

Cerebral Palsy –Spasticity management & gait training with homebased therapy

By Dr Nibedita Das

Be Your Child At Home Therapist

If you learn the proper ways to help your child **exercise** at home , you can help him stretch his muscles, build balance and reduce pain between office visits.

If your child has pain from **muscle spasms**, massage may help, so you may want to learn some basic technique

The main goal of physical therapy is to make everyday movements easier for children with cerebral palsy

Physical Therapy can Improve

- Coordination
- Balance
- Strength
- Flexibility
- Endurance
- Pain Management
- Posture
- Gait
- Overall Health

Core strengthening Cerebral Palsy Balance Exercise

- ▶ Horse Back Riding @iStock.com/Antonio_Diaz....
- ▶ Walking in the Pool
- ▶ Playing on an Exercise Ball
- ▶ Deep Breathing...
- ▶ Swinging

Exercise to Improve Balance

Balance Activities can include

- Static/Dynamic standing balance with/without standing frame/eyes open/eyes closed/ on a dura disc
- Dynamic sitting balance-on a dura disc or swing to build up confidence
- Gentle seated /standing perturbation
- Dynamic Through /Catch activities stand on two feet / one foot/ dura disc
- Timed Up and Go and Obstacle courses

The best stretches for cerebral palsy patient will focus on lengthening spastic muscles

Let's Get into the Stretches !

- Hamstring Stretches...
- Heel Cord Wall Stretches...
- Seated Heel Cord Stretches...
- Quadriceps Stretches...
- Knee To Chest Stretches...
- Wrist Stretches...
- Shoulder Stretches...

Exercise to Improve Strength

There are a wide range of different activities to improve muscular strength

- Neck Strength
 - Make Noises
 - Throw/ Catch
- Core /Postural Control
 - Horse Riding
 - Scooter Board/Fit Ball/ Dura Disc Activity
 - Swimming/Rowing
- Lower Extremities(LE)
 - Leg Cycling (With/Without Support)
 - Stair Climbing
 - Sit to Stand (With/Without Support)
- Upper Extremities (UE)
 - Rowing
 - Arm Cycling (With/Without Support)
 - Thera band Exercise



Above: Gait re-education using the parallel bars under close

Exercise With Cerebral Palsy

TYPE OF EXERCISE	TIPS TO GET STARTED	EXERCISE/TOOLS
MUSCLE Boosting strength and endurance	<p>Think about building muscle strength and working on muscle endurance.</p> <p>Gradually increase weight used to increase muscle strength.</p> <p>Gradually up the time or repetitions you do an exercise to help endurance.</p> <p>Rest your muscles in between exercise days.</p>	<p>Resistance bands</p> <p>Free weights</p> <p>Weight machines for upper and lower body</p> <p>Arm exercisers, especially if you have a hard time using your legs</p> <p>Water exercise</p> <p>Yoga fitness class</p>
CARDIO Raising your heart rate during extended exercise	<p>Work on exercising at your target rate (see fact sheet to calculate yours).</p> <p>Exercise for a duration (recommended minimum is 10 minutes) to keep the heart beating at an increased level.</p> <p>Gradually build volume instead of pushing yourself to the limit right away.</p>	<p>Stationary bike</p> <p>Regular bike or adapted tricycle</p> <p>Climbing stairs</p> <p>Water exercise/swimming</p> <p>Cardio fitness class</p>
FLEXIBILITY Keeping the bones and joints in motion	<p>Incorporate stretching and flexibility into normal resistance exercises.</p> <p>Always stretch before and after exercising.</p> <p>Work on full range of motion stretches.</p> <p>Switch up your exercise routine to keep your bones and joints guessing.</p>	<p>Stretches</p> <p>Resistance bands</p> <p>Yoga fitness class</p> <p>Dance fitness class</p>

Thank You

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the frame, creating a modern, layered effect. The rest of the background is plain white.