

Spondylitis Exercise Program

A resource by Mary Pack Arthritis Program Physiotherapy

General Instructions

Regular exercise is key in maintaining your mobility, flexibility, strength and posture. A balance of therapeutic exercises prescribed by your therapist and recreational activities will help you achieve this. If an exercise causes pain or if you are uncertain of how to do the exercise, discuss it with your therapist before doing them.

Core Activation

- 1. a. , b.
- 2.
- 3. a. , b. , c. , d.

Range of Motion

- 4.
- 5.
- 6.
- 7.
- 8. a. , b.
- 9. a. , b. , c.
- 10.
- 11.
- 12.
- 13.
- 14.

Strengthening

- 15. a. , b. , c. ,
Progression
- 16.
- 17. L1 , L2 i. , ii. ,
iii. , L3
- 18. a. , b. , c.
- 19. a. , b. , c. , d.
- 20. , Prog
- 21. a. , b. , c.
- 22. a. , b.
- 23. a. , b. , c.
- 24. a. , b. , c. , d. ,
e. , f.
- 25. a. , b. , c.
- 26. a. , Prog , b.

Stretching

- 27. a. , b.
- 28. a. , b. , c.
- 29.
- 30.
- 31. a. , b.
- 32. a. , b.
- 33. a. , b. , c.
- 34. a. , b.
- 35. a. , b.

This Spondylitis Exercise Program has been developed with a systematic, progressive framework by physiotherapists from the Mary Pack Arthritis Program. It is intended as a resource for use by physiotherapists with some knowledge and experience in treating the Spondylitis population. For safety and accuracy, initial supervision by a physiotherapist is recommend.

Basic Core Activation Exercises

Inner Core Muscles

The inner core muscles are located deepest and closest in attachment to the bony frame of our body – along the spine, ribcage and pelvic girdle. They provide support, stability, and postural control when you move.

The following are exercises for two of the muscle groups that make up the inner core muscles. Learn to **activate/turn on** and **control** these muscles **before** and **throughout** your **exercises**.

Lower belly should remain slightly scooped in or soft below the belly button at all times.
Do not allow back to arch or stomach to brace or bulge

1. Pelvic Floor

a. Bladder Sphincter Muscles (front/upper portion of pelvic floor)

For men: Lift the bladder muscles to the belly button, **hold 6 seconds**, slowly lower it down.

Imagine wading into the arctic sea water.

For woman: **Imagine bladder muscles as two curtains on a stage:**

Draw the curtains closed, hold 6 seconds, slide open the curtains.

b. Anal sphincter muscle (bottom of the pelvic floor next to tailbone)

Tighten anal muscle like a drawstring and **pull** it up towards the belly button.

Hold 6 seconds, slowly lower drawstring down and relax it.

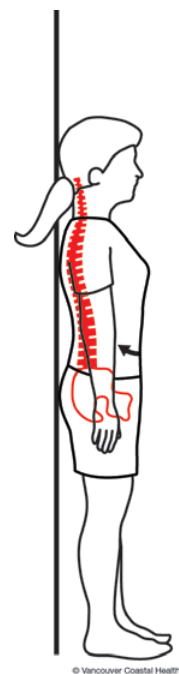
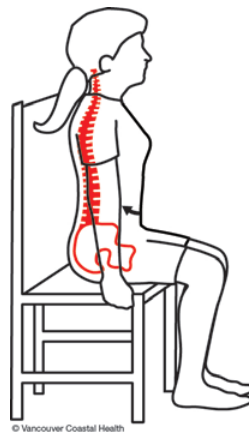
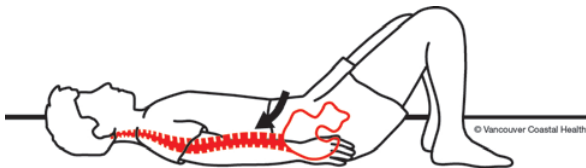
2. Deep Lower Abdominals

- Scoop lower belly muscles into lower back, take 6 quiet breaths through your nose without losing the hold on the muscles.
- Breath into the ribcage and widen through the sides. Breath out softly through the nose and feel the lower belly muscles tighten further.

Imagine zipping up a tight pair of pants, take 6 quiet breaths through your nose, expanding through the sides of your ribcage. Slowly unzip the pants.

Do one set of 6 repetitions.

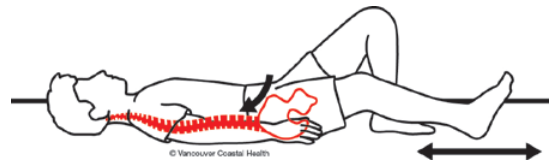
Perform whenever you think about it throughout the day, in different positions.



3.

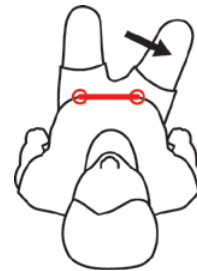
a. Heel Sliding

- Lie with legs bent, align with shoulders
- Turn on inner core muscles to keep back and pelvis still
- Slide one leg away to straighten leg
- Re-set or keep inner core muscles on, slide heel back to starting position



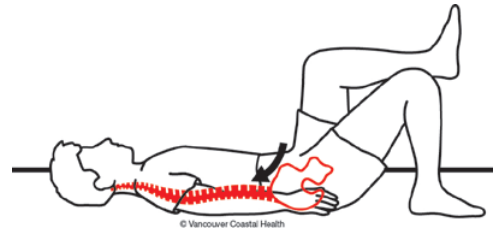
b. Bent Knee Turn Out

- Lie with legs bent, feet in line with shoulders
- Turn on inner core muscles to keep back and pelvis still
- Turn one knee out 30-45°, depending on your ability to keep your hips still on the mat
- Use inner core muscles to hold the opposite pelvis down on the mat
- Re-set or keep inner core muscles on, pull knee back in line with shoulders



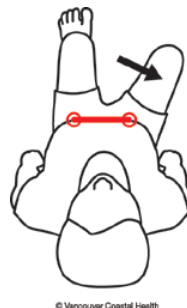
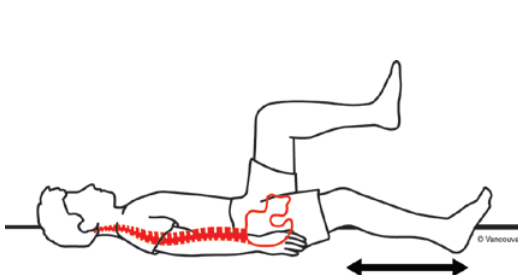
c. Bent Leg Float

- Lie with legs bent, feet in line with shoulders
- Turn on inner core muscles, especially pelvic floor
- **Float** one bent leg up to 90° **toward belly button**, lower it down without releasing inner core muscles



To Progress:

- d. Keep one leg bent up in 90° while performing **a.**, **b.** and **c.** with the other leg



Range of Motion (ROM) Exercises

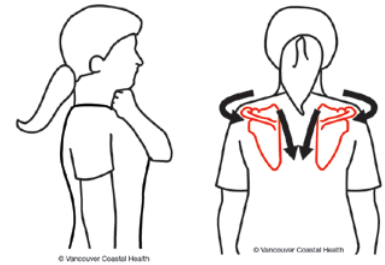
- Help to maintain spine mobility, maintain optimal posture, and to decrease stiffness by putting sections of the spine through their full available movement
- Recommended as a warm up activity before other exercises
- **Generally do 5-10 repetitions of each exercise, daily**
- **Move smoothly through your range. There is no need to hold a position**

Cervical Spine (Neck)

To find neutral head position:

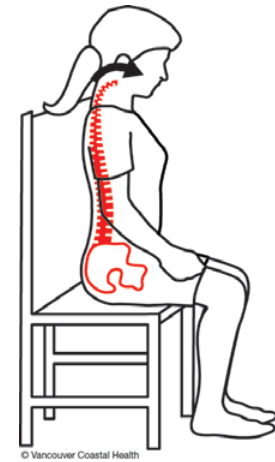
Place your fist in the notch between collar bones and rest chin on the fist. Imagine holding a peach under your chin

To **set shoulder blades** for optimal shoulder/neck posture: Open collar bones wide and gently slide shoulder blades down the back towards opposite hips.



