

Core Strengthening Exercise Program

Core strengthening isn't just for grown-ups; children can also benefit from toning techniques--but it has to be fun. Here are some exercises kids can do in therapy or at home to work core muscles and achieve better posture, stability and endurance, without getting bored.

Bridging: Lay on back with knees bent and feet flat on floor. Push through heels and lift buttocks off surface. Hold position and focus on keeping pelvis and shoulders level. Tighten buttocks and stomach muscles.

- Add a little: Lift and lower hips with control.
- Add a little more: Hold one leg out straight but still keep hips lifted and pelvis level. Repeat on other side. Try lifting and lowering with one leg.
- Add a larger ball: sit on therapy ball and roll to lying position with back supported by ball. Keep hips/pelvis flat like table top. Maintain this position. To progress exercise hold position and alternate marching legs.
- Make it fun: While in bridge position zoom cars under the bridge see how many can pass under. Place a musical or squeak toy under the pelvis that will sound as the child lifts and lowers. Roll a ball under the hips.

Prone Extension/Superman: Lay on stomach with arms overhead. Lift arms and legs so upper chest and upper thighs lift off surface, engaging spinal muscles. Arms and legs should be straight. You can place a pillow under the hips. Or do over a therapy ball alternating lifting arms and legs.

- Add a small ball: Lift arms and legs while holding a ball.
- Make it fun: Reach up for items that can be hidden under the body. Play catch from this position. Perform this on a swing or supported by a parent in the air. Place toys or bean bags on the floor and have child reach down to pick up and throw bean bag.

Quadruped Alternating Arms and Legs: On hands and knees, hold spine stable and straight like a table top. Alternate lifting and straightening the opposite arm and leg while holding back stable.

- Add a little: Crunch engaging abdominals by pulling in elbow to opposite knee under the body.
- Add a small ball: Place the small ball or rolled up socks on the low back and do not let it roll off while performing this exercise.
- Make it fun: Add movement and crawl around with a small stuffed animal on the low back, pointing to other animals in the "forest" while not letting the animal drop off a stable spine.

Plank: Assume a push-up position (body and legs straight, supported on extended arms and balls of feet). Hold a straight neutral spine in this position.

- Add a little: Lift one foot off the ground and maintain stable position
- Make it fun: Have a timed contest to see who can stay up in the position longest. Set up play kitchen toys on back pretending child is a table.

Sit-Ups: Lay supine with knees bent and feet on floor. Lift head and shoulders off surface. Breathe out as you lift and in as you lower.

- Add a little more: Add rotation to engage the obliques by reaching arm or elbow for opposite knee.
- Add a larger ball: Perform sit-ups while sitting/lying on a large ball.
- Make it fun: Play catch with the ball as the child lifts and lowers. Have the child grab a puzzle piece with each lift to then complete a puzzle.

Lunges With a Twist: Stand with feet in stride, supported on a flat foot in the front and on the ball of the toes in the back. Flex the front knee, keeping back leg straight and engaged to lower into a lunge. Push to return to upright. Be cautious to keep front knee directly over ankle and not coming forward in front of the foot.

- Add a small or larger ball: Lower to pick up and put down a small ball. Play catch while lifting and lowering
- Make it fun: Make the lunges walking lunges and have a race performing walking lunges.

Wood Chops: Seated with both hands together, lift arms up over one shoulder and, with control, lower arms across body to opposite hip. Repeat movement to both sides.

- Add a little: Perform exercise in varied positions, such as standing, tall kneel and half kneel.
- Add a larger ball: Perform exercise while seated on the larger ball.
- Make it fun: Use a plastic bat or wrapping paper roll to swing or simulate sword movements to knock down toys, have a play sword fight or swipe at balloons.

Dead Bugs: Lay on back with arms and legs off surface. Hold arms at hips and knees flexed. Lift right arm over head and straighten left leg, then switch with left arm over head and right leg straight. Move through these alternating arm and leg movements with control and abdominals engaged.

- Add a small ball: With the small ball in hands, lift knees and hold ball between feet or knees. Lower legs and repeat by passing ball back up to hands.
- Make it fun: Swat or pop bubbles while performing this exercise. Play balloon volleyball while in this position.

