

Surgery for tethered spinal cord

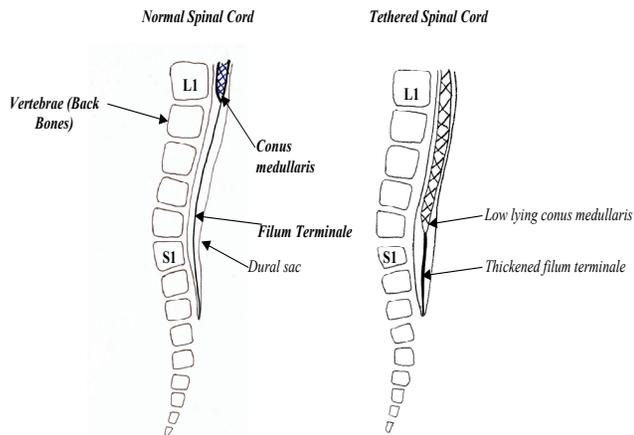
What is Tethered Spinal Cord?

Tethered spinal cord means that the lower end of the spinal cord is attached (tethered) to the spinal column. It may also lie in a lower than normal position. As the child grows, spinal nerves can get stretched and cause many problems.

How does it happen?

- We don't know what causes tethered spinal cord. But it can be linked to:
 - Spina bifida
 - A collection of fat in the spinal column (lipoma)
 - Scarring from inflammation or previous surgery
 - A thickened filum terminale which acts as a tight anchor
- Normally, when the spine starts to develop before birth, the bones that surround and protect the spinal cord (the spinal column) are the same length as the spinal cord.
- Spinal column bones grow faster than the spinal cord, so that by the time of birth, the cord has moved up within the spinal column. The cord does not move up within the spinal column in children with a tethered spinal cord.

Example: Thickened filum terminale



What are signs and symptoms of a tethered cord?

- Bladder or bowel problems:
 - Problems with toilet training
 - Needing to pass urine (pee) often
 - Wetting or bowel accidents (wetting the bed, peeing or having a bowel movement in underwear in a child who was previously toilet trained)
 - Abnormal bladder test results
 - Constipation (hard stools or poop)
- Back pain
- Leg weakness or numbness
- Difficulty walking
- Foot deformities
- Curvature of the back (scoliosis)
- Some children have an unusual dimple, birthmark or patch of hair on the lower back

What tests will my child need?

- In young babies, an ultrasound of the spine can help detect the problem.
- **MRI (Magnetic Resonance Imaging):** this test uses a large magnet and radio waves to give detailed pictures of the back.
- Bladder testing
- Electrophysiology tests (to measure the speed of electrical impulses in the spinal cord)

What happens during surgery?

During the surgery:

- A small piece of backbone may be removed over the site of the attached spinal cord
- The tissue which is tethering the spinal cord and nerve roots is then cut, to release the stretched cord.

The surgery takes from 3-6 hours, depending on the extent of the problem.



After the surgery...

Hospital stay:

Most children stay in hospital for 5-7 days.

Catheter:

Your child will have a soft tube in the bladder to drain urine.

Dressings (bandage):

Your child will have a dressing on the lower back. It must stay clean and dry. A special plastic sheet ("mud flap") will be taped below the dressing to prevent soiling from stool (poop!). We will change the dressing as needed.

Activity:

Your child will need to lie flat in bed (on tummy or sides) for 3-5 days. This prevents leakage of spinal fluid. Your doctor will then allow your child to gradually move around more. You can help by bringing toys, music and quiet activities that your child can enjoy lying flat in bed.



Eating and drinking:

- Your child will start with sips of fluids, and will be back to a regular diet in a few days.
- Your nurse can help you breastfeed, but it is challenging with your child having to lie flat in bed. You may find it easier to pump breast milk and freeze it ahead of time.

Intravenous line (IV):

We will take this out when your child is drinking well, and when IV medications are finished.

Pain medicine:

Your nurse will give your child medicine for pain and nausea as needed. Please tell your nurse if your child needs medicine for pain.

'Pins and needles':

Your child may have different feelings in the legs (like 'pins and needles'). This should get better with time.



Taking care of your child at home

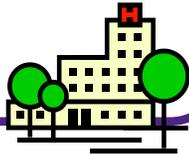
- **Relieve pain.** If your child has pain, you can give acetaminophen (Tylenol ® or Tempra®) every 4 hours as needed. Back pain should get better every day.
- **Keep the bandage(s) clean and dry.** For babies, keep using the mud-flap for 2 more days after the stitches are removed.
- **Getting stitches or surgical clips removed.** If these haven't been taken out by the time you leave the hospital, we'll give you an appointment in the Neurosurgery clinic (C-9) 7-12 days after the surgery.

Your doctor will tell you how to care for your child's incision if there are steri-strips (tapes) over it.

- **Apply antibiotic ointment.** Once the stitches or clips have been removed, apply Polysporin® ointment with a clean Q-tip or gauze, 3 times a day for 2 days.
- **Showering and baths.** Your child can have a shower 2 days after the stitches or clips are removed, and a full bath after a week.

Come to CHEO's emergency department if your child's incision is:

- Red
- Draining clear fluid or pus
- Opening up
- Swollen



Activity guidelines

For 4-6 weeks after surgery, your child must not take part in strenuous activities like:

- Sports
- Lifting
- Twisting

Your child can slowly return to usual activities after 4-6 weeks. Take care to protect your child's back from injury.

Want more info?

Check out this website:

<http://cpmcnet.columbia.edu/dept/nsg/PNS/TetheredSpinalCord.html>



what you NEED TO KNOW about...

Surgery to release a tethered spinal cord

