

Visceral Fat (Abdominal Obesity)

Introduction

I chose visceral fat (abdominal fat) as the topic for my Fact Sheet because there weren't many other choices left to choose from and this one seemed the most interesting. I found this topic extremely hard to find reliable information on for certain sections. I also couldn't find much on this topic in Healthy People that specifically talks about visceral fat and abdominal obesity. So I decided to for certain sections to talk about obesity in general instead. While reading about visceral fat I learned that it can be very dangerous if it isn't checked on. Unlike subcutaneous fat, visceral fat is much more dangerous and can lead to serious health problems. Also, while doing research, I found most of my results were about visceral fat affecting women, information about men was not as common.

Before this Fact Sheet, I did not know what visceral fat was, nor did I know how dangerous it can be. After learning about it, I have become more conscious of what I eat and how active I am. Even though age, genetics and environment play a role in how much fat someone can gain, you can still reduce your risks for diseases like metabolic syndrome, cardiovascular disease, high blood pressure and many other illnesses. In order to reduce the risks is by eating a healthy balanced diet and staying physically active.

Section 1: Background and Problem Statement

- **Web site #1 Name:** Medical News Today
- **Web address**
<http://jap.physiology.org/cgi/content/full/99/4/1613?maxtoshow=&hits=10&RESULTFORMAT=&fulltext=visceral+fat&searchid=1&FIRSTINDEX=0&sortspec=relevance&resourcetype=HWCIT>
- **Background Information:**

Visceral fat is abdominal fat that surrounds the organs in the abdominal cavity. Having too much of this kind of fat can be dangerous. A high amount can lead to different kinds of diseases like heart disease, diabetes and metabolic syndrome. Visceral fat also gives chance to insulin resistance. Visceral fat is not the kind of fat that can be 'grabbed'; it is too far into the body cavity. Studies have shown that by having an increase in physical activity can greatly reduce visceral fat accumulation. For example, running 11 miles every week significantly prevents visceral fat growth. However, a continued amount of inactivity shows an increase in the amount of fat. This is basically saying that, the more the exercise the higher the prevention and decrease of visceral fat. The less the exercise means the more visceral fat will accumulate and the greater the risk for

diseases. Also, it is found that the older people get, the more visceral fat accumulation is found. This is because adults and the elderly are more sedentary than children and teens.

- **Web site #2 Name:** Harvard Health Publications: Harvard Medical School
- **Web address:** <http://www.health.harvard.edu/newsweek/Abdominal-fat-and-what-to-do-about-it.htm>

- **Background Information:**

Visceral fat is also associated with cardiovascular disease. For women, it has even been connected to breast cancer. Menopause also contributes to the addition of abdominal fat. The stress hormone cortisol is also a factor in abdominal fat gain. An accurate way to find out how much abdominal fat someone has is by using magnetic resonance, which uses the circumference of the waist to determine how much fat there is. Luckily visceral fat is easy to get rid of with a good diet and plenty of exercise. Visceral fat has been linked to type 2 diabetes, cardiovascular disease, and in women, even breast cancer. There are different ways to measure one's self to see if he or she is at a health risk or not. One way is the use of BMI, or Body Mass Index, this is used to determine if patient is at risk for health problems. However, this form of measurement is found to be misleading and isn't always used. Another way to measure is, waist to hip ratio, this entails measuring the most narrow point of one's waist and the most widest point of one's hip and dividing it. A third form of measurement is, waist circumference, this is one of the easier ways to determine if one is at risk or not. By using a tape measure and measuring at or just above the naval, this can help determine if there is risk for health problems. Another form of measurement that is used along with the waist circumference measurement is BMI. By using both numbers from BMI and waist circumference, doctors are able to get a better understanding if the body is healthy or not. For women, a waist circumference 35 inches or higher is considered to be at high risk in getting diseases. For Asian women, a waist circumference of 31.5 inches is considered to be dangerous.

