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What Are The Health Risks Associated With Obesity?

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Introduction

Physicians and other health care professionals who have studied the effects of weight on the health of individuals are very concerned about the strong relationship between obesity and health problems. Most health care professionals consider that obesity is a medical condition that needs attention.

The human body stores fat as part of its natural processes. Fat is stored under the skin, around the organs and around joints. Fat is critically important to the proper functioning of the human body because it is a key source of energy that the body can call upon. Energy is necessary for the

sustaining of critical life functions, and fat reserves can be called upon when the body needs additional energy. Fat is also a good insulator, and it provides some protection for vital organs.

In 1962, a geneticist by the name of James Neel, hypothesized that human beings possess what he called a “thrifty gene”. This gene research was premised on the assumption that for thousands of years and over hundreds generations, populations were subjected to alternating periods of abundant food and scarcity. In order to adapt to these external conditions which could not be controlled by human beings, Neel believed that the populations developed a gene that provided them with stored fat that could help sustain them during periods of scarcity.

As long as populations suffered from alternating periods of plenty and of famine, this gene was helpful. But as mankind began to develop the technology to better control the environment and to develop more predictable and available food supplies, the gene became more of a liability than an asset. Apparently human beings have not developed an ability to “turn off” the gene, and the gene may be a contributor to the accumulation and retention of unhealthy amounts of fat.

Is there legitimacy to this theory? Apparently there is, and there is a long term study of the Pima Indians which has given significant support to the theory. The National Institute of Diabetes and Digestive and Kidney Diseases, (hereafter referred to as NIDDK), in collaboration with the Pima Indians, has conducted an ongoing study of the high incidence of diabetes among the Pima Indians. This study, which now has run longer than thirty years, is available through the NIDDK website, at the following link: <http://diabetes.niddk.nih.gov/dm/pubs/pima/obesity/obesity.htm>

However, genetics are not necessarily destiny. While there is much research to be done on genetic tendencies toward obesity (see our topic paper on that subject), it is clear that the lifestyle of the civilized world has not provided any offsetting signals to the body that it has an adequate amount of fat stored, and that the next meal is not in jeopardy.

When too much fat accumulates in the body, the beneficial properties of the fat are more than offset by increased risk of diseases and ailments. Studies have shown that people who are 20% or more overweight run a greater risk of developing diabetes, high blood pressure, heart disease, arthritis, some forms of cancer and being at increased risk for strokes.

This topic paper identifies many of the health risks that have been shown to be associated with obesity.

Health Complications

From the foregoing introduction, it is clear that obesity is related to increased risk of developing various diseases and ailments. There have been many articles and reports that highlight specific diseases and ailments and their association with obesity. There have been so many, and they have tended to be released out of context with each other, that we have prepared the following list to attempt to identify these health problems.

Diabetes

An astonishing 80% of people with Type 2 diabetes (non-insulin dependent diabetes mellitus) are obese. Among those who have been diagnosed with Type 2 diabetes, 67% have a BMI of greater than 27, and 46% have a BMI that is greater than 30. The relative risk for developing diabetes increases by approximately 25% for each additional increment of BMI above 22.

If there is too much fat in a person's body, the natural occurring hormone, insulin, cannot function well.

According to the United States Surgeon General (2001), a weight gain of 11-18 pounds increases the risk of developing Type 2 diabetes by a factor of 2. For those who gain 44 pounds or more, the risk increases fourfold. For the complete report, "The Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity", please use the following link:

<http://www.surgeongeneral.gov/topics/obesity/default.htm>

The Centers for Disease Control and Prevention has estimated that one in three Americans born in 2000 will develop diabetes during his or her lifetime. Of the two types of diabetes, Type 2 (non-insulin dependent) affects 95% of those who are diabetic.

Heart Disease

According to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), almost 70% of heart disease cases can be linked to excess body fat. Some experts have reported that overweight people are 3 times more likely to develop coronary artery disease than those who are not overweight.

The association between obesity and heart disease is very strong, and the Waist Circumference measure that was discussed in another topic paper is an important measure of that heightened risk. The risk of heart disease is also increased for those who have high blood pressure. Obese people are much more likely to have high levels cholesterol and triglycerides (fats) in the blood than are people who are not obese. The presence of cholesterol and triglycerides is also an indicator of heightened risk of heart disease.

According to the United States Surgeon General (2001), a weight gain of 10-20 pounds increases the risk of coronary heart disease by a factor of 1.25 for women and 1.6 for men.

