

needs to remain healthy are found in plant foods!

### **Weight Loss**

One of the biggest factors contributing to diabetes is overweight and obesity, so losing the pounds significantly improves the insulin sensitivity, and thus brings down the blood sugar level. The old-fashioned way to lose weight is best – diet and exercise. However, don't think of it as a diet, but rather a new lifestyle. Adopt a new you! For more information, check out our Weight Loss handout.

### **Exercise**

An indispensable part of improved insulin sensitivity is exercise. Both cardiovascular and resistance exercise has shown to decrease blood sugars. Cardiovascular exercise causes your heart rate and respirations to go up and remain up over a period of time. Resistance exercise causes your muscles to strain against an opposing force. The recommendations for cardiovascular exercise are at least 150 minutes weekly of moderate intensity exercise. That is 30 minutes daily, 5 days a week. Moderate intensity means that you could talk while you exercise but would be too out of breath to sing. Examples of good exercises are walking, bicycling, swimming, and using a stationary bicycle or treadmill. The recommendations for resistance exercise is at least 2 times weekly, covering all major muscle groups (shoulders, arms, back, chest, abdomen, legs/thighs). If you choose to lift weights, choose a weight that you can easily lift 10 times, then work up until you can do it 15 times easily. Then increase the weight so that you can do 10, and then work up to 15, and so on. Make sure you wear good foot protection and check your feet after every time you exercise to make sure there are no sores. If you have other health problems, check with your doctor before you begin. Start slow and work up to your goal over the next 1-3 months.

### **Water**

You need to drink 1 ounce of water daily for every 2 pounds you weigh. This will help satisfy hunger, keep you hydrated, and clean out toxins.

### **Live Temperately**

This means avoiding that which is harmful (tobacco, alcohol, caffeine, etc.), and using wisely that which is good. You can have a perfectly healthy meal, but if you overeat, it is no longer healthy.

### **Lots of Fresh Air**

Fresh air is vital to life and health. Diabetics already have enough complications with poor healing and circulation. Get your fresh

air regularly (open the windows, get out into nature).

### **Entire Trust in God**

This is the most important aspect—seriously! The only way there will be sustained change for the better is if you are able to rely on God to do for you what you are unable to do for yourself. To know that you have Someone who is greater than you helping you along and giving you His strength is a great encouragement. Trust in God. You can't help but notice the difference!

### **Sunshine**

Light-skinned individuals need 15 minutes and dark-skinned individuals need 30 minutes of sun daily to the face and hands in order to produce sufficient vitamin D. Sunshine also helps wound healing, kills germs, improves mood, and has a host of other benefits.

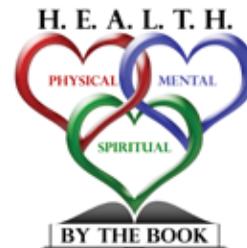
### **Sufficient Rest**

Don't forget that most of your healing happens during sleep. The hours before midnight are better than the hours after, so get to bed early and get your 7-9 hours nightly. Don't forget to take a break 1 day each week. That is why God created the 7th-day Sabbath.

### **WELLNESS**

So, as you look at treating your diabetes, don't forget your WELLNESS (Water, Exercise, Live Temperately, Lots of Fresh Air, Nutrition, Entire Trust in God, Sunshine, and Sufficient Rest).

*Work closely with your physician to decrease your medications while you make these changes, or else you may suffer low blood sugar!*



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# Treating Diabetes



## The Carbohydrate Controversy

In the typical diabetic diet one obtains about 40% of their calories from carbohydrates (low-carbohydrate diet). But a question needs to be asked: Is this the optimal diet for diabetics and for health in general? To answer this question, let us look at some recent research. In one study, 20 normal weight diabetics on insulin were placed on the standard diabetic diet (43% calories from carbohydrates) for 7 days, and then were switched to a high complex carbohydrate diet (70% calories from carbohydrates). On the high complex-carbohydrate diet, the average insulin dose dropped from 26 to 11 units daily, and 11 patients were able to come off their insulin entirely. In addition, the average cholesterol dropped from 206 to 147. In another 6-week study of 27 diabetics with one group on a high complex carbohydrate diet with legumes (beans/lentils/peas) and the other group on a standard low carbohydrate diet, those on the high complex carbohydrate diet had decreased blood sugars, cholesterol, and sugar in the urine compared to those on the low-carbohydrate diet. In another study, 21 diabetics with neuropathy (numbness/ burning/ tingling in the extremities), were placed on a vegan diet (no flesh foods or dairy products). Within 16 days, 17 of the 21 diabetics had complete relief of their neuropathic pain. Although numbness persisted, it was noticeably improved after 2 days. As you can see carbohydrates are good for diabetics.

