Sweet It Isn't- Diabetes, Its Risks

by HELLEN C. GREENBLATT, PhD

According to Dr. Surujpal Teelucksingh, the 2011 Laureate of The Anthony N Sabga Caribbean Award for Excellence in Science and Technology, diabetic patients and patients with diabetes-related illnesses fill 25% of all hospital beds. "Diabetic patients suffer health complications at a rate 3 to 7 times greater than those without diabetes", says Yehuda Handelsman, MD, of the Metabolic Institute of America, California, USA.

Just in the Caricom region alone, childhood diabetes has tripled in the last ten years, which suggests that their rate of diabetes as adults will be even greater, unless changes occur.

DIABETES, GLUCOSE, and ENERGY

Diabetes is a condition in which the body cannot properly control glucose levels. Most cells in the body, especially brain and red blood cells, need glucose, a simple sugar, for energy. When we digest food, for example carbohydrates, the body breaks some of it down to glucose molecules. This sugar ends up in the bloodstream, or the liver (where excess glucose is stored). Except for brain and liver cells, to gain entry into a cell so glucose can be used for energy, it must be "escorted" by insulin molecules.

It is essential that the body maintain consistent glucose levels in the blood. Non-diabetics produce the right amount of insulin to transport glucose from the blood into the waiting cells. In diabetics however, insulin is unable to "escort" glucose out of the bloodstream, and blood sugar rises to dangerously high levels.

People diagnosed with pre-diabetes have higher than normal levels of sugar in their blood, but their levels are not high enough to be called diabetes (yet!). However, over time, high glucose levels in pre-diabetics and diabetics results in damage to nerves and blood vessels, vision loss, poor wound healing, kidney failure, and narrowing or blockage of blood vessels. Sometimes these conditions end up in amputation of limbs or stroke (a condition where brain cells are starved for energy). Some of the early signs of diabetes are light-headiness, frequent urination, fatigue, frequent infections, difficulty in feeling feet and hands, and slow-healing sores.

INFLAMMATION: ESSENTIAL for HEALING and PROTECTION

Inflammation is a two-edged sword. Inflammation helps the body heal after injury and protects it from infection from viruses, bacteria, molds, and parasites. However, inflammatory responses can be too much of a "good thing". Excessive inflammation,meaning immune imbalances, results in disease, including diabetes. The goal for optimal health is immune balance (immune homeostasis).

DIABETES and INFLAMMATION

Diabetes and diabetes-related complications are associated with "runaway" inflammatory responses (2008 Workshop on Inflammation, Boston MA, USA). In some types of diabetes, the body damages its own insulin-producing cells. [Destroying one's own healthy tissue is called an autoimmune response.]

A person in immune balance regulates the amount of inflammation occurring in their body, and is more easily able to control their blood sugar levels.

Many physicians prescribe medications for diabetics. Unfortunately, for many individuals, these medications do not adequately control their blood sugar levels, so they end up with serious complications. To reduce the damaging effects of diabetes, the body needs to reduce the destructive actions of unchecked inflammation.

GUIDELINES for DIABETICS

Recently, new clinical guidelines have been released addressing the issues of high blood sugar, heart, and kidney disease in diabetics (Endocr Pract. 2011 17(S2):1-53). The guidelines encourage changes in lifestyle to help control blood glucose levels. Increasing physical activity, reducing weight [fat cells cause inflammation], and making smarter food choices can help in controlling blood sugar and blood pressure. When all else fails, medications, and surgery such as gastric band or gastric bypass may be required.

Levels of vitamin D may also play a role in diabetes. Individuals with lower levels of vitamin D are at a 57% greater risk of developing diabetes than individuals with higher levels (Diabetes Care 2011 34:1133), and vitamin D may help regulate blood sugar (Amer J Clin Nutr 2011 9:764).

ACHIEVING IMMUNE HOMEOSTASIS (BALANCE) NATURALLY

Become physically active. Muscles release anti-inflammatory molecules every time they contract. To help balance the levels of inflammation in the body, try to be physically active at least 150 minutes in a week. Walk to the bus at a brisk pace. Stand, instead of sitting. Work faster when in the garden. Exercise while watching TV. Just get moving! Even without weight reductions exercise by itself helps control blood sugar levels.

Make smarter food choices. Limit your intake of: mauby, sodas (both regular and "diet" soda), roti, fried foods, sweets, white rice, pasta.

Fill half your plate with vegetables and colorful fruit. The following foods are reportedly helpful to diabetics: Brewer's yeast, broccoli, buckwheat, liver, okra, peas, and spinach.

Moderate coffee consumption. Certain compounds in coffee may help decrease inflammation (Med Klin (Munich) 2010 105:910), suggesting that moderate consumption of coffee may be useful for diabetics.

Dietary supplements. Although there is insufficient scientific evidence that people with diabetes benefit from supplements, it is recommended that individuals consume 2-3 servings of fish/week or take a high-quality omega-3 fish oil supplement. Also moderate sun exposure is helpful so that the body can produce its own vitamin D.

Hyperimmune Egg. Immune researchers have shown that consumption of one or more servings/day of hyperimmune egg is a natural way to help the body regain its immune homeostasis.

CONTROL INFLAMMATION

Restoring immune homeostasis by controlling inflammation may reduce diabetes symptoms (J Autoimmune 2011 Apr 14) and contribute to overall health by letting the body heal itself. Lifestyle changes, rather than medication, are the best way to regain immune balance.

Questions may be directed to:
hgreenblatt@legacyforlife.net