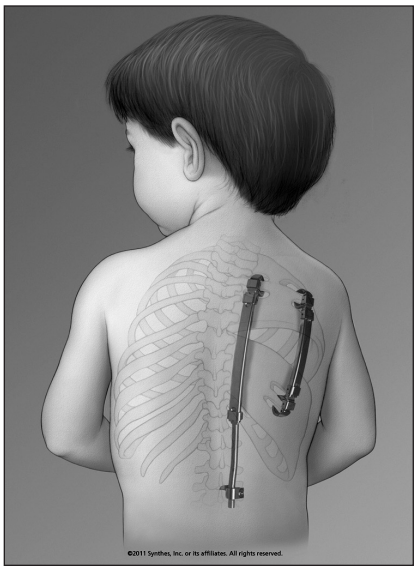
Let's Talk About...

Vertical Expandable Prosthetic Titanium Rib (VEPTR)

A VEPTR is a metal rod put into the chest during surgery. This helps children whose spine (backbone) curves too much. The VEPTR spreads the ribs out so the chest is shaped better. This surgery is used most often in children with scoliosis (scole-ee-OH-sis), mild kyphosis (kie-FOE-sis), and Thoracic Insufficiency Syndrome (TIS). The curving spine pushes on the lungs so the child cannot breathe deep enough and the lungs cannot grow enough. The VEPTR helps the lungs have enough space to grow and fill with enough air to breathe. The VEPTR can expand. As your child grows, the surgeon can change the VEPTR length so it still fits right. *(See illustration below.)*



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What happens during surgery?

Your child will receive medicine so he sleeps during the surgery. The surgeon makes a cut on your child's back, and attaches the VEPTR to the ribs and hips. The surgeon may have to make additional smaller cuts to place the VEPTR correctly.

What can I expect after surgery?

- Your child will have the following tubes and a dressing after surgery:
  - **IV:** An IV is a tiny, flexible tube put in a vein to give liquids and medicine. Your child's nurse will take out the IV before your child goes home.
  - **Oxygen with a nasal cannula (nay-zall CAN-you-lah):** A nasal cannula is a tube that sits just below your child's nose and gives him oxygen. Your child will use this only when needed.
  - **Dressing over the surgery site:** This is a large bandage. Keep the dressing clean, dry, and in place. Your child's nurse will remove the dressing before your child goes home or will tell you when you can take the dressing off at home.
- **Breathing exercises:** Breathing exercises are important and can shorten the time your child needs oxygen.
- **Nausea, Vomiting, and Dizziness:** It is common to have nausea (feel like you are going to throw up) or vomit (throw up) after surgery. The medicine your child received to help him fall asleep during surgery can cause this. Other medicines, constipation, pain, or not eating can cause nausea and vomiting. Your child may feel dizzy when he first sits up after he has been lying down for a long time.
- **Constipation:** Your child may become constipated (can't poop) after surgery because of medicine during surgery, pain medicine, and because he is less active. Your child's nurse will give him stool softener and laxative medicine to help. If your child hasn't had a bowel movement and it is nearly time for him to go home, the doctor may order an enema or

suppository. Walking and movement helps ease constipation. If your child has a bowel program at home, your nurse will want to continue the program while your child is in the hospital. Please bring any equipment and instructions you use for the bowel program with you to the hospital.

- **Pain:** This is a big surgery and your child will have pain around his back, spine and ribs. This pain will slowly decrease over time. You and your nurse will set a goal for your child's pain after surgery. The goal is to keep your child as comfortable as possible. You will pick the pain goal for after surgery on a scale from 0 to 10. Before your child is able to eat, the nurse will give the pain medicine in his IV. After he starts to eat and drink, he will get pain medicine by mouth.

What can my child eat after surgery?

On the day of surgery, your child can eat ice chips and clear liquids such as apple juice or Jell-O®. He can eat more as the days go by. Encourage your child to drink water, and eat fresh fruits, and vegetables so he gets enough water and fiber. Your nurse will make sure your child goes slowly the first few days so he doesn't get sick.

What should I do with the dressing?

You can take the outer dressing off 4–5 days after surgery. Do not get this dressing wet.

The stitches will dissolve (go away) by themselves. Your child may have a thin stitch coming out of the top and bottom of the surgery site. You may clip this stitch close to the skin, but do not pull it out.

The surgery site edges will be neat and even. There may be some swelling. This is normal and will go away over time. Look at the swelling every day. If the surgery site is red, more swollen, or has fluid coming out, call your child's doctor.

What activities can my child do over the next few days?

- **Sitting and other positions:** Be careful how long your child sits in one position. Use padding on hard surfaces (desks, chairs, car seats) to protect his surgery site from rubbing. The skin and muscles over the VEPTR have been stretched and are very thin. Rubbing can break the skin open over the surgery site. Your child's nurse will make sure he changes positions often while in the hospital.
- **Activities:** For the first month after VEPTR surgery, your child should not lift heavy objects, bend, twist, or join in rough or contact sports. The VEPTR can break easily or move around. After a month, there are no limits to your child's activities.
- **School:** your child can return to school about 4 weeks after surgery.
- **Showering:** Your child may shower 5-7 days after surgery. Pat the place where your child had surgery dry, and do not rub it or soak it.
- **Other water activities:** your child should avoid tub baths, whirlpools, Jacuzzis®, or swimming pools until the surgery site heals. This most often takes about 4 weeks.

When can my child go home after surgery?

Your child will go home about the 5th day. Time in the hospital will help with pain, positioning, eating, elimination habits, and normal daily activities.

Is there anything my child should avoid at home?

- **Medicines:** Your child should not take Ibuprofen, Advil, Motrin, Aleve or any other nonsteroidal anti-inflammatory drugs for 6 months after his surgery. These medicines may block bone healing. Follow your doctor's advice.
- **Dentist visits:** You will need to tell your child's dentist or oral surgeon that he has a metal implant. Your child should take antibiotics before he has his teeth cleaned or any other dental work.

When should I call the doctor at home?

You should call your child's doctor your child has pain that suddenly gets worse or if he has numbness

to his legs or back. You should also watch for infection. Signs of infection are if the surgery site is red, warm, swollen, or starts to spread apart. Another sign of infection is a fever greater than 101 degrees. Other reasons to call your doctor are if your child still has pain after taking pain medicine, has problems breathing, or cannot eat normally.

What about visits to the doctor after surgery?

Your child's nurse will talk to you about future doctor's appointments before your child goes home. It is important to keep all the appointments with your surgeon and other doctors.

Will my child need more surgery after this one?

Your child will have other surgeries to lengthen the VEPTR as he grows. These may happen every 4–6 months. Your child will likely stay in the hospital overnight, for these surgeries. Once your child stops growing (14 for girls, 16 for boys), your child may not need the VEPTR anymore. At that point you and your child's doctor will decide if the doctor should remove the VEPTR. Some children need a spinal fusion.

For more information, refer to:

- http://www.iscoliosis.com or
- http://www.veptr.com

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