

Safety guidelines

Before you exercise:



- ☐ Move with comfort and avoid any sharp or worsening pain
 - Modify or skip exercises that increase your symptoms



- ☐ Start slowly and gradually increase time or repetitions



- ☐ Consistency matters more than intensity; gentle movement most days is the goal



- ☐ **Always follow your specific restrictions**
 - **After spine fusion:** typically, no bending, lifting more than 10 pounds, or twisting for the first 4–8 weeks
 - **With spinal stenosis:** focus on neutral or slightly flexed positions and avoid prolonged arching of the low back

Build a daily exercise routine

Warm-up → Stretching → Strengthening

- ✓ Choose 3-5 simple exercises
- ✓ Aim for 10-15 minutes of exercise per day and progress gradually
- ✓ Try to exercise at the same time each day to build a habit
- ✓ Always a good idea to get a physical therapy evaluation for an individualized home exercise program



Warm-up/Stretching/Strengthening

March in Place (2 minutes)

- Stand tall with good posture
- Lift knees one at a time (to comfortable height)
- Swing arms naturally or keep hands at sides
- Breathe steadily, move at easy pace

Why it works: Gently warms legs, hips, and circulation without stressing your back



Warm-up/**Stretching**/Strengthening

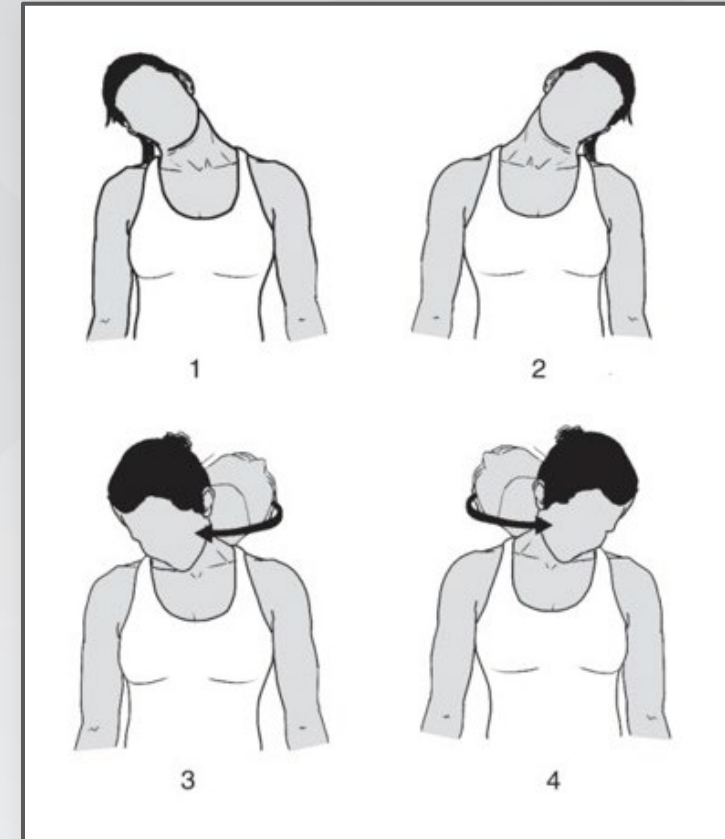
1. Head Rolls (5 minutes)

3 sets of 3 rolls | Daily | No equipment needed

Step-by-step directions

- Stand or Sit tall in chair, feet flat, hands in lap
- Drop chin gently to chest (like nodding yes)
- (Image 1) Roll RIGHT: Ear toward right shoulder. Hold 5 seconds then return to center (chin to chest.)
- (Image 2) Roll LEFT: Ear toward left shoulder. Hold 5 seconds then return to center (chin to chest.)
- (Image 3) Small circles: 3x clockwise
- (Image 4) Small circles: then 3x counterclockwise

