Diabetes - Nutritional Help by Chuck Jumpeter

One of our modern-day epidemics today is obesity. I noted some of the major complications associated with obesity in my last artilce and that there are over 300,000 premature deaths each year in the good old USA as a result of our ever-increasing girth. (By the way, we have just introduced a remarkable addition to our weight management program - CINCH ™. For information on this clinically proven weight and inch loss program visit **www.cinchplan.com/jumpeter**.)

In addition to increased risk of all types of cardio-vascular disease, diabetes, primarily Type II diabetes is one of the most PREVENTABLE of those complications. That's right, I said preventable! Let's take a look at just exactly what we're talking about.

Read on for more information...

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Facts and Background

- 20.8 Million Americans have diabetes1
- 14.6 Million have been diagnosed1
- 6.2 Million don't know they have diabetes1
- Incidence of diabetes are increasing by 6%/year. 600,000 new cases each year.
- A newborn baby who lives to age 70 has a 1 in 5 chance of becoming diabetic.
- Diabetes kills over 300,000 people each year making it the #6 killer.
- Diabetics have a 2 to 4 times greater risk of heart disease.
- Diabetics have a 2 to 6 times greater risk of stroke.
- Diabetes in the #1 cause of adult blindness. (More than 5,000 cases/year)
- Diabetes can also cause kidney failure, leg ulcers, amputations, and much greater susceptibility to infections.

Diabetes Definition

Simply put, Diabetes Mellitus is a disorder of the body's means of utilizing sugar, or glucose, which is the body's basic fuel.
The measure of diabetes is blood glucose (sugar) levels in milligrams/deciliter of blood (mg/dl). Normal blood sugar is 60 – 110mg/dl; Pre-diabetes, often called Syndrome X, is 110 – 125mg/dl. Above 125mg/dl is considered diabetic. (NOTE: It is estimated that the percentage of people in the USA who are Syndrome-X could be as high as 40%)
Two major forms of diabetes are:

Type 1, or "juvenile diabetes". Symptoms often become apparent in childhood. Also called insulin-dependent diabetes mellitus (IDDM) because the insulin-dependent person must take daily injections of insulin to stay alive. This group comprises about 10% of all diabetics.

Type 2, or "adult onset diabetes." Most often occurs around middle age. Also called non-insulin-dependent diabetes mellitus (NIDDM) because type 2 is not necessarily a lack of insulin production, but rather the inability of the body to use it effectively. Some 90% of all diabetics are type 2.

Insulin and Diabetes Types

Insulin is made in scattered areas of our pancreas called Isles of Langerhans, which were named in honor of German pathologist Paul Langerhans who first described them in 1869. Ironically, insulin wasn't discovered until the 1920's. These "islands" contain specialized cells called beta cells.

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2012 COLA Update

Federal retirees in the CSRS retirement system will receive a COLA increase of 3.6 percent in their annuities in **2012**, while FERS retirees will receive a 2.6 percent increase. Complete COLA information is available on this site.

Retiree JOB Opportunities

Many job opportunities are available for federal retirees – and those planning to retire soon – to earn additional income in retirement. Our Jobs Board has updated listings targeted to federal retirees. Many companies seek out retired federal employees due to their government experience and contacts. You can also explore high paying opportunities for those that hold current Security Clearances.

There are many forms of sugar in our diet (sucrose, lactose, etc.) but before the body can use them they must all be converted into glucose. Once in the blood, glucose must enter individual cells where it is used for energy and to run the cellular machinery. Insulin is the only hormone in the body with the function of allowing glucose to enter each cell. There are two exceptions for having glucose enter cells without insulin:

1. Glucose can enter brain cells without insulin, and,
2. While exercising, muscle cells can remove glucose from the blood without insulin.

The pancreas, when working properly, responds to every fluctuation in blood sugar. When sugar goes up, insulin is released, when sugar drops, insulin is stopped. Imagine that each of your cells has a door that must be opened for glucose to get in. All doors have a knob, this is the insulin receptor. Think of insulin as the door opener. It is then easy to see that there are two blocks that can keep glucose from getting into the cell. First, insulin, the door opener, is absent or inefficient; and, second, the doorknob (insulin receptor) is missing or cannot be easily used for one reason or another.

