## **CUSTOMIZE YOUR DIET**

James H. Carraway, M.D. Eastern Virginia Medical School

These days, we customize just about everything we do. Many of us have learned how to individualize our nutritional intake to match our needs and goals for health and body contour. No two people have exactly the same nutritional needs, likes, or even reactions to food. Our nutritional intake combined with other lifestyle habits such as exercise, supplements, and stress management make a huge difference in our health status and longevity. Only about 20-30% of our longevity is determined by our genetic background, while the rest of it is a function of lifestyle habits, including nutrition.

Each one of us follows various pathways in our lives and has many forces interacting on us during this life passage. Some of us are endowed with a gene for cancer or heart problems, while others may carry a gene for diabetes or Alzheimer's disease. Some of us have incorporated moderate exercise workouts into our routine several times a week, while others are out pushing 25-30 miles running every week. Most people in this country don't do either and spend much of their time in sedentary jobs, after which they relax in the evening and weekends in the same way. Each one of us has to identify exactly what our lifestyle is in terms of activities, calories burned, and nutritional needs to avoid excess weight and some of the medical problems we are prone to develop. In order to do that, you need to think about your own health status, weight, genetic background, physical activity, and predilection for certain foods.

If you live mostly a sedentary life, including your job and weekends, you need to calculate fairly precisely what your caloric needs are. If you require 1800 calories a day on the average and are 10 to 15 pounds overweight, you have to reduce your food intake in order to achieve a goal of having a more appropriate body weight. Additionally, if you remember that carbs form glucose and then make triglycerides, you can see the need to modify your carbohydrate intake. Triglycerides are the precursors of body fat. If you eat 100 calories of pure carbohydrates and don't burn them in several hours, about 90% of that will be stored as triglycerides and fat. Because of this, it will increase your risk for heart disease, diabetes, and degenerative joint problems. One thing that you don't want to do is to ignore the reality of how many calories you should be taking in matched against how many you are actually burning. For the overweight individual, I would certainly go with a "Zone" type of diet where all three food elements including carbohydrates, protein, and fat are included each meal so the body can maximize the burning of these foods for energy. Additionally, you need to know the calorie value of each of these foods and match this with your caloric output as determined by your activity level. If you are on the high end of the exercise scale and are running more than 10 to 15 miles a week, you will need extra calories, usually in the form of carbohydrates, to furnish enough energy to your cells to keep the muscles going. For this, many runners turn to pasta, polished rice, bread products, and other "empty" calories. Consider this very carefully, because if you ingest empty calories that have no nutrient value and they are furnishing a high percentage of your caloric needs, your body goes without enough nutrients. Nutrients in food are the basis of protection for your immune system, your brain function, your cardiac function, and many of the other body functions that serve you on a daily basis. Burning more than 3,000 to 3,500 calories per week in aerobic activity has a "pro-aging" effect on your body. This means it ages you more rather than less, and this is probably because of the poor nutrition that accompanies high caloric intake to sustain

energy levels. Better choices would be eating more fruits and vegetables, whole grain cereals, unpolished brown rice, and other high nutrient density carbohydrates. If you're going to expand that many calories, you need to have good food coming in all the time or your body will pay the price later.

Suppose you have a family history of heart disease. We know now very clearly that eating many carbs and increasing your insulin level and your blood sugar level causes higher triglycerides and high serum cholesterol. If you have a predilection for heart disease in your genetic background, you will do well to keep your carb intake confined to mostly fruits and vegetables and basically eliminate bread, bagels, cakes, cookies, wheat snacks, and other flour-based foods. By increasing your carbohydrate intake with empty calories, you actually increase the insulin resistance of your cells and produce more insulin, and a high insulin level is one of the most accurate predictors of heart disease.

Suppose you have a family history of cancer. We know that the genes for cancer penetrate and become active in an environment that allows this cellular activity to progress. When I see a patient who has had multiple skin cancers, the very first thing that I do is take them off of any "empty" calories in their diet and add highly nutrient density foods such as 2 or 3 green vegetables a day, fruits, nuts, whole grains, and range-fed eggs and beef. In order to get the highest nutrient density to promote your cellular function, you must pay attention to these factors every day. If you do, you will decrease your risk for cancer. It is clearly known that individuals who have the highest intake of fruits and vegetables have the lowest incidence of cancer of any type.

You may need to pay particular attention to your nervous system. If you have a family history of Alzheimer's disease, remember that this is aggravated by reduced physical activity, reduced mental activity, increased low nutrient density carbohydrates, and a lack of adequate omega-3's. Additionally, hydrogenated fat that contains trans-fat and a high level of omega-6 fatty acids can increase your risk for Alzheimer's. We know that if you eat cold-water fish 2 to 3 times a week, take omega-3 supplements in the form of flax seed or fish oil, and keep your carbohydrate levels within the "Zone" that your incidence of Alzheimer's disease is remarkably lower. If you then engage in mental challenges each day such as Sudoku or crosswords, you will also maintain your mental skills. Physical exercise including aerobic and anaerobic muscle activity also reduces the risk of Alzheimer's disease as well.

It becomes obvious in analyzing the dietary factors of people is that we have the choice either to make our lives better or to allow our health to deteriorate. You should look at your own individual genetic background, current physical status, and activity patterns so that you can determine what your needs are. Additionally, obtaining consultation from a certified nutritionist is a good option. You will note in the Yellow Pages that there are a variety of nutritionists available who are able to counsel you. Also, all hospital nutrition departments have certified nutritionists, and most doctors' offices know how to obtain this type of therapy. There is really no excuse for any of us to not understand what our needs are in this regard. It is worth mentioning that there is a lot of nutrition information on the web. If I want to know something about nutrition, I simply go to Google and ask the question and usually get a prompt answer. For example, how much trans-fat is in a McDonald's hamburger or how much omega-6 oil is in fresh corn? These and other questions arise daily as we are trying to work on our best nutritional pathway.