Your Belly Fat is it’s own Endocrine Organ

What does that mean???

At one point we thought that belly fat was just something that made us feel uncomfortable in a bikini. Now we know that belly fat actually sends out inflammatory signaling molecules called adipokines and lipokines. Belly fat is considered an endocrine organ because it produces it’s own hormones! In fact, it produces upwards of 100 different signaling molecules some of which are anti-inflammatory, and some are pro-inflammatory.

The two most recognized signaling molecules are leptin and adiponectin. Leptin is also known as the “satiety hormone”. It is made by the adipose cells and helps to regulate energy balance by inhibiting hunger. Belly fat increases leptin levels and secretion, and over time the body becomes resistant to this stimuli. Just like your system can become insulin resistant, it can also become leptin resistant. Meaning you have a lot of it, but your body is just not listening or receiving it’s message. Since leptin helps with managing satiety, leptin resistance results in increased hunger. Leptin is also responsible for thermogenesis, or the burning of energy so the leptin resistance also can contribute to sluggish weight loss or weight gain.

Adiponectin plays an important role in the modulation of glucose and lipids, and has an insulin sensitizing effect. The expression of adiponectin reduces with the increase in adiposity, and therefore reduces the bodies ability to regulate glucose.

Not only does belly fat reduce these good anti-inflammatory and regulatory hormones, but it tends to increase the amount of pro-inflammatory hormones that are released. Since we know inflammation is at the root of all chronic disease, that little power pack around your middle is a significant source of trouble.

We think of these problems only being in very overweight individuals, which is true. However the reality is, it is more important where you store your weight as oppose to how much weight you have. There have been studies done on sumo wrestlers vs the “skinny fat” men as they are called who are slim but just have belly fat. It has been found that although the sumo wrestler is much larger, the fat distribution and also the increased exercise put them at lower risk for lipid issues and insulin issues than their “skinny fat” counterpart. Dr Osama Hamdy from The Joslin Diabetes Centre at Harvard has shown that it only takes 2-6 lbs of visceral (abdominal) fat to trigger insulin resistance.

In clinic, I see this all of the time. Women come in and say that it drives them crazy because their husbands can eat whatever they want, but just have a little belly. To that I reply, sometimes the increased belly fat is worse than being generally overweight.

The great news is the right diet and lifestyle program along with weight loss can re-sensitize all of these hormones and get your body back to health.