

Weight Management

Today, Americans have access to a seemingly endless variety of programs claiming to treat or eliminate obesity. Many of these programs take a simplistic, ‘silver bullet’ approach to weight loss, often promoting the use of a miracle pill. Others focus on the use of some exotic piece of exercise equipment. Few discuss the root causes of obesity and, predictably, give the consumer little basis to make an informed decision about the choice of an effective weight management system or program.

Obesity is one of the major health issues facing us today. It is a contributing factor in a host of serious diseases including diabetes, heart disease, arthritis, digestive disease, and cancers of the breast, prostate and colon. According to statistics from the National Institute of Health, two-thirds of American adults are considered overweight or obese. The problem is evident in pre-teen populations as well and has been the subject of considerable press in recent months.

The financial impact of obesity is staggering, with the annual cost of related health care and lost productivity estimated in the multi billions of dollars. Even more significant, obesity may be a contributing factor in as many as 300,000 American deaths each year. These statistics compel us to seriously examine the factors contributing to obesity and to take a far more comprehensive view of the real science of weight gain and weight loss and also; maintaining this loss.

Weight gain is linked to a variety of factors, many of them metabolic in nature. Thus, weight gain cannot always be attributed to consuming more and exercising less. There are also a number of lesser-known factors that can contribute to unhealthy weight levels. The connection between stress

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“According to statistics from the National Institute of Health, two-thirds of American adults are considered overweight or obese.”

and belly fat has been posited by advertisements for one popular weight reduction product marketed to female audiences. And while there is a scientific basis for the correlation, the role of stress in weight gain is considerably more complicated and deserving of more attention.

Another relatively unheralded source of weight gain is systemic toxicity. Once again, toxicity levels cannot be considered in a vacuum and are often indicative of other conditions that need to be addressed as part of a comprehensive weight loss or control regimen. The role of stress and toxicity in the process of

weight gain will be discussed later in this paper.

Hormonal Appetite Control; The roles of leptin, ghrelin, and cortisol

Recent research has also identified two 'hunger hormones', leptin and ghrelin, that operate as on and off switches for the appetite. Ghrelin is mainly secreted by the stomach and travels to the brain where it triggers the hunger cells and deactivates the satiety cells, leaving us feeling hungry. Leptin, which is secreted by adipose (fat) tissue, performs the opposite function; it turns

on the satiety cells and turns off the hunger cells in the brain. Predictably, an imbalance of leptin and ghrelin are a major factor in development of obesity. These hormones also have an impact on the production of cortisol - that widely touted stress hormone - that has been shown to contribute to weight gain and especially to the accumulation of VAT (Visceral Adipose Tissue; more about this later) in the abdominal area. Hence, it is far better to understand the full scope of factors contributing to weight gain before launching into a protocol designed - or claiming - to deal with some 'key' weight gain factor.

Stress, Cortisol and Weight Gain

Stress causes the production of cortisol, a hormone released by the adrenal glands to help the body deal with stressful conditions. Continuous or excessive stress causes alterations in the normal pattern of cortisol secretion, leading not only to weight gain but to a concentration of that weight in the abdominal region. Such abdominal depositions known as VAT fat, are often correctly referred to as 'toxic fat' and have been further linked to inflammation, insulin resistance, diabetes, and cardiovascular disease. VAT fat actually penetrates nearby organs such as the pancreas; and it also releases proteins such as C-reactive protein; a known cardiovascular risk factor that triggers damage to the circulatory system. VAT fat also releases proteins that decrease our sensitivity to insulin; a known risk for developing the life-shortening disease diabetes. Chronically elevated cortisol is a contributing factor to both weight gain and disease.

Stress typically causes an individual to crave comfort foods which are fatty, salty and sugary. These alter blood glucose levels, slowing our metabolism and resulting in even more weight gain that ingestion of these "foods" would otherwise cause. Thus, stress reduction must be a major component of any comprehensive weight management or loss program. Certain lifestyle modifications will often contribute to reduced stress levels. A combination exercise and meditation program is a highly effective way of dealing with stress. There are also a range of recognized nutrients, including L-Theanine, Rhodiola Rosea, Phosphatidylserine, Fish Oil and L-Carnosine, that can be extremely helpful in not only reducing stress levels but also in protecting the brain from the toxic effects chronic stress has on the memory and sleep.

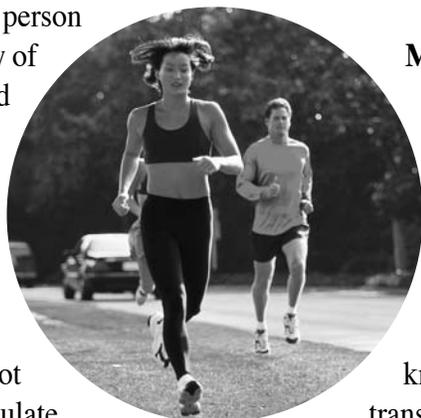


And that leads us to the one absolute truism in the field of weight management: Simply stated, 'one size does not fit all.' Each person's metabolism is different, based on genetics, eating habits and fitness levels. Each person gains weight for a variety of physical, emotional, and environmental reasons.

