Treating Diabetes From A Nutritional Perspective – PART FOUR

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In this month's installment of our series on treating diabetes from a nutritional perspective, we will look at a number of dietary supplements that may be helpful in maintaining proper blood sugar levels.

Very often, blood sugar can be controlled through dietary adjustments, weight loss, a consistent exercise program and specific nutritional supplements. The following is a list of supplements that have been shown to be effective in lowering blood sugar levels without the potential side effects that drugs can produce.

GLUCOCARE: This product from a company called Himalaya USA offers diabetics a safe, natural alternative to drug therapy. This produce has had extensive testing to determine its usefulness. Glucocare has undergone Phase I, II and III clinical studies to establish its complete safety, toleration and efficacy. This formula contains Gymnema Sylvestre, an herb that stimulates the production of insulin and increases glucose utilization by the tissues. In other words, it reduces insulin resistance. The bark extract Pterocarpus Marsupium in this formula slows down glucose absorption and increases insulin release. The herb Mormmodica Charantia stimulates insulin release by the pancreas, increases the liver's ability to store glycogen and reduces elevated cholesterol and triglyceride levels. There are additional elements in this product that contribute to its overall effect.

ALPHA LIPOIC ACID (sometimes referred to as lipoic acid or thictic acid) is one of the most important nutrients a diabetic can take. This nutrient is found in many foods, including broccoli, spinach and beef. Small amounts are produced in the body. Its primary function is to convert glucose to energy.

Research shows that alpha lipoic greatly stimulates cell uptake of glucose. This results in a significant decrease in blood sugar and a subsequent drop in insulin levels. Alpha lipoic acid serves as a very powerful anti-oxidant, and unlike many other anti-oxidants, it can function in watery and fatty regions of the cells. Alpha lipoic strengthens the activity of other anti-oxidants such as vitamins C, E Coenzyme Q10 and glutathione.

A diabetic should take 100-300 mg's per day. For the non-diabetic, 50 to 100 mg's per day are adequate.

CHROMIUM is the most important mineral relative to glucose metabolism. Chromium is a trace mineral that must be present for insulin to remove glucose from the blood into the cell. Chromium is generally deficient in the American diet and supplementation with chromium is a must for anyone with blood sugar problems. Two to four hundred micrograms per day should be adequate for most diabetics, although higher dosages may be necessary with advanced diabetes.

ZINC is necessary for the pancreas to produce insulin and to protect insulin receptor sites on the cells. This trace mineral is often lacking in the American diet due to deficiency in the soil and loss of this mineral in food processing. Supplementation with zinc can be helpful to increasing insulin efficiency. Thirty to fifty milligrams per day should be adequate.

MILK THISTLE, an herb traditionally used to detoxify the liver, has as its key ingredient the compound silymarin, which research has shown will reduce insulin resistance and block the toxic effect of excessive glucose on the kidneys.

GYMNEMA SYLVESTRE, an herb from India's Ayurevdic tradition, has been used effectively to increase insulin production by the pancreas and, therefore, improve glucose utilization. This herb has proven to be one of the most effective remedies in treating diabetes without drugs. It can be used by itself or in combination with other herbs as is true in the product Glucocare discussed above.

VANADIUM is a trace element that works by mimicking insulin and therefore facilitating better utilization of glucose. This substance is available as vanadyl sulfate and should be used in conjunction with other glucose lowering substances.

MAGNESIUM is a major mineral that is necessary for the production of insulin and is required by the cells for maintaining insulin sensitivity and increasing the number of insulin receptors. Magnesium is deficient in many American diets. Eating a lot of green foods or taking a green food concentrate can help maintain adequate magnesium levels.

BANABA LEAF is a medicinal plant that grows in India, Southwest Asia and the Philippines. This plant contains a compound called corosolic acid which acts to stimulate the transport of glucose into the cell. Studies have shown that banaba, at a dose of 16-48 mg per day for 4-6 weeks, has reduced blood sugar levels up to 30% while also effecting tighter control of blood sugar fluctuations. No negative side effects have been shown with using banaba.