When the beta cells are damaged and do not produce insulin, type 1 diabetes is present. This beta cell damage can occur for a variety of reasons. Genetics play an important role, however type 1 diabetes is not absolutely and inherited condition. Diseases like flu, mumps, chickenpox and measles are all associated with type 1 diabetes. There are also reports of environmental chemical compounds such as pesticides being a factor in type 1. Further, some type 1 diabetics report an extremely stressful event occurring 6 to 8 months before the onset of their diabetes. Classic symptoms of type 1 are:

- Frequent urination (Polyuria)
- Excessive thirst (Polydipsia)
- Weight loss
- Increased appetite

Quite often, type 2 has none of the classic symptoms of type 1. The typical patient is overweight, middle aged, and inactive. In about 85%, a parent or close relative has (or had) diabetes. Generally there is no problem with insulin production; rather the problem is with the insulin receptor. Glucose gets to the cell "door", but the "door knob" is broken, or sometimes, just too slippery. Fat is definitely involved. Sometimes, just by losing a few pounds, type 2 diabetics can control their problem.
There are 5 key lifestyle changes that both type diabetics should incorporate immediately. In some cases, just these modifications will control type 2 diabetes.

1. Sugar Level: This is #1. Maintain your sugar as close to normal as possible at all times.
2. Diet Modification: This is key. Diet modification can alter insulin sensitivity and help prevent complications. This includes the appropriate use of food supplements.
3. Obesity: Fat in the body has a direct effect on insulin receptors.
4. Exercise: Keeps sugar under control by lowering the level of glucose circulating in the blood and thereby lowering insulin requirements. In one study at Yale University Medical Center a 50% increase in insulin receptors and a 30% increase in insulin sensitivity was demonstrated after a six-week program of daily exercise.

Diabetic Complications and the Nutrition Connection

To some degree or another, nearly all diabetics eventually have problems due to complications of the disease. The problems of the diabetic are no different from the rest of the population, but they occur earlier in life and more often in the diabetic. Here is the main listing:

1. Heart disease (arteriosclerosis): Cause of death in about 46% of the general population, but 75% of the diabetic population.
2. Eye Problems (retinopathy): Nine out of ten diabetics within 20 years show some vascular changes in their retinas.
3. Neurologic problems (neuropathy): Affects nerve function with symptoms like tingling, pins and needles, burning, itching, numbness and sometimes, severe pain.
4. High blood pressure: Seems to go along with the narrowing of the diameter of the blood vessels.
5. Renal problems (kidney failure): About 35% develop kidney problems around 15 to 20 years after diagnosis. Kidney failure accounts for 48% of all deaths in diabetics who acquire the disease before age 20.
6. Infections: A diabetic must keep his or her immune system in optimal condition.

Supplementation

Traditionalists will argue that we should get all our nutrition from our diets, and we all agree with that. EXCEPT, depending upon which study you read, only from 3% to 9% of Americans eat according to the food pyramid. (visit **www.mypyramid.gov** for the most current food guide pyramid. Also, the American diabetes association has updated the diabetic food guide pyramid as shown here. More information is available at **http://www.diabetes.org/nutrition-and-recipes/nutrition/foodpyramid.jsp** That means that a whopping 91% of us don't! Additionally, it has been shown that some nutrients consumed at levels well above the Daily Value (DV) can have beneficial effects on our health. Little attention is given to clinical nutrition in medical school. As a result, physicians graduate with little idea that what people eat, or do not eat, can have such a profound effect on their health. Few realize that altering the nutritional intake can be an extremely powerful tool in preventive healthcare.

