

## Spinal Fusion

A spinal fusion with instrumentation (screws) is an operation done to correct the curvature of the spine. During surgery, rods with hooks, screws or wires are attached to the spine to correct and hold the spine while the fusion takes place. There are several names for the devices - called appliances - that are used to hold the spine in place. Your doctor will decide which one is best for you.

### What is Scoliosis?

Scoliosis (skoh-lee-OH-sis) is a twisting and/or curving of the spine (Picture 1). It often begins in the growing years of life, especially during the teens. There are several types of scoliosis. Three of the most common types are:

**Congenital** - A curving of the spine present at birth caused by a malformation of the vertebrae.

**Idiopathic** - A curving of the spine that usually appears during the adolescent years. The cause is not known.

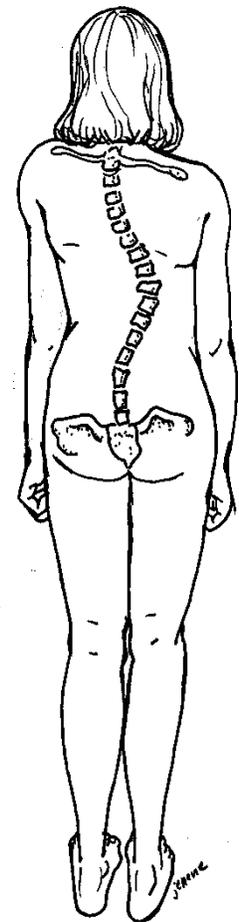
**Neuromuscular** - A curving of the spine caused by a defect in the nervous or muscular system.

Scoliosis is sometimes noticed when one shoulder or hip looks higher than the other one. In some cases, scoliosis can be treated with a brace to keep it from getting worse. In other cases where the curvature is more severe, surgery is needed.

### Preadmission Testing (PAT) Visit

You will be contacted by phone or mail and given a date for your PAT appointment. Ideally this visit will be scheduled about 2 to 4 weeks before your surgery date. This visit usually lasts from 9:00 am until 3:00 pm. At this time, you will have the testing your surgeon has requested. Your medical history will be reviewed by a nurse and you will have a physical exam. You will also be given information about what to expect while you are in the hospital and after you go home.

We will talk with you about pain control after surgery, and if needed, you will be taught how to use the PCA (Patient Controlled Analgesia) pump. Refer to the Helping Hand, *PCA (Patient Controlled Analgesia)*, HH-V-24.



**Picture 1** A type of scoliosis.

## Anesthesia

You will meet with an anesthesiologist during your visit. You will be told about the anesthetic and the monitoring equipment. The doctor will answer any questions you may have.

You will also have some of the following tests:

### EKG

An electrocardiogram (EKG) may be done. An EKG is a recording of your heartbeat. For this test you will lie on a padded table. The technician will put sticky patches on 6 areas of your chest. The sticky patches are connected to wires that lead to the EKG machine. The machine writes the impulses of your heartbeat on a piece of paper. You will not feel any pain from the test. The test takes about 5 minutes. (Refer to the Helping Hand, *EKG (Electrocardiogram)*, HH-III-6.)

### Spinal Cord Monitoring

You may have a Spinal Cord Monitoring test (motor evoked potential and Somato-Sensory Evoked Potential Response). This is to test the way your nerves function. It is done in the Pediatric Intensive Care Unit (PICU). The test takes about 2 hours. You will have flat discs and wires (similar to the EKG) put on your head, back and legs. The discs and wires will be removed after the test. You will be given medicine through an IV to help relax you before the test. It is important to avoid drinks that have caffeine (such as colas, chocolate and coffee) and foods that are high in fat (such as fried foods, ice cream and cheese) for 8 hours before the test.

### Pulmonary Function Test

A pulmonary function test may be done to test breathing capacity. You will be asked to breathe into a machine that shows how fast your lungs can expand and how much air you can breathe into the machine. This will take about 15 minutes.

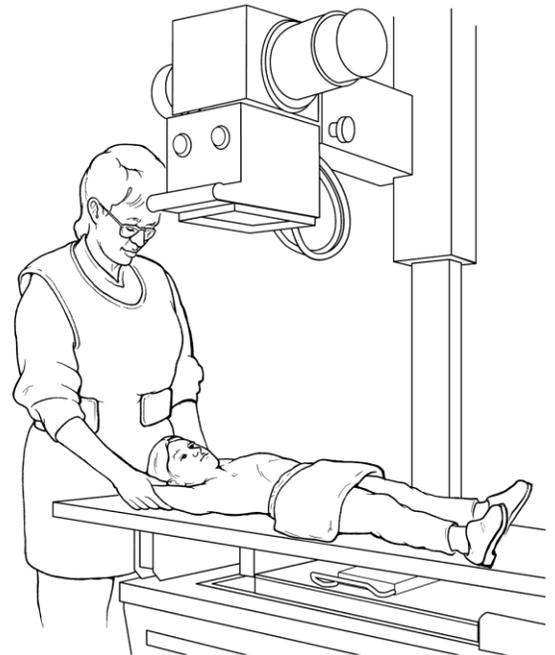
### X-rays

X-rays may be taken of your back while you stand in different positions. Chest X-rays may also be taken to check your lungs and heart (Picture 2).

### Lab Tests

Blood will be drawn for blood tests and you may be asked to give a urine sample. A pregnancy test for menstruating females is done at the PAT visit and again on the day of surgery.