AMERICAN GINSENG has been found to help lower glucose levels. Some research has shown that three grams of American ginseng lowered post meal glucose levels significantly. You may want to add this product to your regimen to reduce blood sugar levels.

CINNAMON, a common baking spice, at just a half teaspoon per day, has been shown to lower blood sugar levels in diabetics. Cinnamon has a water soluble polyphenol compound called MHCP which mimics insulin and activates insulin receptors. Research also shows cinnamon helps to lower blood fats and LDL cholesterol.

GREEN FOOD CONCENTRATE: Using a high quality green food concentrate can →

promote better blood sugar metabolism. Green food concentrates provide a very wide range of nutrition and will, therefore, give the body the many nutrients necessary for proper metabolism at all levels, including sugar control.

The foregoing supplements can be taken individually, and are also available in combination in diabetic formulas. For example, the Nutraceutical Company Kal has a product called Blood Sugar Defense, which contains zinc, chromium, alpha lipoic acid, vanadyl sulfate, gymenma sylvestre, and several other elements known to be helpful to regulating blood sugar.

THE ROLL OF EXERCISE IN MAINTAINING PROPER BLOOD SUGAR LEVELS

A DIABETIC MUST EXERCISE! Exercise builds and strengthens muscle tissue. Conditioned muscles increase insulin sensitivity. Conditioned muscles will burn glucose more efficiently. Exercise requires fuel. The primary body fuel is glucose. Exercise will burn glucose and reduce glucose levels. Exercise will also reduce cholesterol and triglyceride levels. Exercise is a must if a diabetic expects to experience better blood sugar metabolism. Exercise should be a daily activity and can include simple walking, jogging, biking, swimming, rebounding, stretching, weight training, etc. Exercise should be a mix of cardiovascular and resistive exercise that will both improve oxygen uptake and increase muscle strength and size. Stronger and larger muscles will burn more glucose.

DIABETES AND YOUR WEIGHT

As explained above, diabetes often results from the cells not excepting insulin to remove glucose from the blood into the cells. The pancreas continues to produce adequate insulin, even to the point of excess, in an effort to remove glucose from the blood. Since Insulin is involved in fat metabolism as well as glucose metabolism, excess insulin promotes the storage of fat. Insulin resistance can promote weight gain by creating more fat. It does this because it can't get glucose into muscle cell receptor sites to be burned as energy so it converts glucose and other sugars into fat. The accumulation of body fat increases the ratio of fat cells to muscle cells. It's primarily in muscle tissue where glucose is burned. In contrast, fat cells don't burn much of anything. As weight is gained, it often becomes more difficult to exercise and muscle tissue begins to shrink. This creates less and less receptor sites for insulin to try to move glucose from the blood into cells. This leaves increasing amounts of insulin available to convert glucose into fat and weight continues to increase.

As weight increases, cells become increasingly less sensitive to insulin. This is why a diabetic, who is also overweight, must lose weight. If insulin resistance continues to increase, and the pancreas becomes finally exhausted from having to produce so much insulin, this organ can ultimately fail. Then there occurs a significant drop in insulin which results in glucose not being used by the body and instead leaving the body through the urine. This results in rapid weight loss and the need to be given insulin to stabilize weight. Maintaining a proper ratio of muscle tissue to fat tissue is of vital importance in the battle against diabetes. Increasing muscle tissue and reducing fat tissue will provide more receptor sites for the acceptance of glucose and therefore reduce blood glucose levels and reduce pressure on the pancreas to produce insulin. Depending on age, the target body fat range for men is between 12 and 20 percent and for women between 18 and 25 percent.

Following a low glycemic diet along with the use of applicable supplements will facilitate better glucose metabolism and lead to better weight management. Knowing your basal metabolic rate, overall calorie requirements, thyroid function and body mass index are also important dynamics relative to weight management and its role in diabetes. We will discuss these dynamics in part five of this series. Visit ***www.milkandhoneyhealthfoods.com*** for comprehensive articles on many aspects of health and nutrition.