

Mini Scoliosis Surgery uses smaller incisions for a faster & easier return to activity

For some patients with spinal curves, surgery can be necessary to prevent the curve from pressuring internal organs and shortening one's lifespan.

Scoliosis surgery is based on a two-rod instrumentation system with screws that attach to each vertebral level, to de-rotate and straighten the abnormal curve. An incision is made in the back so the surgeon can access the vertebrae and install the necessary instrumentation, rods, hooks and screws.

Traditional scoliosis surgery can involve a long 12 to 24-inch incision to enable the surgeon to access the spine and correct the curve. While this surgery is effective, the recovery period is significant because of the long incision and disruption to muscles and ligaments.

A new advanced treatment option, however, is "mini scoliosis surgery" which is done in only a handful of scoliosis centers in the United States.

Dr. Matthew Geck at Ascension Texas Spine & Scoliosis Center is one of the developers of this new mini scoliosis surgery technique. With mini scoliosis surgery, Dr. Geck is able to use special instruments and work through three smaller incisions to straighten the spine with far less muscle and

tissue disruption. The benefit of mini scoliosis surgery to the patient is significant:

- The shorter incisions involve less blood loss and no need for outside blood, which lessens risks.
- The shorter incisions cause less disruption to muscles and tissues so the patient has a less painful and quicker recovery.
- There is less risk of complications and less time in the hospital.

When to consider scoliosis surgery

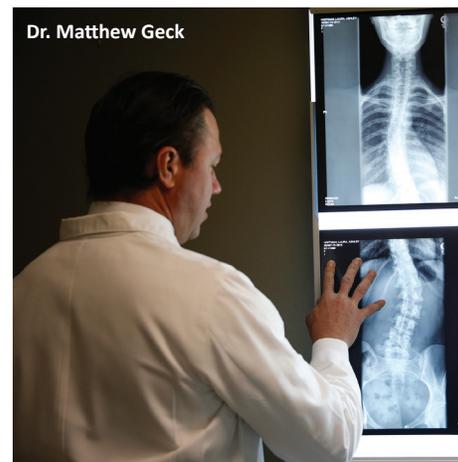
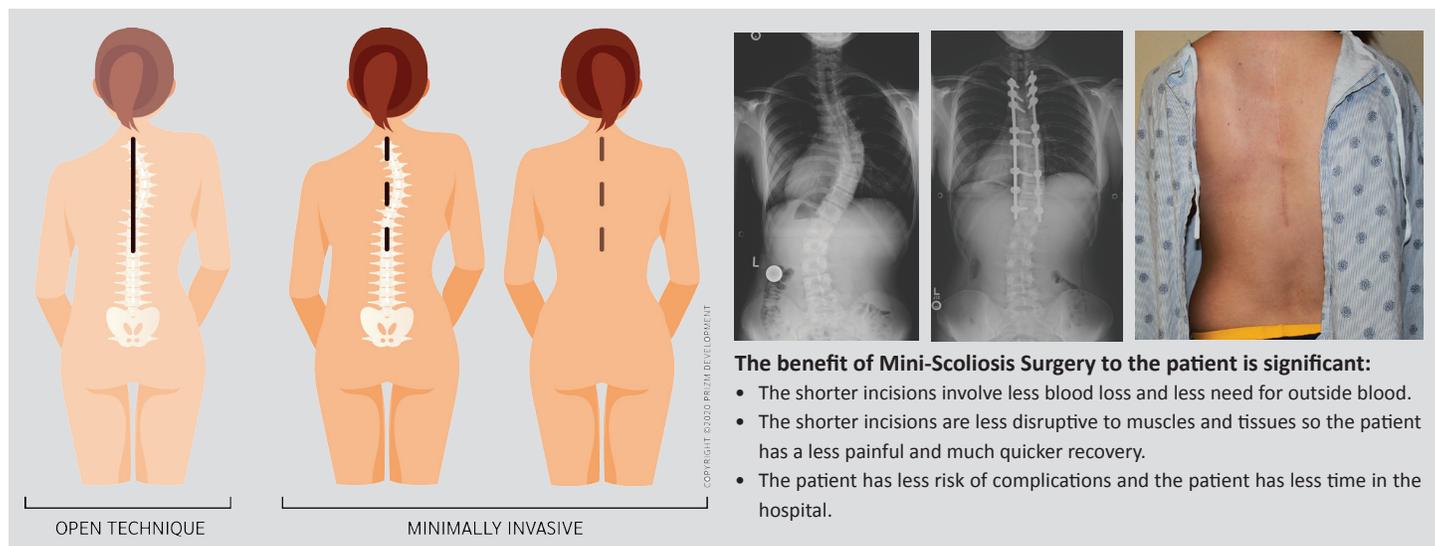
When should a person consider scoliosis surgery to straighten a curve? It's a complex decision, because waiting too long carries increasing risks. That's because the spine is most flexible — and more receptive to correction — when the person is under 21 years of age. In addition, younger patients get restoration of lung function and prevention of disc degeneration with scoliosis surgery.

If an aggressive spinal curve is left untreated, it can cause pain and put pressure on internal organs which can shorten a person's lifespan. Some adults can have severe degeneration of their scoliosis leading to "collapsing spine syndrome," in which they lose height, stoop forward and develop bone spurs that pinch their spinal nerves. Another

complication can be osteoporosis, where the vertebrae in the spine become porous and brittle, causing vertebral fractures. This can limit surgical options.

