

## What Is Rhizotomy or SDR Surgery?

Selective dorsal rhizotomy (SDR) surgery is a procedure that treats muscle spasticity caused by abnormal communication among the brain, spinal cord, nerves and muscles. It corrects muscle spasticity by cutting the nerve rootlets in the spinal cord that are sending abnormal signals to the muscles.

SDR surgery is a treatment for **cerebral palsy**—typically performed on kids who are affected by spasticity. SDR surgery might help your child to:

- Reduce spasticity.
- Improve walking patterns.
- Use energy and oxygen more efficiently.
- Improve range of motion and functional mobility.
- More easily perform self-care activities, such as getting dressed and grooming.



### Who Benefits From SDR Surgery?

SDR surgery is irreversible, so it's critical to carefully select patients who will benefit most from the surgery. When evaluating candidates for SDR surgery, a team of experts including an **orthopedic surgeon**, a **neurosurgeon**, a **pediatric rehabilitation medicine physician** and a **physical therapist** will consider:

- **Cerebral palsy type:** The best candidates for SDR surgery typically have spastic diplegic **cerebral palsy** that affects the legs more than the arms.
- **Gross motor function:** If your child is at levels I, II or III on the **Gross Motor Function Classification System – Expanded & Revised (GMFCS–E&R)**—meaning they can walk and are expected to continue walking—they might be a good candidate.

- **Gait analysis data:** Gait analysis can indicate whether abnormal movement patterns stem from spasticity or another movement disorder. It also quantifies how much energy is used when walking by measuring oxygen consumption. Candidates for SDR surgery often require 200 to 600 percent more energy to walk than others do.
- **Age:** If your child is age 4 to 7, they are typically candidates for SDR surgery, but older children can benefit from the procedure as well.
- **Cognitive abilities:** Because SDR surgery requires extensive rehabilitation, the best candidates are cognitively able to follow directions and participate in therapy.

If your child is a candidate for SDR surgery, they will undergo a **spasticity evaluation**, which includes a physical examination and **gait and motion analysis**.

At Gillette Children's Specialty Healthcare, your child's growth, challenges and expected outcomes will be assessed by specialists who are trained to work with kids. Once your child is identified as a good candidate for surgery, we'll work with your family to plan a time for surgery and rehabilitation that will work with your schedule.

As a regional leader in **pediatric neurosurgery**, Gillette is one of the top providers of SDR surgery in the U.S. Patients from across the world come to Gillette for SDR surgery.

Make An Appointment **651-290-8707** Refer a Patient **651-325-2200**

This information is for educational purposes only. It is not intended to replace the advice of your health care providers. If you have any questions, talk with your doctor or others on your health care team.

If you are a Gillette patient with urgent questions or concerns, please contact Telehealth Nursing at **651-229-3890**.