

# TOWN OF MAMARONECK FIRE DEPARTMENT

## FAMILY HEALTH and WELLNESS

### VOLUME 1 # 3

I hope that everyone is well and enjoying their families, friends and work to their fullest capacities. Being healthy is ever increasingly more and more difficult. Our busy life-styles, whether that involves our own personal lives or all the added responsibilities of being a home owner and provider for our families can induce much stress with little time left over for looking out for our health. I hope that in some way, these newsletters will give you some basic information that you can use to maximize whatever time you have available to make the choices that will direct you to a healthier you.

Let's talk about something called the "glycemic index". This is a scientific numerical assignment of the amount of glucose that is in foods we eat. The reason that this is important, is because, the higher the glycemic load, the greater the insulin reaction that follows. Insulin has a very specific job. It goes into cells, unlock those cells at specific receptor sites to allow blood sugar (glucose) to enter the cell and be deposited in the cells called Mitochondria (you may remember that term from helping your kids with their science homework). In the Mitochondria, the cells use the glucose and oxygen to convert these into usable forms of energy for all cells. The highest number assigned to a foods glycemic index is a value of 100. This is the value of glucose itself. The higher the number, the greater the insulin reaction. The more glucose circulating within the bloodstream, the greater the corresponding Insulin reaction in the blood stream.

If you are a very active person engaging in strenuous exercise daily, or have a job that requires physical muscular labor throughout the day, this is not a huge problem because you are burning a great amount of the glucose and you require a steady replacement source throughout the day. However, having said that, there are still better choices, even for those individuals. On the other hand, if you are overweight, obese, pre diabetic, or sedentary these values are the keys to your improving or declining health.

Here is the problem. In active individuals who exercise and are fit and who eat a well - balanced diet, the hormonal and enzyme balances and the nutrient requirements are always met and the fit body, because of exercise actually stores glucose in the form of muscle glycogen in the muscles themselves. Although this number is not huge and is exhaustible, this person is constantly feeding and exercising this positive cycle and continually replacing stored glycogen. This glycogen when converted to glucose needs no insulin help because it is already present in muscle tissue to supply energy for work, usually in the form of muscle movement. In the sedentary, overweight, under exercised, stressed individual who lives on processed sugars and salts and fats, insulin plays a major factor in supplying the glucose to the muscle. The problem is that with repeated negative nutrient cycles, the body although getting calories, is not getting nutrients. This continuous flooding of nutrient dead, highly processed foods, makes us eat again, and soon trying to get these nutrients into our bodies and keeps the insulin working at incredibly, unsustainable levels until it becomes ineffective, resulting in insulin resistance and finally diabetes and its entire spectrum of illness and death related diseases.

Insulin is the “fat storage hormone”. When energy needs have been satisfied, a fit individual will store most excess glucose in muscle tissue, while unfit people who eat processed foods convert this excess glucose under the direction of insulin into fat. This fat is extremely bad for your health as it is usually in the form of belly-fat that resides around your waist line. This fat grows and produces inflammatory signals that communicate with all the major organs of the body and disease follows shortly afterwards.

Ideally, eating foods with a glycemic index of under 55 is recommended to manage this problem, but the lower down you go, the more ideal the nutritional value of the food. Don't rely on food corporations to help you here. You will have to do a lot of this work on your own to identify the GI of foods. I have included a short list to help you out. Try to consume as many under 55 GI products as possible.

FOOD	GLYCEMIC INDEX
Bran	30
Whole wheat bread	49
Whole oats	51
Peas	39
Corn	47
Potatoes	54
Chickpeas	42
Apples	34
Oranges	40
Skim-milk	32
Sugar-free yogurt	23
Puffed wheat	80
Bagel	72
Parsnips	97
Instant white rice	87
French fries	75
Rice cakes	87
Watermelon	80
Banana	58
Ice cream	62