

Common questions about
Idiopathic Scoliosis

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What is scoliosis?

Scoliosis is when the spine rotates and curves as it grows. As the spine “twists”, it can make the ribs, pelvis and/or shoulder on one side higher than the other. This change in body symmetry is the most common way that scoliosis is first suspected.

Why is it called “idiopathic” scoliosis?

Idiopathic is the medical word for something that does not have a clearly known cause. Idiopathic scoliosis is the most common type of scoliosis, although there are other forms that I look for when I meet with you. Researchers recently discovered a gene that may be associated with having scoliosis, although more research is underway right now to further understand this finding. We do know that scoliosis occurs more often when another family member (mom, dad, sister, brother, aunt, uncle...) also has scoliosis, but it is still more common for you to be the first in the family to have scoliosis. We do not understand the genetics well enough to accurately predict the likelihood of another child to get scoliosis when one family member has it.

Who gets scoliosis?

Scoliosis most often occurs in otherwise totally healthy kids. It is most often diagnosed when kids are 11 to 13 years old. Girls and boys get scoliosis at nearly the same rate when the curve is small, but it is more likely to get bigger in girls. In kids with bigger curves (like 30 degrees or more), the girl to boy ratio is about 4 to 1.

Does scoliosis cause pain?

Scoliosis is not felt to be the source of back pain in the majority of patients. It is increasingly common in the United States, however, for adolescents to complain of back pain for reasons not clearly understood. If you have back pain, I will recommend the same treatment whether or not you have scoliosis. This might include a change in your activities, using Tylenol or Motrin medicine, or working with a physical therapist.

Will scoliosis hurt your lungs, heart, or stomach?

Scoliosis has to be extremely severe before it causes any significant compression of your internal organs. Only when curves are 100 degrees or more does this happen. I will help make sure that this never happens to you.

Will scoliosis kill you or shorten your life?

No. Scoliosis has to be extremely severe to start affecting your lifespan.

Do you have to stop doing any of your activities because you have scoliosis?

No. You can continue all sports, etc., no matter how vigorous as long as you are comfortable doing so. Scoliosis does not weaken your back, or seem to make you more prone to injury.

How will you know if your curve is getting worse?

If your curve is worsening, you might notice that your shoulders are becoming less level, that your waist is less level, that you have more of a curve on one side of your flank than the other,

or that your ribs are sticking up even more on one side than they used to. As mentioned, you would not expect to have more pain if your curve is worsening.

I will be checking your back during doctor visits and with x-rays. I will be measuring the angle of your curve each time. The accuracy of measurement is about 5 degrees, meaning that if the curve is measured on your new x-ray to be less than 5 degrees different than the last x-ray, then the curve may not have changed at all. If I measure 5 degrees or more difference, then the curve probably has changed.

Do you need a MRI of your spine?

A MRI is ordered only if I suspect something unusual about your curve – perhaps the shape of it, how fast it is worsening, the nature of your pain is very abnormal, or if your muscles reflexes, or examination is not normal. For most patients, everything is normal and only regular x-rays are needed.

When is scoliosis most likely to worsen?

The time when scoliosis is most likely to worsen is around the time of your growth spurt (usually between ages 11 and 13). For boys, this may occur a year or so later than in girls. Scoliosis is not entirely predictable, though, and can change in “spurts and stops.” I may ask you about recent growth spurts, or whether you have had your first period in order to help decide how likely your scoliosis is to change.

How is scoliosis treated?

If the curve is small (generally less than 25 degrees), or your body is already pretty mature, then your scoliosis may need no treatment and I will only recommend continued check-ups with x-rays over time to make sure that it doesn't worsen. When a curve gets to 25 degrees in a younger patient, or 30 degrees in an older patient, I may talk to you about using a scoliosis brace. Surgery is recommended if your curve gets to 45 degrees and you are still young or 50 degrees if you are older.

What about other treatments?

Although you can find a lot on the internet, or hear a lot about other treatments for scoliosis (such as chiropractics, yoga, physical therapy, electrical stimulation, etc.), you should understand that there is very little, if any, real science that suggests that any of these types of treatments help in any way. In fact, there are many studies that show just the opposite – that such approaches don't change your scoliosis at all. I do not recommend such treatments for you.

