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Weight Loss - Medicine, Myths, Magic By: James L. Holly, MD

Few subjects are more confused with false information than the incessant concern which Americans have with the ideal, Barbie-doll, body habitus. In addition, weight reduction is "big business." Millions, if not billions, of dollars are made every year on the basis of bad information and on the inability of Americans to make good dietary choices which result in unhealthy, excessive weight.

Many "fad" diets make promises which simply contradict the fundamental scientific laws of energy metabolism. Some believe that there are certain kinds of food which require more energy to metabolize than is contained in the food itself. The implied promise is that, just by eating this food, you will lose weight. Think about it, if that were true, if you ate enough of that food, or an excessive amount of that food, you would simply, eventually, disappear. Experience lets us all know that is not true.

Other "fad" diets ignore the simple science of calories and weight gain, or loss. Each pound of fat stored in our body contains 3,500 calories of energy. In order to lose one pound of fat, one must either eat 3,500 calories less than is required to maintain one's current weight, or one must use up, with extra activity, 3,500 calories of energy. Walking a mile in about 15 minutes will consume approximately an extra 100 calories. Therefore, it generally takes a combination of reducing calories and increasing activities in order to lose weight effectively, consistently and permanently.

Calories, food and weight loss, or gain, are not unlike one's checking account. If you deposit \$500 into your checking account, but you write \$600 of checks, you will be overdrawn. Likewise, if you need 2200 calories to maintain your present weight, but you eat 2700 calories every day, in seven days, you will gain one pound. However, if you increase your use of calories by walking a mile a day, in one month, you will lose one pound. As can be seen -- and as we all know -- it is easier and faster to gain weight than to lose it.

Depending on one's level of activity, most people need between 13 and 15 calories per day per pound of body weight to maintain their current weight. Of course, it takes fewer calories to maintain a pound of fat on our body, about 3 calories a day per pound, so the

fatter, we are, the fewer calories it takes to maintain our current undesirable weight. Doesn't seem fair, does it?

It may seem that as we get older, it is more difficult to keep the extra pounds off, or to get the extra pounds off. And, the appearance is the reality, but it is most often due to the more sedentary life style which we adopt as we get older. And, it is because, as we age, we involuntarily lose muscle mass, which means that muscle, which takes 35 calories a day per pound to maintain, is replaced with fat which takes 3 calories per pound.

Therefore, if at 60, we continue to eat what we ate at 30, we will get fatter and fatter. And, we will be able to honestly say, "I'm not eating any more." The secret for weight control success as we get older is not only to "watch what we eat," but also to keep active and to take steps to retain as much muscle as we can through strengthening exercises.

Very often, a person will say, "I don't eat very much," but I still am gaining weight." Another person will say, "But I work hard, why do I keep gaining weight?" A 1992 scientific study entitled, Discrepancy Between Self-Reported and Actual Calorie Intake and Exercise in Obese Subjects in the New England Journal of Medicine (327:1893-98 [December 31], 1992), addressed these issues. In this study, actual calorie intake and exercise expenditure were measured and compared to reported calorie intake and exercise expenditure in individuals who reported diet-resistant obesity. To quote the conclusion, "the failure of some obese subjects to lose weight while eating a diet they report as low in calories is due to an energy intake substantially higher than reported and an overestimation of physical activity, not to an abnormality in thermogenesis (calorie burning)." The dietary resistance that these individuals reported was related to a misperception in calorie intake, exercise expenditure, or both. Yet, there was no conscious deception on the part of the subjects.

Many believe that following a special diet will make them lose weight faster. The problem is that these diets, while generally low carbohydrate and high protein are also generally high in fat. Weight for weight, fat contains more calories than carbohydrates and proteins. This means that if you eat six ounces of fatty foods, you will gain more weight than if you eat six ounces of carbohydrate, or protein containing foods. In addition, by avoiding some of the food groups like vegetables, one can develop deficiencies of vitamins, especially Vitamin A, the B group, C, and occasionally K. Additionally, since the "low carbohydrate" diet is generally high in fat, serum lipids (cholesterol and Triglyceride) tend to be higher. In general, a balanced calorie-deficit diet is safer and more likely to assist for a longer period of time.

Some believe that a grapefruit juice and cabbage soup diet will make them lose weight faster. The reality is that anytime you consume fewer calories than you expend, you will lose weight. A diet that causes weight reduction does not necessarily mean that it is a healthy diet. Going on a grapefruit juice diet or a cabbage soup diet will definitely (over time) lead to what is referred to as protein-calorie malnutrition. This means your protein intake is inadequate for your usual body needs. This will lead to breakdown of protein tissue, such as muscle tissue and internal organs, including your heart.

Obviously, one would prefer to not lose weight by "losing" heart muscle but this can happen by going on such a diet. Additionally, you will not be getting the vitamins and minerals that you need for normal daily activities. You will, however, have a large and rapid weight loss since you will be losing a lot of water (initially). Cabbage soup or grapefruit juice diets can cause permanent damage to your body. The long-term effectiveness of these diets is essentially zero.

As previously stated, fat is higher in calories than carbohydrates or protein. Protein and carbohydrates have approximately 4 calories per gram versus 9 calories per gram of fat. There is evidence that ingestion of fat has less of an effect on satiation (the internal state that leads to termination of eating activity) than do carbohydrates or proteins. Additionally, there is experimental evidence that obese individuals tend to metabolize fat less effectively than lean individuals, which may predispose to fat being stored rather than used as an energy source.

There is no magical way to lose weight. In order to lose weight, you must "spend" fewer calories than you need. You can do that two ways -- and, generally a combination of both is best -- decrease food intake and increase calorie utilization with exercise. Weight control and weight reduction are part of good health care. But, fad diets, or the latest fad medication to "make it easy" to lose weight, is not the solution. The solution is to find a healthcare provider who will tell you the truth and who will help you change your behavior so that you can achieve the health which you have determined to have.

At Southeast Texas Medical Associates, we will not promise you miracles of weight loss, but we will tell you the truth. We will be your partner in reducing your weight, increasing your cardiac conditioning and improving your health. That's medicine without the myths and the magic. If you want to lose weight effectively, you need to know your:

1. Basal Metabolism Rate
2. Body Mass Index
3. Daily Protein Requirement
4. Percent Body Fat
5. Ideal Body Weight and Percent Body Fat

And, you need a personalized "Exercise Prescription." At SETMA, your healthcare provider can give you this information easily and quickly at every visit. Together you can work out a plan for achieving your healthcare goals and for eliminating weight as a health hazard. If you are really serious about "getting in shape" and "getting healthy," you can ask for a referral to SETMA's Weight Management Clinic where an in-depth analysis will be made of your current health and weight and a plan devised for helping you achieve your goals.

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