



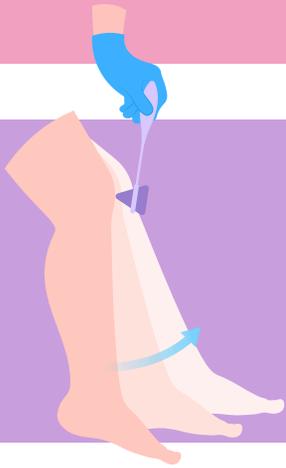
**Kids Brain Doc**

Dr. Laila Mohammad

# Selective Dorsal Rhizotomy (SDR) Patient Packet



# Diagnosis: Spasticity



## What is it?

Spasticity happens when muscles get stiff and tight because the brain and spinal cord send abnormal signals to the muscles. *Cerebral palsy* (CP) is group of disorders caused by early brain injury or abnormal development that affects movement and muscle tone, and spasticity is a common feature

## Who does it affect?

Spasticity most commonly affects children with cerebral palsy or other conditions involving early injury to the brain or spinal cord that causes an imbalance of signals from the brain/spinal cord to spine.



## How did my child get it?

Spasticity develops from damage to the parts of the brain or spinal cord that control movement, often occurring before birth, during birth, or early in life such as a brain bleed (IVH), stroke, or lesion.



## Is it Harmful?

While spasticity itself is not life-threatening, it can stop muscles from growing properly, lead to muscle tightness, and even cause bone issues. Over time it can limit mobility, cause pain, and affect walking and daily activities if not treated.



## What is the Treatment?

If your child's muscle tightness makes it hard for them to use their legs, do everyday things, or if it causes pain, treatment can help. Options include physical therapy, medications, injections, braces, or surgery like selective dorsal rhizotomy (SDR) to ease tightness and help them move better.



# WHO'S A GOOD CANDIDATE FOR SDR: AMBULATORY



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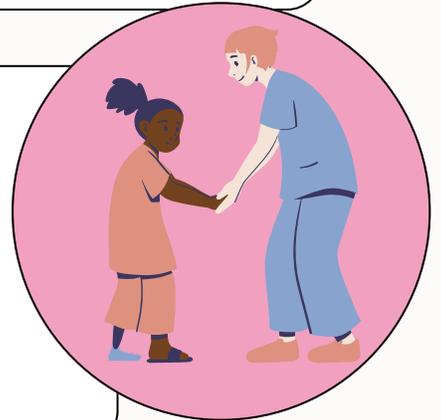


## 01. WHO

Children who can walk, with or without assistive devices, may experience muscle tightness that causes spasticity, affecting their walking pattern or endurance. With reduced spasticity, their strength and motor control can improve.

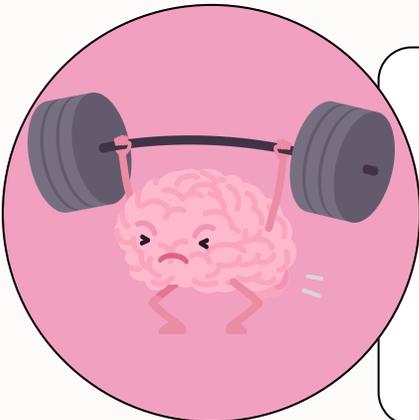
## 02. BENEFITS

It really helps kids who have trouble walking because of stiffness, scissoring, toe walking, or tiredness, not just weakness. The aim is to make walking smoother, more efficient, and independent.



## 03. IMPROVEMENTS

Many kids notice better walking, improved balance, more endurance, and find it easier to join in therapy and daily activities. Progress is gradual, with strength and motor skills improving over several months after surgery.



## 04. REQUIREMENTS

For a successful recovery, regular physical therapy and active involvement in rehab are key. Families should get ready for a well-organized rehab process, focusing on building strength, stretching, and relearning movements.



# WHO'S A GOOD CANDIDATE FOR SDR: PALLIATIVE



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## 01. WHO

Kids who can't walk on their own and have very tight muscles may feel pain or have trouble with hygiene, positioning, or caregiver tasks. The aim is to make them comfortable and improve their quality of life, rather than focusing on walking.

## 02. BENEFITS

It can help ease muscle stiffness that makes sitting, dressing, diapering, or sleeping hard. It might also lessen spasms that cause discomfort or make daily care tricky.