Often, a home exercise program for children can get boring and will not be followed through. It can be more beneficial to suggest functional fun activities that kids do everyday to engage the core muscles.

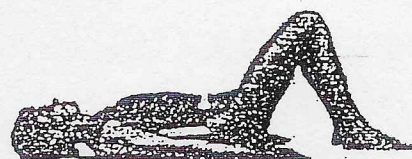
- Build an obstacle course out of chairs and cushions at home, and have the child crawl or climb over it.
- Climb up a slide instead of using the steps, then turn around and slide down.
- Hold relay races in wheelbarrow, crab walking and bear (plantigrade) positions.
- Crawl backwards up and down the stairs.
- Standing on an uneven surface (i.e. bed or pillows) while playing catch. This can also be done in a half-kneel if the child is tall.

Back Stabilization Program

Level 1

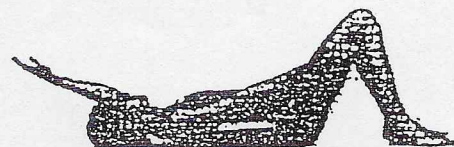
Abdominal bracing:

Lie on your back, find your neutral position, tighten your stomach muscles — hold three seconds — then relax. Repeat for two minutes.



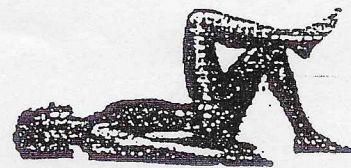
Abdominal bracing with arms:

Lie on your back, keep your neutral position. Alternate raising arms above your head. Keep contracting your stomach and remember to breathe. Repeat for two minutes.



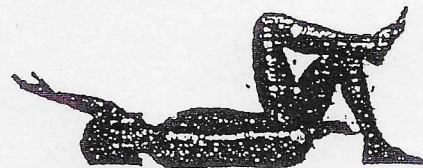
Abdominal bracing with legs:

Tighten your stomach and back muscles to keep your neutral position. Alternate raising your feet from the floor without lifting or rotating your hips. You can place your hands on your hips to help you feel when you are stabilizing. Repeat for two minutes.



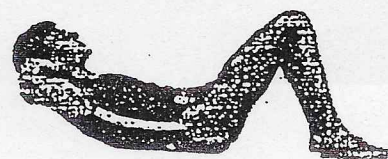
Abdominal bracing with arms and legs:

Keeping your neutral position, alternate raising your right arm and left leg with your left arm and right leg. Repeat for two minutes.



Partial sit-ups:

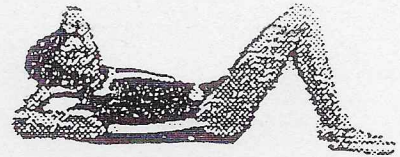
Start in your neutral position with your hands behind your head, use your stomach muscles to raise your upper back off the floor. Rise only enough to clear your shoulder blades. Repeat ten times.



Back Stabilization Program

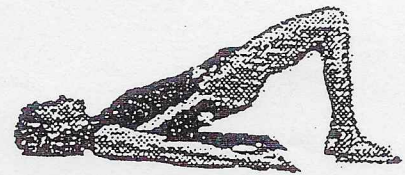
Diagonal partial sit-ups:

Start from neutral. Lift your left shoulder from the floor, hold for three seconds, then lower back down. Alternate lifting your left and right shoulders. Be sure to keep your back down in your neutral position. Perform ten repetitions to each side.



Bridging:

Tighten your stomach muscles to hold your neutral position. Press with your feet to lift your buttocks and back from the floor. Be sure to lift your lower back rather than just your hips and stay in your neutral position. Perform slow repetitions for two minutes.



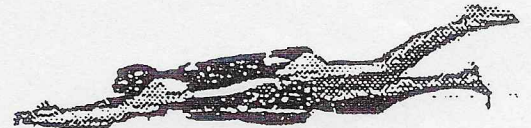
Prone single arm lifts:

Lie on your stomach. With a smooth, controlled motion, slowly raise one arm, then lower it. Lift only the arm, don't lift or rock your shoulders. Concentrate on keeping your entire trunk stabilized. Perform slow repetitions for two minutes.



