

Low Cost Weight Loss

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Abstract

More than 67 percent of adults in the United States are overweight or obese. Americans who are overweight (32%) or obese (35%) are at greater risk for premature death from four of the ten leading causes of death: heart disease, cancer, stroke, and Type II diabetes. Individuals can easily lose weight, keep it off, and improve health by moving toward a whole foods, plant-based diet with increased exercise. This article supports overwhelming scientific evidence gathered over the years that supports a plant-based diet, good foods to stay healthy, strategies for successful weight loss, and the best weight loss programs that fit this prescription.

Why Lose Weight?

Obesity is a national epidemic. More than 67 percent of adults in the United States are considered overweight or obese (Whitney & Rolfes, 2013). This statistically breaks out to over 32% overweight and 35% obese (Ogden, Carroll, Kit, & Flegal, 2012). Approximately 17%, or 12.5 million children and adolescents aged 2 to 19 years, are obese. Since 1980, obesity among children and adolescents has almost tripled (Ogden & Carroll, 2010). The highest incidence of overweight and obese is found among minority African-Americans and Hispanics living in poor neighborhoods. If the parents of children don't know how to properly lose weight and eat healthy, what hope is there for the next generation?

Let there be no illusion with the whole foods, plant based diet approach to weight loss. It may



Blue Devils Diet Tip: "You have to get to the bottom of why you overeat before you can lose weight" Joe, former pre-nutrition at KCKCC now a graduate Registered Dietician from Kansas State University

require a significant lifestyle change. The result of a plant based diet is that you will live longer with fewer health problems. It also means you will recover more quickly when you do become ill. This is an excellent value for only improving your choices of food and drink. With a plant based diet there are no pills, milkshakes, special food packages, surgery, or special advisors to pay. All you need to lose weight and find you ideal weight is to utilize one food website, a little exercise, and to start planning your grocery shopping and cooking activities.

Those who are overweight or obese, especially beginning in youth, are at greater risk for heart disease, cancer, stroke, and diabetes later in life, often leading to premature death. Each year obesity-related illnesses account for 240,000 deaths, 500,000 heart bypasses, and \$147 billion in health care costs. The good news is that you can reduce risk factors for these serial killers by moving yourself toward a whole foods, plant based diet coupled with increased frequency of exercise (Whitney & Rolfes, 2013). Unlike all the warnings on pharmaceutical commercials, *only* one caveat goes with switching to a plant based diet, “Let food be thy medicine.” Losing weight is not a “one size fits all” endeavor. A flexible range of plant based food choices and rates of weight loss are prescribed.

How do you know if you are overweight or obese? Download a Body Mass Index (BMI) calculator iPhone App, or enter calculate my BMI into your favorite search engine. Then make the analysis by entering your height and weight. If your score is between 18.5 and 24.0 you are in healthy range. If from 25 to 29.9 you are overweight while 30 or more means you are obese.

This article begins with ten basic nutrition chemistry facts that point to a whole foods, plant based formula for weight loss. Next, the article lists foods to eat to reduce weight and keep it off, then a few eating strategies and finally the simple MyPlate.gov no cost program that measures up to the latest scientific evidence. Throughout the paper are helpful tips from students to consider in a personal weight management plan to sustain healthy weight.



Blue Devils Diet Tip: “I ride my bike to work and the college every day it’s possible to stay in shape” Olivia

Nutrition Certainties

The # 1 surprise of basic nutrition chemistry is that no matter the source of carbohydrate or protein each yields exactly the same amount of energy in the body, 4 Kcal (Calories) per gram (Whitney & Rolfes, 2013). That means you can gain weight eating too much protein as easily as eating too much carbohydrate. Carbohydrates have the same energy as protein and both of these energy nutrients have less than half the energy of fat. Fat has a whopping 9 Kcal per gram of energy regardless of whether the source is meat, dairy, grains, fruits, or vegetables. This is one of several good reasons to switch to a plant based diet. Grains, fruits, and veggies contain less grams of total fat. Therefore, eating foods that are not high in total fat per serving offers an easy first point of attack for reducing Kcal intake.

While it says nothing about how many total Kcal you should have per day to lose weight, the total Kcal percentage ranges you should have from the three energy sources are as follows: Carbohydrates 45-65%, Fat 25-35%, and Protein 14-35% (Whitney & Rolfes, 2013). This is surprise # 2 in nutrition chemistry: protein is *not* the nutrient you need the most. Since the human body is primarily made of protein, most people think you need to eat a lot of protein and that it must be the most important nutrient. In fact, from among the energy trio, you need mostly carbohydrates. The reason is the cells in the central nervous system utilize only the glucose found in carbohydrates to make their energy. The rest of the cells of the body are happy to use fat and protein for energy. The trouble with animal products is they come with loads of protein *and* sugar *and* fat *with no* fiber and *no* water. Regardless the source of animal products, the net effect of the animal based diet we consume translates into too many Kcal. Cutting down on animal products makes it easier to lose weight and maintain ideal body mass index.

