

## WHAT MUSCLES AND JOINTS ARE COMMONLY INVOLVED WITH SPASTICITY?

- Shoulder joints, surrounding muscles and rotator cuffs
- Elbows, biceps and forearm muscles
- Hands, wrists and fingers/thumbs
- Hip joints
- Knees, including the thigh and calf muscles
- Ankle joints

## DOES SPASTICITY NEED TO BE TREATED?

### Yes, when it causes

- Pain and stiffness
- Contractures or joint dislocations
- Skin breakdown
- Problems with transfers, mobility and function
- Poor positioning, spasms, difficulty in care, increased caregiver burden
- Difficulty in reaching therapy goals and increasing strength

## WHAT HAPPENS IF SPASTICITY IS LEFT UNTREATED?

- Pain may develop due to positioning or how the bones grow
- Movement, function and motor skills lessen
- Stuck joints or bone misalignments may appear over time
- Skin breaks down
- Caregiver burdens increase
- Positioning and transfers become more difficult

## WHAT ARE COMMON GOALS IN SPASTICITY MANAGEMENT?

- Provide pain relief
- Prevent worsening of contractures
- Improve positioning, decrease skin breakdown
- Increase tolerance of treatments such as orthoses/splinting and/or Neuromuscular Electrical Stimulation (NMES)
- Maintain and improve strength
- Avoid deformity in children as the child grows
- Improve outcome of orthopedic procedures
- Develop better function and gait
- Reduce loss of abilities as the child grows
- Improve care and hygiene, decrease caregiver burden

## WHAT TREATMENTS ARE AVAILABLE?

Many treatments are available depending on the goals for your child and family. The Spasticity Team at Texas Children's works together to determine the best treatment plan. Treatments include therapies, splinting, medications and orthopedic and neurosurgery procedures.

## SPASTICITY VS. DYSTONIA – WHY DOES IT MATTER?

Many children have both spasticity and dystonia present.

- If only one type of high muscle tone is treated (removed or significantly reduced), then the other may be more obvious. The remaining type of hypertonia can negatively affect joint function in the future as well.

Knowing exactly the cause of high muscle tone can be important in tailoring therapies to the individual patient.

- Some medications can be helpful for dystonia but not spasticity.
- A surgery called selective dorsal rhizotomy improves spasticity but will not change dystonia.
- In orthopedic surgeries such as tendon transfers, some outcomes are less predictable if dystonia is present.