4. Bending Forward

- Sit up tall on the edge of a seat, feet shoulder width apart on the floor
- Turn on inner core muscles, **place head in neutral position**
- **Set shoulder blades** (hold onto sides of the seat to help)
- Bend head down to look at belly button
- **Keep eyes on belly button** and lengthen back of the head away from tailbone to return head to neutral position



5. Bending Backward

- Sit up tall on the edge of a seat, feet shoulder width apart on the floor
- Turn on inner core muscles, **place head in neutral position**
- **Set shoulder blades** (hold onto the sides of the seat to help)
- Lift head up to look backwards on the ceiling
- Keep inner core muscles and shoulder blades set to bring head back to neutral position



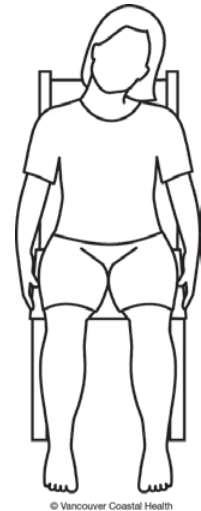
6. Rotation - Turning

- Sit up tall on the edge of a seat, feet shoulder width apart on the floor
- Turn on inner core muscles, **place head in neutral position**
- **Set shoulder blades** (hold onto the sides of the seat to help)
- Turn head to one side, looking eye level across the sides of the room and back



7. Side Bending

- Sit up tall on the edge of a seat, feet shoulder width apart on the floor
- Turn on inner core muscles, **place head in neutral position**
- **Set shoulder blades** (hold onto the sides of the seat to help)
- Bring one ear toward shoulder, lengthen away from the other shoulder. Keep nose pointing forward



Thoracic Spine (Upper – Mid Back)

8. Ribcage Movement

a. Towel Resistance

- Sit tall on edge of seat, legs shoulder width apart
- Wrap a towel around base of ribcage, cross arms for a snug hold on opposing ends of towel
- Turn on inner core muscles and set shoulder blades
- Inhale gently into the towel. Feel ribcage expand and lift sideways
- Keep inner core muscles on and exhale through the nose. Feel ribcage relax and drop down



b. Anchor Shoulder Blades on your Ribcage

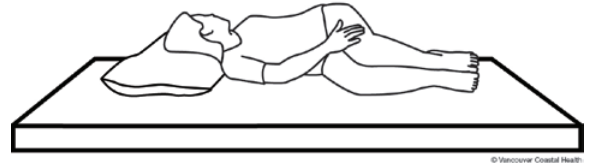
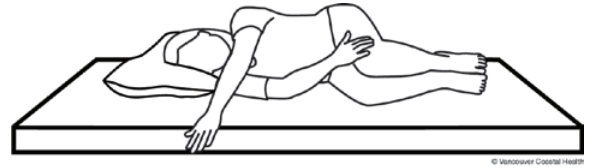
- Hands hold on to sides of chair to keep shoulders blades down
- Turn on inner core muscles and set shoulder blades
- Breath in slowly and feel ribcage expand sideways
- Keep inner core muscles on and exhale through the nose. Feel ribcage relax and drop down



9. Rotation

a. Side Lying

- Lie on the side with knees bent
- Press lower hand on opposite thigh
- Turn on inner core muscles
- Breathe in slowly as you turn upper body, reaching upper arm across to the floor. Keep eyes on moving hand
- Exhale slow and long through the nose as you use stomach muscles to bring body and upper arm back to starting position



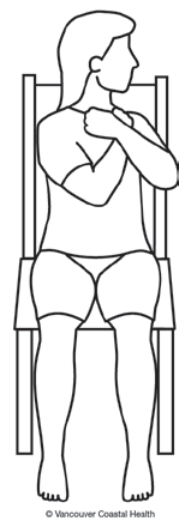
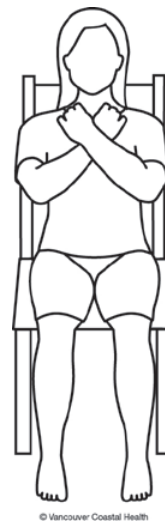
b. Sitting - Supported

- Sit tall on the edge of a seat in front of a table
- Rest heel of hands against edge of table
- Turn on inner core muscles
- Slide one hand forward **across** the table pass the other hand as you breathe in, using stomach muscles to flex and bend upper body
- Slide hand back to starting position as you exhale



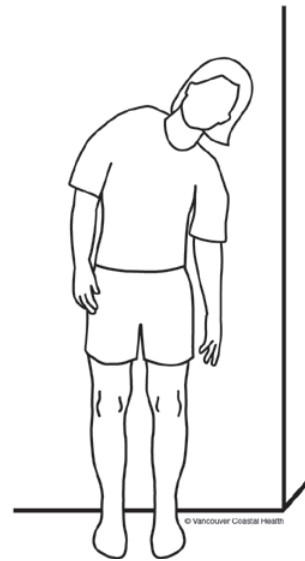
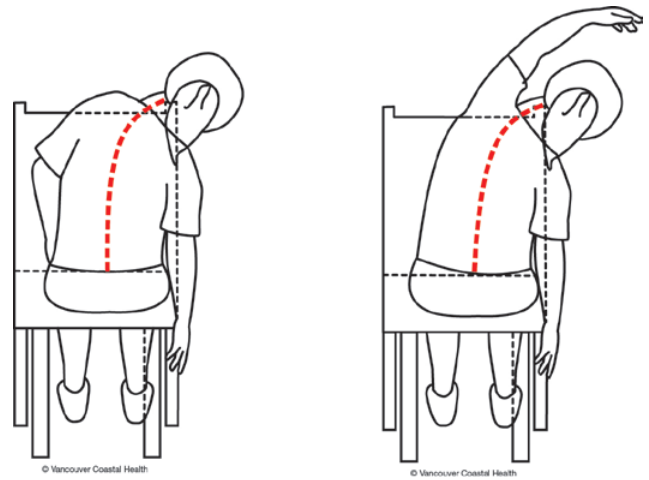
c. Sitting - Unsupported

- Sit tall on edge of seat, legs shoulder width apart
- Rest arms across chest bone, hands rest on collar bones
- Turn on inner core muscle
- Turn body slowly to one side from the bottom up like a corkscrew, breathing in as you turn
- Exhale to turn back to starting position



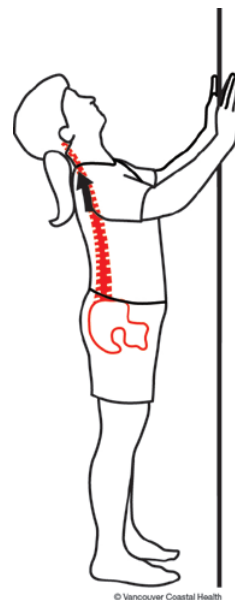
10. Side Bending with Breathing

- ❑ Sitting: Sit tall on edge of seat
- ❑ Standing: Stand tall against a wall
- Turn on inner core muscles, find neutral head position, set shoulder blades
- Scoop lower belly muscles in to pull the ribcage down towards hip to bend body sideways, sliding hand down side of chair leg
- Breath into ribcage on the opposite side, lengthening it up and away from hip
- Exhale using stomach muscles on the stretching side to pull the ribcage down to start position
- **Ensure even pressure through both hips on the seat throughout**
(Optional: raise opposite arm up over head)