Tip: Do not shrug your shoulders up during this exercise



Warm-up/Stretching/Strengthening

2. Kneeling Back Extension (5 minutes)

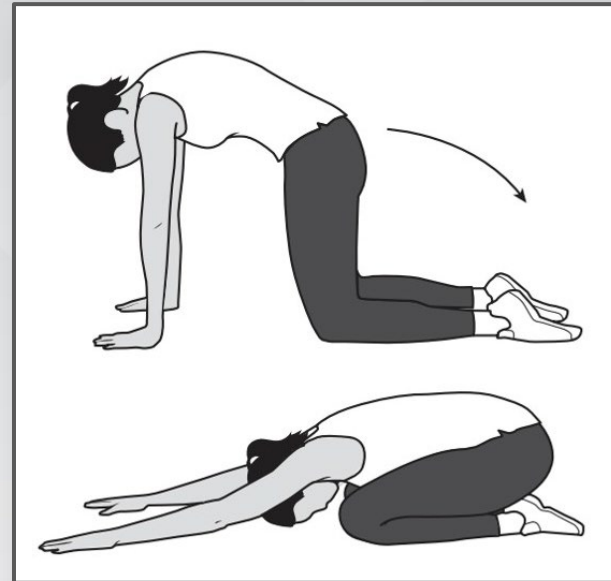
10 sets | Daily | No equipment needed

Main muscles worked: Quadratus lumborum, erector spinae. You should feel this stretch in your lower back and your abdominals.

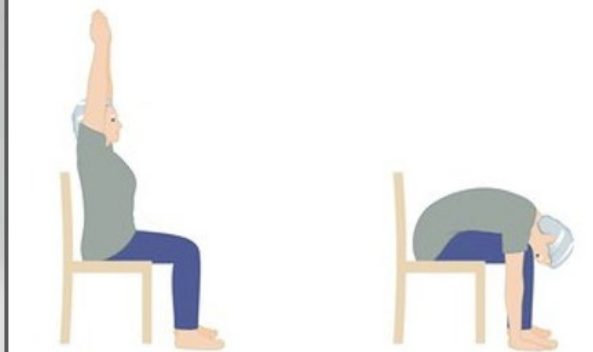
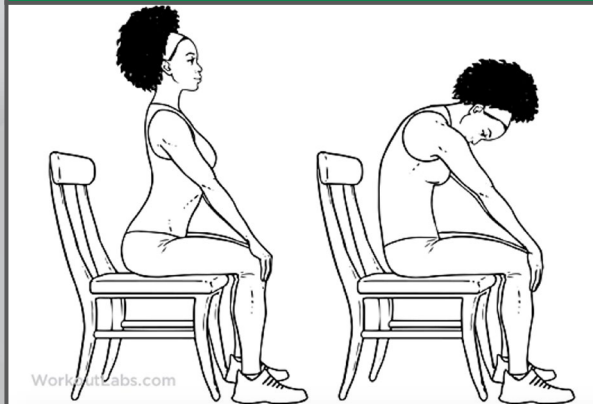
Step-by-step directions

- Begin on your hands and knees with your shoulders positioned over your hands
- Rock forward onto your arms, round your shoulders and allow your low back to drop toward the floor. Hold 5 seconds.
- Rock backward and sit your buttocks as close to your heels as possible. Extend your arms and hold for 5 seconds.

Tip: Look down on the floor to keep your neck in alignment with your spine



Seated alternatives



Warm-up/**Stretching**/Strengthening

3. **Sitting Rotation Stretch** (*5 minutes*)

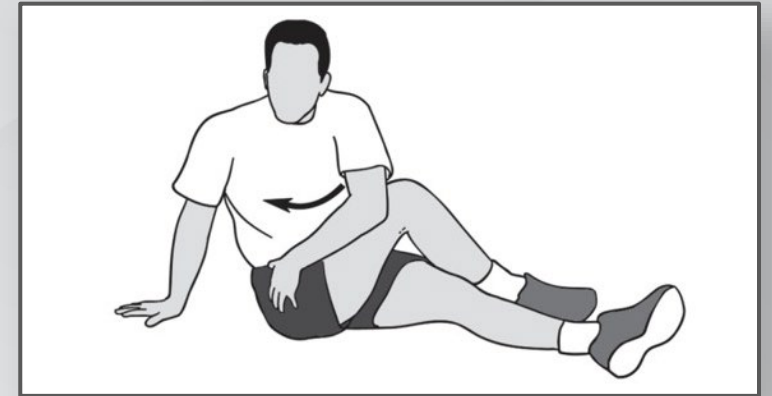
2 sets of 4 | Daily | No equipment needed