- **Web site #3 Name:** The Journal of Clinical Investigation
- **Web address:** <http://www.jci.org/articles/view/22028#B11>
- **Background Information:**

French Physician, Jean Vague, is the one who discovered the correlation between Abdominal Fat and insulin resistance. It is also a matter of type of environment, genes and hereditary factors that contribute to visceral fat growth and insulin resistance. Even if an adult is lean, there can still be an excess amount of visceral fat in the body. This means that the adult is at high risk for heart disease and other illnesses that is part of metabolic syndrome. Visceral fat makes up about 10% fat in both lean and obese people. The reason why visceral fat is so much more dangerous than subcutaneous fat is because visceral fat is located in between the organs in the abdominal cavity. It is dangerous because visceral fat adipose tissue secretes free fatty acids into the portal vein which leads into the liver

Section 2: Research

- **Web site #1 Name:** PubMed.gov
- **Web address:** <http://www.ncbi.nlm.nih.gov/pubmed/10941878>
- **Summary of the research:**

An experiment has been conducted to see if moderate exercise has any effect on visceral fat levels in healthy non-obese women. It has been shown that with moderate exercise, over the course of 6 months a significant amount of visceral fat has been lost. Yet, there was no change in body weight, body mass index, or waist-to-hip ratio.
- **Web site #2 Name:** EurekaAlert
- **Web address:** http://www.eurekaalert.org/pub_releases/2002-10/ajoc-vf1102202.php
- **Summary of the research:**

A study was done comparing visceral fat loss between white and African American women who are overweight. Subjects were put under a clinically controlled diet and the diet lasted until the Subjects met the target weight range. The results were that white women had more visceral adipose tissue than African American women. However, during the study, the white women lost twice as much visceral adipose tissue than the African American women. On the other hand, the African American women lost more subcutaneous fat.
- **Web site #3 Name:** Obesity; A Research Journal
- **Web address:** <http://www.nature.com/oby/journal/v18/n3/abs/oby2009251a.html>
- **Summary of the research:**

Tests have shown that women going through menopause have a growth in visceral fat. This is because of the increase of hormones, like bioavailable testosterone. It was discovered that this hormone affects the distribution of fat in the area. This means that there is a relation between menopause-related testosterone, visceral fat and its risk for cardiovascular disease.

Section 3: Statistics

- **Web site #1: Name:** Weight Control Information Network
- **Web address:** <http://win.niddk.nih.gov/statistics/>
- **Summary of the statistics:**

The percentage of Adults in the U.S at the ages of 20 and over that are obese or over weight is 68%. Less than one-third (31.6%) of the population of Adults 20 years and over are healthy. People who are suffering from obesity have a much greater increase in death from multiple causes. There are 112,000 deaths caused by cardiovascular disease, 15,000 deaths from cancer. For non-cardiovascular disease and cancerous causes, there are

35,000 deaths. Statistics show that 31% of Adults are physically active and participate in regular physical activities and that the older they get the fewer the activities they do.

- **Web site #2 Name: Healthy People 2010: Progress Review Focus Area 19- Nutrition and Overweight**
- **Web address:**
<http://www.healthypeople.gov/Data/2010prog/focus19/2008Focus19.pdf>
- **Summary of the statistics:**
What determines healthy body weight is through BMI (Body Mass Index). In order to be considered healthy one's BMI should be between 18 and 24. However, most American adults have a BMI around the 30s. It's also shown that young children are eating healthier as compared to the 90's. On the other hand, the target percentage on the intake of healthy food (vegetables, fruit and grain) compared to the percentage on what's actually being taken shows a gap so large it makes trying to get to that target percentage seemingly impossible. For example, the percentage of fruit consumption is 40%, while the target percentage is 75%. However, for grains young children eat about 7% and adults consume 10%, even though the target percentage is 50%.
- **Web site #3: Connecticut Department of Public Health**
- **Web address:** http://www.ct.gov/dph/lib/dph/Obesity_FactSheet.pdf
- **Summary of the statistics:**
In Connecticut, in 2004 the percentage of obesity in adults is 19.7%. In 1990 the percentage was 11.7%. A survey taken in 2003 called, Connecticut School Health Survey showed that 11.6% of teens in High School were overweight.

Section 4: Consumer Information

- **Web site #1 Name: National Heart Lung and Blood Institute**
- **Web address:**
http://www.nhlbi.nih.gov/health/dci/Diseases/ms/ms_whoisatrisk.html
- **Summary of the information:**
By being overweight and abdominally obese, it can cause insulin resistance, and that can lead to the metabolic syndrome. Therefore, by being abdominally obese, there is an increase in health problems. In the United States, about 25% of the citizens have metabolic syndrome. African American and Mexican American women are more likely to get metabolic syndrome than men. However, white men and women are about equally at risk.
- **Web site #2 Name: Mayo Clinic**