11. Upper Back Bending Back

- Stand pressing hands into wall to support upper body, elbows lengthened away from armpits
- Turn on inner core muscles to support body
- Turn on lower buttock muscles to hold pelvis and hips still
- Push upper body away from wall, feeling breastbone sliding forward and upward



Lumbar Spine (Lower Back)

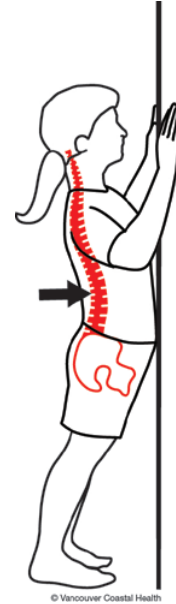
12. Bending Back

- Stand pressing hands into wall to support upper body, elbows lengthened away from armpits
- Turn on inner core and lower buttock muscles to support body
- Lean lower back and hips forward into wall to comfort level

Place feet further away from the wall to increase movement range

Maintain neutral head position throughout the exercise; imagine holding a peach under your chin

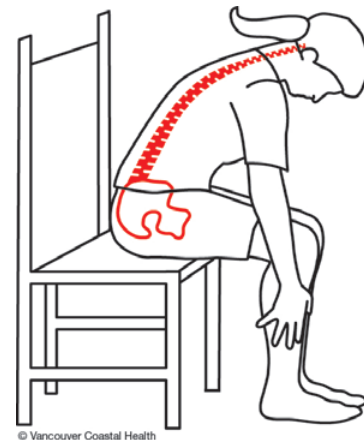
Keep inner core and lower buttock muscles on throughout exercise



Full Spine Movement

13. Bending Forward (Curling Down and Curling Up)

- Sit on the edge of seat, feet in line with shoulders
- Turn on inner core muscles
- **Curl** body down over both knees using stomach muscles, sliding hands down against the side of shins, eyes look towards belly button
- Keep eyes on belly button, use inner core muscles to **uncurl** body from the bottom back up to upright position



14. Bending Forward Diagonally

- Sit on the edge of seat, widen feet apart slightly
- Turn on inner core muscles
- Curl body down over one knee, sliding hands down the shin
- Use inner core muscles to uncurl body from the bottom back up to upright position (use hands to support against thighs to help if necessary)



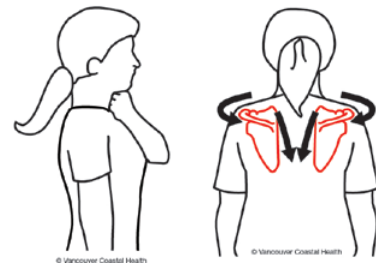
Strengthening Exercises

- Strong muscles help stabilize joints and absorb weight loading impact transmitted through your joints when you move
- When performing strengthening exercises, the target muscle group should experience “momentary muscle fatigue”. Eg **unable** to do 1 more repetition maintaining good form, work through full range or muscle feeling shaky by the end of a set
- **Generally begin with 6-8 repetitions. Build up to 15 repetitions, if no fatigue is experienced, the exercise needs to be progressed**
- **Strengthening exercises should be done 2-3 times per week, with rest days in between**
- You can expect muscle soreness and stiffness initially for 48 hours or less. Some discomfort following exercise in other structures is not unusual but should ease off after 1-2 hours, and reduce with practice over time.
- If an exercise causes increasing pain, try reducing the loading, or number of repetitions. If pain persists, seek help from your physiotherapist.

To **find neutral head position**:

Place your fist in the notch between collar bones and rest chin on the fist. Imagine holding a peach under your chin

To **set shoulder blades** for optimal shoulder/neck posture: Open collar bones wide and gently slide shoulder blades down the back towards opposite hips.



Neck Muscles Strengthening

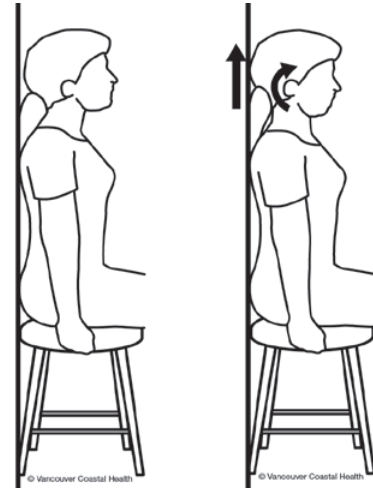
15. Deep Neck Flexors - Upper Neck Bending

a. Sitting or Standing

- Rest head against wall in neutral position (Support head with folded towel if necessary to achieve neutral)
- Set shoulder blades: widen collar bones, gently imprint shoulder blades on the wall
- Turn on inner core muscles to support body
- Lengthen back of the head away from tailbone, sliding head up the wall, drawing chin down to look towards belly button
- Hold 6 seconds

To Progress:

- Hold head just off the wall for 6 seconds, keep eyes on the floor as you rest head back on the wall



b. Lying on the Front

- Lie on your front, rest forehead on a ball, arms bent and shoulders supported with rolled towels
- Place pillow under belly to support spine
- Turn on inner core muscles and lower buttock muscles to support body and hold hip girdle still
- Set the shoulder blades and press forearms into the mat
- Roll ball with forehead towards you and away

Alternative: Can be performed in standing, rolling ball against wall with forehead



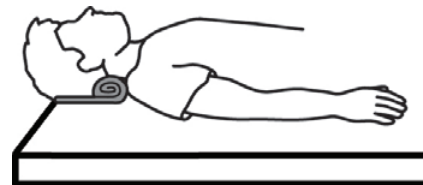
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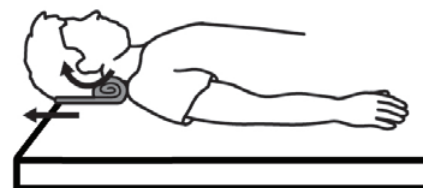
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c. Lying on the Back

- Lie on your back with knees bent. Find neutral head position. (Support head with folded towel if necessary)
- Set shoulder blades, gently imprint into the bed
- Lengthen back of the head away from tailbone by sliding head up the bed, drawing chin down to look towards belly button
- Hold 6 seconds



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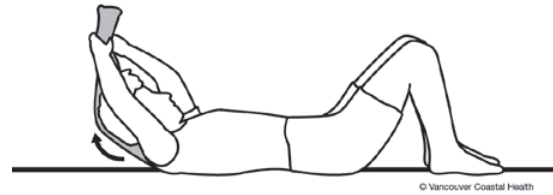
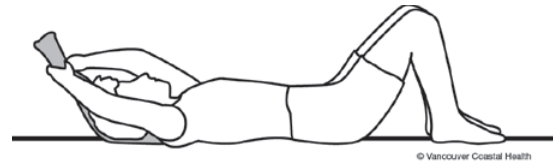


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To Progress:

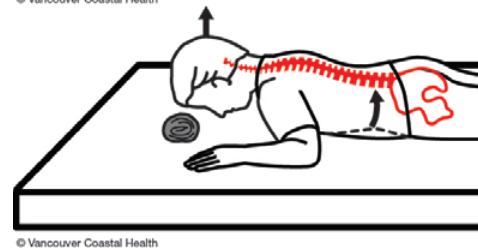
Fold a towel length wise. Secure one end under upper back between shoulder blades. Hold the other end with hands, letting towel support neck and back of the head.

