

Let's Talk About...

Vertical Expandable Prosthetic Titanium Rib (VEPTR)

A **vertical expandable prosthetic titanium rib**, or VEPTR, is a metal rod put into the chest during surgery. This helps children whose spine (backbone) curves too much because of:

- Scoliosis [scole-ee-OH-sis]: The spine curving sideways
- Mild kyphosis [kie-FOE-sis]: A rounded back
- Thoracic [thor-AS-ick] insufficiency syndrome (TIS): Chest wall problems that affect lung growth

How does the VEPTR work?

When the spine curves, it pushes on the lungs so your child cannot breathe deep enough and the lungs cannot grow enough. The VEPTR:

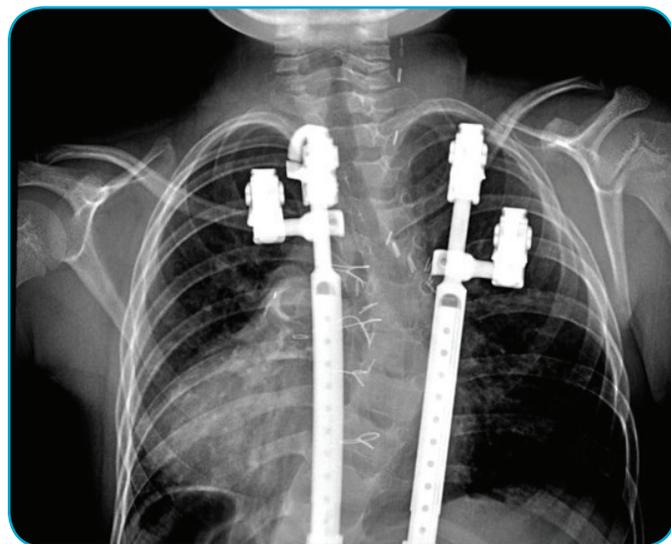
- Spreads the ribs out so the chest is shaped more naturally
- Helps the lungs have enough space to grow and fill with enough air to breathe
- Can expand as your child grows so it still fits right (a surgeon will need to adjust it from time to time)

What happens during VEPTR surgery?

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

What can I expect after surgery?

Your child will go home about 5 days after surgery. They will have an IV (tiny, flexible tube in a vein) for liquids and medicine and a nasal cannula [CAN-you-lah] that delivers oxygen. Breathing exercises help your child shorten the time they need oxygen and may prevent lung infections, like pneumonia [new-MOH-nee-uh].



If your child has a bowel management program, bring any equipment and instructions to the hospital. Other problems after surgery may include:

- **Nausea and vomiting:** Your child may have nausea (feel like throwing up) or vomit after surgery because of medicines, constipation, pain, or not eating.
- **Constipation:** Your child may become constipated (unable to poop) after surgery because of medicine and less activity. They may need a stool softener, laxative, enema, or suppository if they haven't pooped when it's time to go home. Fluids, walking, and movement help ease constipation.
- **Pain:** Your child will get pain medicine by IV until they can eat and take medicine by mouth. They will have pain around their back, spine, and ribs that will slowly decrease over time.

What can my child eat after surgery?

After surgery, your child can have ice chips and clear liquids, such as apple juice or gelatin. They can eat more as the days go by. Encourage your child to drink water and eat fresh fruits and vegetables so they get enough water and fiber.

How should I care for the dressing?

Keep the outer dressing clean and dry. You may take off the outer dressing after 4 to 5 days, or when your child's doctor says it's okay.

- 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 don't pull it out.
- It's normal to see some swelling at the surgery site, but it 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 should my child limit after surgery?

For the first month after surgery, your child should:

- **Try not to sit in one position too long.** Their nurse will make sure they change positions often.
- **Be careful not to rub the surgery site.** The skin and muscles over the VEPTTR have been stretched and are very thin. Rubbing can break the skin open over the surgery site. Use padding on hard surfaces (desks, chairs, or car seats) to prevent this.
- **Avoid lifting heavy objects, bending, twisting, or playing rough or contact sports.** The VEPTTR can break easily or move around.
- **Stay out of hot tubs and swimming pools.** Your child should also not take baths until the surgery site closes completely (about 4 weeks).

Your child can shower 5 to 7 days after surgery. Pat the surgery site dry, and don't rub or soak it. After a month, your child will not have any activity limits and can usually return to school.

When should I call the doctor?

Call your child's doctor if your child has:

- Pain that suddenly gets worse
- Numbness in their legs or back
- A red, warm, or swollen surgery site
- A fever higher than 101°F (38°C)
- Continued pain after taking medicine
- Trouble eating normally

If your child has chest pain or trouble breathing, call 911 or go to the emergency room.

What should I be aware of when my child goes home?

- **Medicines:** Your child should not take ibuprofen (Advil or Motrin) or any other nonsteroidal anti-inflammatory drugs (NSAIDs) for 6 months after their surgery. These medicines may block bone healing. Follow your child's doctor's advice.
- **Dentist visits:** Tell your child's dentist or oral surgeon that they have a metal implant. Your child should take antibiotics if they are having a major dental procedure but not for dental cleaning.

Will my child need more surgeries after this one?

Your child will have other surgeries to lengthen the VEPTTR as they grow, usually with an overnight hospital stay. These may happen every 4 to 6 months.

Once your child stops growing (usually at 14 years old for girls and 16 years old for boys), they may not need the VEPTTR anymore. You and your child's doctor will decide if the VEPTTR should be removed. Some children need a spinal fusion. To learn more about VEPTTRs, visit iScoliosis.com or VEPTTR.com.

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