



Chromosome 18 has collected these physical therapy exercises for our member's benefit. These exercises are not created by or endorsed by Chromosome 18, and were collected from organizations that offer physical therapy resources. These are suggestions of general exercises that you can do with your child at home and not an individual plan of care.

## **Physical Therapy Exercises**

### **Glute Sets**

Exercising your glutes is a relatively simple and easy way to strengthen your hips by improving blood circulation to the hips and legs. Here are the steps for one of the more popular glute exercises:

- Lie flat on your back and bend your knees at about a 15-degree angle (it is best to use a yoga or exercise mat to provide a comfortable surface to lie on).
- Raise your buttocks slightly off the ground and squeeze/tighten your buttocks muscles.
- Hold for about five seconds.
- Relax your buttocks.
- Do three sets a day, with 10 repetitions in each set.

### **Hamstring Sets**

Your hamstring muscles assist you in bending your knee and extending your hip backwards. Strengthening your hamstrings can be critical in the recovery process by helping you more quickly get back to walking in a normal manner. Here is a hamstring set most individuals can do. To begin, lie on your stomach and follow these steps:

- Raise your leg backward about 10-12 inches.
- Hold for up to five seconds.
- Slowly lower your leg back to the ground.
- Do two-three sets a day, with 10-15 repetitions in each set.

### **Quad Sets**

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<sup>1</sup> [In-Home Physical Therapy Exercises for Leg Strength](#)

Your quadricep muscles are the four (quad) muscles that are located at the front end of the thigh. Together, they contract to assist in lifting up the hip and extending the knee. There are several different types of quad strengthening exercises you can do. One of the simplest is called straight leg raises. Here are the steps:

- Lie flat on your back (again, use a yoga or exercise mat for best results).
- Bend the knee of the stronger leg (the one that was not injured or operated on) to a 90-degree angle while keeping the weaker leg straight and flat on the mat.
- Lift the weaker leg slowly until it is about 12 inches off the ground.
- Hold in the raised position for five seconds and slowly lower your leg back to the ground.
- Do two-three sets a day, with 10-15 repetitions in each set.

### **²Modified Hook Ups**

Child will sit on a chair and cross ankles, then extend both arms in front, crossing one wrist over the other interlacing fingers and drawing clasp hands up toward chest. Child will hold position for 1 minute while breathing slowly, touching the tip of the tongue to the roof of the mouth and relaxing it during exhalation.

### **Neck Rolls**

Child will stand/sit in an upright position. Child will deeply inhale, then exhale with shoulders relaxed. Child will drop head forward with chin drawn in, allowing head to slowly roll from one side to the other, coming to rest just below the shoulder.

### **Knee Ball Bounce**

Child will balance on their knees on a stability ball with hands on adult shoulders. Child will bounce 10x on knees.

### **Joint Squeeze/Pull**

Child will sit/ lay as adult gently pulls each joint away then pushes them in 10x. Joints include shoulder, elbow, wrist, and ankle.

### **Right Head Righting (For Infants)**

Place child so that they are on your lap, straddling your leg facing away from you. Hold child around their tummy or under their arms if needed. Slowly tilt the child to the left to encourage the child's head and trunk to move to the right.

### **Drop and Catch**

Place a ball in your stronger hand. Raise your stronger arm as high as you can but not higher than your face and place your weaker hand on the table. Drop the ball from your

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<sup>2</sup> [Physiotech](#)

strong hand and catch it with your weaker hand. Repeat this a few times then switch hands.

### **Ball Kick**

Put two objects (cone or bottle) to form a goal about 14 inches/35 cm. Sit on a stability ball about 13ft/4m from the goal. Kick a ball into the goal.

### **Righting Reflex**

Sit with your weight equally distributed on both hips and bring your arms out to the side. Shift your weight over to one side then to the other.

### **Hand Squeeze**

Place your weaker hand on a table and squeeze a ball as hard as you can.

### **Active Opening**

Sit in a chair and cross your arms on your chest with your legs together. Open your arms and legs, come back into position, and repeat.

### **Tenodesis Against Gravity**

Position your arm so that your palm is pointing downward, raise your wrist as you gently form a fist, then drop your wrist as you open and extend your fingers.

### **Differential Flexors Tendon Gliding**

Position your wrist so that it is straight

Straighten your fingers

Make a hook fist so that the next two joints are bent, like a hook or bird claw

Straighten your fingers

Make a fist with straight tips so that your big knuckles bend and the next joint is bent but the last joint is straight

Straighten your fingers

Make a full fist

Straighten your fingers

Make a duck bill with your hand by bending the big knuckle of all your fingers while keeping the last two joints of each finger straight

Repeat

### **Putty: Grip**

Grip putty or play doh by making a fist. Open your fingers and repeat.

### **Putty Roll and Pinch**

Roll putty into a log, pinch your thumb and index finger into the putty log, then your thumb and long finger, then your thumb and your ring finger, finally pinch your thumb and pinkie. Repeat.

### **Wrist Gentle Room**

Place your hand flat on the table. Apply pressure using the other hand just at the edge of the wrist line while you lift your elbow to stretch the wrist into extension. Then lower the elbow to stretch the wrist into flexion. Alternate between these two motions

### **Isometric Ulnar Deviation**

Place your forearm on a table/armrest in a neutral position with thumb up and wrist over the edge, fingers relaxed. Put your opposite hand under your hand. Keep your forearm supported and try to push only your hand against the resistance of your opposite hand. Hold for 20 seconds.

More Resources:

[Cornerstone Autism Center](#)

Skills in communication, social interaction, academics and life skills increase your child's independence.

[In-Home Physical Therapy Exercises for Leg Strength](#)

[Physiotech](#)