### What are Complex Carbohydrates?

Complex carbohydrates are high in fiber and come from natural sources. Fiber is a carbohydrate substance that the body cannot process, and so it passes through the bowel undigested. Fiber helps slow the absorption of natural sugars into the blood stream, thus reducing the spike of insulin and blood sugar after meals. It also helps prevent the after-meal hypoglycemia (low-blood sugar), and provides for a steady source of energy after meals. In addi-



tion, fiber helps reduce heart disease by decreasing cholesterol and triglycerides; helps reduce the chance of developing certain cancers such as colon, breast, ovarian, & uterine; aids in weight loss; reduces the risk of developing diverticular disease and constipation; and reduces the risk of gall stones and kidney stones among a host of other benefits.

### What foods have complex carbohydrates?

Fruits, nuts and seeds, whole grains, legumes, and vegetables are your sources of complex carbohydrates. Although fruits have natural sugars, they are good for diabetics. These are your main source of antioxidants, and a great source for other vitamins and minerals. Nuts and seeds should be eaten sparingly (closed hand-full) but often (daily). Buy your nuts/seeds raw and then lightly roast them in the oven with little or no salt. Those who eat more nuts are less likely to develop diabetes or heart disease. Whole grains are grains that still contain the bran and the germ. The bran and germ contain the vitamins, minerals, and fiber. Avoid processed grains (white/parboiled rice, white pasta, white flour, etc.) and eat whole grains (brown rice, whole grain pasta, whole wheat flour, barley, oats, etc.). Legumes include beans, peas and lentils. These contain healthy proteins, minerals, and fiber. One research project showed that eating ½ bowl of lentils with breakfast helped regulate blood sugars through lunch time. Any legume mixed with any whole grain will supply your complete protein needs. Vegetables include parts of the plant that are not the fruit (leaves: lettuce, spinach, bhagi, etc.) (roots: potato, beet, carrot, etc.) (stems: celery, bok choy, etc.) (cruciferous: broccoli, cauliflower, etc.). Vegetables contain many nutrients, vitamins, antioxidants, and fiber.

### Protein Poison?

People are always concerned about if they are getting enough protein. The reality is that most of us are getting too much protein. In the processing of excess proteins, the kidneys have to work harder and calcium is pulled from the bones to buffer the amino acids, thus leading to osteoporosis and potentially kidney disease. Research shows that osteoporosis has little to do with calcium, and much to do with excess protein. Plant foods have the right amounts and types of proteins that the human body needs. Animal products provide excess protein.

### The Skinny on Fats

Research shows that those who have increased fat consumption, especially animal fats and trans fats, have increased risk of developing diabetes and cardiovascular disease. Cholesterol is found in animal products (flesh foods, eggs, and dairy products), but not in plant products. Also, the majority of your saturated fats are found

in animals. Interestingly, the saturated fats that are found in some nuts and avocados, are not shown to be detrimental like those from animal fats.



Trans fats are produced when unsaturated fats are heated up to high temperatures for a period of time in the presence of a catalyst. Turning oils into trans fats makes them more solid at room temperature (shortening, margarine), or helps prolong their shelf life (partially hydrogenated oils). Most oils are obtained by heat extraction – the raw product is heated to high temperatures for long periods of time to extract the oil. So, most of your oils are already developing some trans fat formation. A “good” oil would be cold-pressed olive oil. It is cold pressed, so it isn’t already transformed, and it is monounsaturated and therefore is more resistant to auto-oxidization. Your healthiest option, however, would be to get the fats in the actual source (olives, nuts, vegetables, etc.)

### Meal Scheduling

Most diabetics have been started on a plan that includes 5 or 6 small meals throughout the day. The reality is that if you are eating a diet full of complex carbohydrates and plant proteins and fats, you can do very well on just 2 meals daily. If you need to, you can add a small 3rd meal, but you do not need many small meals throughout the day. A large breakfast, medium lunch, and possibly a small supper are all that you need. Avoid anything between meals other than water. Research shows that even eating healthy foods between meals delays stomach emptying, and thus leads to negative health consequences. Give your stomach a break, and don’t eat between meals. Ask yourself these 3 questions before eating: 1. Is it healthy for me? 2. Is it the right time to eat? 3. Is it the right amount? If you can answer yes to all 3, go ahead and eat.

### The 2 Rules of Nutrition

**1. The closer it is to how it grows, the better it is for you!** For instance, brown rice is better than white rice. Potatoes are better than potato chips. Eat things like they grow, and you will be much healthier.

**2. If it can swim, fly, or run away from you, don’t eat it!** Multiple research projects show that diabetics who have the best improvement in blood sugars are ones who adhere to a strictly plant-based diet. The facts are simply stacked against a diet that includes flesh foods and dairy products. All the nutrients one