Main muscles worked: Piriformis, external oblique rotators, internal oblique rotators. You should feel this stretch in your buttocks, as well as at your sides.

Step-by-step directions

- Sit on the floor with both legs straight out in front of you. Cross one leg over the other.
- Slowly twist toward your bent leg, putting your hand behind you for support
- Place your opposite arm on the side of your bent thigh and use it to help you twist further
- Look over your shoulder and hold the stretch for 30 seconds. Slowly come back to center.
- Repeat on the other side. Repeat the entire sequence 4 times

Tip: Sit up tall and keep your sit bones pressed into the floor throughout the stretch



Seated alternatives



Warm-up/**Stretching**/Strengthening

4. **Modified Seat Side Straddle** (*5 minutes*)

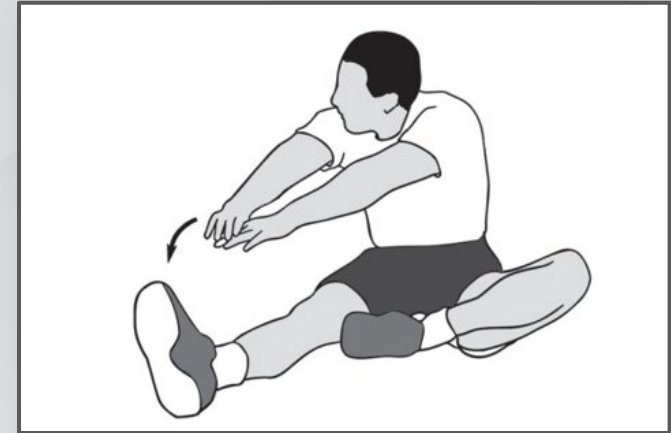
10 each side | Daily | No equipment needed

Main muscles worked: Hamstrings, extensor muscles, erector spinae. You should feel this stretch in the back of your thighs and into your lower and middle back.

Step-by-step directions

- Sit on the floor with one leg extended to the side and the other leg bent
- Keep your back straight and bend from your hips toward the foot of your straight leg. Reach your hands toward your toes and hold for 5 seconds.
- Slowly round your spine and bring your hands to your shin or ankle. Bring your head down as close to your knee as possible.
- Hold for 30 seconds and then relax for 30 seconds
- Repeat on the other side. Repeat the sequence 10 times.

Tip: Keep your extended leg straight as you bring your head down



Seated alternatives



Warm-up/**Stretching**/Strengthening

5. Knee to Chest (5 minutes)

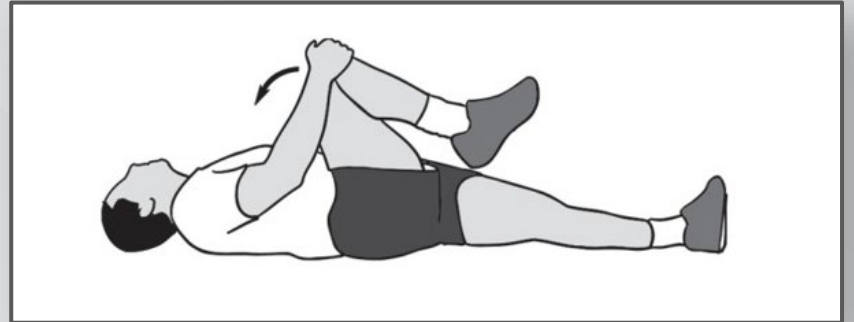
3 sets of 10 | Daily | No equipment needed

Main muscles worked: Quadratus lumborum. You should feel this stretch in your lower back, as well as in the front of your hip and inner thigh.