- Turn on inner core muscles to stabilize body
- Look toward belly button and lift back of head off the bed, assisting the lift with hands through towel as much as needed
- Maintain inner core muscles and keep eyes on the belly button, lower head down starting from bottom of the neck, lengthening back of the neck on the way down.
- Use arm support through towel as needed.



16. Deep Neck Flexors and Neck Extensors

- Lie on your front with pillow under belly, forehead on folded towel
- Rest bent arms beside you, lengthen elbows away from armpits
- Turn on inner core muscles and lower buttock muscles to stabilize body and hip girdle
- Set shoulder blades, press elbows and forearms into the mat
- Hold weight of head off the towel, eyes kept level with towel
- **Hold for up to 6 seconds** and slowly lower forehead down



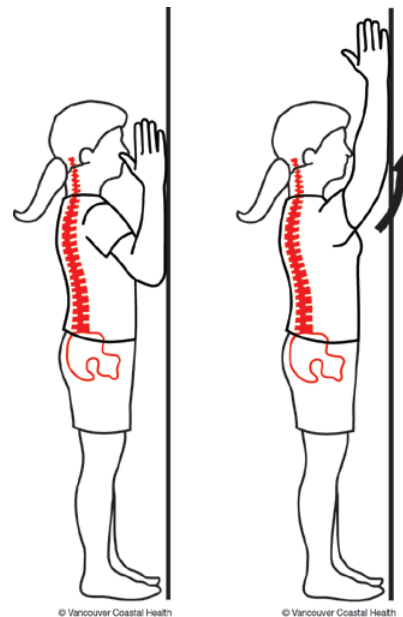
Upper Back and Shoulder Girdle Strengthening

17. Upper Back and Shoulder Girdle Strengthening

Level 1:

Stand facing wall with forearms resting on wall, elbows below shoulders, **palms facing in**

- Turn on inner core muscles to support body
- Turn on lower buttock muscles to support standing
- Set shoulder blades
- Slide forearms up and down the wall, pressing gently into the heel of hands
(Option: place small cloth under heel of hands)



Level 2:

Stand facing wall with forearms resting on wall, elbows below shoulders, **palms facing in**

- Turn on inner core muscles to support body
- Turn on lower buttock muscles to support standing
- Set shoulder blades

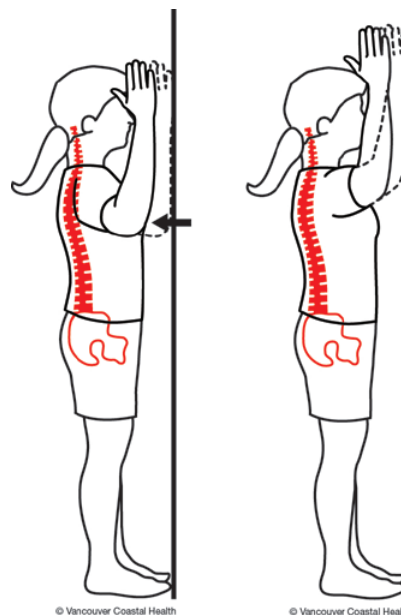
(i)

Lengthen through the elbow and **unweight one** forearm off the wall

- Keep shoulder blade down and expand through ribcage under the armpit
- Keep inner core muscles on and ribcage wide while placing forearm back on the wall
- **Progress by sliding elbow higher on the wall before unweighting**

(ii)

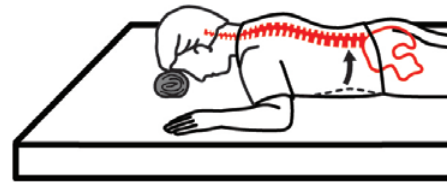
Unweight both forearms off the wall



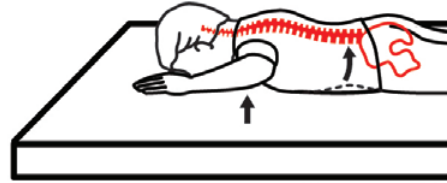
(iii)

- Lie on your front with firm pillow placed lengthwise from chest to lower belly
- Rest forehead on small rolled towel
- Perform level 1 and 2 exercises

Ensure inner core muscles turned on, and softly holding lower ribcage in at all times
Hold head in neutral posture throughout all exercises



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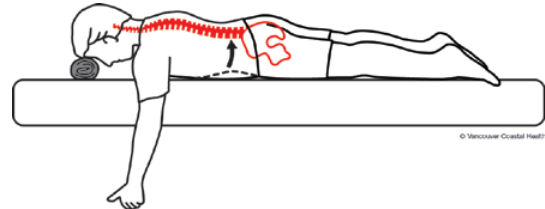


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Level 3:

Lie on your front along edge of the bed, arm hanging down side of bed

- Turn on inner core muscles and lower buttock muscles to support and stabilize body
 - Hold neck in neutral position and set shoulder blades
 - Gently hold lower ribs off the bed
- a. Float arm out to the side from below, thumb pointing upward, lengthen elbow away from the armpit
 - b. Float arm up forward from below, thumb pointing upward, lengthen elbow away from the armpit



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Shift across to opposite side of bed and repeat on other arm

Hip Girdle Strengthening Exercises

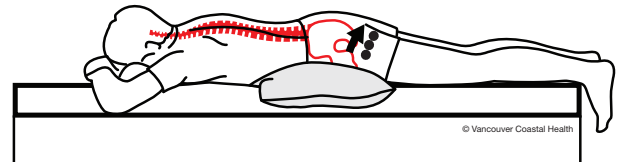
18. Lower buttock squeeze

a. Lying

- Lie on your back or your front with legs straight
- Squeeze lower buttocks together gently, as if holding a pencil between your buttocks

Hold 6 seconds

Repeat 6 – 8 times, 3 times a day



b. Sitting

- Sit on chair with feet supported, hands under your sit bones
- Turn on core muscles
- Slowly squeeze lower buttock muscles together, feeling your sit bones lift off the chair (imagine sitting on a hot leather seat)

Hold 6 seconds, slowly relax, **as you keep core muscles on**

Repeat 6 – 8 times, 3 times a day



c. Heel squeeze

- Lie with pillow under belly button, legs apart
- Bend knees and put heels together
- Turn on core muscles
- Keep core muscles engaged and heels pressed firmly together, slowly relax the lower buttock muscles. You would feel the muscles along the front thighs and hips release

Hold 6 seconds

Repeat 6 – 8 times, once a day

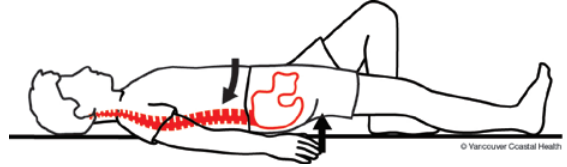


19.

a. Half Bridge

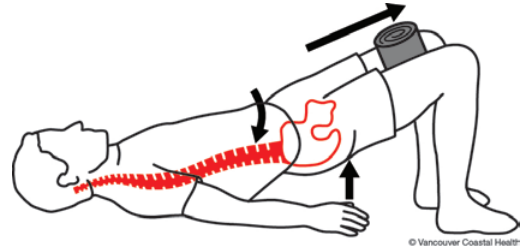
- Lie on your back with one leg bent, one leg straight
- Turn on inner core and lower buttock muscles, pressing into feet
- Lift both hips just off the mat with lower buttocks, keeping hips level and back relaxed
- Keep inner core muscles on while lowering buttocks back onto mat

Switch leg positions and repeat exercise



b. Full Bridge

- Lie on your back with knees bent, shoulder width apart
- Turn on inner core muscles (press a large rolled towel between inner thighs to increase and maintain their effort throughout the exercise)
- Turn on lower buttock muscles to lift hips off the mat, lengthening the thighs away from the belly
- Keep inner core muscles on while lowering buttocks back onto mat



c. Bent Leg Lift on Single Hip Support

- At the end of a full bridge, lift one bent leg off the mat without dropping the hip, maintain both hips level