Exacerbating this issue is the fact that nutritional quackery seems to be everywhere you turn. The outlandish claims, and the way they are made by some manufacturers and their representatives, are so offensive to most medical professionals that they make the entire nutritional supplementation business look like a bunch of rip-off artists. Most physicians, not being gullible, totally disregard the use of all food supplements and react with predictable contempt when a patient asks a question concerning food supplements. It is critical to use supplements from a reliable and credible source. Insist that your supplement manufacturer provide you with a listing of the clinical studies done on their products. Look for a company that develops their products based on solid scientific data, not on "fad marketing". Ask your manufacturer to provide you with this data. If they can't…find one that can and will. To date, Shaklee Corporation is the leader in this area with over 100 clinical studies published in referenced, peer-reviewed journals such as The Journal of The American Medical Association (JAMA). Discuss this with your doctor and develop a program that's right for you.

Now let's look at some specific nutrients that may provide some benefit.

The foundation is a quality multi-vitamin/mineral. The multi should contain at least 100% of all the recognized vitamins and minerals. An exception here would be Calcium, Magnesium and Phosphorus, which are very bulky and hard to get in one tablet. Taking these as an additional supplement is advisable. Look for a balance of all 8 essential B vitamins and at least 100% (5000 IU) of vitamin A. Vitamin A is essential in bolstering the immune system.

Fiber is number one for the diabetic. Fiber is in two forms, soluble and insoluble. Soluble fiber prevents drastic shifts in blood sugar levels. Foods high in soluble fiber are fruits, vegetables, oats, and dried beans. Increasing soluble fiber also helps lower total cholesterol. Insoluble fiber helps regular elimination and helps prevent constipation. Couple insoluble fiber along with 8 glasses of pure water each day and this should no longer be a problem.

The average American consumes only about 9-13 grams of fiber a day. The recommendation is an astounding 30 - 45 grams/day. Most people won't make the dietary changes necessary to add that much fiber, so using a fiber supplement makes good sense. Other benefits from a fiber supplement are that you can control the amount, the time of day, the caloric intake, etc. much more accurately than by adding the necessary amount and types of foods.

Glucose Regulation Complex (GRC): An essential combination of Chromium, Vanadium, Colosolic Acid, Alpha Lipoic Acid and much more. GRC provides natural support for normal glucose metabolism. It helps to transport glucose into cells, making your system more efficient and effective at utilizing blood sugar, and helping to retain normal blood sugar levels. (NOTE: Call or e-mail us and we can send you an information sheet on GRC that will provide your medical specialist with the information they need to understand this critical supplement.)

Eicosapentaenoic Acid (EPA) is an essential fatty acid. EPA is an omega-3 acid found in cold-water fish such as mackerel, haddock, sardines, anchovies and some salmon and tuna. The American Heart Association has urged us to add these fish to our diets. However, not many of us will eat enough of these fish to get the amounts of EPA we require, so adding it in a supplement form makes good sense. EPA has been shown to have a beneficial effect on the vascular system. EPA lowers triglycerides, and makes the blood platelets less sticky so they flow through the small capillaries better. EPA has lowered blood pressure if high.

Lecithin contains choline, inositol and essential fatty acids. It has been shown to lower cholesterol and helps prevent dry skin.
Gamma Linolenic Acid (GLA). It is well accepted that the conversion of dietary linolenic acid (the main unsaturated fat from vegetables) to GLA is inadequate in diabetic patients. Lack of GLA causes problems with the sheath covering the nerves (myelin sheath) and reduces blood flow. Various studies on GLA indicate it can have some very positive effects on diabetic neuropathy by affecting the nerves and helping blood supply.

Vitamin E is a powerful antioxidant and reduces the risk from heart attack and coronary disease and, let's not forget, that diabetics have two to four times the cardiovascular problems of the rest of the population. The Daily Value (DV) for vitamin E is 30IU. The minimal amount for optimal disease protection is 400IU. An ongoing Harvard University study of 87,000 female nurses found that those who took the highest levels of vitamin E had 41% less risk of heart attack or death from coronary disease. Harvard also reported on 46,000 male health professionals. Over a four-year period, those who took daily vitamin E supplements had the same results as the nurses.