Step-by-step directions

- Lie on your back on the floor
- Lift one leg and bring your knee toward your chest. Grasp your knee or shin and pull your leg in as far as it will go.
- Tighten your abdominals and press your spine to the floor. Hold for 5 seconds.
- Repeat on the other side, then pull both legs in together. Repeat the sequence 10 times.

Tip: Keep your spine aligned to the floor throughout the sequence



Seated alternatives



Warm-up/**Stretching**/Strengthening

6. Bird Dog (5 minutes)

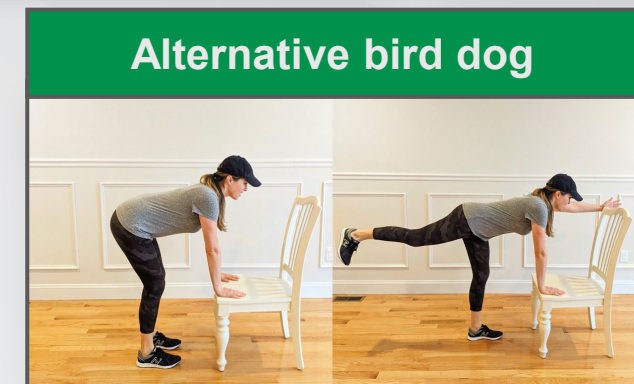
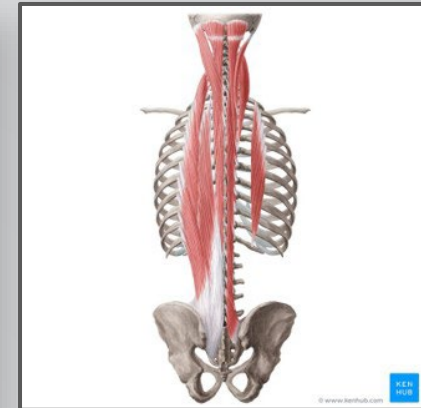
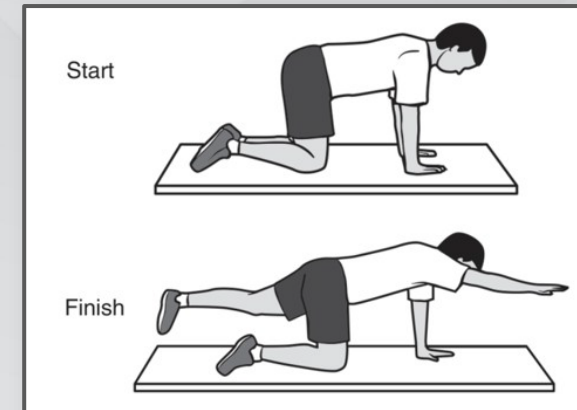
5 sets | Daily | No equipment needed

Main muscles worked: Back extensors, erector spinae, gluteal muscles. You should feel this stretch in your lower back and into your buttocks.

Step-by-step directions

- Begin on your hands and knees with your shoulders positioned over your hands and your hips directly over your knees
- Tighten your abdominal muscles and raise one arm straight out to shoulder-height and level with your body. Hold until you feel balanced.
- Slowly lift and extend the opposite leg straight out from your hip
- Tighten the muscles in your buttocks and thigh, and hold this position for 15 seconds
- Slowly return to the start position and repeat with the opposite arm and leg

