## Addendum B: Exercises



Begin on your hands and knees in a quadruped position. Extend your right leg and left arm into a fully straightened "bird dog" position. Hold this contraction for two seconds and return to the quadruped position. Do not arch your back or twist your hips at any point.

Repeat with your opposite limbs, slowly alternating for three complete sets of 10 repetitions two times per day or as directed.


Begin sitting or standing with an elastic exercise band wrapped and secured around your palms. Begin with your arms at your side, elbows bent, forearm's pointing forward. Move your hands apart from each other to maximally stretch the band while simultaneously rotating your palms out, straightening your arms, and pinching your shoulder blades together as your hands move behind your hips. Return to the start position and repeat 3 sets of 10 repetitions daily, or as directed.

Sit or stand looking forward with good posture. Tuck your chin to create a double chin. Hold this position for $3-5$ seconds. Return to the starting position. Focus your vision on a spot on the wall to avoid neck flexion or extension. To progress, place a finger on your chin, and apply backwards pressure at end range. Imagine that your head is on drawer slides. Keep your mouth closed. Perform 1 set of 10 repetitions 3-10 times per day. Alternately, this exercise may be performed standing with your back against a wall. Your buttocks and shoulder blades should be in contact with the wall. Tuck your chin to make a "double chin" until the base of your skull contacts the wall, relax and repeat as directed.

## CLAM WITH BAND



Lie on your side with your affected hip pointing up. Keep your feet together, knees bent at 90 degrees and hips at 45 degrees. Place an elastic band around the outside of both knees. Lift your knee upward without rolling your hips back. Maintain a pain-free range of motion. Slowly lower your legs so that your knees are touching and repeat on each side for three sets of 10 repetitions once per day or as directed.

CORNER PECTORAL STRETCH


HAMSTRING DOORWAY STRETCH


Begin standing, facing a corner with your palms on the walls above head level. Step toward the corner and "lean in" to stretch your chest muscles. Against the resistance of the wall, attempt to push your hands into the wall and toward each other for 7 seconds. Relax and "lean in" to increase the stretch. Lock into this new position and repeat 3 contract/ relax cycles, twice per day or as directed.

Begin lying on your back with your right arm reaching overhead and your left leg flat on the table. Your right knee should be bent 90 degrees and your hip 45 degrees. Place your left wrist beneath your back to prevent your back from flattening against the ground. Slowly begin by raising your left knee and right arm at the same time until your hand touches your knee. Be sure not to lift your head or allow your spine to flatten against the floor. Return to the start position and repeat for three sets of 10 repetitions on each side, twice per day or as directed.

Lie flat on your back with your leg elevated and positioned in a doorway as shown. "Scoot" toward the doorframe until your hamstring is taut. Contract your hamstring by attempting to push your heel into the doorframe for seven seconds. Relax and gently slide your buttocks toward the doorframe while keeping your knees straight to increase the stretch. Repeat three contract/relax cycles on each side, twice per day or as directed. Alternately, you may provide your own resistance by looping a belt or towel around your heel instead of using a doorframe.

While sitting, grasp the seat of your chair with your left hand. Rotate your head toward the right and look downward toward the floor. Place your right hand over the top of your head and gently pull down and diagonally in the direction you are looking. Against the resistance of your hand, contract your neck in an attempt to push your head backward/diagonally from the direction you are looking for seven seconds. Relax and gently pull your head further toward the floor to increase the stretch. Lock into this new position, and make sure that you continue to keep your head rotated in the direction that you are pulling. Perform three contract/relax cycles on each side twice per day or as directed.


POSTERIOR LUNGE


## RESISTED POSTERIOR TIBIALIS STRENGTHENING



Attach the center of an elastic exercise band to a doorknob or other sturdy object in front of you. Grasp one end of the band in each hand and with straight arms at your side, stretch the band backwards. Keep your palms facing backward and arms pointed straight down throughout the exercise. Return to neutral and repeat 3 sets of 10 repetitions daily, or as directed.

While standing on one leg, slowly bend your knee to lower your hips toward the floor as though you are going to sit in a chair. Keep your knee positioned directly above your ankle and do not allow it to shift forward. Try not to allow your back leg to touch the ground. Consciously contract your gluteal muscle on the planted leg side to return to the start position and repeat three sets of 10 repetitions once per day or as directed.

