What is scoliosis?

Scoliosis is the medical word for an abnormal curve of the spine. Although everyone's spine has natural curves from front to back, a child with scoliosis has curves to the side as well. The problem can occur anywhere along the back. In most cases, there is no known cause for the abnormal curve. This is called idiopathic (id-ee-o-PATH-ic) scoliosis.

Children with scoliosis may have uneven shoulders or hips, and one shoulder blade may stick out more than the other. The changes in the back may be more noticeable when the child is bending over.

Scoliosis is seen most often in girls in their early teens.
Children with neuromuscular disorders may also have scoliosis. With this special group of children, weakened muscles are unable to support the spine in the normal position, and abnormal curves develop.

Surgery may be recommended to correct scoliosis by straightening the abnormal curves. In children with neuromuscular disorders, surgery may improve the quality of their life and, sometimes, make seating easier.

What happens before surgery?

Several days before surgery, your child will have an appointment in the Pre-op Clinic in the Same Day Surgery Unit. A Child Life Specialist and a nurse will help you and your child prepare for surgery. Depending on your child’s needs, your child may also see the Anesthesiologist. The Anesthesiologist is the doctor who will give your child medication to make him or her sleep and not feel pain during surgery. Your child may also have a breathing test called a Pulmonary Function Evaluation. You will be given a checklist of instructions to follow the day before surgery.

If your child has a wheelchair with special seating, please speak to his or her therapist before surgery. Some adjustments or temporary seating may be needed during recovery. The nurse will tell you when to bring your child to the hospital.

- If you are asked to come to the hospital the day before surgery, your child will be admitted to Ward 3B or 3C.
- If you are asked to come to the hospital the day of surgery, bring your child to the Same Day Surgery Unit.

A short time before surgery, your child will change into pajamas or hospital clothing. A nurse may start an intravenous (IV) to give your child fluids and medication before, during and after the surgery.

When should I call the surgeon?

Call your surgeon right away if you notice that your child has ANY of these problems:

- your child feels ill or has a fever (a temperature higher than 37.7°C or 99.9°F)
- redness, swelling, active or persistent bleeding or discharge from the incision
- pain that does not get better or is getting worse
- numbness, tingling, or weakness in arms or legs
- change in bowel or bladder control

For Dr. Missiuna, call 905-527-3014 (office) or 905-540-0373 (pager).

For Dr. Peterson, call 905-521-2100, ext. 73177

After hours, on weekends, or if the doctor is not available, call 905-521-2100, ext. 76443 and ask for the Orthopedic Staff On-Call.

If you cannot reach the surgeon bring your child to the Emergency Department of McMaster Children’s Hospital. If you are not in the Hamilton area, go to the nearest hospital emergency room.
What activity can my child do?

Although it will be painful for the first few days, your child needs to move to prevent complications. At first, the nurse or physiotherapist will help your child get out of bed. Your child will slowly begin walking doing daily activities, with support from the nurses and physiotherapist.

Most children can return to school within 1 month of surgery. To help the bones heal completely, your child may need to limit some activities for 6 to 12 months. Check with the surgeon before your child starts any new activities or sports.

When can my child go home?

The usual hospital stay is 5 to 10 days. The surgeon will decide when your child can go home. This will depend on whether:

- your child is drinking and eating well
- your child is moving around well on their own
- there is no sign of infection
- your child's pain is well controlled

What happens in the operating room?

The Anesthesiologist will give your child a general anesthetic so that he or she will be asleep and not feel any pain. If it is not already in place, an IV will be started when your child is asleep. Another IV, called a central line, may be inserted into a vein in the neck. A third IV, called an arterial line, may be inserted into a small artery in one wrist to measure blood pressure and take blood samples. A breathing tube will be placed in your child’s throat. A tube called a catheter will be put into your child’s bladder to drain urine.

To straighten the spine, the surgeon attaches one or two rods to the spine. Depending on where the abnormal curve is located, the surgeon will insert the rods through an incision in your child’s back or side. The surgeon may place bits of bone from the pelvis or ribs, around the spine to help stabilize it.

A tube called a drain may be placed at the site of the incision to allow any extra fluid to leave the body and collect in a small container. With more complex surgeries, a chest tube is placed between the lung and its covering to help re-inflate the lung. The chest tube also collects fluid.

When the surgery is complete, the incision is closed and covered with a long white dressing.

You can go with your child to the surgical receiving area. The operating room staff will greet your child and make him or her comfortable on a bed. They will decide the best time for you to leave your child. When asked, please change back into your own clothes and make yourself comfortable in the waiting area.

What plans are made when my child goes home?

During your child’s hospital stay, the health care team will help you learn about your child's care. Please ask them any questions you may have.

If your child will require nursing care at home, arrangements will be made with Community Care Access Centre (CCAC). The health care team will confirm plans for home care before your child is discharged from the hospital.

Before you leave the hospital, we will make follow-up appointments for your child. Your child will need to see the surgeon about 2 weeks after surgery. Depending on your child’s needs, you may need to bring your child to a seating clinic.

If your child will need extra support or care at home, arrangements will be made with CCAC. The health care team will confirm plans for home care before your child is discharged from the hospital.

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This operation usually takes about 8 hours. Each child’s surgery is different; so do not be alarmed if your child’s surgery takes longer.
**What happens after surgery?**

After surgery, the surgeon will come to the waiting area to speak with you.

Your child will go from the operating room to the Post Anesthetic Care Unit (PACU) or the Pediatric Intensive Care Unit (PICU). Your child will be closely monitored until he or she is fully awake. Your child may still have a breathing tube in place, until he or she can breathe normally. A nurse will bring you to be with your child as soon as possible.

When you see your child, do not be alarmed if his or her face looks quite swollen. The swelling is caused by the fluids given to your child and his or her position during surgery.

Your child will stay in the PACU or PICU until it is safe to move him or her to the children's ward.

**How will my child’s pain be relieved?**

We will assess your child’s pain and provide relief as quickly and as safely as possible. Relieving or controlling the pain can promote healing.

The surgeon and the Anesthesiologist will decide which type and combination of medications will provide the best pain control. For the first days after surgery all pain medications will be given in the IV. As your child recovers, your child can take the medication by mouth. You know your child best. Please let us know whether the medications and comfort measures are relieving his or her pain.

**What can my child eat and drink?**

When it is safe for your child to drink, he or she will be given ice chips or sips of clear fluids. When your child can tolerate fluids, your child will gradually return to his or her usual diet.

Being less active or taking medications that contain codeine could make your child constipated. Constipation is when bowel movements are dry, hard and difficult to pass. To prevent constipation, have your child drink plenty of fluids and eat foods high in fibre. Foods high in fibre are fruits, vegetables, and whole grain breads and cereals.

**May I stay with my child?**

We encourage parents to spend as much time as possible with their child. When your child is on the children’s ward, one parent may stay overnight in your child’s room. If both parents would like to stay overnight, please ask to reserve a housekeeping room at the hospital or a room at the nearby Ronald McDonald House. One parent may sleep on a cot in your child’s room and the other will be only a short distance and a few minutes away.

**How do I care for the incision?**

The nurses will check the dressing over the incision and change it if necessary.

Keep the incision(s) clean and dry. You may give your child a sponge bath. **Do not give your child a full bath or shower until directed by the doctor.**
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