Tip: Keep your stomach muscles tight and your back flat to stay balanced



Warm-up/Stretching/Strengthening

1. Plank

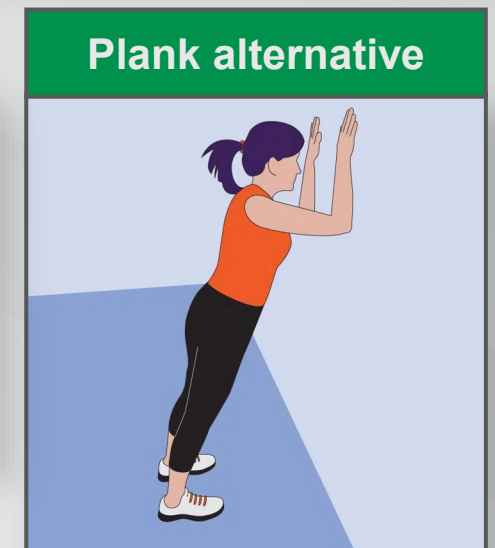
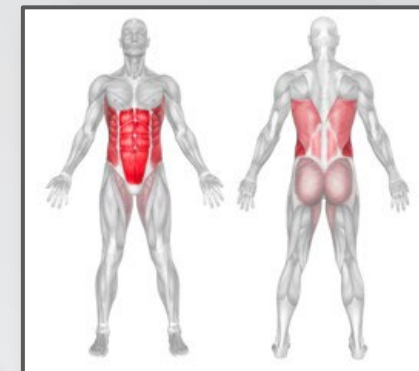
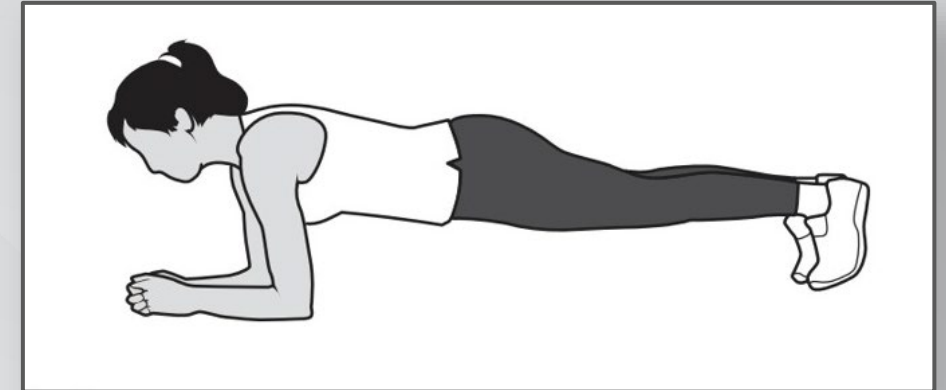
5 sets | Daily | No equipment needed

Main muscles worked: Back extensors, erector spinae, quadratus lumborum, abdominals. You should feel this exercise in your middle to lower back, abdominals, and gluteal muscles.

Step-by-step directions

- Lie on your stomach with your forearms on the floor and your elbows directly below your shoulders
- Tighten your abdominal muscles and lift your hips off the floor
- Squeeze your gluteal muscles and lift your knees off the floor
- Keep your body straight and hold for 30 seconds. If you cannot hold this position, bring your knees back to the floor and hold with just your hips lifted.
- Slowly return to the start position and rest 30 seconds. Repeat.

Tip: Do not let your pelvis sag toward the floor. Keep your stomach muscles tight.



Warm-up/Stretching/Strengthening

2. Modified Side Plank

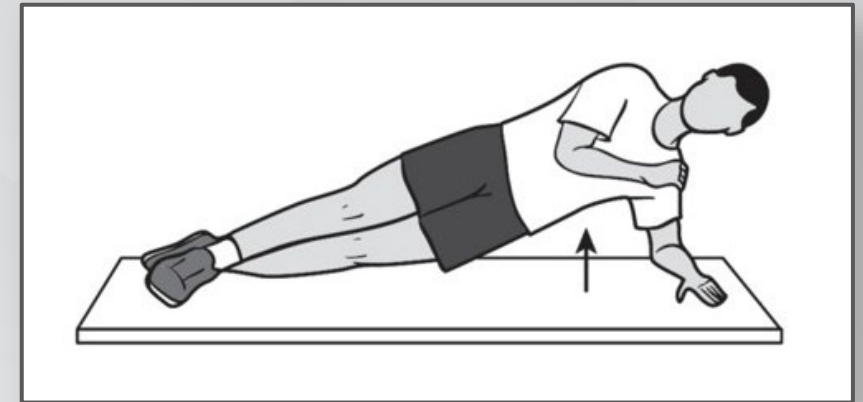
5 sets | Daily | No equipment needed

Main muscles worked: Quadratus lumborum, external oblique rotators, internal oblique rotators. You should feel this exercise in your lower back, waist, and abdominals.