Harrington Rods & revision surgery

Harrington Rods date back to the 1960s. It was a stainless steel rod that was the precursor to current instruments. Harrington Rods were the most common system for scoliosis surgery for a couple decades. However, while the new instruments de-rotate and straighten the spine, Harrington Rods take a corkscrew-like spine and merely bend it straight without

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derotation. This has unfortunately become a problem for all those treated in that era with this now-obsolete system. It is estimated that around one million people had Harrington Rods implanted over 30 years with some people developing Flatback Syndrome as a result.

Some of the symptoms of Flatback Syndrome include having trouble maintaining one's posture, low back pain and upper leg pain. Since the person has trouble maintaining proper alignment, the symptoms can increase throughout the day causing extreme pain and fatigue.

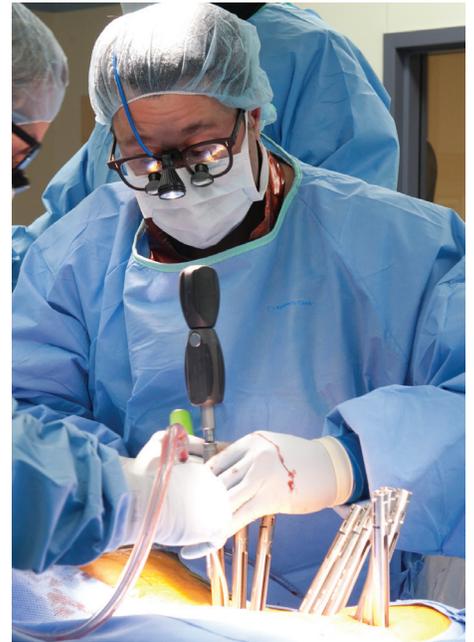
Patients might also have upper back and neck pain due to constantly trying to realign themselves. With some people, the pain symptoms can result in dependency on painkilling drugs.

In some cases of Flatback Syndrome, the unnatural spinal curve can cause discs to herniate resulting in even more pain

symptoms. Other conditions that may cause flatback syndrome include having a collapsed vertebrae. Arthritis can also contribute to flatback syndrome and cause inflammations in the spine, which may cause pain and stiffness. Most patients with flatback syndrome will complain of pain while standing upright.

Treatment starts with full-length X-rays of the spine. An MRI or CT scan might also be taken. If all non-surgical options fail to relieve symptoms, then surgery may be recommended to remove the Harrington Rods, treat the herniated discs and to address other pain symptoms. During surgery, the scoliosis surgeon replaces the old rods with new technology that provides a more correct curve that relieves symptoms.

The good news about scoliosis is that the vast majority of people diagnosed with scoliosis will often live normal, active and healthy lives.



PHYSICIAN BIO

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Matthew J. Geck MD is a board-certified, fellowship-trained spine and scoliosis surgeon. Dr. Geck's practice is exclusively focused on the niche of spine and scoliosis surgery. This includes patients with adult and pediatric scoliosis, kyphosis, failed surgeries, spinal cord compression, flatback syndrome from Harrington Rods and other complex spinal problems. His specialty spine practice has been based in Austin since 2002. Over the past 20 years, Dr. Geck has performed over 2,500 spine surgeries. His scoliosis practice receives patients from across Texas, surrounding patients and Mexico. He also performs surgeries in South America through his non-profit foundation SpineHope.

Dr. Geck's focus is on pediatric and adult patients with scoliosis, kyphosis, spinal cord compression, failed previous surgeries, and other complex spinal problems. He is experienced in minimally invasive scoliosis surgery, spinal stapling and tethering (fusionless scoliosis surgery), complex spinal reconstruction, osteotomy surgery, and revision surgeries.

Dr. Geck was raised in Wisconsin. He performed his undergraduate work at the University of Wisconsin in the Medical Scholars program and graduated Phi Beta Kappa. He attended medical school at the University of Wisconsin School of Medicine and graduated Alpha Omega Alpha. Dr. Geck performed his orthopedic surgery residency at UCLA Medical Center. He then performed two spine fellowships in adult and pediatric spine surgery, the first at Jackson Memorial Hospital and a second in pediatric scoliosis and kyphosis surgery at Miami Children's Hospital. He moved to Austin, Texas in 2002 where he started his spine deformity practice.

Dr. Geck has authored more than 80 scientific papers, book chapters, and abstracts for the journals Spine, The Journal of Spinal Disorders, Orthopedic Clinics in North America, The Spine Journal, and the Journal of the Scoliosis Research Society: Spinal Deformity, and presentations at the Scoliosis Research Society, International Meeting for Advanced Spinal Techniques, North American Spine Society, Cervical Spine Research Society, the Society for Minimally Invasive Surgery of the Spine, and the American Academy of Orthopaedic Surgeons.

Dr. Geck was certified by the American Board of Orthopaedic Surgery in 2004 and is a Fellow of the American Orthopedic Association, the Scoliosis Research Society, North American Spine Society, and the American Academy of Orthopedic Surgeons, the Society for Minimally Invasive Surgery of the Spine, and the Cervical Spine Research Society.

Dr. Geck also contributes his time as Medical Director for SpineHope which performs free spine surgery for children in poverty-stricken countries across South America and elsewhere. Dr. Geck has traveled to more than 20 international locations, performing spinal deformity surgeries at various hospitals across South America. He has supervised or performed over 200 spine surgeries in these locales, and has seen over 1,000 children with severe or neglected spinal deformities. Through SpineHope, Dr. Geck provides advanced training to local spine surgeons at these hospitals in the specialty of spinal deformity and scoliosis. To learn more about this foundation, visit SpineHope.org.