The **third** nutrition surprise pertains to the "nutrient density" of food. Nutrient density refers to the amount of vitamins, minerals, fiber, and water compared to protein, sugar and fat. Foods low in energy but high in vitamins, minerals, fiber, and water are referred to as "nutrient dense" foods. While

animal foods often contain abundant vitamins and minerals, these benefits are outweighed by negative factors for losing weight. Animal products are high in energy, have no fiber, and no water. Strike three, meat is on the “to be highly moderated” list for weight loss. When coupled with lack of exercise, our animal based diets explain roughly half the scientific explanation for the epidemic of overweight and obese people reaching premature death (“The Perils,” 2012, p. 30).

The other half of the explanation why 67 million of us become overweight or obese is not so surprising, but is a newly described disease syndrome. **Number 4** is stop eating so many concentrated sweets in order to avoid Metabolic Syndrome. This syndrome consists of a series of obesity related abnormalities which put you on course for developing Type II diabetes, stroke, and heart disease. Avoiding concentrated sweets means limit your intake of processed white flour products, cakes, ice cream, candy, cookies, pies, pop, anything with high fructose corn syrup, and any type of added sugar. Not only do these foods cause diabetes but excess sugar ends up being converted to fat which ends up in the arteries causing atherosclerosis (arterial plaque), which directly increases the risk for heart disease and stroke. If you are serious about losing weight safely and keeping weight off as a permanent lifestyle, you must stop purchasing nearly everything in a bottle, can, or package because some type of sugar has been added. Eating too much processed food with added sugar is a huge overlooked problem that directly leads to becoming overweight. This has led to announced changes in food labels that explicitly require a line for the amount of added sugars. Removing foods with added sugar from your weight loss program and then restricting foods with added sugar will also allow you to keep weight off once your ideal weight has been reached. This must become a permanent lifestyle change. At all costs, avoid the added sugar except for special occasions. What is a special occasion? Start with once or twice per year. You pick the occasions. A final caveat: Beware, you are not only consuming too much added sugar you are eating too many servings in the grain group. After cutting the added sugar foods it is best to maintain weight loss by curtailing servings of high Kcal wheat products and rice.

The **fifth** nutrition finding is that a high concentration of toxic chemicals, from *anywhere* in the environment, bioaccumulate in the fat tissues of animals that you end up eating. Endocrine disruptors that create a long held “body burden” of toxins include Bis-phenol A, found in canned food products, phthalates in plastic that leach into foods, and monosodium glutamate flavoring. Pesticides and herbicides are better known as obesogens since they concentrate in animal tissues and trigger weight gain (Lustig, 2011). Since 1980 the rate of obesity in infants has shot up 73% in large part due to obesogens contaminating breast milk and baby foods. This is a strong reason why an animal based diet is contrary to losing weight and maintaining an acceptable weight. Cutting down on animal products will reduce your chances of premature death from the four leading causes of death: heart disease, cancer, stroke, and diabetes. It is possible to wash fungicides, pesticides, and herbicides from plant based foods before you prepare them for consumption. This is not possible even with a lean cut of meat. Animal products often contain animal growth hormones that are absorbed into your body, induce weight gain, and are correlated with increased risk of breast, uterine, ovarian and colon cancer.

The **# 6** nutrition fact is that certain types of bacteria in the small intestine and colon are linked with weight gain and overall health. Around 100 trillion bacteria live in the gastrointestinal tract and the balance between the two most common genera of bacteria, *Bacteriodes*, and *Firmicutes*, is linked with obesity (Ley, 2006). *Firmicutes* is better at fermenting the added sugars of the American diet and converting these into short-chain fatty acids that get absorbed adding unexpected Kcal to the system. More studies are needed but people lose weight easier with a plant based diet because this promotes the growth of *Bacteriodes*, but not *Firmicutes*. Moreover, taking broad spectrum antibiotics for any kind of infection disrupt the balance of microbes in the gastrointestinal tract and can induce weight gain. More research needs to be performed but the role of prebiotics and probiotics when coupled with exercise help with weight loss and proper weight maintenance.

