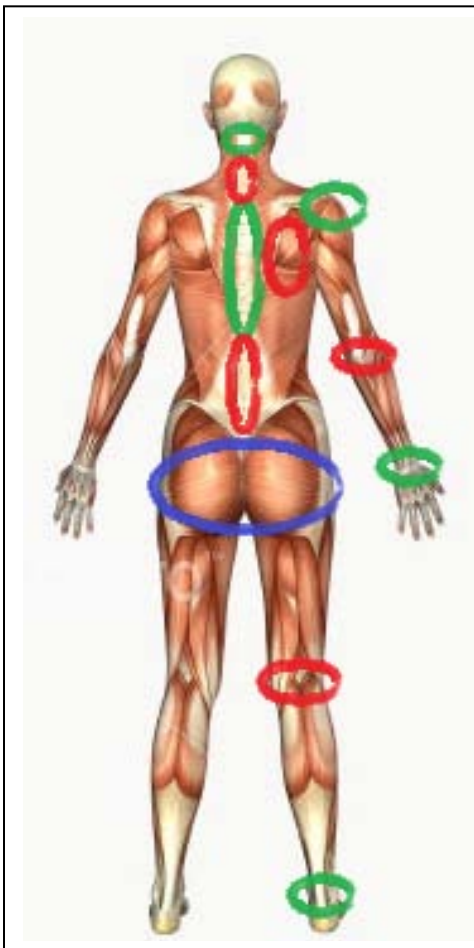



Mobility and Stability Fundamentals By Dr Andrew J Park

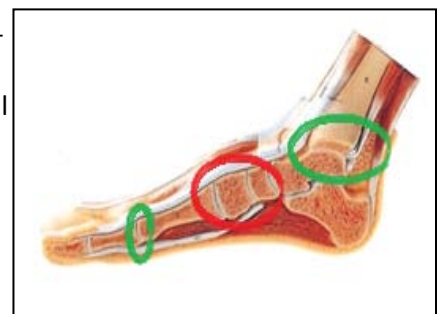
Having correct fundamentals is critical to proper function. This is why many seek professional assistance through lessons when attempting to start a new activity or sport like tennis or golf. In golf, the first fundamental we are taught is the grip, followed by address and swing mechanics. During sport activities, there are times when we sometimes fall into slumps and cannot seem to hit the ball the same as we used to. Those who were smart enough to take lessons go back to the fundamentals we were taught and retrace the steps to find our rhythm again. Those who never took lessons remain lost and start from scratch changing their form and swing pattern in order to hit the ball. The end result is that they often develop a new pattern to hit the ball and the cycle continues again at their next slump.



This same concept can be applied to the bio-mechanics of the body. The body is divided into key areas that are intended for a specific function. Simply put, one particular part of the body may require mobility while the adjacent area, stability. Mobility and stability of joints allow movement in the body. Motion capture videos are often used in athletic training to help analyze movement patterns. Quite often enough, faulty movement patterns coexist with pain. This is because the body is a master of compensation when the intended function is altered. Altered movement patterns come about to allow movement when the normal pattern cannot be produced, and thus the fundamental pattern is lost.

1st MTP: mobility
Midfoot: stability
ankle: mobility
knee: stability
hip: mobility and stability
pelvis: mobility and stability
lumbar spine: stability
thoracic spine: mobility
scapulothoracic region: stability
glenohumeral joint: mobility
lower cervical spine: stability
upper cervical spine: mobility

 Mobility
 Stability
 Mobility/Stability



Movement fundamentals are innate in nature. They were not taught to us initially, instead it is programmed into us. These important fundamentals start the instant we are all born with the doctor slapping our bottoms to kick start our breathing. At about 1-2 months, the baby is able to hold their head. At about 2-4 months, the baby can roll over. Soon after, the baby learns to sit, and then crawl, stand, and walk. Basic fundamentals we all know and went through yet we have difficulty reproducing right now.

Don't believe me? Take a deep breath in and slowly exhale, is what I instruct my patients to do during examinations. The vast majority of the population do not know how to breathe correctly. If you have the opportunity to watch an infant breathe, you will notice that they breathe with their tummy, which is the correct way. Most of us breathe by expanding our chest using accessory muscles and not our diaphragm causing altered movement. If you have ever experienced low back pain and received treatment for it with some sort of exercise, you were most likely given abdominal bracing exercises to strengthen your core. The foundation of abdominal bracing is relearning how to breathe through your abdomen. The body compensated for altered breathing by using other muscles.

Let's take the foot as our next example. The mid-foot requires stability while the big toe and ankle require mobility. If the foot is unable to provide stability, the body compensates by flattening the foot arch in the attempt to provide more stability. A flat arch increases tension on the bottom of the foot called the plantar fascia causing pain. A flat arch also increases pressure at the big toe forcing the joint to move laterally causing a bunion, therefore losing mobility. The ankle also loses mobility because it is attempting to compensate for the loss of stability at the foot. The knees, which are supposed to be stable, are now mobile to compensate for ankle immobility. Once again, the body is the master of compensation.

When alterations occur with our body in regards to mobility and stability, movement patterns will also change and the end result is pain. Often times patients ask me which exercises are good for a particular region and depending on the level of alteration of fundamental movement forgetfulness, I would provide corrective exercises. The figure and chart describes the intended mobility and stability regions of our body as a quick reference to target those areas while exercising. Instead of blindly going to the gym, have a goal and intent to target certain regions for stability and strength, while allowing flexibility and mobility at adjacent regions.

For the following newsletters to come, I will introduce different exercises with warm-up and stretching routines intended for golf during off peak season. As peak golf season approaches, I will follow-up with nutritional advice intended for the female golfer.

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