

Insulin Resistance

The major cause of systemic inflammation for many people today is related to insulin resistance

Insulin resistance has been documented to increase systemic inflammation and increase C-reactive protein (Clifton PM. 2003. Lee WY, et al. 2004. Wannamethee SG, et al. 2005).

Insulin resistance is a condition anyone can develop from lack of physical activity and eating high glycemic index foods. Some people can be genetically predisposed to developing insulin resistance. If somebody in your family has diabetes, you need to be extra careful.

The glycemic index is a rating of foods and their effect on the blood sugar level. The index rates how high the food will raise the blood sugar. A high glycemic index food will raise the blood sugar faster and much higher than a low glycemic index food.

Cookies and donuts are examples of high glycemic index foods, as are most breads and potatoes. You will find a list of both high and low glycemic index foods later in this book.

What is insulin resistance?

The pancreas responds to the food we eat by releasing more or less insulin. Insulin's role is to transfer the blood sugar into the cells so it can be used for energy.

The higher the glycemic index of the food, the more insulin is required to metabolize it.

When you eat a high glycemic index meal, you suddenly get a lot of calories available very quickly. Unless you are very physically active at the time, your body is not going to be able to use all these calories. It will store as much as it can as glycogen in the muscles and the liver, to be used later as energy when needed. However, the muscles and the liver have a limited storage capacity for glycogen. When these depots are filled, the only thing the body can do with the rest is to store it as fat. High glycemic index meals will elevate the blood sugar quickly, making a lot of calories available right away. These meals are usually very high in calories and low in nutrients.

Researchers at Harvard concluded that higher consumption of sugar-sweetened beverages is associated with an increased risk for development of Type 2 diabetes and a greater magnitude of weight gain (Schulze MB, et al, 2004).

The increased consumption of fructose in the later years as a result of high fructose corn syrup being added to processed foods can also produce undesirable effects.

There is emerging evidence from research suggesting that high dietary intake of fructose has become an important cause in the development of the metabolic syndrome (Basciano H, et al, 2005).

The metabolic syndrome includes symptoms of increased cholesterol, triglycerides, and insulin resistance. Results also indicate that fructose infusion induces insulin resistance in humans (Dirlewanger M, et al, 2000).