Spinal Fusion for Scoliosis

Table of Contents
- Spinal Fusion for Scoliosis

Surgery Overview

In spinal fusion for scoliosis, rods, hooks, wires, or screws are attached to the curved part of the backbone and the spine is straightened. Small pieces of bone are then put over the spine. The bone pieces will grow together with the spinal bone, fusing it into the proper position. Spinal fusion is major surgery that usually takes several hours to complete.

Although the basic procedure is the same, a variety of specialized techniques can be used to do spinal fusion. Many different types of spinal instrumentation are used to treat scoliosis. Also, techniques vary, from what type of hooks or rods are used to whether the surgery is done from the front of the body or from the back. The method chosen will depend on a number of things, including the child's age, spinal maturity, the location and severity of the curve, the clinical opinion of the surgeon, and the preference of the child and parents.

The surgical technique most often used to straighten and stabilize the spine is to do surgery from the back, called the posterior approach.

Another option is to do the surgery from the front of the body, called the anterior approach.

What To Expect After Surgery

Antibiotics to prevent infection are usually given at the beginning of surgery and continued for 24 hours after the operation.
Most people spend several days in the hospital after surgery, gradually increasing their movement over those several days. Depending on which technique was used, some people may be fitted for a brace, but this is much less common now than in the past.

By the time a person leaves the hospital after surgery, he or she will be able to dress, bathe, feed himself or herself, and walk around. A child may not return to school for 3 to 4 weeks.

Medicine used to reduce pain will be gradually decreased over a few weeks.

**Activity**

After surgery, it is important to avoid any extreme bending, twisting, stooping, or lifting of objects weighing more than 10 lb (4.5 kg). One should expect to spend the first weeks at home with occasional rest periods throughout the day.

Activities that could jar the spine—including competitive sports, ice skating, roller skating, and skiing (water or snow)—are restricted for 6 to 12 months. Cycling and swimming can usually be resumed in 3 to 4 months, unless prohibited by a brace or cast.

**Why It Is Done**

Surgery is indicated for:

- Your child has a moderate to severe curve or yours is severe, and the curve is getting worse.
- You have pain or trouble doing your daily activities.
- Bracing cannot be used or does not work.

Other factors considered before surgery include:

- Age, skeletal age, and status of puberty.
- Location of the curve.

Surgery may be considered in some situations, such as:

- An adult who has trouble breathing or who has disabling back pain caused by scoliosis.
- A very young child who has a severe spinal curve(s).

For very young children, the timing of surgery for severe scoliosis is controversial. Some experts believe that surgery should be delayed until
the child is at least 10 years old and preferably 12 because surgery stops the growth of the part of the spine that is fused. But in some situations, early surgery can't be avoided.

**How Well It Works**

Whether surgery is successful depends on many factors, including the flexibility of the curve and the technique that was used.

Multiple-hook, multiple-screws (that may also include hooks), and double-rod systems improve the shape of the spine and back as seen from the back and side.

The goal of surgery is not a perfectly straight spine but a balanced one, in which fusion prevents the curve from getting worse.

After surgery, back pain in adults usually gets better or goes away.

**Risks**

Risks of surgery include neurological complications, infection, and lung problems.

Surgery in an adult carries a higher rate of complications and risks than in a child or teen, including blood clots, infection, and neurological complications.

**Other risks of surgery**

Early complications of surgery include the following:

- Ileus (lazy bowel) is a common complication after spinal fusion. To treat this complication, the person is not allowed to have any food and drink by mouth until normal bowel function returns, usually within 36 to 72 hours after surgery.
- Collapse of a small portion of the lung is a common cause of fever after surgery. Frequent turning of the person and deep breathing and coughing help prevent this.
- Deep wound infections are rare but may require another surgery.

Late complications after surgery include the following:

- Back pain.
- Failure of the fusion. A rod or instrument that breaks usually indicates that not enough bone has formed fully fuse the bones
together. But if there is no pain and the curve seems stable, a broken rod does not need to be removed.

- Loss of lumbar lordosis (flat-back syndrome) is characterized by upper back pain, lower neck pain, inability to stand up straight, increasing upper back fatigue with prolonged upright posture, and front thigh and knee pain.
- Although neurological complications are rare, they can occur. To reduce the risk, most centers use intraoperative electronic monitoring of spinal cord functioning.

What To Think About

Fusing the curved area of the spine will cause that portion of the spine to stop growing. But this should not greatly affect a child's adult height, because the rest of the spine will continue to grow normally.

Complete the surgery information form (PDF) to help you prepare for this surgery.

Credits for Spinal Fusion for Scoliosis

By Healthwise Staff
Primary Medical Reviewer John Pope, MD - Pediatrics
Specialist Medical Reviewer Robert B. Keller, MD - Orthopedics

Current as of November 14, 2014

Note: The "printer friendly" document will not contain all the information available in the online document. Some information (e.g. cross-references to other topics, definitions or medical illustrations) is only available in the online version.

© 1995-2015 Healthwise, Incorporated. Healthwise, Healthwise for every health decision, and the Healthwise logo are trademarks of Healthwise, Incorporated. This information does not replace the advice of a doctor. Healthwise, Incorporated disclaims any warranty or liability for your use of this information.

The Health Encyclopedia contains general health information. Not all treatments or services described are covered benefits for Kaiser Permanente members or offered as services by Kaiser Permanente. For a list of covered benefits, please refer to your Evidence of Coverage or Summary Plan Description. For recommended treatments, please consult with your health care provider.