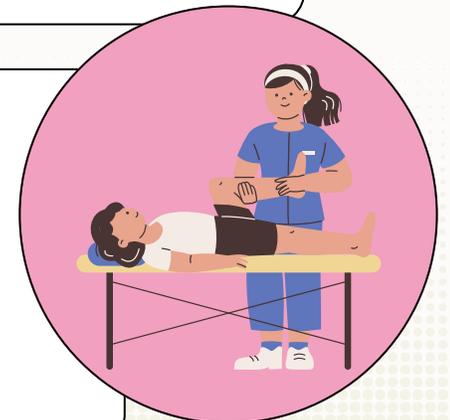
## 03. IMPROVEMENTS

Families often notice easier positioning, improved tolerance of wearing braces, reduced pain, and smoother caregiving routines. Functional mobility may not change significantly, but comfort and daily care often improve.



## 04. REQUIREMENTS

Postoperative therapy focuses on stretching, positioning, and maintaining joint mobility rather than gait training. Ongoing collaboration with therapy, orthotics, and medical teams help maximize comfort and long-term results.



# Surgery: Selective Dorsal Rhizotomy

## 1 Goals of Surgery

- Reduce leg spasticity permanently
- Improve long-term function and quality of life
- On average will improve one level (walker to walk)

## 2 Risks of Surgery

- Temporary side effects: tingling/numbness of legs, difficulting peeing, muscle spasms in the calves
- Rare complications: infection, CSF leak, persistent sensory changes

## 3 Alternatives

- Medications, therapy, casting/bracing
- Botox
- Baclofen Pump
- The SDR in which the surgeon removes the bone of all the lumbar spine

## 4 Right after Surgery

- Your child will be admitted to the ICU with a foley (catheter in the bladder)
- They will lay on their back or side for the first night for their back to heal
- Pain medications: IV Tylenol, IV Motrin, Gabapentin
- Antibiotics: 24 hours
- Work with therapy on Day 1 after surgery

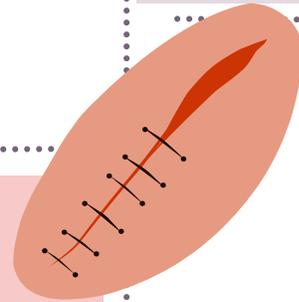
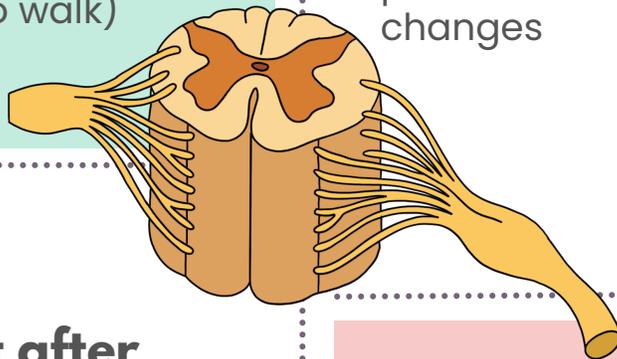
## 5 Hospital Recovery

On Day 2 after surgery, we will work towards discharging you to an inpatient rehabilitation for intensive therapy. Some patients will be discharged to outpatient therapy, based on their circumstances.

## 6

## Incision Care

- Ok to shower 2 days after surgery.
- No bathing or soaking incision in tub for 4 weeks after surgery
- Incision will fall off on it's own in 3-4 weeks
- Incision will be covered until you are discharged



# Recovery & Follow-Up



## ACTIVITY RESTRICTIONS

- Day 1 after surgery: sitting on edge of bed with support
- 0-6 weeks: inpatient physical therapy
- 6 weeks-2 years: Outpatient physical therapy

## HOME CARE

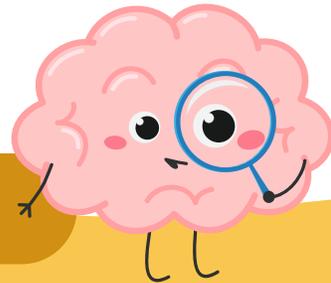
After discharge for inpatient rehab, your child will begin intensive outpatient therapy

## FOLLOW-UP

- 2-week: incision check
- 3 months
- Annual check-up



## LONG-TERM CARE



- SDR is one step in your child's journey
- Ongoing care with the physician managing your child's spasticity, typically a physiatrist (PM&R doctor) or neurologist, is very important
- Long-term therapy and follow-up help maximize independence, mobility, and quality of life.