Dynamic Chiropractic

CHRONIC / ACUTE CONDITIONS

Unlocking Secrets of the Pelvis (Part 4): Corrective Strategies

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In this series, I have discussed how asymmetries affect lumbopelvic-femoral alignment, starting with a chain of muscles on the left side (left anterior interior chain or AIC) with too much tone that includes the diaphragm, iliacus, psoas, TFL, biceps femoris and vastus lateralis. The diaphragm is important because the most common movement dysfunction is breathing, and breathing dysfunction affects entire chains of muscles in the body.[1]

Assessing the ability to breathe in a functional manner needs to be part of our evaluation and education process for every patient. Combining breathing with a corrective exercise strategy will provide a powerful tool for expanding your clinical competency and providing more effective patient care.

What makes breathing so important is that the diaphragm or "Big D" is not only responsible for respiration, but is also a major player in stabilization and positioning of the lumbopelvic-femoral region. As discussed previously, "Big D" has right and left leaflets; the left side is notable since it tends to have more "tone" or tends to be more flattened in an overactivated state.

Patients with this left AIC pattern present with too much tone in that entire chain of muscles and just want to relax them (and with focused breathing, the rest of their body as well). When that polyarticular chain relaxes, other muscles (as described in part 2 of this series) can be recruited in a way that restores a more functional pelvic positioning and alignment, which then affects the entire musculoskeletal system.

The reason breathing with corrective exercise is important is that you need to start influencing the diaphragm, especially the left leaflet, if the rest of the left AIC is going to be addressed. The left leaflet needs to relax and dome (Remember the ZOA or Zone of Apposition, from part 1 of this series and part 3 of my previous series, "Breathe Well and Breathe Often"?) during exhalation while you are activating the left anterior abdominal wall. The rest of the muscles in the left AIC will relax and help facilitate activation of inhibited of muscles that help to restore symmetrical pelvic alignment and position of the acetabulum over the femurs.

The dysfunctional left AIC pattern has "tri-planar" consequences to the lumbopelvic-femoral region, and our thinking and correction needs to affect the sagittal, frontal and transverse planes. The goal is to restore neuromusculoskeletal symmetry that creates a rotational shift of the pelvis back to the left, providing for a more equal acetabular / femoral (AF) position on each side.

Many of the muscles that influence positioning and control of the pelvis were mentioned in part 2 of this series. The following exercises are a beginning step to correct the left AIC pattern. Your findings from the "adduction drop test" and the "extension drop test" (Part 3) will give you direction and proper sequencing of a corrective strategy, as outlined by the Postural Restoration Institute.

Let's look at a few of the many exercises that combine breathing with myokinematic repositioning of the pelvis. If the patient presents with a positive left adduction drop test and a positive left extension drop test, we start with an exercise designed for lumbopelvic-femoral control, as quoted from the PRI's home study course:[2]

I. 90-90 Hip Lift

1. Lie on your back with your feet flat on a wall and your knees and hips bent at a 90-degree angle.
2. Place a 4-6-inch ball between your knees.
3. Inhale through your nose and exhale through your mouth, performing a pelvic tilt so that your tailbone is raised slightly off the mat. Keep your back flat on the mat.
4. Hold this position while you take 4-5 deep breaths in through your nose and out through your mouth.
5. Relax and repeat four more times.

II. 90-90 Hip Lift With Hip Shift

1. Lie on your back with your feet flat on a wall and your knees and hips bent at a 90-degree angle.
2. Place a 4-6-inch ball between your knees.
3. Inhale through your nose and exhale through your mouth performing a pelvic tilt so that your tailbone is raised slightly off the mat. Keep your back flat on the mat.
4. As you maintain a hip lift, *shift your left hip down and your right hip up* so that your right knee is slightly above the left.
5. Slowly take your bent right leg on and off the wall so that your right thigh comes toward your chest. You should feel the muscles behind your left thigh engage.
6. Perform three sets of 10 repetitions, 1-2 times a day.

III. 90-90 Hip Lift With Medial Hamstring

1. Lie on your back with your feet flat on a wall and your knees and hips bent at a 90-degree angle.
2. Place a 4-6-inch ball between your knees.
3. Move your left foot and ankle slightly outward while gently squeezing the ball.
4. Inhale through your nose and exhale through your mouth performing a pelvic tilt so that your tailbone is raised slightly off the mat. Keep your back flat on the mat.
5. Slowly take your bent right leg on and off the wall so that your right thigh comes toward your chest. You should feel the muscles behind your left thigh and left outer hip engage.
6. Perform three sets of 10 repetitions, 1-2 times a day.

The breathing component is essential and can be taught with the patient on their back. Ask them to take a full, relaxed breath in through the nose and then breathe out through their mouth in a long, relaxed sigh; holding it at the end of the breath for just a second before breathing in through the nose again. It helps to have the right hand overhead since this allows the right rib cage to expand more while the patient inhales and is still flattening their lower back with the sacrum elevated off the floor or table.

Any one of these three exercises is a starting place for a progression of more exercises that are designed to provide muscular realignment of the lumbopelvic-femoral region.

These exercises are designed to inhibit muscles that have too much tone, like the ones that comprise the left AIC; and recruit muscles that have been reciprocally inhibited, causing a chronic pelvic position asymmetry. We are simply reversing the roles of antagonist and agonist,

lengthening tight muscles, shortening overlengthened and weak muscles – thereby providing more AF internal rotation on the left and AF external rotation on the right. You can help this process along with a standard left AIC pattern with a precise adjustment to the inominate bones that facilitates balanced alignment and positioning.

These exercises should not be performed if the patient experiences additional pain or discomfort during or after the exercise. Also, these exercises work best if done in a relaxed fashion, with the patient mastering the many parts of each exercise with breathing and gentle activation of the muscles and position.

This completes my introduction to myokinematic restoration of the lumbopelvic-femoral region and common pathomechanics, combined with a path to assessment and correction. Of course, mastery of any approach to patient care requires more than an overview, so I recommend attending a PRI course or studying their home courses to learn more.

In my opinion, these corrective strategies will make your adjustments more effective and provide lasting results beyond "That last adjustment was great, Doc, but it just didn't hold very long!"

In a sense, chiropractic is the landline telephone many of us baby boomers grew up with: safe, effective and reliable. But today, think of your practice as a smartphone. It still operates as a phone, but now you can add "apps" or functions that enhance and make it more powerful. For your chiropractic practice, postural restoration is a critical "app" to include in your treatment toolbox.

References

1. PRI home study course: myokinematic restoration: anterior interior chain; page vi.
2. PRI home study course: myokinematic repositioning techniques, page 2.

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