Abdominal fat is an organ similar to the heart or liver

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For many years the conventional wisdom about fat was that it was essentially inert and a place for the body to store extra calories as fuel reserves. Recent research has shown that abdominal fat is an organ similar to the heart, kidney, or liver that produces its own hormones. In other words, fat regulates itself. What is even worse is that excess body fat is also a source of inflammation that promotes leptin resistance. Leptin resistance is a hormonal dysfunction that interferes with the body's normal appetite and metabolism.

Leptin is a hormone that was discovered in 1994 and is secreted by white adipose tissue (fat cells). Leptin plays a far greater role than previously thought. Leptin actually helps to regulate thyroid, pancreatic, sex and adrenal hormones. It is important to note that leptin and insulin have a very special hormonal relationship. They keep each other in check, and if they stop talking to each other, leptin and insulin production gets turned upside down and can result in leptin and insulin resistance.

Hormones are great communicators and are responsible for the smooth operation of human biochemistry and metabolism. When your metabolism is running smoothly and weight gain does occur, white adipose tissue (fat cells) send a leptin long distance phone call to the hypothalamus located in the brain.

The message is temporarily curb the appetite and burn the extra fat (increase metabolism). The body responds obediently, the extra 3 or 4 pounds comes off, and leptin levels return to normal. But, with chronic weight gain and obesity, there is a major communication problem.

Problems begin when there is a breakdown, or lack of communication between the brain, hormones, and receptor sites. As previously stated, silent, or subclinical inflammation is a major disrupter of normal cellular communication. The phone calls simply do not get through to the brain. The end result is a viscous cycle of increased adipose tissue promoting inflammation, inflammation causing more fat cells, and the beat goes on. In most overweight individuals leptin levels are actually elevated. They are leptin resistant.

The phone call is being made from the fat cells, but the brain is not receiving the message. Weight gain continues along with excess hunger, fat cells get fatter, and leptin levels keep climbing. The body is then instructed to make more adrenalin to stimulate metabolism. If this continues too long, the fat cells themselves become adrenalin resistant. Now, the cells just hibernate, they don't listen to

anybody and the weight continues to pile on. In order to better understand the scope of the problem, let us take a closer look at the role fat and inflammation plays in chronic weight problems.

The role excess fat plays at the chemical level is rather sinister, and is indeed one of the most important revelations to come from these recent studies. Studies have shown that fat actually produces chemicals called cytokines, small secreted proteins that promote inflammation. Worldwide studies have now shown that inflammation is a key player in chronic degenerative diseases such as heart disease, rheumatoid arthritis, cancer and obesity.

Although inflammation is a normal function of the body's immune system, chronic stimulation by stressors sets the stage for chronic degenerative diseases as well as weight problems. It is also important to note that there are two types of inflammation, One, the type that creates symptoms visible to the naked eye: redness, pain, heat and swelling, and two, silent inflammation, the type that is visible only at a cellular level.

There are no noticeable symptoms of the second type of inflammation. This type of inflammation is also caused by chronic stress, bad diet, environmental toxins, lack of exercise and obesity. In addition to the stress factors listed above, research has revealed two new causes of inflammation—the foods we eat and fat itself. The science of "Nutrigenomics" for example, has shown that foods have codes that speak to our genes. For many years the conventional wisdom about fat was that it was essentially inert and a place for the body to store extra calories as fuel reserves. Recent research has shown that abdominal fat is an organ similar to the heart, kidney or liver that produces its own hormones. In other words, fat regulates itself.

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return to normal. Life is good! But, with chronic weight gain and obesity, there is a major communication problem!

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Special emphasis is placed on eating fruits, vegetables, and omega-3 fats. Weekly training is provided showing how to choose the right kind of fats, fruits, vegetables, grains and herbs that are anti-inflammatory. Exercise also plays a key role in correcting leptin resistance and weight control.

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