Vitamin C is another strong antioxidant. There are reams and reams of data concerning the impact of this essential nutrient. The DV for vitamin C has just been increased from 60 milligrams to 90 milligrams/day. Vitamin C has to be obtained from our diet since we cannot manufacture it within our bodies. The Food and Nutrition Board of National Research Council sets the DV for us….and for other animals. The DV for a 154-pound monkey is 3,859 milligrams, but the DV for a 210-pound American adult is only 90 milligrams! (That's a lot of monkey business, if you ask me!) Vitamin C is involved in the production of adrenal hormones, protects us against a number of airborne pollutants, reduces the duration and severity of colds, protects against cancer and heart disease, bolsters the immune system and provides numerous other benefits.

B-Complex, the whole complex, is intimately involved in sugar metabolism and energy release. In neuropathy, about 80% have some improvement with B-complex. Always be sure to take the whole complex, that is, all 8 essential B vitamins in balance. (Balance implies 100% of the DV for each B) Taking large amounts of a single B can cause you to be deficient in some of the other B vitamins. Always take the whole complex unless under the supervision of a healthcare professional.

Zinc is the most valuable mineral to diabetics. Insulin contains an amazing amount of zinc. A diabetic pancreas contains only about half the amount of stored zinc of a normal pancreas. Zinc can also stimulate the immune system and it promotes faster healing.

Calcium/Magnesium taken in a supplement can ensure DV's are met while cutting down on fatty dairy products. The average American consumes on about 450 milligrams of calcium/day while the DV is 1200 mg. Magnesium has a fundamental role in carbohydrate metabolism and a very specific role in the efficient action of insulin. In one study at St. George's Hospital, London, H.M Mather of the Department of Medicine found that diabetics had significantly lower levels of magnesium than non-diabetics. Low levels of magnesium are associated with heart disease. Dr. Takeo Takemura of the Department of Internal Medicine, Osaka City University, Japan reported to the Japan Diabetic Society that low levels of Magnesium are definitely associated with an increase in diabetic retinopathy.

Garlic is an amazing herb that can dramatically lower the blood levels of both cholesterol and triglycerides. It has a tendency to thin the blood and is an immune system enhancer. Garlic is a natural, nontoxic antibiotic.

Echinacea works best for illnesses that come and go, such as colds and the flu. Studies suggest that echinacea works best during a 10-day course. Peppermint, thyme and hyssop increase the positive effects of echinacea. Since diabetics are prone to infections, so having echinacea handy can be invaluable.

Final note concerning supplementation

Diabetes is far too serious a condition to be dealt with alone. All of these supplements should be discussed with your doctor and a specific regimen designed for your condition should be developed. Always ensure that the supplements you take are from a reputable company, are clinically tested to

ensure absorption. All of the supplements listed here are specific to Shaklee® Corporation since these are the only products we've found to consistently provide the science and clinical testing for efficacy. The following is a list of specific products which have been proven beneficial:

Multi-vitamin: Vita-Lea®
Fiber: Fiber Planâ, Fiber Plan Daily Mixâ & Fiber Plan Daily Crunch ®
Eicosapentaenoic Acid: Shaklee's OmegaGuard
Lecithin: Shaklee's Lecithin
Gamma Linolenic Acid: Shaklee's GLA Plus
Vitamin E: Shaklee's Vita-E Plus ™
Glucose Regulation Complex
Vitamin A and other carotenoids: Shaklee's CatotoMax ™
Vitamin C: Shaklee's Sustained Release Vita-C®
B Vitamins: Shaklee's B-Complex
Zinc: Shaklee's Zinc
Calcium/Magnesium: Shaklee's OsteoMatrix
Garlic: Shaklee's Garlic Complex
Echinacea: Shaklee's Shaklee DR

More information on all of these supplements can be found on our website. The address is listed below. If you would like to begin a nutritional program based on the recommendations in this document, please contact us at either: E-Mail: **healthyone@gmail.com** , or Web Site: **www.shaklee.net/jumpeter** and we will be glad to assist you.

Yours in Good Health,

Chuck Jumpeter

[1] Source material: **http://www.diabetes.org/uedocuments/NationalDiabetesFactSheetRev.pdf**

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