

Straight talk about scoliosis: Advanced treatments benefit patients of all ages



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For patients with scoliosis -- a musculoskeletal disorder in which the spine develops a sideways curve -- orthopedists must take into account many factors to determine what level of intervention, if any, is required, including patient age, the degree of the curve and the presence or absence of pain.

Dr. Daveed Frazier, orthopedic spine surgeon at New York City Spine Surgery PLLC, with practices in New Jersey and New York City, says that in addition to the familiar "S" or "C" shaped curve of scoliosis, the condition also causes the individual vertebrae to twist or rotate. Because scoliosis is a "very complicated" subject, no two cases are exactly alike.

He notes some degree of curvature is often common among human spines.

"To really be considered scoliosis, a curve has to be at least 10 degrees or more," Frazier says. "If you look at the population, especially among women, a substantial number of people have a curvature measuring less than 10 degrees. It's like saying you have blue eyes."

As one of the world's foremost experts on minimally invasive and motion-preserving treatments of the spine, Frazier says part of his responsibility as an orthopedic surgeon is to see patients who won't require surgery. In fact, he says he operates on less than one-third of the patients whom he sees. The patients not requiring surgery he refers to top non-operate experts, such as chiropractors, physical therapists and pain management doctors.

"I feel very strongly that before we consider surgery on anyone, we want to try non-invasive interventions as much as possible," he says, including physical therapy, chiropractic treatments, anti-inflammatories, and, if needed, pain management options such as epidural injections or nerve blocks.

In the case of adolescent scoliosis, Frazier says the primary reason for surgery is to prevent progression of a large or fast-growing curve, whereas in adults, the goal is to relieve pain and restore function and proper alignment.

Bracing is an option in adolescents who are still growing; however, it is not effective for adults.

"Scoliosis in adults is a different entity than scoliosis in adolescents," he notes.

While adolescent scoliosis is typically painless, adult patients with the condition frequently experience painful symptoms in the back and legs because their scoliosis is associated with arthritis. That's why an adult patient might undergo surgery for pain related to a curve measuring 40 degrees, while a young person experiencing no pain with a similar 40-degree curve would not necessarily be a candidate for surgery, Frazier says.

Conversely, adult patients even with large curves might not require treatment if they are symptom-free, but a 10-year-old girl may require surgical intervention for a large, fast-growing curve even when pain is not a factor.

"In adolescents, you will typically see the fastest increase in the size of the curve when kids have growth spurts," Frazier says, noting that girls grow on average until age 14, and boys typically stop growing around the age of 16.

"If, by the time a child has finished growing, the curve measures less than 45 degrees, it's unlikely that the curve will become larger and intervention would not be necessary," he says. "However, if the curve is over 45 degrees, there is a reasonable chance that the curve is going to continue to grow 1 to 2 degrees per year for the rest of that person's life."

This is problematic, he says, because when curves get very large -- more than 70 degrees -- "it can affect your breathing and, in theory, shorten your lifespan."

Also, while adults are generally not as self-conscious, young people tend to be concerned that a curve will affect their appearance and interfere with normal functioning.

"At any age, once you hit the 45- to 50-degree mark, it becomes more likely that you're going to require surgery," Frazier notes.

He says although surgery in adults involves different challenges because spinal curvatures are more rigid, less-invasive spinal surgery technologies have emerged in the last 10 years that result in less blood loss, less pain, shorter hospital stays and a faster return to normal life.

"Not only do these procedures make things easier for both the patient and the physician, they have made people candidates for surgery who, 10 years ago, would have had to continue to suffer."

In addition to these surgical advances, Frazier says scientists have developed non-invasive tests to determine genetic predisposition to scoliosis. Soon, health care providers will use simple mouth swabs for all patients to determine if a person will require surgery for scoliosis.

"There have been a lot of genetic studies done that have shown if a person's genome looks a certain way, there's a 95 percent chance that they will need an operation at some point.

"This is not in our distant future," he said. "It's a reality that's here and present today."

The NJ Practice of New York City Spine Surgery, PLLC helps patients from around the world overcome back pain and dysfunction. The practice's New Jersey office is located at 261 James St., Suite 2G, in Morristown. Call (973) 998-9651 or visit newyorkcityspine.com for information or to make an appointment. **- Kerry Serzan**



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