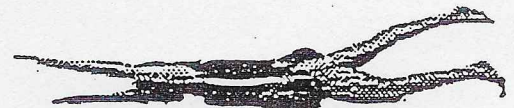
Prone single leg lifts:

Lie on your stomach. Keeping your lower back stabilized, alternate raising your legs. Lift only high enough to clear your thigh from the floor. Don't allow your hips to rock. Perform slow repetitions for two minutes.



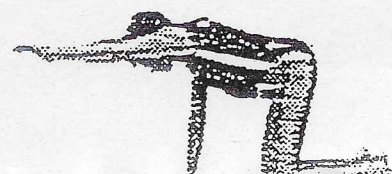
Prone arm and leg lifts:

Use your trunk muscles to stabilize your neutral. Alternate lifting your right arm and left leg with your left arm and right leg. Keep the motion smooth and controlled. Your trunk should not move. Perform slow repetitions for two minutes.



Quadruped arm raises:

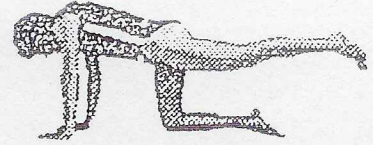
While on your hands and knees, tighten your abdominal muscles to stabilize your back. Alternate raising your arms. Move only from the shoulder while keeping your back and hips steady. Don't let your shoulders rise up or twist. Perform slow repetitions for two minutes.



Back Stabilization Program

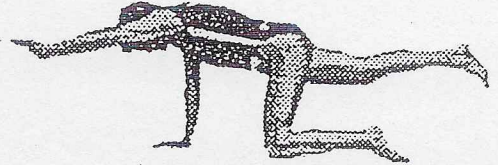
Quadruped leg raises:

While on your hands and knees, tighten your abdominal muscles to stabilize your back. Alternate raising your legs. Move only your leg while keeping your back and hips steady. Concentrate on keeping your trunk stabilized without letting your hips rock or drop during the lift. Perform slow repetitions for two minutes.



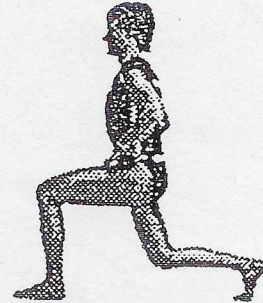
Quadruped arm and leg raises:

While on your hands and knees, keep your shoulders, hips, and back as motionless as possible. Alternate lifting your right arm and left leg with your left arm and right leg. Be sure to stabilize in your neutral position. Perform slow repetitions for two minutes.



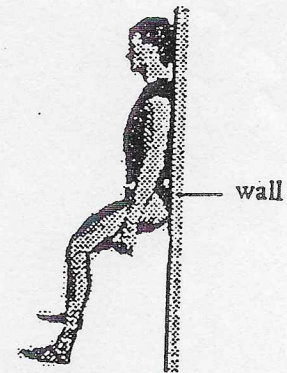
Forward lunges:

Stabilize your lower spine with your abdominal muscles as you step forward and bend your knee to lower your trunk. Keep your back straight while moving smoothly down, then back up. Perform slow repetitions for two minutes.



Wall slides:

Stand with your back against a wall and place your feet twelve to eighteen inches from the wall. Bend your knees to slide your body down six to eight inches. Hold this position for two minutes.



Sumo:

Stand holding your neutral spine position. Bend your knees and hips to lower your body six to eight inches. Be sure to keep your neutral position without flexing your back. Hold this position for two minutes.



NAME _____

DATE _____

Weight Shift—Four Point

Purpose

To strengthen the muscles that help the arms support the body weight in transfers and walking with a walker, crutches, or cane

Directions

Have the child get into a hands-and-knees (four-point) position on the floor. Place a puzzle frame in front of the child. Sit in front of the child and the puzzle. Present puzzle pieces one at a time where the child must shift the weight forward to reach each piece.

Ideas

Also try using rings to be placed on a ring stacker, toy plastic monkeys to be placed in a barrel, or pegs to be placed in a plastic jug or bottle.

Notes

Have him keep his back flat like a table with his tummy tight. He can reach for objects alternating his hands and then legs. Have push or kick a ball.