The # 7 surprise in nutrition is that a plant based diet reduces your risk for a life threatening bacterial infection. Seventy-three percent of all antibiotics used in the U.S. go to prevent infections in caged animals raised on Concentrated Animal Farming Operations (CAFO's). The trouble starts with the practice of feeding animals antibiotics to prevent disease and not just to treat disease on giant corporate farms for pigs, chicken, and cattle. CAFO's are the point of origin for many of the antibiotic resistant bacteria in our environment derived from farm workers and the meat products we consume. CAFO is the dirtiest four letter word known to Americans. Antibiotic resistant infections cause an estimated 68,000 human deaths per year in the United States. CAFO's provide meat for the fast food industry and both are culpable when it comes to a history of labor atrocities, bad eating habits, environmental contamination, global warming, and animal cruelty. To add insult to injury, seventy-six million people experience fatal gastroenteritis from animal foods resulting in 5,000 deaths and \$22 billion in additional health care costs each year in the U.S. None of this happens with adoption of a plant based diet society. This is not an ideology. This is a sustainability fact.

The # 8 nutrition certainty is that water is the most vital of all the classes of nutrients for good health and is the one most often taken for granted. Water has the highest required intake of all nutrients (2,500 ml per day) and is the one you can't live without for more than a couple of days. The best liquid you can drink is filtered tap Water. The starting-point investment for good health is a Water filter. Protein is hereby demythologized as the most important nutrient.

Enter # 9 in nutrition: The main reason for the difficulty in controlling sugar intake is because it has been found to be more addictive than cocaine. Most people think you are free to choose the food you eat. This is another nutrition myth. Most people do not know that sugar and other ingredients added to processed foods are covertly addictive, and even if they do know, are unable to kick the



Blue Devils Diet Tip: "I have a plot in a community garden and show my family and others how to grow, pick and prepare healthy food." Carolyn

addiction to added sugar, and added flavor enhancers in cheap high Kcal processed foods that to varying degrees override the function of the cerebral cortex. If you add in mass marketing of high Kcal foods, targeted sugar products, plus peer pressure, you easily can manage to trigger the primitive brain to subjugate conscious thought. This is a commonly understood aspect of nutrition chemistry that exploits our natural primitive brain mechanisms in a very similar way to as sex. Both are “controlled” by the same pleasure seeking brain pathways. There is rare moderation when it comes to the human pattern of grazing for the pleasure trap sugar foods, just like the animals we are, especially when high Kcal foods are so easy to procure with your car. Early onset heart disease, cancer, stroke, or Type II diabetes are not “the choice” of two-thirds of Americans. A conscious connection has to be made in each individual that comes with knowledge and self-discipline surrounding the additive qualities of processed foods. Ironically speaking, stop behaving like a spoiled child, grow up, and behave like an adult responsible for your body and the life of others who live on this planet now, and in the future.

The **10th** nutrition item is to dispel the myth that it costs more to eat healthy. In fact, it is much cheaper to consume a whole foods, plant-based, non-processed food diet - if you calculate in reduced health care costs, reduced damage to the environment, extended life span, and increases in physical activities - particularly sex. Warning: blood circulation is so markedly improved with a plant based diet that women will experience orgasms and men erections without the additional cost of Viagra or Cialis.

Your options for weight loss in terms of food choices are to literally go “cold vegetarian” or cut out one or two animal based food items per day and replace it with a plant entrée. There are many fabulous plant based recipes to select from in recipe books or online. A subscription to *Vegetarian Time* makes an excellent gift to your significant other with benefits all round. Perhaps it could form the basis of a healthy relationship?

Convincing evidence favoring a plant-based, unprocessed food diet can be found in the superb documentary film *Forks Over Knives*. The documentary follows the life of two nutritionists who first

discovered the plant based diet is healthier than our commonplace meat based diet. Dr. Colin Campbell initially discovered the benefits of a plant based diet while researching impoverished areas of the Philippines. He discovered the wealthy peoples of the Philippine islands who could afford a diet high in animal protein were more susceptible to acquiring liver cancer. Campbell's later research in rats indicated that high casein protein ingestion found in cow's milk is a direct link to various forms of cancer. He also learned about a study in China conducted from 1973-1975 that is the largest nutrition study in history. The nutrition study on 880 million Chinese using 357 variables and employing 400,000 nutritionists, proved that a plant based diet found in the poor rural areas reduced the rate of cancer, heart disease, and stroke twenty fold over people living in urban areas who ate a meat based diet. In 1983 he was granted permission to work with Dr. Junshi Jen and conducted a similar study drawing blood and taking urine from nearly 300,000 people and came to the same conclusion. Based on this study, he published *The Diet, Lifestyle and Mortality in China: a Study of the Characteristics of 65 Chinese Counties*.