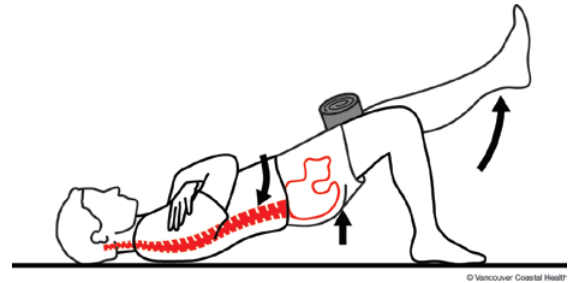


d. One Leg Straightening on Single Hip Support

- At the end of a full bridge (18b), straighten one knee without dropping the hips
- Maintain squeeze on rolled towel between thighs throughout this exercise

Progression: March slowly on the spot while keeping hips level in bridge position

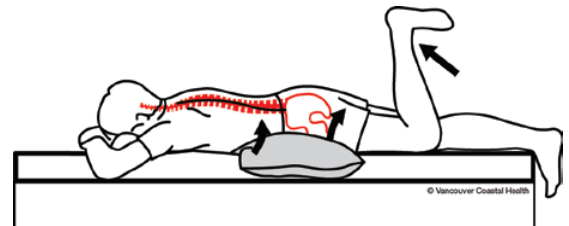
Ensure the inner core and lower buttock muscles stay engaged, back relaxed.



20. Knee Bending

- Lie with pillow under belly button
- Turn on inner core and lower buttock muscles
- Bring heel towards sit bone, lengthening front thigh away from the belly
- Keep core and lower buttock muscles on as you lower foot down

Progression: strap weight around ankle to increase loading

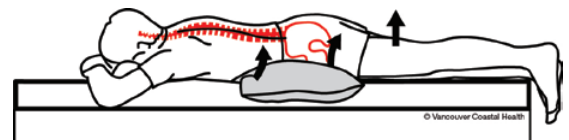


21. Prone Leg Lift

Be sure to stop lower back from arching in this exercise series

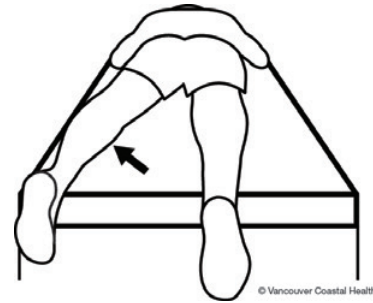
a. Straight Leg Lift

- Lie with pillow under belly button, feet off the edge of bed
- Turn on inner core and lower buttock muscle
- Use lower buttock to float straight leg **just off** the bed, lengthening through the heel
- Keep inner core muscles on and use lower buttock to lower leg down



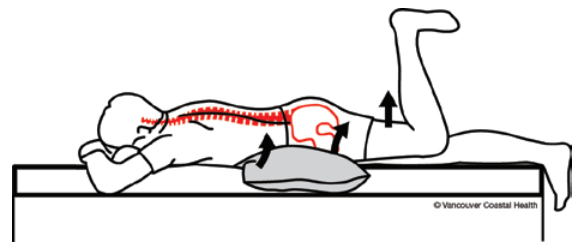
b. Unsupported Hip Swing Out

- Lie with pillow under belly button, feet off the edge of bed
- Turn on inner core and lower buttock muscle
- Use lower buttock to float straight leg **just off** the bed and swing leg out to the side; return to neutral and lower leg down
- Ensure inner core muscles stay engaged to prevent body or pelvic girdle from moving during the exercise



c. Bent Leg Lift

- Lie with pillow under belly button, feet off the edge of bed
- Turn on inner core and lower buttock muscles
- Bring heel towards sit bone
- Slide front of your thigh away from belly until it just floats off the bed
- Keep inner core and lower buttock muscles on to lower thigh down

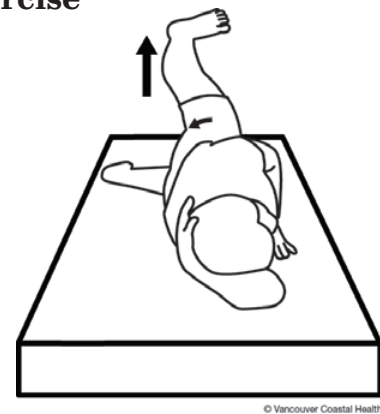


22. Side Lying Leg Lift

Keep pelvis still and both sides level throughout exercise

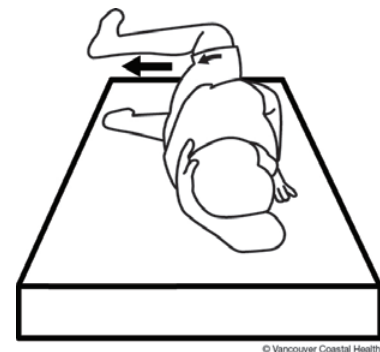
a. Top Leg Straight

- Lie on your side with bottom leg bent, top leg straight
- Turn on inner core muscles to hold spine and pelvis still
- Turn on lower buttock muscles and float top leg up, pushing through the heel to lengthen the leg
- Keep inner core and lower buttock muscles on when lowering leg down



b. Both Knees Bent

- Lie on your side with hips straight and both knees bent, lower legs resting behind you
- Turn on inner core muscles to hold spine and pelvis still
- Turn on lower buttock muscles and float top leg up by lengthening through the inner thigh
- Keep inner core and lower buttock muscles on when lowering thigh down



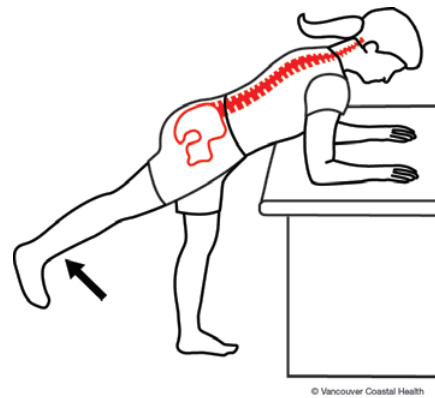
23. Supported Standing Leg Lift

- Stand tall supported over counter, place one leg behind, pressing into the ball of the foot
- Tilt tailbone up to create a small curve in lower back
- Turn on inner core and lower buttock muscles to support body



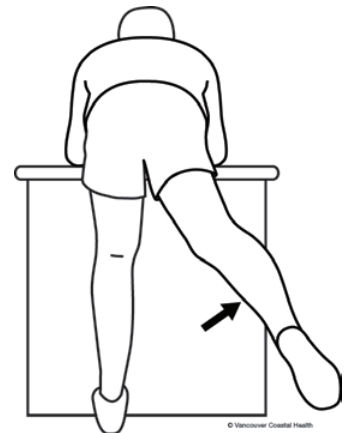
a. Straight Leg Lift

- Float leg off the ground using lower buttock muscles, pushing into the heel
- Lower leg down to rest on ball of foot, keeping inner core and lower buttock muscles on



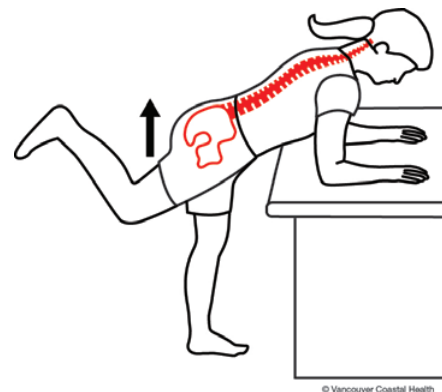
b. Straight Leg Swing Out

- Float leg off the ground using lower buttock muscles, pushing into the heel
- Swing leg out slightly to the side
- Return leg to neutral and lower leg down to starting position without relaxing inner core and lower buttock muscles



c. Knee Bend with Thigh Lifted

- Float leg off the ground using lower buttock muscles, pushing into the heel
- Bring heel towards sit bone without lowering the thigh
- Straighten leg and lower leg back to starting position without relaxing inner core and lower buttock muscles

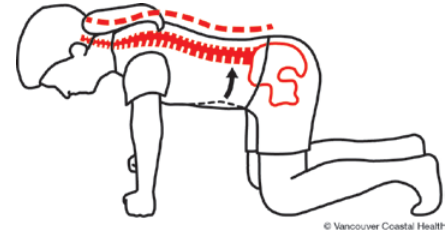


Spinal Stabilization and Strengthening

24.

