

OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Joseph Baker

Fat: An Organ?

Carrying some extra weight around your midsection these days? You'd probably like to get rid of it so you'll look better in a bathing suit, but it's certainly not dangerous, right? Actually, a little extra fat is not as innocent as it may seem. Dr. Baker wants patients to know about fascinating new research revealing that fat actually functions like an "organ."

The theory stresses that fat "organs" negatively affect metabolism and health, especially when fat is congregated around the waist.



Location, Location, Location

As with real estate, location is key when it comes to body fat. When fat is congregated around the midsection, it's far more harmful than when it's stored anywhere else. The fat right under the skin of the abdomen and the fat that surrounds the organs, deep within the belly, is especially sinister.

Bellyful of Risks

The fat that's way below the surface of the belly and surrounds the organs is called intra-abdominal fat. It's even more harmful than the fat just under the skin, which is known as subcutaneous fat.

Why? Researchers theorize that intra-abdominal fat functions like an organ, producing inflammatory proteins that spike risks for heart disease, diabetes, stroke and some types of cancer.

Plus, intra-abdominal fat is located right next to *vital* organs, such as the liver and the stomach. This means that harmful inflammatory proteins don't have far to travel to cause damage. Intra-abdominal fat also has a greater blood supply as well as more receptors for a stress hormone called cortisol, which make it a superhighway shuttling disease-instigators to organs.

Internal Fat Fools the Scale

In general, "apple-shaped" individuals with visible abdominal fat carry the most intra-abdominal fat. Affectionately referred to as a "beer belly," a wide girth most likely indicates an excessive intra-abdominal load. (Men with waists wider than 40 inches and women with waists wider than 35 inches have the *highest* risks.)

However, since intra-abdominal fat is hidden deep within the abdominal cavity, it may appear invisible from

the outside. So, even normal-weight individuals can carry too much intra-abdominal fat. *Translation: Even if you're thin or normal weight, you may not be off the hook — diet and exercise still count.*

That's why Dr. Baker wants all patients to educate themselves about intra-abdominal fat, its risks and how to prevent it.

Heart Disease

Clearly, the biggest risk associated with intra-abdominal and subcutaneous (under the skin) fat is chronic heart disease (CHD). For years, a wealth of research has repeatedly linked CHD to both types of fat.

One study, performed in Denmark, suggests that the intra-abdominal fat and CHD connection may be higher for men because they tend to carry more abdominal fat than women.



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Of course, women with intra-abdominal fat also have CHD risks, which increase as they age. One study included 20 post-menopausal women aged 50 to 70 years who were overweight or obese with waists larger than 35 inches. The scientists took small samples of the subjects' abdominal fat from just under the skin to gauge the production of proteins.

Researchers studied two "bad" proteins that promote inflammation and are linked with CHD. In addition, the scientists also looked at two "good" proteins that prevent inflammatory risk factors of CHD.

In 15 participants without diabetes, higher levels of the "bad" proteins were associated with a lower ability to respond to insulin and use glucose. On the other hand, higher levels of the "good" protein were associated with an increased ability to use glucose.

Eight of the women were diagnosed with metabolic syndrome, a cluster of symptoms that increases risks for CHD (high blood pressure, obesity and high blood sugar). Their levels of the good protein were 32 percent lower than the 12 women who didn't have the disorder (*Amer J Physiology* 2005;288:E741-7).

Diabetes

Multiple studies strongly link intra-abdominal fat to diabetes. One study included 290 subjects, of whom 78 had type 2 diabetes. Intra-abdominal fat was the most significant predictor of the disease.

They determined that intra-abdominal fat "precedes" the development of the disease. They also found that it "demonstrates an effect independent" of other risk factors, such as fasting insulin, insulin secretion, total body fat and family history of diabetes (*Diabetes Care* 2000;23:465-71).

Exercise

Exercise is essential to whittle your middle and slash intra-abdominal fat. But what exercises are best to make the belly less like a bowl full of jelly? Researchers in Lisbon, Portugal, set out to determine the best way to lose the apple shape.

For one year, 36 subjects with coronary artery disease participated in the study.

The patients were divided into three groups: 13 in weight training plus aerobics, 13 in aerobic exercise only and 10 in a no-exercise control group.

Only the subjects who combined lifting weights with exercise were able to reduce abdominal fat. Aerobic exercisers and nonexercisers maintained the same amount of abdominal fat mass.

The aerobic exercise-only cohort did reduce *total* fat mass; however, the combined weight and aerobic group was also more successful in losing total fat (*Metabolism* 2003;52:1413-7).



Diet

A low-fat, high-fiber diet that's packed with fruits and vegetables is another essential component in the quest to shrink the gut. In addition, try these figure-friendly tips:

- Enjoy your meals in an environment where you can relax and savor your food.
- Skip eating in front of the TV. Studies show that people are more apt to overeat while dining in front of the tube.
- Monitor your portion size.
- Chill out. Stress and anxiety are tied to overeating.
- Make sure that snacks between meals are nutritious. Low-fat options include fruit, vegetables and bean salads. Snacks comprised of

healthy fats, such as nuts and grilled salmon, also assist weight loss.

Nonfat, organic yogurt is another great choice. One recent study found that yogurt actually helps with weight loss, particularly around the abdomen.

For 12 weeks, 34 obese adults followed one of two diets. One diet included three daily servings of fat-free yogurt and a total daily intake of 1,100 mg of calcium. The other diet limited dairy servings to one each day and restricted calcium intake to 500 mg. Both diets also included an allotment of healthy fare. The yogurt group lost 61 percent more fat and 81 percent more abdominal fat, compared with

the calcium-restricted group (*International J Obesity* 2005;29:39).

We're Here to Help

Chiropractic care can jumpstart you on the road to wellness. Chiropractic is the foundation of a healthy lifestyle. Remember that an ounce of prevention against obesity and intra-abdominal fat is really worth a pound of cure later on!

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