Also in the documentary, Dr. Caldwell Esselstyn of the famed Cleveland Clinic, found long-term historic studies favoring the benefits of a plant-based over animal-based diets in Norway during World War II, and more recently in Kenya, Japan, Hawaii and New Guinea. Esselstyn learned that the difference between American rates of cancer and cardiovascular disease were highly correlated with animal protein consumption. He conducted clinical studies on patients with severe cases of heart disease who, when following very strict plant based, unprocessed food dietary changes, saw reduced and sometimes reversed rates of disease. Based on decades of medical findings, the documentary encourages all viewers to assume a whole foods, plant-based diet. The research of these and many other nutritionists provides overwhelming evidence favoring a whole foods, plant based diet and exercise rather than pills and prescriptions to lose weight, prevent weight gain, and prevent disease.

Fad diets are popular eating plans that promise quick weight loss but are ineffective and expensive. Dieters typically make several attempts per year to lose weight paying an extra \$60billion annually to try to shed pounds ("The Heavy Price," Jan. 2013). Perhaps the first cue to any healthy weight loss program is that it should not cost money. On any given day in the United States, 50 percent of women are on a weight loss fad of some sort (Lutter & Jaffee, 1996). More alarming is the fact that 90 percent of all teenagers have tried one or more of the popular fad diets (Dray, 2011). Although living up to the ideal standards of weight can be a lifelong struggle, stay focused on long-term health rather than short-term numbers on a scale. Most fad diets do have the ability to help a person lose weight *in the short term*. This type of weight loss is often accomplished by a rigid change in eating habits for a certain period of time. In the *long term*, fad diets fail to create a permanent change in overall health. The most understated fact of fad dieting is the inevitable return of weight that occurs after stopping the program. Because a fad diet only changes habits for a short period of time, most fad dieters will have to battle the bulge again after reaching a weight often higher than before because of what is known in physiology as the ratchet effect. The best way to keep weight off once a midpoint body mass index has been achieved is to stay with a plant based unprocessed food diet.

To sum up the arguments for a plant based weight loss diet simply read any USDA food label. The first five lines on a food label (daily values) that are of greatest concern to your health per serving are required by law to be in the following order in accordance with the potential long term damage to your health: 1) total Kcal of the product per serving which is highest in animal products; 2) total fat which is highest in animal products; 3) total saturated fat which is only in animal products, coconut oil, and palm oil; 4) total cholesterol which is found only in animal products; and 5) sodium, which is found



Blue Devils Diet Tip: "I've been eating a plant based diet for several years and have never felt better." Ashlyn exercise-science

in processed foods. Here you have the foundational arguments for moving toward a plant based diet laid out in most succinct fashion.

Foods to Eat For Weight Loss and Weight Maintenance

When it comes to weight loss and maintaining a healthy weight, people must be consciously aware of the food they stuff down their gullets. Since most of us do not make a conscious choice because of the "pleasure trap" – an academic-styled use of the cerebral cortex leads to the following choices:

Grains Group: 6 ounces per day, minimum 3 ounces. Serving is ½ cup. The main food items to avoid are white flour products, cakes, cookies, crackers, donuts, pancakes, pastries, pies, and waffles. Select whole grains like barley, brown rice, teff, buckwheat, bulgur, chia, faro, oats, quinoa, rye, and not just whole wheat. Whole wheat is linked with data demonstrating epidemic rates of celiac disease, and gluten sensitivity (Kasarda, 2013). This group is great for fiber which maintains the all important normal bacteria of the gastrointestinal tract that battle against weight gain.

Vegetable Group: 2 1/2 servings per day. Serving is 1 cup. Eat plenty of cruciferous vegetables. In one week you should find recipes and purchase groceries to fulfill main course dishes that include the following colorful variety: broccoli, cauliflower, Brussels sprouts, bok choy, legumes, peppers, tomatoes, mushrooms, asparagus, artichokes, eggplant, sweet potatoes, red chard, arugula, onions, carrots, and varieties of lettuce. Find recipes during the week that use a variety of herbs such as parsley, sage, rosemary, thyme, cilantro, garlic, and many others. It is best to avoid starchy foods like corn and potatoes while losing weight although these are fine once on weight maintenance. This group is great for fiber and water which maintains the normal bacteria of the gastrointestinal tract. The importance of maintaining the normal bacteria of the G.I.T. may have profound ramifications for maintaining normal weight.



Blue Devils Diet Tip: "I plan out my weekly work out program every Sunday night." Nick, Lawrence, KS; Pre-Pharmacy

Fruits Group: 2 servings per day. 1 cup is 1 serving. Find fruits that are small and devoid of a waxy shine. You must wash fruit with soap and water; soak for a few minutes and then rinse, or peel the skin to remove harmful pesticide or herbicide residue. Environmental toxins are very harmful especially to children. All fruits are nutrient dense and ideal to take with you as snacks. This group is, like the vegetables, crucial for fiber and maintenance of the normal bacteria of the gastrointestinal tract. Avoid all colas, diet-colas, artificial sweeteners, fruit drinks, -ades, teas with added sugar, honey, syrup, and jello. These substances displace fruit in the diet and have zero nutrient density. If you drink alcohol, it should not be over 3 ounces of alcohol per week for women and 4 for men. Red wine has certain health benefits in moderation as long as you are not sensitive to sulfites. However, alcohol is not recommended during weight loss but is plausible for weight maintenance with moderation.

