosis. When a person with scoliosis bends forward at the waist, the twisting component of the scoliosis worsens. In the mid back this results in "humping" of the rib cage. In the low back, the only thing that "humps" is the muscles along the side of the spine. It is more difficult to see this in the low back. These screening procedures are not accurate enough to detect scoliosis when it is just starting.

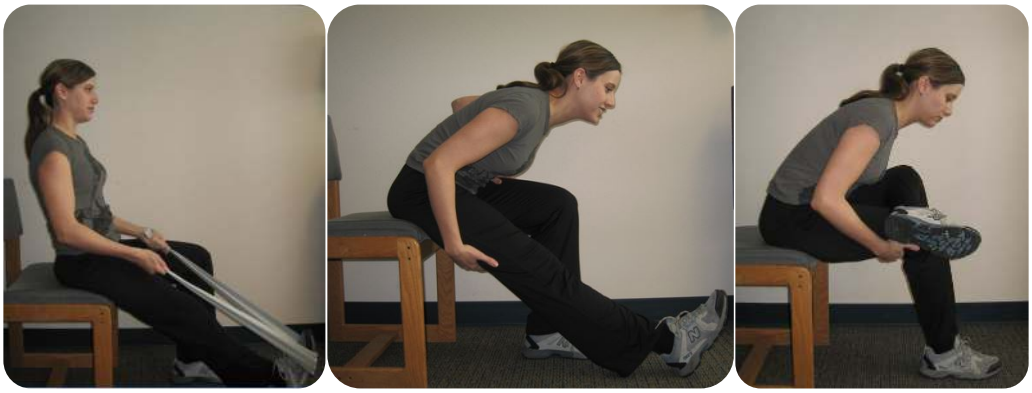


X-rays always have been and continue be the gold-standard for scoliosis identification and measurement.


12/22/2015 Initial X-ray
ERECT
Translation T1-L5: -15.4 mm right
R.F. T5-T11: -19.0° right
Cobb T5-T11: -31.3° right
Tr T5-T11 (T7): -24.3 mm right
Tr T5-T11: -11.0 mm right
Cobb: 30.4°
R.F. L1-L5: 18.3°
Cobb L1-L5: 30.4°
Tr L1-L5 (L3): 22.1 mm left
Tr L1-L5: 8.8 mm left
R
L

4. WHAT YOU CAN DO AT-HOME FOR SCOLIOSIS

Besides the exercises described below that are designed for each specific scoliosis and prescribed by a qualified health care provider, there is no research showing stretches or exercises that can be done at home to IMPROVE a scoliosis. Strengthening the core muscular system is always good for almost everyone, especially people with chronic low back pain, but it will not improve a scoliosis. No amount of going to the gym, strength training, stretching, etc., has been shown to improve the deformity of scoliosis. However, if you suffer from low back pain associated with scoliosis, which is very common, especially in adults, there are some simple home stretches and exercises that can be done that may alleviate your symptoms.



One of the more effective stretching series for patients with low back pain, in my 20 years of experience, is loosening up the hamstrings and calves. Stretches are typically held for 10-20 seconds, followed by relaxation for about 5-10 seconds, then repeating the stretch. At Modern Chiropractic Center we teach our patients to progress through the calf, hamstring and glute/hip stretches shown above.

Two relatively simply at-home exercises to strengthen the low back are the dead bug and bird dog exercises. These exercises strengthen the core, while protecting the spine. If your pain is too intense to tolerate these simple exercises, consult your doctor right away. It is likely that you have to get pain relief before the exercises can be performed.

5. #1 THING DOCTORS WON'T TELL YOU: NON-SURGICAL TREATMENTS CAN ACTUALLY WORK!

For mild and moderate curves the traditional medical approach is "watchful waiting". This is exactly what it sounds like, wait and see if the condition worsens. Instead of passively waiting for a curve to worsen, most people want the most progressive forms of non-surgical scoliosis management possible.

Chiropractic Biophysics® incorporates unique spinal rehabilitation exercises and customized spine traction to help reduce the curvature. It is important to note that exercises, like the ones used in CBP® technique have shown remarkable success when properly incorporated into a scoliosis rehabilitation program. These rehabilitation methods are used extensively in Europe, but have not yet been commonly utilized in the United States. A properly trained scoliosis rehabilitation expert will design a series of corrective exercises targeting the specific type of scoliosis for each patient. These are not cookie-cutter exercises, or plain core-stability exercises you might get at a physical therapist's office. None of the traditional symmetrical strength and stability training exercises have been shown to reduce scoliosis to a statistically significant extent.

If the curve is more severe, an orthotic brace is often prescribed. The most common brace prescribed in the United States is the Boston Brace. Most traditional Boston braces are classified as "symmetrical" in nature. That is, they do not push the spine into correction, instead they are designed to hold the spine into a neutral, symmetrical position.

In other countries, more progressive scoliosis braces have been designed. In fact, contrary to what is typically available in the U.S., there are many braces and brace options used throughout the world. The most recent research shows these progressive designs are more effective than the traditional designs that have been used in the U.S. medical industry since the 1970's. Advances have been made in the decades since the Boston brace was first invented and other countries have used that knowledge as a solid foundation to design the most effective braces possible. One such brace is the ScoliBrace, designed in Australia. It is a brace produced by modern 3-dimenensional scanning technology interfaced with a Computer-Aided Design (CAD) software resulting in a completely one-of-a-kind, custom corrective 3-D brace. Dr. Joe Betz is the lead U.S. training expert for ScoliBrace, Inc.

If you are curious as to whether scoliosis specific exercises and rehabilitation and/or a custom 3D ScoliBrace may be right for you, please contact us right away. Time is always of the essence when it comes to scoliosis!

ABOUT THE AUTHOR:

Dr. Joe Betz has been managing scoliosis patients for nearly 20 years in clinical practice. He wrote his first Chapter in a textbook on Lumbar Scoliosis only 3 years after having earned his Doctorate of Chiropractic degree. He has co-authored several peer-reviewed research papers related to the topic of scoliosis and other spinal deformities. Dr. Betz has also traveled the world teaching chiropractors and other health care providers on proper scoliosis management. He is a consultant and head of U.S. training for ScoliBrace utilization. Dr. Betz has been an instructor for Chiropractic BioPhysics® technique for 15 years and is the current Vice-President of CBP® NonProfit. He actively sees patients at his Boise clinic, that include many scoliosis patients that travel from around the country seeking the best combination of conservative options for scoliosis management.

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