

Do you stretch and stretch and fail to make gains? Have you been trying to strengthen certain muscles to no avail? Have you ever wondered why your right leg might be stronger than your left? Why your right shoulder is lower than your left? Why your left ribs stick out and are higher than your right? Why one of your calves might be larger than the other?

The answer is the *science of asymmetry*, affectionately known as PRI™ or The Postural Restoration Institute. This treatment approach provides you with a Physical Therapist that is able to recognize how the *science of asymmetry* and the *science of respiration* affect movement and posture.



The Science of Asymmetry

The PRI™ approach that some Physical Therapists are trained in, is based on anatomical asymmetry and asymmetrical patterns of muscle pull. These develop due to our postural habits, our repetitive movements, and our side dominance (right or left). Each person is dominant on one side of their body or the other. This dominance is often exaggerated by the jobs we do or the sports we play. We never use our bodies equally on each side. This theory can often explain how a person develops the onset of pain only on one side or why a joint on one side wears out before the other side.

PRI™ takes this a step further and recognizes human function is based off of an integration of systems that are also asymmetrical. Our neurologic, respiratory, circulatory, and vision systems are not the same on the left side of the body as they are on the right. Our brain, primitive reflexes, and vagal system (the vagus nerve conveys sensory information about the state of the body's organs to the central nervous system) are not the same either. Each side has a different responsibility, function, position, or demand put on them.

With Postural Restoration™, we recognize these fundamental asymmetries in the body, and attempt to get our clients into a state of “neutrality”. Neutrality is a state of position in which our body is able to communicate reciprocally, or from our right side to our left side. To investigate and define this neutrality, a PRI™ trained Physical Therapist will use objective tests and measures. The state of neutrality helps us evaluate and facilitate muscle tone, muscle balance, and improve joint position.

You may be saying, ‘If everyone is asymmetrical, then why am I the one with pain? Am I that unlucky?! The answer to this is that individuals get locked into Biomechanical Adaptation Patterns (BAPs) at varying degrees. The more locked up one is, the more compensatory movement strategies and pain that may result. As an example of how we develop Biomechanical Adaptation Patterns (BAPs), we tend to stand on our right leg more than our left. We run around a track in a counter-clockwise motion. We drive with our right leg and reach for things with our right hand. This is important because we are always in a different position on either side of the body. How we function in that position influences our BAPs and what compensations, pain and joint dysfunction may result. It is the goal of PRI™ to create an understanding of these asymmetries and how to manage them in order to restore reciprocal (or side to side) function.

The Science of Respiration

The first action in each of our lives is to breathe in and out and the last action when we die is the same. Because of the crucial nature of our respiration, our body will sacrifice almost everything else to allow us to continue to breathe. As the focus of this breathing process, the diaphragm is one of the most important muscles in our bodies. Postural Restoration™ teaches a Physical Therapist how to evaluate the diaphragm muscle and its influence on posture and gait. A mechanically disadvantaged diaphragm can lead to many problems, not only in the thoracic (or trunk) region, but also through the pelvis and down the muscle chain, as well as up the muscle chains into the shoulder complex and even the temporomandibular joint.

The diaphragm muscle is a very large, powerful muscle that attaches to our ribcage and spine. The diaphragm is instrumental in holding our core and skeleton in place. Because of the diaphragm and the influence it has on the spine and in rotational movements of our body, PRI™ utilizes specific breathing techniques and exercises to help balance asymmetries found throughout our skeleton. We think of our right and left diaphragms differently due to their difference in size and in function. Our right diaphragm is larger, thicker, and stronger than the left. Because of how our bodies are designed, we use our right diaphragm as a primary muscle of respiration. Our diaphragm on the left does not have the same structural support. It is smaller and its ability to function as a muscle of respiration is reduced.

In conclusion, our body is anatomically asymmetrical, yet we ask symmetrical activities of it each day. If we don't properly manage our biomechanical adaptation patterns (BAPs) and train our bodies to function in a reciprocal fashion, we may end up with joint pain, muscle pain, weakness and dysfunction. If you have previously had Physical Therapy for orthopedic or neuromuscular problems and are not satisfied with the results, you may want to consider an evaluation by a Physical Therapist that is trained in Postural Restoration™. For additional information, please consult the website: <http://posturalrestoration.com/>

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