Dairy Group: 3 servings per day. Serving is $\frac{1}{2}$ cup. Find a type of milk that you like that does not come from a cow. Use almond milk, for example, with steel cut oatmeal or whole grain *Kashi* or *Organic Natures Path* cereals. The healthiest selection is unsweetened almond milk because of its special high Vitamin E content, rice, flax, coconut, or even goat milk on some occasions. Goat cheese, gorgonzola, feta or other fermented cheese are best for Vitamin B2 riboflavin. Avoid all processed cheeses and be careful not to overindulge in any cheese. This is a common problem when people switch to a plant based diet. Learn how to make homemade yogurt but plain Greek yogurt with real fruit added is a key part of a good weight loss program. Try almond yogurt. Yogurt is the best of all the animal based products because it contains valuable microbes that help balance the bacteria in the gastrointestinal tract. However, if you must have cow milk in transition to better health, drink nonfat organic.

Protein Group: 5 $\frac{1}{2}$ ounces per day. 1 ounce is the size of a matchbook. Vary your protein. Decrease and eliminate your intake from the meat group especially when losing weight. Start by eliminating the least nutrient dense foods in the meat category: hot dogs, ground beef, marbled steaks,

tenderized beef, fried meats, roast beef, sausage, and spare ribs. The best sources of protein are legumes and whole grains together as a daily regimen. Legumes and whole grains provide the most balanced protein content in terms of acquiring all 20 amino acids in the meatless diet.

Legumes and whole grains are a preferred source of protein over eggs due to the latter containing exorbitant cholesterol. It is best to select egg whites as a source of animal protein in order to eliminate cholesterol. Many people do not realize that you do not need cholesterol in the diet. The liver makes all the cholesterol you need. Once you get over 300 mg of cholesterol from food sources per day (one egg), you begin the inexorable shift toward atherosclerosis which leads to heart disease and stroke.

A good source of protein that is high in calcium or iron includes nuts and seeds. Nuts should be around all the time for snacking or in recipes, and not just for the holidays. Tempeh, meat replacements, and tofu are other good ways to obtain plenty of protein coupled with Vitamin B12. Many people are surprised to learn that kale is high in protein. Soy products were once considered a good meat replacement. However, mass soy production has led to the advent of a Genetically Modified Organism (GMO) controlled by one manufacturing company that has disrupted the environment with overuse of pesticides and insecticides to grow its crop.

The best fish choices for providing Omega 3 fatty acids, calcium and Vitamin D would be sardines, anchovies, and Atlantic wild salmon. Locally grown, farm raised tilapia is a good source of protein. Oysters or clams would be for special occasions, although these run the risk of contamination with toxic chemicals. Oysters are a terrific source of iron in women who participate in triathlons or distance running.

Note the old meat group is now called the protein food group by American health nutritionists



***Blue Devils Diet Tip: "I work out with light weights, lots of reps and little rest in between sets to burn more calories and create lean muscle mass."
Leonard, Fort Leavenworth, KS; Adult Sports Director***

who have formulated the government myplate.gov website. This change has been made in order to promote variation in protein sources: a change toward a more plant based diet.

Many people eat out or buy frozen, pre-prepared meals because of convenience, but in the long run these habits negatively affect your health. Sodium is included in almost all processed foods. Over 2,300 mg/day of sodium significantly increases the risk of hypertension which is found in 15% of all Americans. Purchase nuts that are unsalted or lightly salted (Magee, 2011). Keep in mind that catsup, mustard, and bar-b-que sauce, most chips, pickles, and processed meats are high in sodium. Also, learn to avoid all sweeteners especially Nutrasweet, a well known neurotoxin (Cee, 2011). When cooking or baking at home, avoid butter and margarine that is high in saturated and trans-fats. Include olive, coconut (has lauric acid), sunflower, sesame, or peanut oils as healthy alternatives (Magee, 2011). Be sure to pack a lunch with healthy food items. Berries are a great option to include because they are extremely high in Vitamin E which is one of the most common nutrient deficiencies among college students (Top 10 must-eat).

Remember that the bigger the fish, the more mercury. Tuna and swordfish should be avoided especially during pregnancy. Reports are coming in regarding the amount of radiation in Alaskan salmon and other Pacific fish after the Fukushima nuclear meltdown. Avoid fish from Asia as their environmental standards are currently comparable to the U.S. in the 1960s. Asian fish are grown in contaminated water using massive quantities of antibiotics. Only 13% of all food entering the U.S. is inspected by the USDA and 2% of all salmon.