High Blood Pressure (Hypertension)

According to NIDDK, obese people are more than twice as likely to develop high blood pressure (hypertension). Some experts place this risk as high as 3 to 10 times more likely. Other experts put the risk at 2 to 6 times. The importance of the observation is not which multiplier of risk is correct. The importance is that virtually all analyses show a high correlation between being overweight and developing hypertension.

Cancers

Endometrial Cancer

Obese women have an increased risk of developing endometrial cancer (cancer of the uterine lining) when compared with women who are not obese. The United States Surgeon General (2001) has estimated that women with a BMI of 34 or greater have a six-fold risk of developing endometrial cancer.

Gallbladder Cancer

Obese women have an increased risk of developing gallbladder cancer compared with women who are not obese.

Breast Cancer

Obese women are at nearly twice the risk of developing breast cancer than women who are not obese.

Colon Cancer

Obese men and women, have an estimated 42% higher risk of developing colon cancer than those who are not obese.

Mental Health

The mental health problems experienced by the obese are more problematic than simply not being satisfied with their body image. Society has developed many cruel and inappropriate stereotypes of the obese, and these stereotypes can lead to discrimination against the obese. However, self image is not to be dismissed as being unimportant. Women in particular are subjected to many forms of stereotyping related to appearance. Obsession with these unrealistic and harmful stereotypes can be a contributing factor for depression, anxiety and eating disorders.

It may also be that, in some people, mental health problems are both a contributor to and also a result of being overweight. Some people, especially those who are depressed or who have a very low self-esteem may overeat in an attempt to feel better. Those who are prone to worry or anxiety may find it difficult to control their eating when they are particularly worried or anxious.

Some forms of alcohol are particularly high in calories, and those who have an alcohol abuse problem may find that the additional caloric intake aggravates their weight condition.

And, finally, the impact of a particularly traumatic or distressing event can contribute to overeating. For example, victims of abuse (sexual or nonsexual), loss of a loved one, or marital or other family problems may be associated with overeating.

Breathing Problems

Individuals who have a BMI above 40 (now termed as the “very obese”) may experience difficulty in breathing. Among these breathing difficulties is the “pickwickian syndrome” when the individual is forced to take small or more shallow breaths than necessary. Because the restricted breaths cannot deliver as much oxygen as the body requires, the individual finds that he or she is always tired and worn out.

Another increasingly common breathing problem is sleep apnea. Sleep apnea is characterized by interrupted breathing while sleeping. The person with sleep apnea will cease to breathe several times an hour for periods of 10 or more seconds. This condition can be caused by too much fat in the neck, which blocks the airway, particularly during sleep. A recent statistic is that men with neck sizes of 17 inches or greater are at high risk of sleep apnea.

Gallstones

Men and women who are obese are at greater risk of developing gallstones than those who are not obese. Some researchers have put this risk at twice what would be expected.

Arthritis

Additional weight puts increased stress on the joints, and the lower back and knees seem particularly vulnerable to this stress. Men and women who are obese have a greater likelihood of developing arthritis than those who are not obese.

Vein Problems

Men and women who are obese have a greater risk of developing numerous vein and circulatory problems than those who are not obese. Among the conditions that seem more likely to occur are varicose veins, thrombophlebitis (inflammation of a vein), blood clots in the vein and decreased circulatory efficiency.

Skin Infections

Men and women who are obese very often develop skin rashes that are caused by fungal or yeast infections. These infections frequently occur where the skin folds over itself and remains moist. For women, this often occurs in the area right below the breasts.

Sex Hormone Problems

Those who are obese are more likely to develop problems that are related to too much or too little of various sex hormones. Obese women may find it very difficult to become pregnant.

Gout

Those who are obese are more likely to develop gout than those who are not obese.

Heartburn

The risk of developing gastroesophageal reflux disease is increased for the obese. One of the major symptoms of gastroesophageal reflux disease is heartburn.

Premature Death

According to the report issued by the United States Surgeon General in 2001, individuals who have a BMI which is greater than 30 experience a 50% to 100% increased risk of premature death than do those with BMI's in the range of 20 to 25. The Surgeon General estimated that approximately 300,000 deaths a year are attributable to obesity.

The Costs Of Health Complications

As information and research associating obesity and the increased prevalence of induced or aggravated health care conditions has progressed, information concerning what these conditions

are estimated to cost is now becoming available. The costs associated with obesity aggravated health conditions are both direct costs and indirect costs. Direct costs include those costs associated with prevention, diagnosis, and treatment of conditions rendered by health care professionals, medications, nursing home care and hospitalizations. Indirect costs include those costs associated with lost productivity, lost wages and income, and the value of future income lost due to premature death or incapacitation.