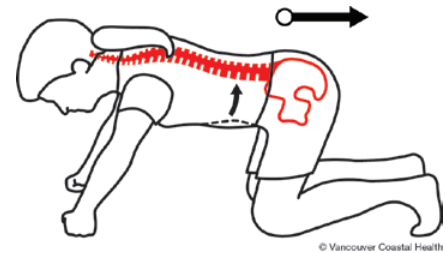
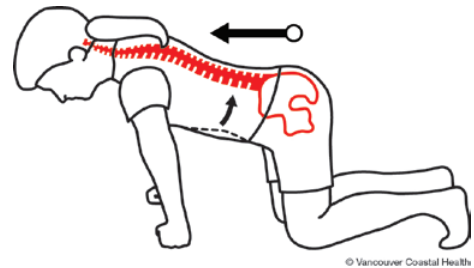
a. Four Point Kneeling Exercises

- Kneel with hands placed under shoulders in fist position, knees under hips, creating a rectangle box with your limbs
- Tilt tailbone up to create small curve in lower back
- Tuck your toes under, and turn on your lower buttock muscles
- Turn on inner core muscles to support spine's S-curve (imagine zipping up a tight pair of pants)
- Hold head in neutral position (imagine holding a peach under the chin)
- Set shoulder blades and push off the mat, hold body weight off the wrists with muscles around the ribcage
- Breath quietly in and out through the nose, expand through ribcage while keeping lower belly scooped in (keep jeans zipped up)



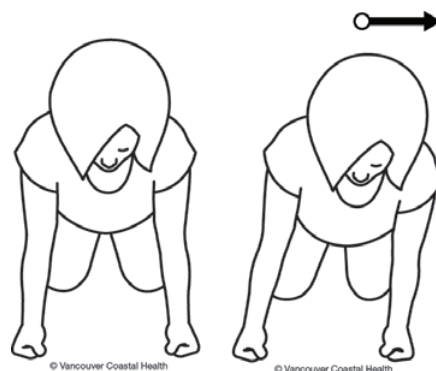
b. Weight Shift Forwards and Backwards

- Shift body forwards (over fists) and backwards (past knees)
- Keep lower belly zipped up and head in neutral (peach under the chin) to maintain S-curve of the spine
- Shift weight forwards and backwards using your lower buttock muscles



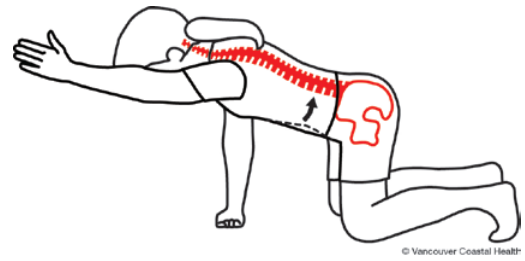
c. Weight Shift Side to Side

- Support upper body load by setting shoulder blade muscles
- Support lower body and pelvic girdle load by setting inner core and lower buttock muscles slide body over onto one shoulder and hip while maintaining spinal posture, then slide across to the other side
- Keep lower belly zipped up and head in neutral (peach under the chin) to maintain S-curve of the spine



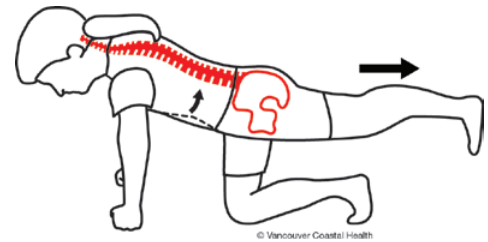
d. Arm Lift in Four Point Kneeling

- Float one arm up by pulling shoulder blades down the back, feeling it move along the side of the ribs (**palm face in**)



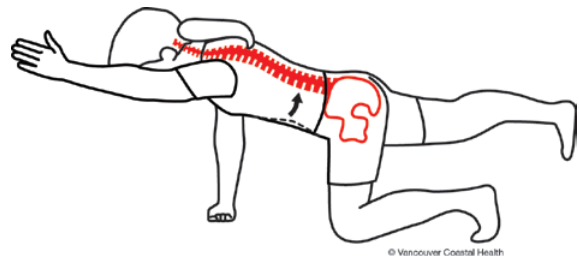
e. Leg Lift in Four Point Kneeling

- Use lower buttock muscles to slide one leg back on the floor through the toes; lengthening to float leg up until it is straight and level with the hip
- Lower leg down, slide back to starting position; ensure your lower belly muscles stay scooped in to prevent pelvis hitch, tip up or drop sideways on the return



f. Opposite Arm and Leg Lift in Four Point Kneeling

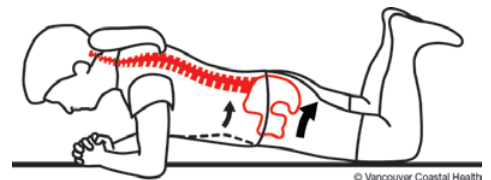
- Perform (d) and (e) simultaneously



25.

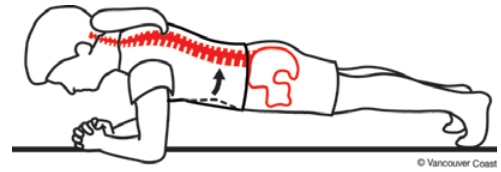
a. Short Lever Modified Plank

- Lie on belly, legs slightly apart
- Interlock fingers, place bent elbows behind shoulders
- Bend knees and press heels firmly together using your lower buttock muscles.
- Turn on inner core muscles and hold chin in
- Push through forearms and elbows to lift body off the floor, lengthening thighs away from hips



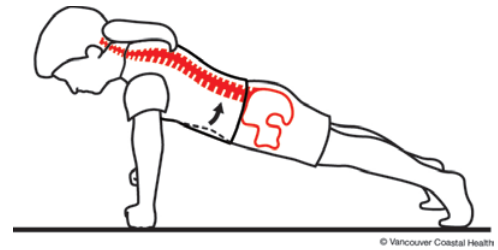
b. Straight Leg Plank

- Straighten legs, press heels firmly together using lower buttock muscles, toes tucked under
- Turn on inner core muscles and hold head in neutral (imagine holding peach under chin)
- Push through forearms and elbows to lift body off the floor
- Lengthen thighs away from lower belly by pressing heels firmly together using lower buttock muscles



c. Full Plank

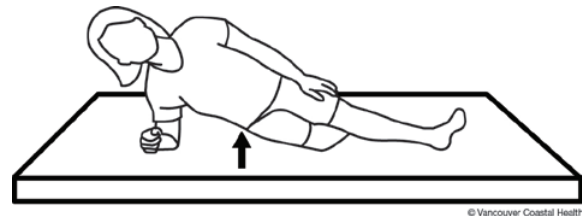
- Place hands beside shoulders, legs in line with shoulders and toes tucked under
- Turn on inner core and lower buttock muscles to support lower body and hip girdle weight
- Set shoulder blades and push body weight off mat using muscles around ribcage and back of arms
- Maintain even quiet breathing in and out through the nose