Start making healthy choices when grocery shopping by reading nutrition labels. When eating at restaurants read the menu thoroughly and ask your waiter for substitutions. Learning which options are best and taking the time to consider choices is not easy at first, but over time, selecting healthy foods will become more natural.



Blue Devils Diet Tip: “I go running and drink excess amounts of water. I also limit sweet foods for the weekends.” Anna, Leavenworth, KS; Psychology

Weight Loss Strategies

The key to setting weight loss goals is to be specific, measurable, attainable, realistic and tangible” (Waehner, 2012), or SMART. Small changes in routine each day may be a good way to start reducing Kcal intake (Waehner, 2012). For example, slowly switch out one of the animal based items in your diet in order to take in a serving of legumes and whole grains. Eat small portions slowly, cook more at home, and avoid fast food restaurants to reduce Kcal, fat, and sodium in meals.

Set a reasonable goal to lose **no more than two pounds per week** or ten percent body weight over six months. Dropping below 1,200 Kcal per day can be dangerous since this leads to ketosis which is harmful to the tissues of the body. Focus on habits that contribute to weight loss such as going to sleep at the same time each night and getting up at the same time. This sets the all important biological clock for plenty of rest. It is well established that irregular sleep times, and especially lack of sleep causes appetite to increase. All of this is regulated by hormones that interface with the foods you eat and the environmental toxins ingested. Create a comfortable environment when eating, because emotional stability helps digestion. Also, do not underestimate the power of a positive attitude by practicing yoga, prayer, meditation, tai chi or some other relaxation technique while keeping the weight loss goal in mind (Whitney & Rolfes, 2013). Enlist the support of family and friends; share plans and goals and seek encouragement. Be patient; if plans get off course, refocus and continue to move towards the goal. Once a weight loss goal is met, the most important thing is to maintain it.

A basic piece of information to know is one’s estimated energy requirement (EER). To lose weight, daily energy intake must be less than the EER as can be calculated for you at myplate.gov by simply entering you age, weight, height, gender, and amount of exercise per week. Eating fewer Kcal does not mean one must starve. The goal is to replace the higher Kcal foods with those that are lower in



***Blue Devils Diet Tip: “I stop eating after 8 pm.”
Gustavo, Kansas City, KS; microbiology student***

Kcal (“Permanent Weight Loss”, 2010). Eating more fruits and vegetables is a good way to cut Kcal. You can save 154 Kcal while getting more fiber and water simply by exchanging cheese and ham for a bok choy salad. It is also important to watch portion size. Avoid “supersizing” meals. Eat slowly to avoid overeating and stop eating when full (Permanent weight loss, 2010).

Fat loss is best achieved when weight is lost slowly, at the rate of one to two pounds per week, through a combination of Kcal cuts and exercise. The more quickly weight is lost, the more likely it is coming from water and muscle instead of fat. Muscle tissue keeps metabolism elevated. Metabolism slows down when muscle tissue is lost and daily Kcal expenditure decreases (Whitney & Rolfes, 2013). One pound of weight is equal to 3500 Kcal. By eliminating 250 Kcal a day from food and then expending that same amount through exercise, one can lose a pound of fat per week. Read food labels for total Kcal and learn how to calculate Kcal of fat, proteins, and carbohydrates. Eating fat-free foods is not a weight loss solution, in itself, although eating less fat does help reduce total energy intake.

To add more healthy eating habits, start by changing a bad habit. For example, if you eat too quickly, practice taking smaller bites and chewing thoroughly, allowing time to enjoy the meal and giving hormones a chance to signal fullness (Whitney and Rolfes, 2013). Another bad habit is skipping meals, such as breakfast, which may cause overeating later in the day (Johnson, C., 2012). Instead of skipping meals, eat three meals per day at regular times with fruit snacks or nuts in between (Johnson, C., 2012). Gradually eat smaller portions at every meal to reduce overall energy intake over time.

Drinking water is especially important when decreasing Kcal intake. Sweetened beverages, and even one glass of wine, may account for as many as 400 Kcal consumed per day (“Building Healthy Eating,” 2010). Water can prevent someone from consuming too many Kcal because it promotes fullness and aids in digesting fiber (Whitney and Rolfes, 2013). If you are hungry drink filtered tap



***Blue Devils Diet Tip: “I make sure to eat small, healthy snacks of nuts, grains and fruit so I don’t starve or eat large portions later.”
Nonelaci, Kansas City, KS; Nursing and Pre-Pharmacy***

water, if you are sleepy, angry, or hyper, drink water. Water tends to restore natural physiological and psychological balance.