Begin in a half-kneeling position with the side to be stretched on the floor and your opposite knee bent at 90 degrees, foot planted on the floor. Shift your pelvis forward slowly, keeping your hips and back straight. Against the resistance of the floor, contract your involved thigh in an attempt to flex it forward toward your chest for seven seconds. Relax and shift your pelvis further forward to increase the stretch. Keep your trailing leg rotated outward. "Lock in" to each new position and perform three contract/relax cycles twice per day or as directed.

Sit with your involved leg crossed over your uninvolved leg. Loop a piece of resistance tubing over your forefoot and secure it beneath your foot on the floor. Stabilize your lower leg with one hand. Against the resistance of the elastic, roll your involved foot upward, as though you are attempting to look at the bottom of your foot. Slowly return to the start position and repeat three sets of 10 repetitions daily or as directed.

## Addendum B : Exercises (Continued)



Begin standing with your thumbs on your rib cage and your fingers on the crests of your hip, making sure not to approximate your fingers throughout the exercise. Stand on one leg with your knee bent only slightly. Slowly flex forward from the hips moving your chest toward the floor, making certain not to flex your back. Return to an upright position. Repeat 15 repetitions on each leg once per day or as directed.


Begin lying on your side. Rest your weight on your forearm and feet. Lift your hips forward and toward the ceiling until your body is in a straight "plank" position. Initially, you may need to use your knees for support. Slowly lower your hips back to the floor and repeat for three sets of 10 repetitions per day on each side, or as directed.

## SIDE PLANK ABDUCTION



SINGLE LEG STANCE


Begin lying on your side. Rest your weight on your forearm and feet. Lift your hips forward and toward the ceiling until your body is in a straight "full plank" position. Slowly spread your legs by lifting your straightened upper leg toward the ceiling. Slowly lower your legs back together and repeat for three sets of 10 repetitions per day on each side, or as directed. If the "full plank" position is too difficult to maintain, begin from a modified position with your lower knee on the ground.

Stand on one leg and slowly bend your knee while maintaining your balance for 30 seconds. As your balance improves, you may increase the difficulty of this exercise by closing your eyes or standing on a softer surface like a pillow or a BOSU ball. Perform this exercise one minute on each foot twice per day or as indicated.

## Addendum B: Exercises (Continued)

STANDING ITB STRETCH


## TRAPEZIUS STRETCH



## YTWL SCAPULAR DEPRESSION



Stand approximately two feet from a wall with your affected hip facing the wall. Move your opposite leg forward so that your legs are in a scissors position. The outsides of your feet should be facing each other. Most of your weight should be on your straightened rear leg with your front knee slightly bent and relaxed. With your trunk upright, rotate your pelvis away from the wall and drop your buttock towards the wall until you feel a stretch. Be sure to keep your pelvis forward, not allowing it to drop backward. Keep your breastbone over your uninvolved hip throughout this stretch. Against the resistance of the floor, attempt to contract your rear leg away from your body (toward the wall) for seven seconds. Relax and drop into this stretch to increase the pull. "Lock in" to this new position and repeat three contract/relax cycles on each side twice per day or as directed.

While sitting or standing, reach down with your right arm, grasping your thigh or the bottom of a chair for stability. While looking straight ahead, place your left hand on top of your head, and gently pull your head sideways toward the left. Against the resistance of your arms, attempt to bring your right ear and right shoulder together for seven seconds. Relax and stretch further toward the left. "Lock in" to each new position, and do not allow any slack.

Repeat three contract/relax cycles on each side twice per day or as directed.

Begin standing near a wall for stability. Stand with your feet shoulder width apart. Keeping your body straight, bend at the ankles to shift your weight forward onto your toes until your heels are about to lift off the floor. Return to the start position and perform three sets of 20 repetitions twice per day or as directed.

Stand with your straight arms raised above your head in a "Y" position. Squeeze your shoulder blades together and downward throughout the following sequence of movements. Lower your straightened arms to shoulder level, into a "T" position. Next bend your elbows so that your fingers are pointing straight up while slightly lowering your elbows to make a "W". Finally, while keeping your elbows bent 90 degrees, lower your arms to your sides so that your elbows are touching your ribs to form an "L" on each side and squeeze. Hold each position for $1-2$ seconds and repeat 3 sets of 10 repetitions, twice per day or as directed.