Step-by-step directions

- Lie on your side on the floor with your bottom leg slightly bent and top leg straight. Your elbow should be directly under your shoulder with your forearm extended on the floor in front of you.
- Tighten your abdominal muscles and raise your hip off the floor
- If you can, straighten your bottom leg and lift your knee off the floor as shown
- Keep your body straight and hold this position for 15 seconds
- Slowly return to the start position and repeat on the other side

Tip: Keep neck in alignment with your spine and do not shrug your shoulder up to your ear



Side plank alternative



Warm-up/Stretching/Strengthening

3. Hip Bridge

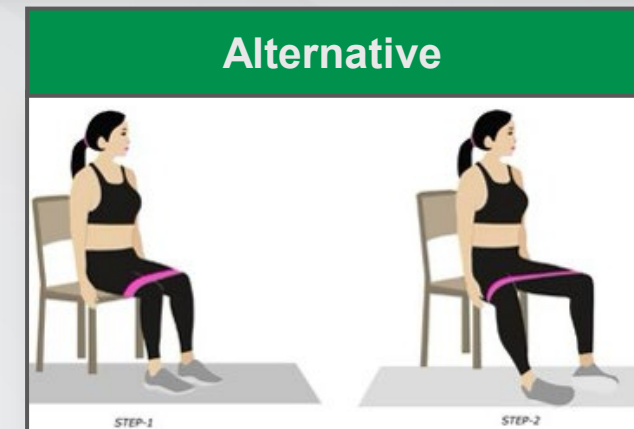
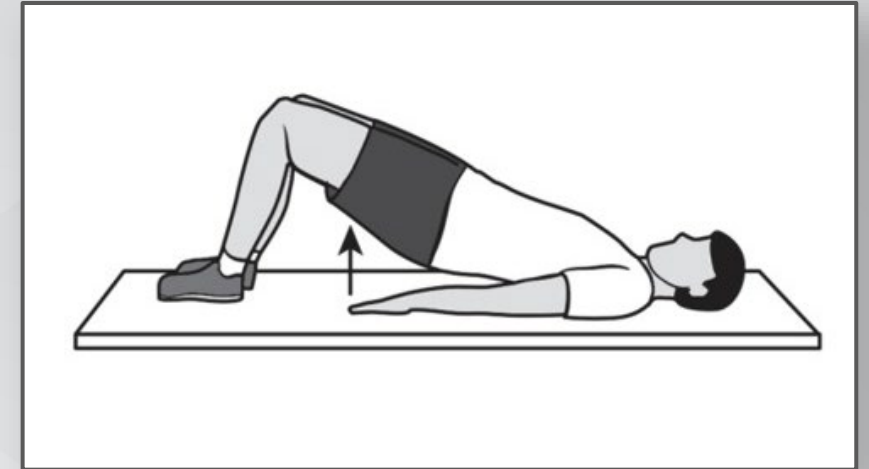
5 sets | Daily | No equipment needed

Main muscles worked: Lower back extensor, erector spinae, gluteal muscles, hamstrings. You should feel this exercise in your lower back, buttocks, and back of your thigh.

Step-by-step directions

- Lie on your back on the floor with your arms at your sides, your knees bent, and your feet flat on the floor
- Tighten our abdominal and gluteal muscles and lift your pelvis so that your body is in a straight line from your shoulders to your knees
- Hold this position for 15 seconds
- Slowly return to the start position and repeat

Tip: Center your weight over your shoulder blades. Do not tense up in your neck.