26.

a. Short Lever Modified Side Plank

- Lie on your side, elbow bent and resting under shoulder
- Bend knees, place lower legs behind hips
- Turn inner core muscles and lower buttock muscles
- Push body weight off the elbow through muscles under ribcage and back of arm to support upper body
- Push hip girdle off the mat using lower buttock and hip muscles on the side of hip

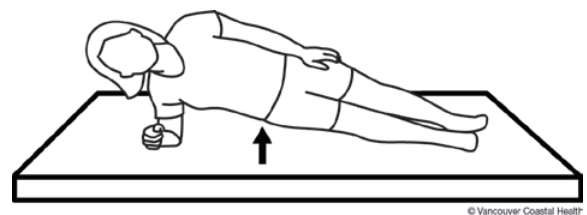


To progress: perform upper and lower body lift at the same time

Do not let the body roll or twist

b. Full Side Plank

- Perform above exercise with legs straight, heels pressed together



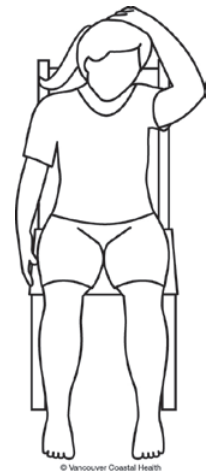
Stretching Exercises

- Help maintain flexibility in soft tissues around the joint
- Tense or shortened muscles interfere with range of movement of the joint they cross
- Aim for balanced muscle tension, length and elasticity.
- Warm up the muscles before stretching (warm shower/bath or hot pack, or some form of aerobic exercise)
- Stretching after strengthening exercises is recommended
- Use caution when stretching muscles over an inflamed or swollen joint
- **Consciously release/relax muscle into the stretch, stop before discomfort. Hold stretches from 20 seconds up to a minute, repeat 4 times. Perform daily if muscle is tight**

27. Neck Muscles Stretches

a. Sideways

- Stand holding onto a table edge or sit holding onto the side of the chair to keep shoulder down
- Bend/tilt head sideways, bringing ear to shoulder until a stretch is felt



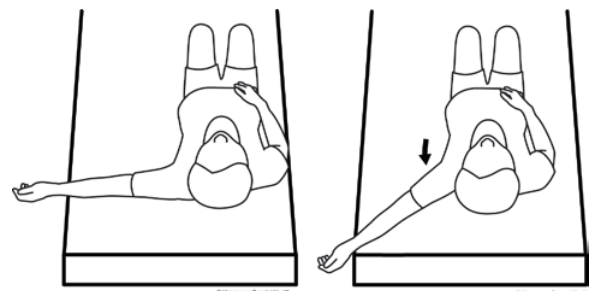
b. Bend Forward Diagonally

- Turn head halfway to one side bend to look towards the floor until a stretch is felt (Cup back of head with hand from the same side to maintain stretch)

28. Shoulder Girdle and Latissimus Muscles Stretch

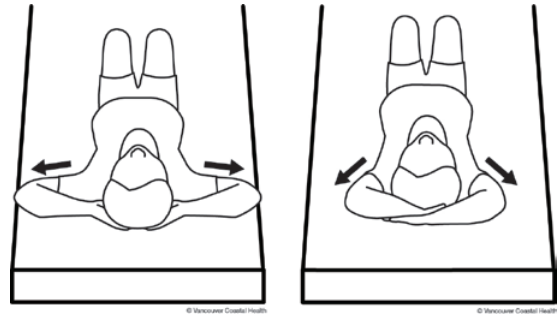
a. In Lying

- Lie with arm outstretched, supported on mat
- To increase stretch, place arm at a higher angle



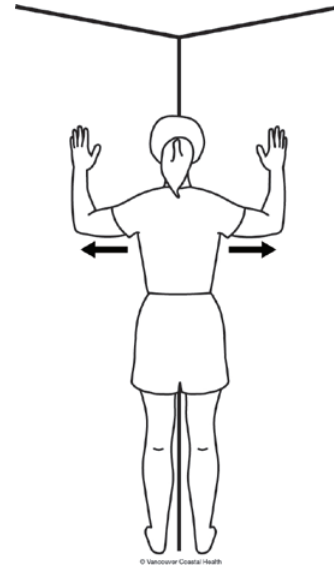
b. Combined Stretch in Lying

- Lie on the back, knees bent
- Rest hands under the head, interlocking fingers
- Turn on inner core muscles to support body and hold ribcage down; maintain quiet long breaths through the nose
- Lengthen and open the elbows towards the bed until a stretch is felt
- To increase stretch, reach hands across to hold opposite elbows



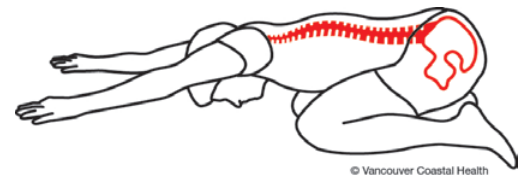
c. In Standing

- Stand facing a wall corner or doorway
- Rest palms along wall or door frames at shoulder level, at a distance where stretch is felt along front of shoulders/chest wall
- To increase stretch, widen arms and palms apart and step closer towards the wall or doorway



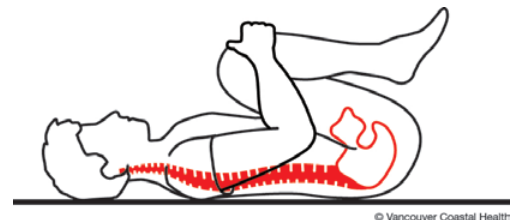
29. Thoracic Spine Stretch

- On hands and knees, turn on inner core muscles and reach backwards through the tailbone to lower buttocks onto heels
- Keep inner core muscles on, take quiet long breaths through the nose
- Scoop the lower belly deeper into the spine while lengthening hands away from you with each exhale



30. Lumbar Flexion Stretch (Lower Back)

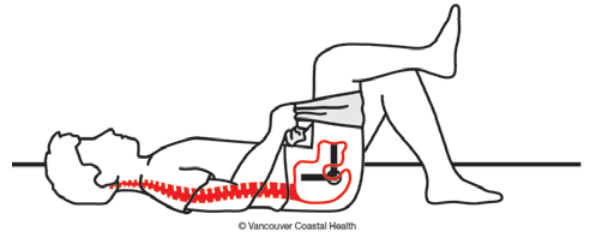
- Lie on the back, wrap hands over knees
- Turn on inner core muscle and pull knees towards chest
- Take long, quiet breaths through the nose
- Scoop inner core muscles deeper into the spine with each exhale and pull knees closer to the chest



31. Hip Flexors Stretch (front of groin and thigh)

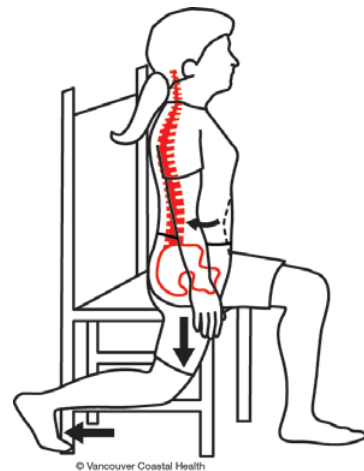
a. For tight or shortened hip flexor across groin < neutral 0° hip straight

