



# Holistic Medical Centre

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## Blood sugar and Diabetes

It is time for us to let you know some key points to help you control blood sugar levels to aid in preventing diabetes. First of all there are two types of diabetes. Type One occurs when there is an inability to produce insulin which results in a lifelong need for insulin shots. This is commonly diagnosed at a younger age. We are going to concentrate on Type Two Diabetes, also known as insulin resistance or adult-onset diabetes. Insulin is the hormone that allows glucose to be moved from the blood into the cells. When insulin resistance occurs, the pancreas has to make more and more insulin as the body becomes resistant to the effect of insulin. This results in high levels of blood glucose and is often associated with weight gain due to the excess glucose being stored as fat. A consistently elevated blood glucose level will result in a consistently elevated insulin. Most of you probably understand the idea behind the glycaemic index; Avoiding foods that elevate the blood glucose too fast and choosing foods that raise the blood glucose levels only moderately but slowly. If you want more information on this concept then there are many easy-to-understand

books at the bookstore or library. The aim of good blood sugar control and preventing insulin resistance is to be super efficient at burning your fuel and use slow burning fuel. Below are a few tips you may not know. The thyroid gland controls your metabolic rate and therefore how much fuel you burn. If your thyroid is suboptimal then less fuel is burned. We consider ideal thyroid function to yield a TSH (Thyroid Stimulating Hormone) result of under 2.0. Many of the B vitamins are needed to keep the metabolism working efficiently and Co enzyme Q10 (in sardines) also supports a healthy metabolic rate. Muscle cells are very efficient at burning glucose and so the more muscle mass you have the higher your metabolic rate is and the more efficiently you burn glucose. Moderate exercise increases the workload and energy requirement of the muscles and therefore is able to use up the blood glucose for fuel. Glucose is the preferred fuel for the muscles. Moderate exercise includes an hour of such things as jogging, swimming, kayaking and basketball but not walking.

When you condition the muscles with activities such as weights or yoga, you further improve metabolic efficiency. Cortisol is a fascinating hormone that is made in the adrenal glands in response to stress. Its effects are not as dramatically felt as when adrenaline is released, but it has far reaching metabolic implications if cortisol is raised for a prolonged period of time. Cortisol, among other things, stimulates the synthesis of fats and glucose in the liver. This is to provide a rapidly available fuel source for the muscles to respond to the 'Fight or Flight' stimulus. Fuel that is not immediately burned up with exercise is stored as fat. Prolonged elevated cortisol causes prolonged elevated blood glucose and therefore elevated insulin. This promotes the slow onset of insulin resistance and gradual weight gain. This highlights the importance of balancing activities that stimulate the physical stress response with either moderate exercise (defined below) or activities that switch off the stress response and promote tranquility and the production of the hormones that promote regeneration.

## Our favourite quote

Nobody climbs mountains for scientific reasons. Science is used to raise money for the expeditions, but you really climb for the hell of it. Sir Edmund Hillary

## Health tips

I know we have mentioned it before but today a little boy with a bad case of eczema has prompted me to repeat the importance of avoiding MSG. This additive, commonly only labeled as 621 is found in many foods. Please read previous newsletter, "What am I Eating" on our website for common food sources. This additive can cause a particularly nasty flare of eczema as well as headaches and stomach aches. MSG is also a stimulant and can create a significant amount of irritability in a child. MSG is commonly found in the snack foods that children love but armed with knowledge are easily avoided.

## Happy Patient File

A lovely post-menopausal lady recently came to us, having problems with, adrenal fatigue, poor energy and poor sleep. Being health savvy, she had "tried everything" in the past without success., The doctor 'custom made' a prescription using natural hormones and addressing the adrenal fatigue and she is very happy. Energy and sleep are much improved and as a consequence she "has a lot of faith in the doctors there".

## More information

An important piece of information for women; the contraceptive pill causes the cortisol levels to be elevated for the duration of the medication. This is a well known effect but why this occurs is unclear. This means it is more important for women on the pill to exercise to manage blood sugar and prevent weight gain and insulin resistance. Relaxation does not appear to effect the ele-

vated cortisol and therefore moderate exercise is very important to counter-balance this effect. To maintain stable weight, the fuel from food as well as the extra produced by the liver needs to be used. Remarkable adaptation occurs with youth but as we get a little older and the metabolic rate slows a little, these effects become noticeable. Moderate exercise in the context

of the above means one continuous hour of the following forms of exercise 5-6 days per week: Swimming, kayaking, jogging, dancing, cycling and others that require a similar energy output. Sorry, but walking is not enough unless it is a 3-4 hour tramp. We want to wish you all a warm and happy Christmas doing all the things you most

love doing. Our Christmas hours are as follows: 24 Dec 9am-3pm. Closed Dec 25-Jan 3. Reopen 4 Jan 10am-4pm. Normal hours from Jan 7  
Article Nine from the United Nations Declaration of Human Rights  
*Article IX*  
*No one shall be subjected to arbitrary arrest, detention or exile.*