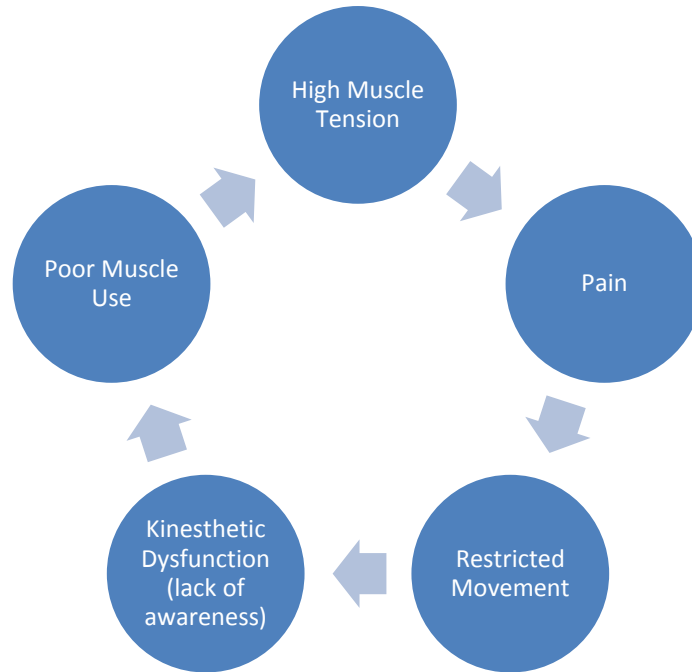


## ***Movement Explorations and Awareness Activities***

Education about Pain Cycle



Exploration 1 - Improve kinesthetic sense of rectus abdominals and low back muscles

Lie on your back. Notice space between low back and floor. Bend knees so feet are flat on the floor and as you are doing so, notice how your pelvis changes positions as your low back becomes flatter. Repeat a few times (straightening legs, bending knees), noticing the difference in the position of your pelvis each time.

Next, with knees bent, intentionally increase the curve in your lower back, making sure your tailbone stays on the floor. Can you feel your lower back muscles working to increase the lumbar curve? Notice the direction in which your whole pelvis moves when the lumbar curve increases.

Next, move in the opposite direction, pressing the lumbar into the earth and raising your tailbone. To do this, the back muscles you were using previously need to relax and your abdominals need to engage. Your rectus abdominals that run up and down the torso are used to press your low back into the floor. Feel these muscles, placing hands on abs. Alternate a few more times noticing that when the back muscles work and your abs relax, you increase your lumbar curve. When you flatten your back, your back muscles relax and your abs work.

Exploration 2 – Improve kinesthetic awareness of transverse abdominals (wraps horizontally around back, sides and front of abdomen)

Lie on back, feet flat on floor, knees bent. Place hands on abs. Pull belly in toward spine. Notice how belly feels under your hand. When you engage transverse abdominal, you will feel abdomen pulling in and **away** from your hand. Do NOT allow length between front of your pelvis and chest to become shorter as you pull in belly (because this won't use transverse). The transverse will pull in when it is isolated and the rectus will press out when isolated.

If this is too easy, do this: Lean against a wall with back and pelvis to wall. Bend both knees slightly and have feet about 10 inches from wall. Think about having an upper and lower part of transverse abdominal. First, pull in lower half of the muscle just above pubic bone. You will feel lower ab pull in and press back of your pelvis into the wall. Next, pull the upper half of the muscle (around and above navel) in and up. Feel your chest lift slightly and your lumbar spine pushes into the wall. Keep your back muscles relaxed and keep the back against the wall. Relax and then repeat slowly until you can distinguish lower and upper parts of this muscle.

Exploration 3 – diaphragm

Go back to exploration #2 where we are using transverse abdominals lying on floor with knees bent. Relax body. Inhale, using diaphragm so it presses down into abs and abs expand from pressure. Hold breath, pull in belly by using transverse abdominal muscles (remember, don't shorten between pelvis and chest). You will feel pressure inside your belly slowly moving from belly to chest. Relax transverse abdominal and the ball of air pressure will move back down to the abdomen. Exhale. Continue a few more times until you clearly feel how ab tension and relaxation affects the expansion of your chest and abs when you breathe.

#### Exploration 4 – pelvis, back and shoulder require oblique movement

Lie on your back, knees bent, feet on floor. Place a hand on each side of your waist. Bend to the right so that the right side of your pelvis moves toward your right shoulder. Do this without increasing the arch in your low back. Use your hand to feel your muscles tightening as you bend, making the right side shorter. At the same time, use your left hand to feel how your left waist lengthens. Reverse. Repeat a few times. Try not to use any other muscles for this movement. Don't use your back. Use only your obliques.

#### Exploration 5 – more oblique movement

Try Jathara Parivartanasana using only obliques. For more challenge, cross arms over chest and do not use at all.

#### Exploration 6 – using the legs

Lie on the back, feet on floor, knees bent. Try pressing the feet into the floor slowly, as if you were making a foot print. Now continue pressing so your tailbone lifts up about 2 inches. Then return tailbone to floor by reducing pressure in your feet. The idea is to use ONLY your leg muscles (pressing thru your feet) and do not engage the back or abs.

Does your low back rise off the floor as your pelvis moves up, as if they were both one piece? If so, your

lower back muscles are tightening. Repeat once more very slowly and let your lower back sink down into the floor as your tailbone lifts. Do NOT use your abs to keep your low back down though. Do it by relaxing the back and allowing gravity to take over. We want to learn to truly relax the back and abs so we don't continue overstressing these muscles with each move when they are unneeded.

Stand up and walk, remembering how your back felt when it was relaxed. If you can't do it yet, go back to the floor and practice some more. Eventually, you will be able to let the legs work without stressing the back.