

James L. Holly, M.D.

Obesity – How to Beat It By James L. Holly, MD Your Life Your Health The Examiner September 2, 2004

In the past two weeks, we have examined the nature of fat and why “ectopic” and “dysfunctional” fat is “dangerous” fat. We have also examined why it is so difficult for a person to lose weight who has a high percentage of body fat.

If you are overweight, understanding the causes and risks of obesity may motivate you to change your behavior. And, changing your behavior is the only way to treat obesity effectively. Most of us want a quick fix, i.e., surgery, which is paid for by someone else, i.e., an insurance company, rather than learning self-discipline and self-control.

Remember, calories are like your check book. If you deposit a thousand dollars in your checking account and write checks for two thousand dollars, you will accumulate debt. Likewise, if it takes 1500 calories a day to maintain your current body weight, which it would if you weigh about 110 pounds, and you consume 2000 calories a day, you will accumulate a pound of additional fat stores a week. In most instances, gaining, or losing weight is a simple mathematical calculation. Here are some facts about obesity which will help you decide that losing your excess weight is the best gift you can give to those care about you.

Imbalance

Obesity is the result of an imbalance between the energy value of the food we eat and our daily energy expenditure. If you consume more energy (food) than you expend (activity), you will gain weight; if you consume less energy (food) than you expend (activity), you will lose weight. However, there are many aspects to this simple formulation which will help you design and follow a weight stabilization program for yourself.

Energy expenditure can be divided into three components:

1. 2/3rds of our energy expenditure is for "resting" metabolism. This includes the energy involved in maintaining body temperature and other bodily functions which are carried on without our thinking about it or doing anything about it.
2. 10% of our energy expenditure is thermogenic, i.e., the energy expended through the thermic effect of food. This is why eating itself will cause your BMR (basal metabolism rate) to go up and it is why eating breakfast is so important. Breakfast gets your metabolism “going” in the morning.
3. The final 25% of the body's energy expenditure is due to activity and exercise. The energy used for activity is related to body weight and the frequency, intensity and duration of exercise.

The energy expenditure we can effectively change is number three. With increased activity, we can increase the number of calories consumed by our “moving around” and we can therefore lose weight.

Need for Food

The normal total food intake for humans peaks in late adolescence and early adulthood and declines afterwards. The decrease in intake with age has been documented repeatedly. Middle aged men showed a decline of 450 calories per day over a 10-year period. The fact that body weight rose over this same 10-year interval indicates that energy expenditure had fallen even more than food intake. If individuals are continuing to gain weight, then they are continuing to eat more food than their bodies need for fuel.

Reasons for obesity

The nature of the diet plays a role in development of obesity. A "Western" diet, in which more than 30% of calories come from fat, has been associated with increasing weight in Japanese persons who migrated from Japan to Hawaii and California. Moderate decrease in dietary fat may have an effect on obesity.

Lean body mass is decreased and fat mass is increased in adults who are deficient in growth hormone as compared with those who have normal growth-hormone secretion. The gradual decline in growth hormone with age may be one reason for the increase in visceral fat with age.

Factors Contributing to Obesity:

1. Sedentary Lifestyle - In an affluent society, energy-sparing devices in the workplace, like elevators and escalators, and at home reduce energy expenditure even further and may enhance the tendency to gain weight.
2. Dietary fat intake -- A diet high in fat is associated with obesity. A high-fat diet introduces good tasting, often high-fat, foods into the diet, accompanied by a corresponding increase in the energy density of the diet (i.e., lesser weight of food for the same number of calories). This makes over consumption of food more likely.
3. Night-eating syndrome -- Defined as the consumption of more than 2% and usually more than 50% of energy between the evening meal and the next morning, this is a common pattern of disturbed eating in obese persons.

Two-types of obesity

1. Hypertrophic obesity -- Obesity associated with enlarged fat cells, tends to correlate with truncal fat distribution and is often associated with metabolic disorders such as glucose intolerance, dyslipidemia, hypertension and coronary artery disease.

2. Hypercellular obesity -- Obesity associated with an increase number of fat cells usually begins in early or middle childhood.

Obese patients are at an increased risk for developing many medical problems, including:

1. Insulin resistance
2. Type 2 Diabetes Mellitus
3. Hypertension
4. Dyslipidemia -- elevation of cholesterol and/or triglycerides
5. Cardiovascular disease,
6. Stroke
7. Sleep Apnea
8. Gall Bladder Disease
9. Elevated uric acid and gout
10. Osteoarthritis

Certain cancers are associated with obesity including:

1. Colon and rectal cancer
2. Prostate cancer
3. Endometrial Cancer
4. Breast cancer
5. Gallbladder cancer in women

While there are drugs which can help with weight loss all of them have significant side effects. Lifestyle changes are the safest and the most effective means of losing weight permanently. The central determinants of whether people will lose weight and maintain the loss are:

1. Modification of eating behavior
2. Physical activity
3. Psychological factors like attitudes, goals and emotions

Even when drugs are used, behavior plays **THE** determining role in successful weight loss. The following are key components of a lifestyle change program:

Lifestyle:

- Reduce rate of eating (this gives the food you eat time to raise your blood sugar and achieve an earlier state of satiety)
- Keep food records (this makes you accountable for what you "really" eat and not for what you only "remember" that you ate)
- Eliminate environmental triggers to eating (sitting and watching TV all evening or all day)
- Identify high-risk situation for overeating (i.e., going to "all-you-can-eat" restaurants)

- Uncouple eating from other activities (i.e., watching TV while eating)

Exercise

- Confront psychological barriers to exercise
- Understand mechanisms linking exercise to weight control
- Establish reasonable exercise goals (it is not the hare that wins the weight race, it is the prodding, but consistent, tortoise)
- Develop a plan for regular activity
- Integrate increase activity into daily lifestyle (walk up stairs instead of taking the elevator, part away from the building and walk further)

Attitudes

- Develop reasonable weight-loss goals
- Avoid "all or none" thinking (a ten-percent weight loss greatly improves your health risk)
- Focus attention away from the scale and toward behavior
- Uncouple weight from self-esteem
- Recover from lapses with constructive action (relapse prevention)

Relationships

- Understand the key role of social support to health
- Identify supportive others
- Match personal style to support-seeking activities
- Be specific in making support requests
- Be assertive but reinforcing in drawing help from others

Nutrition

- Resist the lure of popular fad diets
- Develop pro-health rather than restriction mentality about eating
- Eat with moderation in mind
- Maximize fiber
- Develop a tailored plan

If you are determined to lose weight, you can. You will need discipline, support, accountability and the willingness to change. It can be done and for many it is the greatest gift which can be given to those who love you. Losing weight, like stopping smoking, will improve your health. Improving your health is a gift to those who care about you. Losing weight will not make you a better person because your goodness is not defined by your body shape or size. But, losing weight can make you feel better and work better.

Remember, it is your life and it is your health.