- Lie on your back with knees bent
- Turn on inner core muscles to keep body and pelvis still
- Use towel to pull one knee towards chest and hold it still
- Slide other leg away until a stretch is felt
- Slide leg back to bent position to ease stretch between holds



b. Seated Stretch

- Sit on one side of chair
- Lengthen outer thigh down towards the floor, resting weight on ball of foot (tip: place a face towel under ball of foot)
- Turn on inner core muscles to support body
- Turn on lower buttock muscles and slide ball of foot backwards on the floor until a stretch is felt
- Slide foot forward to ease stretch between holds



32. Hip Adductor Stretch (Inner Thigh)

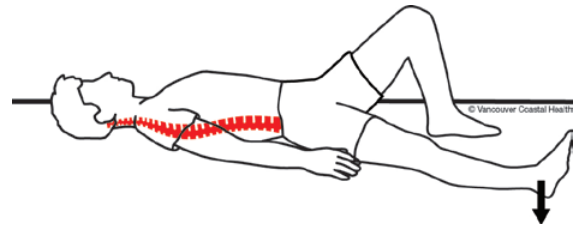
a. In Lying - Legs Bent

- Lie with knees bent and feet shoulder width apart
- Turn on inner core muscles to keep back and pelvis still
- Turn thighs outward until a stretch is felt
- Keep inner core muscles on and bring thighs back to neutral position to ease stretch between holds



b. In Lying - Legs Straight

- Lie with one leg bent, one leg straight
- Turn on inner core muscles to hold body still
- Use lower buttock muscles to slide straight leg out to the side through the heel, until a stretch is felt
- Keep knee cap pointing towards ceiling



33. Buttock Muscles

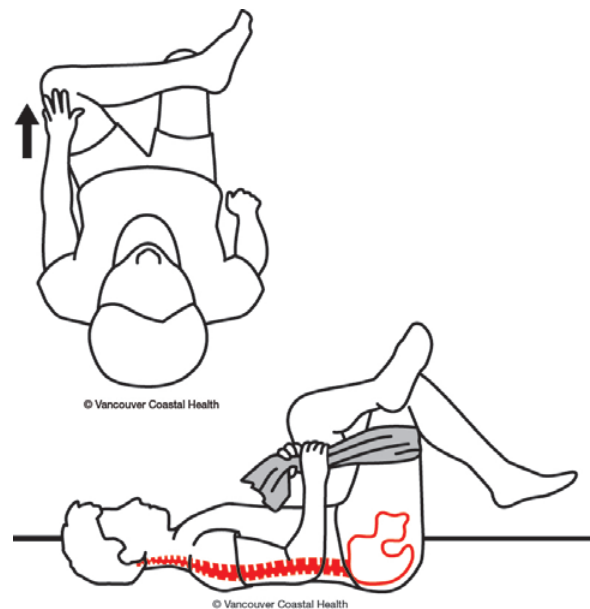
a. In Lying

- Lie with one leg straight and one leg bent
- Turn on inner core muscles to keep body and pelvis still
- Pull bent leg up and across towards opposite shoulder
- Breath quietly through the nose; relax buttock muscles with each exhale and bend hip closer towards opposite shoulder



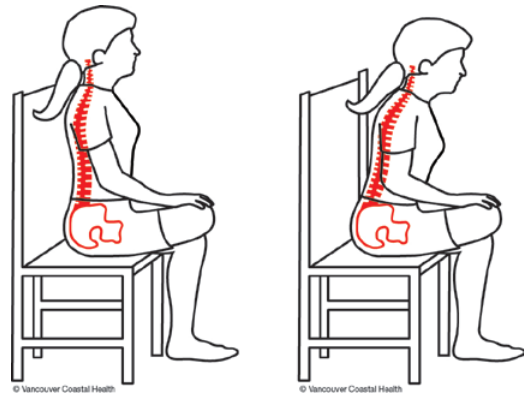
b. Figure 4 In Lying

- Lie with knees bent
- Cross one ankle over top of other knee to form figure 4
- Push outward on the crossed knee to bring it as level with the other knee as possible
- Loop a towel under uncrossed thigh and lift thigh up towards the shoulder to feel a stretch across buttock on crossed leg



c. Figure 4 In Sitting

- Perform **32b** sitting on edge of seat
- Bend forward at the hip to feel stretch across buttock, keeping spine and head in neutral

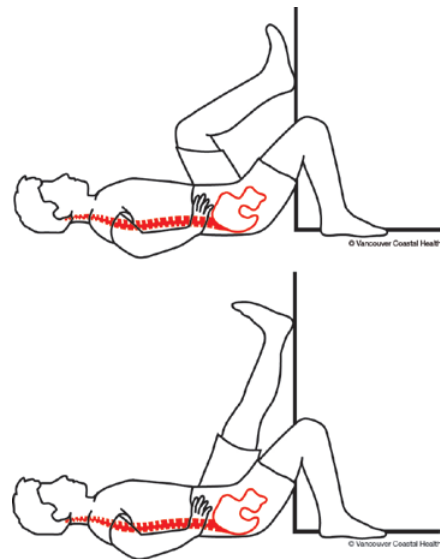


34. Hamstring Stretch

a. In Lying

- Lie on your back facing wall
- Rest one bent leg on the floor, other bent leg on the wall
- Turn on inner core muscles to maintain neutral curves in the spine and tailbone on the floor
- Slide heel up the wall until a stretch is felt on the back of the thigh

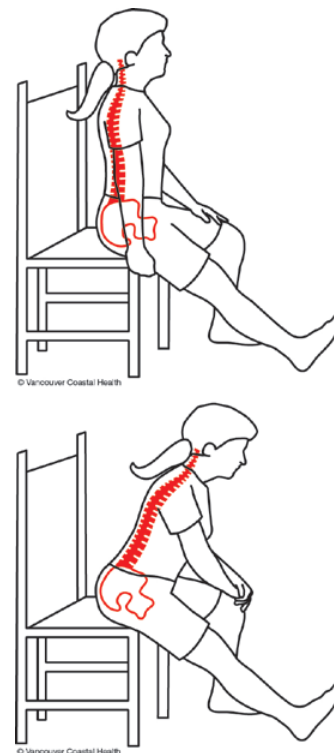
If leg is fully straightened and no stretch is felt, move body closer towards the wall to perform exercise



b. In Sitting

- Sit on edge of a chair with one leg bent, other leg straight on the floor or resting on raised surface (e.g. stool)
- Turn on inner core muscles and bend forward at the hips until a stretch is felt on the back of the thigh

Make sure spine and head maintain neutral posture



35.

a. Calf Stretch

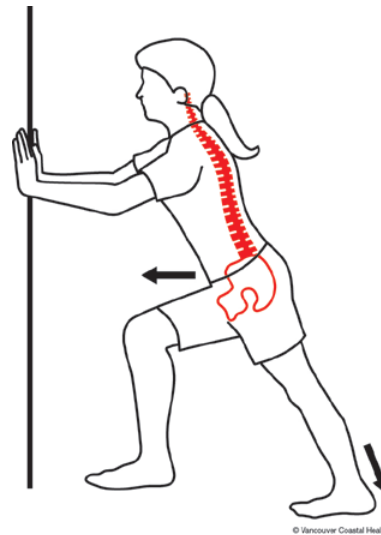
- Stand near a supporting surface, feet shoulder width apart
- Rest one forefoot on the edge of a book on a slant, other leg on the floor beside it
- Turn on inner core and lower buttock muscles and bring hips forward over the feet until a stretch is felt



b. Calf Stretch

- Stand with legs shoulder width apart
- Take a big step forward
- Turn on inner core and lower buttock muscles to support body and hips
- Keep hind leg straight, heel pressed into floor, and bend front leg, bringing body forward, until a stretch is felt in the calves

Make sure both feet point straight forward, hips and body squared facing forward



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