If there is time, you may visit the Orthopedic Unit where you will be during your hospital stay.



**Picture 2** Having a chest X-ray.

## Dental Checkup

Be sure to make an appointment with your dentist for a checkup. It is important your teeth are in good condition (teeth cleaned, cavities filled, etc.) before you have surgery.

## What to Bring to the Hospital

You may bring items from home that you will need while you're in the hospital. Use this checklist as a reminder:

### Grooming Items

- Comb, hairbrush, mirror
- Shampoo and crème rinse
- Barrettes, hair bands

### Personal Hygiene Items

- Deodorant
- Toothbrush and toothpaste
- Note to girls: The hospital has sanitary pads, but you may bring the type that is comfortable for you. Please **do not wear or bring tampons**.

- Please put your name on personal items from home.
- The hospital is not responsible for personal property. It is best to leave jewelry and other valuables at home. Leave cell phones, pagers and laptop computers at home.
- To meet hospital safety requirements, please ask the nursing staff to have any electrical appliances checked for safety.

### Before Surgery

- Take a shower or bath and wash your hair at home the night before coming to the hospital (Picture 3). **Do not use hair spray, hair gel or hair styling mousse.**
- Remove all nail polish and jewelry.
- Long hair should be pulled back with a “scrunchie” before surgery.

### Clothing

- Pajamas (button-type) or nightgown
- Robe (tie-type)
- Slippers

### Other Items

- Crafts
- Playing cards
- Stationery and stamps
- Textbooks
- CD's (a CD player is in the room)
- Magazines and books
- Videotapes



**Picture 3** Wash your hair the night before surgery, but do not use hair spray, gel or mousse.

## Before Surgery, continued

- You may eat your usual foods until 8 hours before surgery. During your PAT visit, you will be given more detailed instructions.
- **On the day of admission you will come to Outpatient Surgery.** Your parents will fill out some papers.
- Your temperature, pulse and blood pressure will be taken in Outpatient Surgery.
- The flat discs and wires you had in your Evoked Potential test will be put on before surgery and removed after surgery.

## After Surgery

- If you are having an *anterior fusion*, you will go to the PICU after surgery. A tube will be placed in the side of your chest during surgery to help with drainage. The tube is connected to a plastic drainage container that provides suction. It will stay in place until the drainage stops (usually a couple days).
- The nurses will help you turn from side to side (“log rolling”).

### Information for Parents

The surgery may take 6 hours or longer. After that, your child will be in the Post Anesthesia Care Unit (PACU) for about 2 to 3 hours. Your child will leave Pre-Op holding for surgery between 7:30 and 9:00 am and will probably return to the unit around 5:00 pm or later. You may wait in the Surgery Family Waiting Room while your child is in surgery. Please tell the receptionist who you are. If you plan to leave the Surgery Lounge, tell the receptionist where you are going so she can find you and page you, only if absolutely necessary. The doctor will talk with you after surgery.

When your child arrives at the unit, your child’s nurse will review the doctors’ orders with you and will answer any questions you may have. After your child comes back from surgery, only one parent may stay overnight in the child's room. (There is not enough space for more than one parent to stay overnight.) If you need a place to sleep overnight, please talk with your child's nurse.

### PICU Visiting

Your child may need to be admitted to the Pediatric Intensive Care Unit (PICU) after this surgery. This is fairly common for this surgery. The staff of the PICU will work with you to plan a visiting schedule and to decide who will visit and when.

## After Surgery, continued

### Nutrition

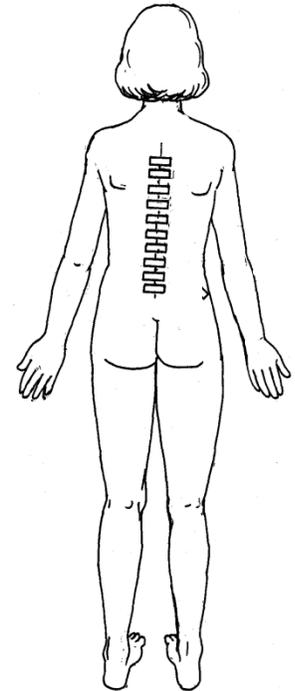
You may need to take a multivitamin or an iron supplement before surgery if you are donating your own blood. Refer to the Helping Hand, *Blood Donation: Autologous*, HH-II-124. Check with your surgeon about this. After you go home, you may eat your usual foods unless your doctor tells you otherwise. It is important to eat a balanced diet after surgery to promote healing. Do not try to lose weight during this time. You should drink a lot of liquids and eat lots of fresh fruits and vegetables.

### Care of the Incision and Personal Hygiene

- There may be plastic over the incision and tape-like strips called Steri-Strips® (Picture 4)
- You will be able to take a shower after you go home unless your doctor instructs you otherwise.

### Activity

- Your activities at home after surgery will depend upon your doctor's instructions. The kind of activity allowed is different for each person.
- You should avoid rough activity and contact sports.
- Be sure to walk every day, gradually increasing the distance as you feel comfortable.
- Be sure to follow your doctor's orders and ask any questions you may have.
- No bending, lifting, pushing or pulling until your doctor says it is okay.



**Picture 4** Back incision with Steri-Strip® closure.

### When to Call the Doctor

Call the doctor if any of the following occurs:

- Drainage or a foul odor from the incision
- Fever over 101°F by mouth
- Incision gets red
- Incision gets more tender or swollen
- Incision begins to separate
- Increase in back pain