Overall, change eating patterns gradually for the best results. Begin by making a change in one area, and then continue to make a few more changes. Enjoy favorite foods occasionally and in moderation. Gradual changes over time will soon become part of one's everyday lifestyle which generally takes about six months.

The ChooseMyPlate.gov website is a great resource to customize individual daily food plans according to an individual's weight, height, age, and activity level (myplate.gov daily). The food plans outline the number of servings to eat from each food group. This information can then be used to better size food portions.

There are many different useful tools available on websites or on smart phone applications that help track and count the Kcal in just about everything one would typically eat. One such tool is MyFitnessPal, available as both an application and a website (<http://www.myfitnesspal.com/>) that synchronizes data between these formats. Using MyFitnessPal, one can track Kcal intake, search for different foods from a large database, create recipes, log exercise programs, and calculate the number of Kcal burned during a workout ("*Lose Weight*").

Personal environmental factors surrounding the eating experience can influence how much one eats. Changing them can promote weight loss. These factors include atmosphere, accessibility, socializing, distractions, and multiple food choices (Whitney & Rolfes, 2011). The ease and convenience of obtaining food is one of the strongest influences favoring overeating. To avoid temptation, do not keep empty Kcal foods in the house; instead, stock the kitchen with healthy options, like fruit, snap peas, carrots, nuts, or Greek natural yogurt. The ease and convenience of obtaining food, or accessibility, is



Blue Devils Diet Tip: "I make it to the gym every day for at least an hour, rotate workouts and try to work out a different body area every day."

Derric, Kansas City, KS; Business

one of the strongest influences on overeating. In general, the less effort required to obtain food, the more likely it will be eaten. To avoid temptation, do not keep empty-Kcal (high fat, sugar, or protein) foods around; instead, stock the kitchen with healthy options, like fruit, snap peas, carrots, nuts, or yogurt (Whitney & Rolfes, 2013).

Distractions influence food intake by initiating eating, interfering with internal controls to stop eating, and extending the duration of eating. Examples are eating at a certain time, or in combination with a favorite TV show, even if you're not hungry, or mindless snacking without thought to how much food is eaten. When offered a large assortment of foods we tend to eat more. To limit food intake, provide a limited number of food choices per meal (Whitney & Rolfes, 2013). Avoid supplements, protein powders, nutrient shakes, nutrient energy bars, and energy drinks. Lose weight and maintain it as a lifestyle change.

Consider gardening with perhaps the assistance of a local master gardening association. Find where the nearest community garden is to your home or start one in your own backyard. Try growing heirloom tomatoes, arugula, swiss chard, black eyed peas, basil and other herbs to start. Research some recipes. It is amazing how good garden fresh vegetables taste and how wonderful you will feel getting out into the sun and obtaining some Vitamin D.

Plant based menus are best found at ethnic restaurants that include Indian, Chinese, Thai, Japanese, African, Greek, or Mid-Eastern foods. Rice and beans is a plant based food staple of Cajun cuisine. Beware that many southern European and Latin American cuisines have been corrupted by modifications that infuse the worst animal based traditions. The American tradition of meat and potatoes derives from German and northern European influences. This tradition was relatively healthy before the industrial revolution and the advent of CAFO's. The most unhealthy American food tradition



***Blue Devils Diet Tip: "I avoid grocery shopping when I'm hungry."
Luz, Lawrence, KS; Nursing***

is Southern because of its reliance on lard, a pure saturated animal fat. However, just as American food traditions are predisposed toward corn, potatoes, and meat, they can be adjusted to be more “other-plant based.”

Finally, losing weight varies with every person. We overeat for different reasons. It helps tremendously to get to the bottom of the reason for why you are overeating. Do you eat, like most people, for the energy? Or is it for convenience, taste, or the cheap price? Do you eat because you are tired, depressed, or stressed? The best reasons to eat are to live longer, healthier and to protect the environment for the next generation.

What Weight Loss Plan for a New Lifestyle

The most available free and easy to use weight loss plan is found on the internet. It is a self-guided, self-developed program called MyPlate made available by the United States Department of Agriculture. It was unveiled in 2011 to replace MyPyramid guidelines. The Food Guide Pyramid had been criticized as too complicated for consumers. The simplicity of the MyPlate design is intended to make it more user-friendly. According to the First Lady, Michelle Obama, the icon is “simple enough for children to understand, even at the elementary school level. They can learn to use this tool now and use it for the rest of their lives” (Vastag, 2011).



