Idiopathic Scoliosis

What is scoliosis?

Scoliosis is a curve of the spine from its typical straight position. This curve may also cause a rotation of the backbone (vertebrae) or cause the spine to curve forward (kyphosis).

When a child or teenager develops a curve in their spine during or after puberty, the medical team refers to it as "idiopathic scoliosis." *Idiopathic* means we do not know what causes this curve in otherwise healthy children. In young people, idiopathic scoliosis is not life threatening. However, if the spine's curve continues to bend, this can lead to breathing problems due to decreased lung capacity and other issues. It may cause children and adults to have poor self-image or cause day-to-day activities to be more challenging.



When is surgical treatment recommended?

Your healthcare provider will get X-rays of your child's spine and hips to see how much of a curve there is and think about how much your child's bones may grow. The measurements from the X-ray will help your provider determine the best treatment for your child.

If the curve in your child's spine is less than 50 degrees, then treatment may include waiting and repeating X-rays when they are a little older. In some patients, wearing a brace around the torso can help.

If the curve in your child's spine is more than 50 degrees, a surgery called "spinal fusion surgery" will be an option. Scoliosis curves become more difficult and riskier to treat as they increase in size. Patients in their early to mid-teens have flexible spines that are more easily treated.



What happens before surgery?

You will have a preoperative visit with your surgeon to review the X-rays, discuss surgery and consent for the procedure. This is a time to ask all the questions you have about the day of surgery and the recovery process. You will also have an appointment with Anesthesiology before surgery where your child will have some tests to make sure your child is healthy enough for surgery. This is called a P.A.S.S. (pediatric anesthesia screening service) appointment.

Do not give your child aspirin or NSAIDs (non-steroidal anti-inflammatory medications) in the two weeks leading up to surgery. Acetaminophen (Tylenol®) is allowed.

What happens on the day of surgery?

Day of surgery you will arrive early in the morning to be checked in. This surgery can take several hours. A member of the surgical team will give you progress updates directly or through an app during the surgery.

What are the important steps in spinal fusion surgery?

The anesthesiologist will provide medications to ensure your child's comfort and safety. Our anesthesia care teams monitor your child's vital signs beat by beat, watching for changes in heart rate, breathing and blood pressure, and adjust the anesthesia to keep your child comfortable.

After your child is asleep, the team members will insert a breathing tube, clean the surgical site and place a drain to collect urine called a Foley catheter.

The surgeon will then make a long cut along the skin, through muscle, to see the spine. Using guided navigation, your surgeon will place hardware, such as anchoring screws, metal rods and bone graft material on to the spine to straighten the curve to prevent the curve from progressing. The hardware, including rods and screws, are meant to last forever and will not need to be removed after surgery. The surgeon will close the incision with dissolvable sutures and place surgical glue and bandages over the incision. Your surgeon may also place a drain tube from your child's back to remove excess fluid from the surgical site.



After the surgery is completed and your child has awoken from the anesthesia medications safely, your child will be monitored in the Post Anesthesia Care Unit (PACU) prior to being admitted to the hospital for multiple days for pain control, removal of the Foley catheter, assistance with moving around and walking and practice with dressing changes, if applicable.

What can be expected after surgery?

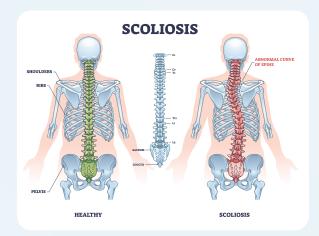
You will be scheduled for follow-up appointments for

- Monitoring the healing of the surgical site
- X-rays to evaluate healing and hardware,
- Receiving guidance on when your child can return to activities

After spinal fusion surgery, you can expect your child's curve to be improved by about 50-75%. The degree of curve and improvement varies, and many patients will find their spine looks straight after surgery even if it's not perfectly straight.

What will recovery be like at home?

When your child is discharged from the hospital, they will begin the first phase of recovery. They must continue to move around, get



comfortable at home and adjust to the feeling after surgery. You will be sent home with pain medications that will help until the wound and muscles have healed. You will be given guidance on how to decrease the amount of pain medications your child is taking. Your child will need help with moving around, bathing and other daily functions as they heal. Your child will get stronger and have more energy each day after surgery. After about 6 weeks, your surgeon will discuss increasing mobility. It can take up to 3 months after surgery for them to feel that they are back to their normal levels of energy.

What are the benefits & risks of surgery?

The benefits of the surgery include correcting the curve as much as possible, stabilizing the spine and preventing the curve from getting more severe to provide a more balanced spine. There is also improved self-image.

Spinal fusion is a major surgery. Please discuss with your surgeon and care team all of the risks of surgery.

What other concerns do families have about surgery?

Spinal surgery is not an individual challenge but an effort by the entire family. It is important that you and your child understand the surgery, have a good relationship with your surgeon, understand the benefits and risks of surgery, and have a good support system to aid your child while recovering from the surgery.

Most insurance companies require pre-authorization for hospital admission and surgery. Make sure we have the correct insurance information for your child on file. Our schedulers will contact the insurance company to begin the process.

A blood transfusion is sometimes needed for surgery. Your surgeon may be able to use special equipment that will collect, filter, and give your child's own blood back to them.

Will my child need to miss school?

School is important. This surgery may require your child to miss some time from school. Consider homebound schooling while your child is recovering. Begin the process for setting up homebound schooling before surgery by ask your child's school to send the necessary paperwork to your surgeon's office by email or fax.

We respect that this is an important decision and want for you and your child to understand the process for surgery as well as the benefits and risks. We are grateful for the opportunity to care for your child.