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Physical Affairs from Central Physical Therapy
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Q: When the senseis ask for speed & power during basics, I only feel slow & wimpy. How can I improve my speed & power?

A: The most powerful way to increase strength, speed and balance is through core or spinal stabilization. Core stabilization involves coordinated recruitment of the muscles around the spine, abdomen, and pelvis. Think of a tree that's deeply rooted in the earth. Imagine your spine and abdomen as the tree trunk and your pelvis, the roots or foundation of the tree. Deeper roots contribute to a more solid trunk, which in turn can support tree limbs buffeted about in stormy weather. If the roots or foundation are unstable, so is the trunk and the limbs risk damage (shoulder or knee pain anyone?). Without a strong core, your limbs must work much harder to accomplish any given task, diminishing efficiency of motion, speed, and balance and increasing injury risk.

In Sensei Ohshima's book, Notes on Training, he describes the hips as the center of human strength. In his use of the term "hips", I believe he is referring to the area from navel to pubic bone or core. He states that one who knows how to use the hips is "a strong man, an expert." I would whole-heartedly agree. Of course, becoming an expert requires more than core stabilization. However, the ability to recruit your core will improve your karate.

Core stabilization is a broad topic. I'll narrow it down to core stabilization as it relates to abdominal muscles. You have 4 layers of abdominal muscles. The core consists of the deepest layer called transverse abdominis. It's the primary spine stabilizer in the abdominal group and the only abdominal muscle that attaches directly to the spine. It's also the only one that can flatten your lower abdomen.

When transverse abdominis is contracted properly, the navel travels back towards the spine and acts as a corset, stabilizing your spine. You may notice that your pelvic floor muscles slightly tighten when contracting your transverse abdominis. This is due to a neurologic link between them. Now the trick is to activate transverse abdominis without holding your breath! Here's a beginning exercise called Pelvic Bracing:

Lying on your back, knees bent, take a big breathe all the way to your belly. As you breathe out, tighten your pelvic floor muscles (same muscles that would be tight after drinking 32 oz. of your favorite caffeinated beverage) & hold while simultaneously pulling your belly button towards your spine. Hold this for 10 seconds, while you continue breathing. It's a subtle exercise, but well worth practicing and incorporating into your karate practice.