MUSCLE/TENDON LENGTHENING
Following Selective Dorsal Rhizotomy (SDR)
Patients who undergo selective dorsal rhizotomy (SDR) surgery at St. Louis Children’s Hospital’s Center for Cerebral Palsy Spasticity often need an additional surgical procedure for muscle/tendon lengthening to relieve contracture (limited motion) in their joints.

Matthew Dobbs, MD, a Washington University orthopedic surgeon at St. Louis Children’s Hospital, uses a minimally-invasive surgical procedure to accomplish the lengthening. This allows the muscle to return to its normal length and the joint to straighten, and is one step in helping children walk with their heels on the floor and knees straight.

Unlike other surgical approaches to tendon lengthening, the minimally-invasive procedure allows for a quicker recovery and requires no leg casts. In most cases, children start therapy the next day.
Muscle/Tendon Lengthening Procedure

The surgery is accomplished using a minimally invasive approach for controlled lengthening. The hamstring, gastroc and heel cord are the most common structures that need lengthening. The procedure is performed in an operating room.

In most cases, patients spend one night in the hospital and start physical therapy the day after surgery. No casts are required; your child will be fitted for specially-designed braces to wear post-lengthening to help with standing and walking.

Children who undergo either the selective dorsal rhizotomy surgery alone or in combination with follow-up tendon lengthening may experience rapid and dramatic changes in their walking. To enhance their recovery and improvement, we recommend physical therapy (PT) four to five times a week for the first six months; three to four times per week for the next six months; and two to four times a week for the following year or longer. The intense PT schedule helps children maintain their motion and their maximum strength and walking potential.

A specially-trained pediatric physical therapist will work with your child while they are at the hospital, and create an individualized plan to continue the therapy once they return home.

After heel cord/gastroc lengthening surgery, your child will wear an ankle foot orthosis, or AFO, to assist with walking. As your child gets stronger, he or she may transition to a less restrictive splint such as a SMO or DAFO.

After hamstring lengthening surgery, your child will wear nighttime knee splints to maintain correction.

Eligibility for Surgery

Matthew Dobbs, MD, pediatric orthopedic surgeon, and T.S. Park, MD, pediatric neurosurgeon, will evaluate a patient’s eligibility for the tendon lengthening surgery. If your child is a candidate for tendon lengthening, the procedure is typically performed 2-8 weeks after SDR surgery.
What to Expect:

Day of Surgery

A surgical nurse will call you a few days before your surgery date. The nurse will provide detailed instructions about what time to be at the hospital, where to park, when your child can last eat or drink, and other helpful information.

Patients are admitted for a 23-hour admit, so plan on spending the night after surgery. Pack comfortable, loose clothing for your child. T-shirts, sweatshirts, sweatpants or shorts are preferred. Be sure to bring any devices that your child uses for functional ambulation or walking assistance.

When you arrive at the hospital, you will check in at the 2nd floor lobby and a patient care representative will escort you to the same-day surgery center on the 6th floor. Dr. Dobbs will meet with you before your surgery.

While your child is in surgery, you will be given a pager so that you can leave the surgery waiting area. When the surgery is over, you will be called into the recovery area to be with your child.

Your child will be measured for braces, if needed, while they are asleep during surgery. Our orthotist will typically have your braces ready before you go home from the hospital.

Post–Op Day 1

After surgery, your child will have bandages on the areas where the surgical incisions were made. These bandages will remain on for 10 days. You may see some bloody drainage on this bandage. Under the bandage, steri-strips will cover the incision area. These tape strips are to be left on until they fall off on their own.

You may see clear stitches. They will dissolve on their own. Sometimes these threads are connected to the steri-strips. You will also see some bruising to the areas. Keep the incision area clean and dry.

Your child will begin intensive physical therapy and continue the exercises at home. We will provide you with an information packet of exercises and stretches prior to surgery.
FREQUENTLY ASKED QUESTIONS

What should we bring to the hospital?

Bring all assistive devices (braces, orthosis, etc.) your child uses for walking and ambulation. Your child should wear loose, comfortable clothing. T-shirts, sweatshirts, sweatpants or shorts work well.

Bring along a favorite item. Children often find it comforting to have something familiar with them at the hospital like a favorite toy, blanket, doll or stuffed animal.

How long will we stay in the hospital?

You child will be scheduled for a 23-hour admit. We recommend patients spend one night in the hospital to assure that pain is well managed. Some families prefer to rest at home or in a nearby hotel.

How will my child’s incision area be bandaged?

Your child’s incision areas will be covered with a bandage that will remain on for 10 days. Under the bandages, steri-strips cover the actual incision. The steri-strips stay on the incision area until they become loose and fall off. Some blood spots on the bandages are normal.
Will my child be in pain?
Children are given prescription pain medications after surgery. By the next day, most children have switched from prescription pain medications to over-the-counter acetaminophen, or Tylenol.

When can my child return to school?
Your child can return to school when you feel they are ready. We do not place restrictions on their return to school.

Can my child swim after tendon lengthening?
Swimming in clean chlorinated pools after surgery is not recommended until after steri strips come off and incisions are closed a minimum of two weeks.

Will we need follow up appointments?
Your physician will inform you if your child needs any follow-up appointments. If a follow-up appointment for tendon lengthening is needed, we will try to schedule it on the same day that you return to see Dr. Park.

Will my child need further lengthening in the future?
All children are different and some may require future lengthening if they have recurrent tightness and growth. The goal is to increase your child’s range of motion, allowing them to walk with heels on the floor and knees straight.

My insurance carrier is requesting CPT codes. What are they?
The CPT codes are used for billing purposes. CPT codes for the tendon lengthening procedures are:

- Hamstrings unilateral (one side) 27393 or bilateral (both sides) 27394
- Achilles 27685
- Gastroc 27687

What if I have more questions or concerns?
Please call us with any questions or concerns you have at 314.454.4192 or email dobbsm@wudosis.wustl.edu.

For more information about selective dorsal rhizotomy surgery or minimally-invasive tendon lengthening surgery at St. Louis Children’s Hospital, contact 314.454.KIDS (5437) or 800.678.KIDS (5437).
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