What kind of a brace is used?

There are 2 kinds of braces that I feel can be helpful. The first type is known as a Boston brace. This brace is a full time brace, meaning that you will be asked to wear it as much as possible every day, including at night. The brace starts under your arms and extends down to your waist. It is very difficult to notice if someone is wearing this brace when wearing clothes. You would be able to take it off for sports, or other times when it really is not possible to comfortably wear the brace. The second type of brace is known either as a Charleston bending brace, or a Providence brace. This brace is to be worn only during the night time when you sleep. I do not feel that the studies on other types of braces, such as the Spine Cor brace, have convincingly shown a benefit and so I will not recommend these alternative braces.

How do we decide which brace to use?

The type of curve that you have, how big of a curve that you have, and how mature your body is all influence what brace is recommended. I will talk with you about the good things and bad things about each choice, and then we will make the best decision together.

How long will you need a brace?

In general, you would no longer need to use the brace when your bones are mature on x-ray, or if your scoliosis has worsened to the point where surgery is recommended. It is common for the brace to be needed until age 14 to 16.

How effective is bracing?

The results of scientific studies of how well braces work are still mixed. The best published study to date suggests that for girls with curves between 25 and 35 degrees a Boston brace is helpful. There was no change in the scoliosis in 74% of these girls who wore the brace as compared to only 34% of girls who did not wear the brace. Unfortunately, the results for bracing boys are not as positive. Studies of boys with scoliosis have shown that the curve increased 75% of the time even though a brace is worn.

When is surgery recommended?

Surgery is a good option if you are still young (e.g. you haven't had your first period, or you haven't had your growth spurt), and your curve measures 45 degrees. Surgery is a good option if you are older and your curve measures 50 degrees. These numbers are based on studies that show a much higher likelihood of the curve worsening at a rate of 0.7 degrees per year throughout life (even though you are done growing) for these larger curves. Although this doesn't seem like much, you are young and eventually the curve can become very severe.

Why is surgery recommended?

The most important goal of the surgery is to stop the scoliosis from getting worse. The second goal is to help make your body more symmetric looking. Although some patients tell me that surgery helped their back pain, this is not the reason to have surgery.

What is done during surgery?

After you are fully asleep and can feel no pain, I straighten your back by placing screws and 2 rods into the bone. Generally, about 80% of the curve can be corrected in this way. During the straightening, I also do my best to make sure your waist and shoulders are leveled and that your ribs are no longer higher on one side. Bone from a bone bank is then placed along your spine to help it solidly heal. The rods and screws can stay in your body for your whole life. You should never be able to feel them inside your body.

What will happen when I go through airport security after surgery?

I have yet to have a patient return and tell me that this has been a problem. There is a study of other types of metal implants that showed that airport screening alarmed on about a third of people, but for some reason I have never heard of it on one of my patients.

How safe is surgery?

Complications can happen but are fortunately quite unusual. We take every step possible to make sure surgery is as safe as possible – we have excellent anesthesiologists, have very sophisticated neurologic monitoring during surgery, and have a lot of experience as surgeons. Scoliosis surgery is done frequently here at Kaiser Oakland (usually twice a week).

How long are you in the hospital?

Typically, you spend the night of surgery in the intensive care unit so that a nurse is close by to help you, then you spend 4 more days in the hospital so that you can have strong pain medicines and work with physical therapy.

How long does it take to recover from surgery?

Most patients get out of bed and are able to sit in a chair the day after surgery. Patients begin walking around their room and around the hospital starting the second day. For the next 4 to 6 weeks, patients increase their activities as they feel more comfortable. In general, I recommend planning to have home schooling for 6 weeks after the surgery. The majority of patients are back to doing almost all of their activities by 3 months, and back to everything by 6 months.

What limitations would I have after surgery?

I do not set specific limitations after surgery. Right after surgery patients are still sore and will limit themselves to a safe level of activity. As patients feel better, it is generally safe to increase the intensity of activities. Long term there would be no restrictions anticipated including any sport or job.