Warm-up/Stretching/Strengthening

4. Abdominal Bracing

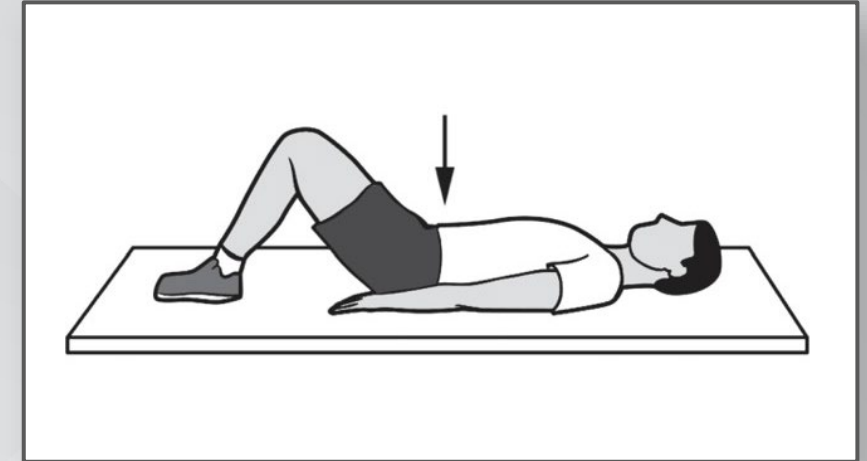
5 sets | Daily | No equipment needed

Main muscles worked: Abdominals. You should feel this exercise in your stomach muscles.

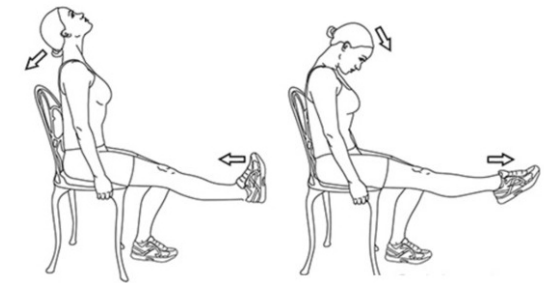
Step-by-step directions

- Lie on your back on the floor with your knees bent and arms at your sides
- Tighten your abdominal muscles so that your stomach pulls away from your waistband
- Hold this position for 15 seconds

Tip: Flatten your lower back into the floor



Nerve “Flossing”



Exercises to stimulate the vagus nerve

These techniques help stimulate the vagus nerve, which can help engage the parasympathetic nervous system and move us out of fight-flight-freeze response

Deep Breathing

Breathe in through the nose for 6-8 counts and exhale through the mouth for about 8-10 counts. Repeat for this for at least 3-5 mins or longer



Gargle Water

In the morning and evenings, maybe before or after brushing your teeth, gargle water for a minimum of 30 seconds.



Singing or Humming

Hum or sing regularly (even if you don't think you can carry a tune)



Neck Stretches

Sit on a chair, or on the floor. Pull the low stomach muscles towards the spine and sit up nice and tall on an inhale. With an exhale let your right ear drop towards your right shoulder. Your right hand can reach up and help guide the head over a bit farther. Hold this for at least 60 seconds or longer. Repeat on the left side.



Spinal Twist

Sit on a chair, or on the floor. Pull the low stomach muscles towards the spine and sit up nice and tall. With an exhale twist to the right. Let your left hand grab your right knee and your right hand can reach behind you to help twist and support. With every inhale sit up a little taller and with every exhale twist a little farther. Hold this for at least 60 seconds or longer. Repeat this on the left side as well.



Ear Massage

Use your fingers and massage the ridge of your ear using a circular motion. Massage in circles up and down the ridge of the ear. Then pull the ear away from the head a few times. After this you can massage the skull behind the ears in a circular motion. Do this on both sides.



Cold Water Therapy

You can submerge your face into very cold water for 30-60 seconds or you can turn your shower cold at the end and stand under the cold water for a minimum of 30 seconds. As you continue to practice this you can increase your time. You can also use an ice pack and place it in the center of your chest for 10-15 mins a day.