- **Web address:**
<http://www.mayoclinic.com/health/metabolic%20syndrome/DS00522>
- **Summary of the information:**
There are two kinds of obesity. There is the kind of obesity that makes someone have a “pear-shaped” body, and then there’s abdominal obesity which makes someone have an “apple-shaped” body. Abdominal obesity can lead to something called the metabolic syndrome. This occurs when someone has more than one of the conditions, such as abdominal obesity, increased levels of insulin as well as blood pressure, and an irregularity in cholesterol levels. An increase of insulin means there is a resistance of insulin, and this causes diabetes. Insulin is needed to help cells absorb glucose for energy, and if there is a resistance, this means that the glucose is having a harder time absorbing into the cells. Even suffering from just one of these conditions can be dangerous because having one or more of them can lead to diseases such as heart disease. Risk factors that can cause metabolic syndrome are age, race, history of diabetes and body weight.
- **Web site #3 Name: Body by Ketosis**
- **Web address:** <http://www.bodybyketosis.com/visceralfat.php>
- **Summary of the information:**
One way to know if you’re at a healthy weight is to measure your waist. The healthy waist measurement for men is between 92cm and 102 cm. Any larger than 102cm is considered to be overweight. For women, the normal waist measurement is between 80cm and 88cm. It is considered that a woman is overweight if she is above 88cm.

Section 5: Solutions to the Problem (or Issue)

- **Web site #1 Name: Visceral Fat: A Major Health Concern in Women in Postmenopausal Women**
- **Web address:** http://www.womenfitness.net/visceral_fat.htm
- **Summary of the information:**
One way to avoid visceral fat is by eating a diet of polyunsaturated fats. Such foods include certain oils like corn, sunflower and soybean. Fish is also a good source of polyunsaturated fat.
- **Web site #2 Name: How to Prevent Belly Fat**
- **Web address:** <http://www.livestrong.com/article/78242-prevent-belly-fat/>
- **Summary of the information:**
A study conducted in 2009 by the University of Michigan Cardiovascular Centre found that eating blueberries also reduces abdominal fat. Different forms of exercise is beneficial as well such as aerobics and weight training. Even yoga, tai-chi and meditation are good fat loss exercises too. In 2005, at the University of North Carolina, a researcher named Chris Slants, PhD, did a study on aerobic exercises and found that a group he tested on showed that after six months,

there was a 7% decrease in abdominal fat by jogging about 17 miles a week. While another group that did no exercise gained about 8.6% more fat. Another thing is healthy eating and reduced calorie intake is effective as well. Also, drinking more water can help, too.

- **Web site #3 Name: Low Vitamin D Levels Associated with Several Risk Factors in Teenagers**

- **Web address:**

<http://americanheart.mediaroom.com/index.php?s=43&item=691>

- **Summary of the information:**

One way to avoid visceral fat is by eating a diet of polyunsaturated fats. More tests are being conducted, but so far it seems that Vitamin D can have a positive affect against high blood pressure, heart disease and cardiovascular disease. Vitamin D is also healthy for the bone growth and helps avoid rickets and osteoporosis. Therefore, as part of the fight in staying healthy and avoiding visceral fat obesity and metabolic syndrome; eating healthy, exercising, and even taking Vitamin D can improve the body and help it stay healthy.

Conclusions:

Before this Fact Sheet, I did not know what visceral fat was and now I am very happy that I do know. This Fact Sheet has definitely changed my eating habits a lot more. Now I am making extra sure I eat balanced meals every day. This Fact Sheet has taught me that by putting in that little bit of extra effort, you can avoid dangerous diseases in the future from being obese and not healthy. I hope what the audience will learn from this is that eating healthy and taking care of your body is essential when it comes to health and wellness. By taking care of your health now, you can greatly avoid problems and complications in the future.

Visceral Fat/ Abdominal obesity

Visceral fat is the type of fat that surrounds your internal organs. And because of that it is very dangerous. Having too much visceral fat can lead to insulin resistance which leads to risk in getting metabolic syndrome, heart disease and even cancer. Among diet and exercise; abdominal obesity can be caused by age, genetics and the environment you live in. Even though visceral fat can be very dangerous, it is very easy to lose and avoid abdominal obesity. All it takes is a good healthy diet and exercise. By continually practicing this, you can lose the visceral fat and greatly reduce your risk in getting diseases and cancer.

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High blood pressure
Cardio vascular disease
Metabolic syndrome
Liver disease
Cancer, breast cancer

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