Resting Metabolic Rate

For these reasons, reference to universal charts and averages is not an effective way to formulate weight goals or to construct a diet plan. Perhaps the best place to start - if one is interested in a scientific approach to effective and sustained weight loss - is by determining Resting Metabolic Rate (RMR), or the rate at which an individual burns calories while at rest. Remarkably (and counter-intuitively) between 70 and 80% of all calories are burned while the body is at rest. Thus, knowing one's resting metabolic rate is vital to nutritional assessment, weight loss planning and the treatment of various medical conditions.

There is little that is predictable about metabolic rates. Numerous scientific studies have shown that metabolic rates can differ substantially for people with similar age, height, weight, and body composition. If your metabolic rate is lower than it needs to be, you may find yourself gaining weight even while dieting. Conversely, if your metabolic rate is higher than necessary, you may never need to diet. Accurate metabolic testing reveals how many calories your body burns at rest, giving you the baseline data you need to plan a weight loss, gain or maintenance plan with the best chance of long-term success.



If you know the amount of calories you burn at rest you can design a diet where your caloric intake is slightly below that level and this translates to long-term and steady but controlled weight loss.

Multi-pronged Weight Loss Plan

Few Americans fail to recognize the connection between caloric intake, exercise and weight gain. But for far too many, this knowledge does not translate into effective weight loss and weight management. If you are struggling with weight issues, working with a professional on an ongoing basis who can help you with incorporating the right foods in your diet and an exercise routine that is best for you, along with the addition of some key nutrients, can make a huge difference. Some of the important nutrients in your successful weight management program could be the following:

Green Tea

The benefits of drinking a few cups of green tea daily are numerous. In addition to its antioxidant properties that have shown benefit in reducing LDL cholesterol and protecting against various cancers, researchers have found that substances found in green tea known as "catechins," may trigger weight loss by stimulating the body to burn calories and by decreasing body fat. According to researchers in Tokyo, "catechins" contribute to the prevention of and improvement in various lifestyle-related diseases, particularly obesity". Larger quantities of Green Tea catechins than what is commonly consumed in a healthy diet, particularly a larger amount



Toxic weight gain

As mentioned earlier, weight gain can be due to a variety of reasons; consuming too many calories, insufficient exercise, stress and toxicity. As we age, most of us develop a visceral sense of the connection between calories, exercise and weight gain. However, the connections between toxicity, stress and weight gain are not nearly as well recognized. Many chemical pollutants including dioxins, PCBs, plastic xenoestrogens, pesticides, and toxic heavy metals are known endocrine disruptors; they mimic, block and disrupt the activity of hormones resulting in metabolic disturbances that cause fatigue and weight gain mostly by interfering with energy production and the fat burning processes. The liver, colon and kidneys are the major detoxification organs and need regular help to remove toxins optimally. Hence, regular systemic detoxification should be a primary concern of people who are seeking to lose weight. Nutrients that help create glutathione (a major detoxification agent) in the body are very important in this regard, along with other antioxidants that make glutathione more available and accessible to detoxification organ systems. These nutrients include Ellagic acid from dark berries, Sulforaphane from cabbage vegetables, and the supplements NAC and Alpha-Lipoic Acid, the mineral selenium, protein, and Vitamins C, E and B2.

of EGCG, (particularly green tea's major antioxidants), are required for significant fat burning.

L-Carnitine

L-Carnitine, an amino acid derivative, is found in nearly all cells of the body. It is a nutrient primarily found in meats and dairy products that can boost your metabolism by helping your body burn

off fat more efficiently. A number of small studies have reported that either acute or short-term L-Carnitine supplementation was associated with an increase in oxygen uptake and a decrease in lactic acid production; this results in improved exercise performance that improves weight management. L-Carnitine transports long-chain fatty acids across the inner membranes in the mitochondria (the energy center of your cells), where they are processed to produce energy in the form of ATP; this is an improvement in energy production and metabolism. L-Carnitine has been shown to have cardioprotective benefits. It is also useful in people with kidney disease.

Fish Oils

Fish Oils, also known as Omega 3 Fatty Acids, are polyunsaturated fatty acids found in oily fish. They are required for the production of the eicosanoids hormones that are responsible for regulating the major body functions, including digestion, insulin production and the storage of fat. It has now been proven scientifically that Omega-3 fish oil helps you lose weight. Studies at the University of South Australia have found that taking omega-3 fish oil combined with moderate aerobic exercise boosts weight loss, particularly around the abdominal region. Research has found that omega-3 fatty acids in the

fish oil activate the enzymes responsible for burning fat, and combined with exercise and increased oxygen intake, they increase the metabolic rate, which has an effect of burning even more fat and losing weight. In addition to that, fish oils provide numerous other health benefits which make them an essential part of your overall nutritional supplementation.

Rhodiola Rosea

Rhodiola Rosea, an adaptogenic herb, helps to increase the body's resistance to a wide range of stressors. It acts on multiple systems (whether chemical, physical, or biological) in the body to promote emotional well-being, physical endurance, and mental clarity. Since stress is so prevalent today and can be such a detrimental force, Rhodiola becomes an excellent herb to help alleviate stress by its ability to optimize the neurotransmitters (chemical messengers) serotonin (for mood and well-being) and dopamine (for memory and sharpness). Recent research has shown that Rhodiola helps boost exercise endurance and physical working capacity.

Protein

Whey protein and soy protein are very beneficial in promoting muscle protein synthesis. Adding a protein supplement containing either of the two or both can help increase fat-free mass in those who do resistance training. Whey protein also contains immunoglobulins that can help boost the immune system. Both forms of protein have been shown to improve satiation after a meal.

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