ChooseMyPlate.gov quickly reveals that half of a healthy meal should be fruits and vegetables and that one should eat more vegetables than fruits. Proteins should consist of legumes and whole grains. Dairy is indicated by a dairy circle on the right. This should include almond, flaxseed, soy, or rice milk. Also in this group is yogurt without added sweeteners or food colorings. An



***Blue Devils Diet Tip: “I avoid buying junk food, so it is not in my house.”
Rhoda, Overland Park, KS; Nursing***

improvement in MyPlate over MyPyramid is that oils and fats are no longer listed as a food group, and physical activity is emphasized. Dietary guidelines and detailed information are available for customized information for plant based dieters, children, pregnant women, educators and nutrition professionals. Further, the online *SuperTracker* diet accountability tool helps users know what they are eating, understand their nutrition and Kcal intake and create an individual plan to reach their weight loss or healthy diet goal. (USDAchoosemyplate.gov).

2. Mediterranean Diet 3. Asian Food Pyramid 4. DASH Diet and 5. TLC Diet

Two other healthful weight loss approaches are the Mediterranean diet and the Asian food pyramid. Similar to the Weight Watchers PointsPlus program and USDA MyPlate, they both emphasize fruits, vegetables, whole grains, and eliminate unhealthy meat based Kcal. Starting with this common foundation, each of these approaches are unique in terms of differences in proportions of certain foods, which can result in different benefits. For example, research shows that the Mediterranean diet reduces the risk of heart disease (Mayo, 2010).

According to Mayo, the Mediterranean diet is a heart-healthy eating plan combining elements of Mediterranean-style cooking. This diet could be right for those that like healthy eating and an occasional glass of red wine (Mayo, 2010). The Mediterranean pyramid emphasizes eating red meats and sweets less often, moderate portions of poultry, eggs, cheese, and yogurt daily or one to two times a week; fish and seafood at least two times a week; and fruits, legumes, olive oil, herbs and spices at every meal (Mayo, 2010). The diet has many health benefits that include a reduction of heart disease and stroke causing low-density lipoprotein (LDL) in the blood. This is due to the use of olive oil in lieu of saturated fats found in butter or trans-fats found in margarine (Mayo, 2010).

An alternative approach is the Asian food pyramid, released in 1955. The Asian pyramid, like the Mediterranean pyramid, was designed as a model for healthy eating because of the low incidence of chronic diseases in Asian countries ("Asian diet pyramid,"). The Asian diet is linked to religious practices

and long-standing customs, and the record of these eating habits is a source of inspiration to many. The Asian diet has a broad base across many countries, to include China, Nepal, Taiwan, and Vietnam ("Asian Diet Pyramid,").

Brown rice is a major food in the Asian pyramid and serves as the mainstay of nearly every meal. Rice is used for many products in Asian cultures including candy, cakes and sake wine. Other items in the Asian pyramid include red meat on a monthly basis; sweets on special occasions, eggs, and poultry once a week; and fish and dairy as options for daily consumption; fruits and vegetables daily. Daily physical activity is stressed as an important aspect of the diet ("Asian Diet Pyramid,").

The Mediterranean and the Asian food pyramids are two options to consider for weight loss or simply as lifestyle choice. Both methods follow healthy diet principles and emphasize the importance of exercise in weight loss. Both promote small quantities of fish and incorporate small amounts of sesame, or peanut oil. These oils are high in monounsaturated fat that reduces lipid carriers (LDL's) in the blood that lead to heart disease and stroke.

The January 12, 2014, *U.S. News and World Report* recently created a panel of experts that analyzed thirty-two weight loss diets. The most highly ranked was the DASH diet, which stands for Dietary Approaches to Stopping Hypertension. It received high marks for preventing or controlling diabetes with high fiber foods and reduced sodium. Second was the TLC diet which stands for Therapeutic Lifestyle Changes diet which promotes cardiovascular health with a diet low in saturated fats and limits daily cholesterol.



Blue Devils Diet Tip: "I try to drink plenty of water to remain healthy and prevent dehydration." Gloria, Lawrence, KS; General Dynamics

Conclusion

Following the strategies outlined in this paper and selecting a weight loss approach that is more plant based will set the stage for safe weight loss. Once a weight loss goal is achieved, the focus shifts to maintaining your new healthy weight. Incorporate the principles and practices that led to this hard-won goal into a permanent lifestyle change that includes regular exercise. Physical activity plays a key role in maintaining weight loss. Frequent self-monitoring using the myplate.gov website will help you to identify weight gain early and take action before regain is substantial. Maintaining weight loss gets easier with time as diet and exercise patterns become permanent (Whitney & Rolfes, 2013).



***Blue Devils Diet Tip: “When I’m not busy studying,
I burn lots of Kcal chasing my five-year old daughter around.”
Ashley, Kansas City, KS: KU Clinical Lab Science program***

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