

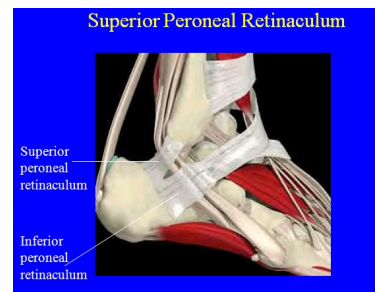
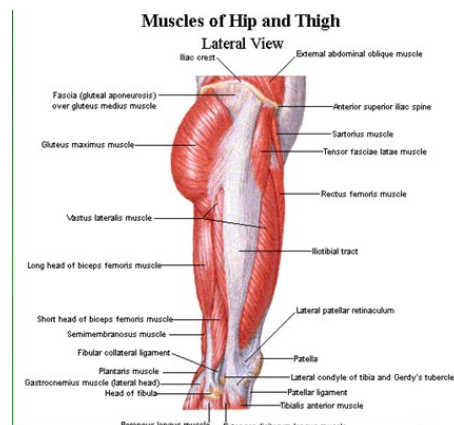
How the Body Works... The Legs Disagree

In the “August 2015” edition of *the Connection*, we had an article entitled, “The Arms Do It All.” While the arms are extremely important to what we do on a daily basis, it is the legs that move the entire body to within “arms length” of an object. Without the legs, the arms couldn’t reach their target, and would therefore be useless!

The legs, or the lower quarter, in the physical therapy world, are made up of the joints and muscles surrounding the hips, the knees, the ankles, and the feet. The main functions of the lower quarters are support while we are upright (standing up), locomotion (walking and running), climbing and deceleration (stopping). It is the legs that allow us to work, hike, play sports, or stand in the crowd at a great concert. When something goes wrong with our legs, we can become “sidelined” from what we need or love to do.

Common problems with the lower quarter include muscle strains, ligament sprains, joint pain, swelling, or weakness. These problems can come on suddenly, like in a sporting injury, or slowly over time, as with any over use condition. The ankle is susceptible to sprains because it is at the end of a long lever arm and involved in significant explosive motions and twisting. The ligaments and muscles of the knees are at risk because they are in the center of the leg. Being in the middle can be a problem. When you decide to change direction, especially at high speeds or when carrying

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Truths/Myths About Exercise

If it's weak, I must Strengthen it

If you define “weakness” as the inability to lift or move heavy loads, then you might think you have a problem with the size or strength of your muscles. In this case, you might go to the gym and start lifting weights to overcome the problem. In some cases, progress is very slow or pain begins to grow. Maybe you don’t have classic “weakness.”

Some other things to consider that could lead to your inability to lift or move heavy loads could be a restriction in the respective joints or a

neurological control issue. Either way, the body can sense that your tissues (bones, joints, ligaments or tendons) are not performing as they should.

This improper movement pattern, especially under heavy loads, tends to put excessive compression or shearing forces into the tissue and your brain will “shut you down.” In other words, your body is trying to protect your tissues from damage. We see this all the time when working with patients.

We might have someone that can’t even do a full squat with just their own body weight or someone that can’t do a toe raise on one leg. After the HCE PT evaluates their movements and performs the necessary joint or soft tissue corrections, these people can “immediately” perform these simple tasks and can even add additional weight. Fix the CAUSE of the weakness, by fixing the movement problem.

True Stories...

“Semper Fi”

James came into the clinic for his initial evaluation, with a “broken” spirit! Two weeks earlier, James had undergone an arthroscopic (minimally invasive surgery) knee surgery to repair a large injury in the end of his femur (large upper leg bone that forms part of the knee). James was NOT bothered by the pain, or the need to work hard to recover. After all, James was a MARINE! James was bothered by the fact that the MD said he would “NEVER RUN AGAIN.”

You see, James was not only a Marine, but he was on the Marine marathon team. He had been on a training run about a month ago, when his injury occurred. He jumped over a fence at the end of his run, caught his toe, and landed on his knee. A rock was pushed up into the end of his femur, creating a significant “hole” in the end of the bone, right in the knee joint. The wound in the skin and muscles healed, but attempts at running produced significant pain and swelling. He eventually had to have surgery to fix the bone defect.

Because the HCE PT looked at “tissue repair” differently than the MD or other PTs, James was up and running, pain free, on his first visit. Within a month, James was out training with his Marine buddies and has completed several marathons since being discharged. The secret to James recovery was the proper application of “loading” using the specialized equipment available to HCE’s PT.



How The Body Works...

The Legs Disagree From Pg. 1

a heavy load, the body’s force is moving in a different direction than the ground forces coming up from your foot & ankle. These conflicting forces often meet at the knee and problems begin. Your hips are not immune to problems either. The hip has very large and powerful muscles controlling it, like the gluteals (buttocks muscles), hamstrings, and quadriceps. We often forget that the hips also have smaller muscles that are designed for precise control of the hip joint itself. It is important that the hips, knees, ankles and feet move precisely or they will begin to prematurely break down. This can be your source of tension, weakness and pain.

As an example, when you fully extend your knees, the tibia (larger of the two bones of your lower leg) has to be able to externally rotate and “lock” into place. If it does not have the ability to do this, your muscles and tendons can get overworked and the knee joint itself can begin to wear out. It is much better to determine if your lower quarter is working correctly NOW, instead of waiting until it begins to hurt.

Summary: The HCE PT is skilled at looking at the body as a whole and has the ability to look for *DRIVERS* (the true cause of your problem) that may affect your movements. Often, we can find a serious movement problem, even before you notice any symptoms. Contact your HCE PT to ensure the health of your lower quarter. On this point, THE LEGS AGREE!

Healthy/Unhealthy Habits

Lowering Your Score!

Caroline N. Pratt, MPT, OCS, MTC, CSCS is the Vice President of Employer Solutions for Health Connections Enterprises. Before coming to HCE, Caroline was the Director of Sports Medicine for the Ladies Professional Golf Association (LPGA) for over five years.

Caroline, would be the first to tell you that the legs are often over looked when golfers are trying to improve their golf swing and lower their scores. She would also agree that it is

NOT the shear strength and power of the legs that is important. The most important aspect of the legs in golf performance is the precision or sequence of “firing/contracting” of the respective muscles of the legs.

Making sure that your respective joint and soft tissue have their required mobility is a great first step. Then, learning drills that can teach you to fire the muscles of the lower quarter in the proper sequence would be next. Once

you have these two steps down, then you can increase your speed of swing to achieve greater distances.

The next step would be to wait for your friends in the club house, since they will be picking up the tab for lunch. Keep an eye out here for more lower quarter tips.