



PREVENTING DIABETES

By Amy Cox

Do you choose white bread over wholegrain? Do you crave sugar and never quite feel satisfied after a meal? Do you enjoy larger-than-normal sized meals? Read on -you may be at risk of diabetes, sooner rather than later!

Type II Diabetes mellitus, according to Diabetes Australia, affects nearly 1-in-4 Australian adults. Quite an alarming statistic considering it is a largely preventable, 'lifestyle-related' disease. The term 'lifestyle-related' refers to one's diet and exercise regime. Whilst keeping in mind that some people are genetically predisposed to certain diseases, there are many habits one can implement into their daily routine in order to prevent the development of such a condition.

Foods known to exacerbate insulin resistance (and increase the risk of developing type 2 diabetes) are closely linked to high Glycaemic Index (GI) and high Glycaemic Load (GL), like refined foods such as processed (white) carbohydrates and simple sugars.

GI compares the potential of foods that contain the same amount of carbohydrate to raise your blood glucose. The GL of a food takes into account how a portion of a particular food affects blood glucose and insulin response/reaction of the body. It is calculated by multiplying the GI of a food by the amount of carbohydrate (in grams) provided per portion, and then dividing by 100. GL essentially refers to the amount of carbohydrate the body actually uses, and takes into account the percentage of fat, protein and fibre the food contains per portion ingested, which, of course, can have a large effect on whether the body can regulate blood glucose efficiently post prandially (after the meal).

If we take two foods with the same GI value, but where Food (1) contains 5% carbohydrates and Food (2) contains 80% carbohydrates, Food (2) actually has a much higher GL and therefore, should be eaten in lesser

proportions. In general terms, foods with high carbohydrate levels and low fibre contents have high GI and GL values, whereas those with high fibre contents have lower GL.

For example, many people have been told to avoid watermelon as it has a high GI of 72. However, GI does not take into account the high percentage of water the fruit contains and, thus, the lower percentage of carbohydrate per serving. The equation for the GL of watermelon is: 72 (GI) x 10.9 (10.9 grams carbohydrate per 100 grams, not including fibre per portion) equals 784.8. Then, divide 784.8 by 100 to give watermelon a GL value of 7.8.

Consider the following GL index, showing watermelon has a low GL:

Low GL: 10 or less

Medium GL: 11-19

High GL: 20 or more

Other examples of low GL foods include:

Complex carbohydrates, such as wholegrain; brown rice, oats, quinoa, millet, spelt, rye and barley

High fibre foods, such as legumes (baked beans, chickpeas, lentils);

Fruit and Vegetables (limiting potatoes and other starchy vegetables); and

High protein foods, such as lean meat, poultry, eggs, fish and full-fat dairy products.

Including more low GL foods is a simple way to avoid peaks in your blood sugar levels, and encouraging a slow release of insulin from the pancreas into the bloodstream and tissues, plus maintaining energy levels throughout the day. Low GL foods tend to have a higher nutrient

content as they are less refined; they help to regulate appetite, giving a feeling of fullness for longer, thus can be useful as a weight loss tool.

Nutrients that are specific for blood glucose regulation are magnesium, alpha lipoic acid, vitamin E, fish oil, zinc, vanadium and chromium. Before taking such nutrients it is important that your practitioner recommends a specific dosage and a tailored diet plan.

New research has emerged about a certain type of fibre found in a legume called 'lupin'. It has been shown to improve insulin uptake into tissues, improve satiety (decrease appetite) and reverse damage to pancreatic beta cells. This means it could play a key role in the treatment and prevention of insulin resistance and type 2 diabetes by not only regulating blood glucose levels, but also by restoring pancreatic function and encouraging weight loss. An added benefit of lupin is it is gluten free and hypoallergenic, making it suitable for all people to include in their diet. Lupin is now being included in some bread and pasta products available in selected health food stores.

It is important to realise that eating small amounts (1/4 cup) of medium-high GI carbohydrate foods is unlikely to have a big impact on blood glucose and insulin levels, while consuming large quantities of relatively low GI carbohydrate foods, for example pasta, wholegrain bread and muesli, can still raise blood glucose and insulin levels significantly. The GL of the diet can be reduced by cutting back on high GI carbohydrate foods, such as white bread, short-grained rice and potato, and increasing intake of low carbohydrate foods, such as leafy-green and orange-yellow

vegetables and fruits, and adding appropriate protein foods to every meal, like fish, lean meat, peas, beans and other legumes. Portion size is of utmost importance when creating a meal. As a general rule, aim for a palm sized portion of protein, a handful of complex carbohydrates and two handfuls of vegetables or salad.

Regardless of how it occurs, a high GL meal or substantial snack leads to a large rise in blood glucose level, which in turn leads to an increased requirement for insulin. Over a period of time, pancreatic insufficiency and insulin resistance may occur as the insulin receptors essentially 'desensitise' to the high levels of glucose in the blood, ultimately resulting in insulin resistance, syndrome X and/or Type II diabetes.

With Type 2 diabetes, prevention is the only cure. Maintain a healthy weight for your age, sex and height, exercise for at least 30-45 minutes daily, avoid highly refined, processed and sugary foods, and have regular health checks if diabetes or any other 'lifestyle-related disease' runs in your family.

A list of GI/GL foods can be obtained from: <http://diabetes.about.com/library/mendosagi/ngilists.htm> ■

Appetite Right Lupin⁺ Formula contains 80% lupin kernel flour and can be easily added to many meals to improve the blood glucose & insulin response.