According to the National Conference of State Legislatures report (*“Nutrition and Obesity”*, September, 2002), the increasing numbers of obese patients in health care facilities has contributed significantly to the rising cost of health care. NCSL reported estimates of approximately \$52 billion in direct health care costs and another \$47 billion in indirect costs.

As the frequency of treating the obese has increased, the need for health care facilities and institutions to upgrade to equipment capable of dealing with the additional weight requirements has begun to escalate. Standard size equipment (beds, wheelchairs, surgical tables, imaging equipment, and other) may not be serviceable for the obese. Hospital and emergency medical technicians have sustained injuries from rendering otherwise routine and standard care and assistance to the obese.

It appears that medical treatment for obesity is seldom covered under health benefit plans. Health insurers typically provide coverage for treatment that is necessitated by the complications of obesity, but seldom provide coverage for weight loss and control interventions. To the extent that insurance does not provide coverage, the individual and his or her family must absorb the costs, and if the patient is indigent it is unlikely that the bill will get paid. Unpaid medical bills get passed on to other patients and payers through higher prices and costs.

In 2002, the Internal Revenue Service enacted governing standards that recognize obesity as a legitimate medical condition. Patients who have secured a medical diagnosis of their condition and have a recommended plan for weight loss and exercise programs can deduct those expenses. However, purchase of diet foods and weight-loss programs that are related to cosmetic treatments are not deductible.

In a study published (*“National Medical Spending Attributable to Overweight and Obesity: How Much, and Who’s Paying”*) in the journal *Health Affairs* in May, 2003, it was estimated that medical spending attributable to obesity may have been as high as \$78.5 billion in 1998. Extrapolating to 2002, the cost would have been over \$92 billion. Taxpayer supported programs such as Medicare and Medicaid picked up a substantial portion of those costs, and it is thought that employer provided coverage and private coverage might have absorbed as much as one-third of the costs.

Weight Loss Scams

The Federal Trade Commission has devoted a considerable amount of resources over the years to investigate weight loss schemes and scams.

You have seen the print advertising, you have had the unsolicited emails, you have been besieged by pop-up ads, and you have heard the TV and radio promotions: “Lose Weight While You Sleep”, “Lost 30 Pounds In Only 30 Days”, “Eat Anything You Want And Still Lose Weight”, and so many others it is impossible to record them all.

Americans expend over \$30 billion per year in weight loss products and services. Americans are not a very patient people and while meaningful weight loss can be achieved over time, too many Americans turn to quick fixes and hollow promises made by fast-buck artists. In September, 2002, the Federal Trade Commission issued an extremely valuable study that looked at the advertising claims made by many of these readily available products. For the complete report, use this link: “*Weight Loss Advertising: An Analysis of Current Trends: A Federal Trade Commission Staff Report (September 2002)*” at <http://www.ftc.gov/bcp/reports/weightloss.pdf>

Evidence based scientific guidelines for weight loss that have been carefully developed by the National Institutes of Health are all premised on the relatively straight forward formula of simultaneously reducing caloric intake and increasing physical activity. Unfortunately, too many promoters of weight loss products, services and remedies use false advertising to induce people to buy their products. Too often this continual assault on American consumers masks the responsible and factual messages of reputable scientific and health sources, and consumers become confused and waste their time and money on products that only serve to better the profits of the manufacturer.

The following quote from the introduction to the FTC study is particularly telling:

“As with cigarette smoking and alcohol abuse, false or deceptive advertising of weight loss products and services puts people at risk. Many of the products and programs most heavily advertised are at best unproven and at worst unsafe. By promoting unrealistic expectations and false hopes, they doom current weight loss efforts to failure, and make future attempts less likely to succeed.”

The Federal Trade Commission has several reports, studies and consumer guides related to weight loss, dieting, exercise equipment and related subjects available free of charge on its website at <http://www.ftc.gov/bcp/menu-health.htm>

The FTC in the concluding paragraph of the introduction to its report had some extremely good advice for consumers:

“The public would be well served by becoming more knowledgeable about the evidence-based guidelines, the scientifically-proven and medically-safe standards that underlie national public health policy. When more people know what’s important and realistic in achieving and maintaining a healthy body weight, fewer will be inclined to waste their money, time and effort on dangerous fads or miracle cures.”