NAME _____

DATE _____

Walking on Hands (over Therapy Ball)

Purpose

To strengthen the muscles that help the arms support the body weight in transfers and walking with a walker, crutches, or cane

Directions

Have the child kneel at a therapy ball. With your support at the hips, have the child roll forward over the ball and place the hands on the floor. Then ask the child to "walk" forward on the hands. The child will move forward over the ball, and your hand support must move from the hips down the legs and to the ankles. Then ask the child to "walk" backward on the hands, returning to a kneeling position. The ball used for this activity must be a size that allows the child to have the hands on the floor without hanging the head down.

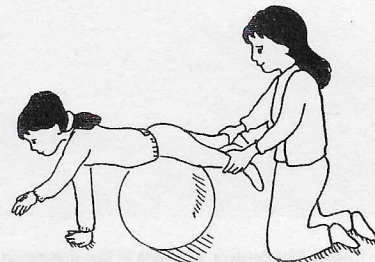
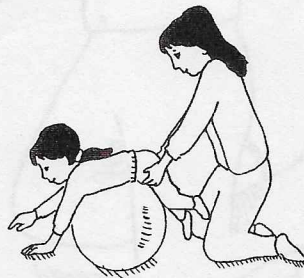
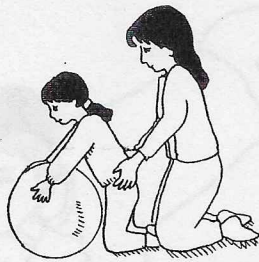
Ideas

If the child performs this activity easily, you may make it slightly more difficult by scattering small items where the child must "walk" over the ball and pick them up, bringing one item back each time. Items that may be used include coins, pegs, blocks, or toy animals.

Important

Do not allow the child's legs to spread apart over the ball as you are holding them. Do not allow the child to slide sideways off the ball. You must help the child control the lower body.

Notes

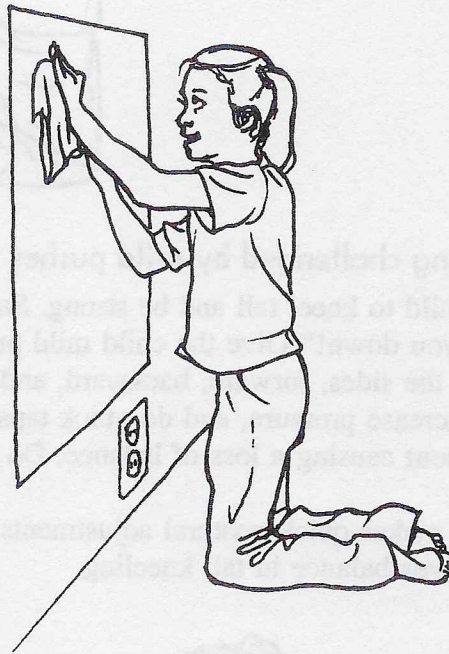


4. Kneeling at a wall

Encourage the child to heel-sit and rise to a kneeling position at a wall. Give assistance as needed. To encourage play in kneeling, mount a blackboard, felt board, cork board, or picture on the wall at an appropriate height. Other ideas are:

- Play with Colorforms® at a large mirror.
- Play with shaving cream at a glass patio door. (Cleaning up afterward with a wet sponge will be lots of fun and more exercise.)
- Play with magnets at the refrigerator.

GOAL: Bracing with hands against flat surface, the child plays while kneeling for several minutes.



He can Kneel or Stand at wall.
Place a ~6" Ball on wall with hand on
ball straight in front of shoulder
Keep shoulder blades back (stand up straight)
Have him ① make small circles clockwise and
counter clockwise.
② Roll ball up/down & side to side in small
quick movements
Repeat 10-20 times on each arm.

Sm

4. Ball play in kneeling

Catching as well as throwing will challenge a child's balance. Use balls of different sizes and weights according to the child's ability. A light, medium-size ball will be easier to catch and toss than a large, heavy ball. Small balls are too difficult to catch but fun to throw.

GOAL: The child plays ball for several minutes without a loss of balance.



5. Lifting Tumble Forms roll in kneeling

Playing "weightlifting" is fun, especially for little boys. Holding or lifting a Tumble Forms roll will tax their strength as well as their balance. Small hand weights of 1/2 or 1 pound may also be used. The child may show better trunk extension and postural alignment with weightlifting.

GOAL: The child will show good postural alignment and balance in tall kneeling.

