

Oh, how I hate those extra pounds!

By Philip R Nicol M.D.

The arrival of the New Year always gives us the opportunity to reflect on extra pounds acquired during the previous twelve months. We are at our most vulnerable in January. We have just emerged from a month of overeating between Thanksgiving and Christmas. Outside activities have been curtailed, either due to cold weather or shorter days. Many of us are either exhausted or plain depressed by the rigorous demands of Christmas. So it is a good time of year to reflect upon the health effects of being overweight and especially, the relationship between weight and diabetes.

It is widely written and true, that we are in the middle of an epidemic of new cases of diabetes. This isn't due to some strange virus or some unfavorable genetic pattern. It's a direct result of an unhealthy lifestyle. We, as a society, have collectively abandoned two behaviors that would virtually eliminate this epidemic if we all chose to adopt them.

Well over 90% of new cases of diabetes are Type II diabetes. They are caused by a lifestyle that involves too little exercise and the consumption of too many unused calories. Chronic overfeeding results in overload of the normal storage mechanisms for excess calories, resulting in high levels of triglycerides in fat cells, liver cells and muscle cells. High triglyceride levels interfere with the normal functioning of these organs, a condition that we term "Insulin Resistance". In muscle for example, insulin cannot initiate the normal actions inside the cell that allow glucose to move into the cell and be stored or utilized as energy. It's as if the glucose is "trapped" in the bloodstream. Different mechanisms occur in the liver and the pancreas, but the net effect is the inability to handle a glucose load in a timely fashion.

Correction of these problems without the use of medication is so simple in principle, but so hard to stick with in practice.

First, one has to reduce the calories consumed. A huge amount of effort is expended on debating which diet is the best diet. A huge amount of money is made selling various diets to the American public. In a sense, it's all totally unnecessary. The most important feature of a diet is that the calorie content must fall below the level required to support all other daily activities, such as walking, breathing, thinking, doing housework or playing golf. If you are in "negative energy balance", then the body will pull energy from a

storage source such as a fat cell. Over time, this will result in weight loss. So there isn't any magic, it's calories **in** versus calories **used**. From the practical standpoint, in order to make this work, you have to count something to know where you are. Some people like to count fat grams and some people carbohydrate grams. I think that counting calories is the simplest. That way, you can eat what you want. Purchase a food guide from any bookstore listing the calorie content of all the foods that you are likely to consume, and start adding things up. Don't forget drinks and little snacks here and there. You will soon learn which foods are loaded with calories and need to be avoided and which foods can be consumed in larger quantities. Portion control is crucial. American portions are two to three times larger than necessary in order to satisfy your hunger. If you are eating out, split a meal with your partner. How many calories do you have to consume in order to lose weight? The answer will vary from person to person, but essentially, the correct number of calories is that number at which your weight begins to drop. Don't set unrealistic goals. A five or ten pound weight loss can profoundly affect the degree of insulin resistance and result in improved ability to handle a glucose load. The secret, in so much as there is any secret, is time. You must maintain this new way of eating forever, not for two, or three, or four months. You must always keep your calorie intake at, or close to, your maintenance level so that you don't ever again exceed your body's storage capacity. If you can do this, your insulin resistance will go away and your blood sugar problem will go away.

The second change that must be made is the addition of more exercise. In my opinion this is even more important than food intake. Those of you who have traveled in other parts of the world will understand me when I say that the rest of the world walks! In the USA we drive, we use elevators and unless we make a conscious effort, we don't engage in any structured exercise. You can go a long way toward using up those calories that you just ate, by exercising 45 minutes a day. Walking is a wonderful choice if your running days are over. Park away from the building and take the stairs. Riding a bike, going to the gym, exercise classes or yard work are all excellent selections. Just pick something that isn't a burden. There are numerous additional benefits to exercise involving your heart, your joints and your mind, but for our present discussion it is the effects on insulin resistance that are attractive. A lifestyle involving a controlled diet and 45 minutes of exercise five days a week, reduces the chance of getting diabetes by 58%. It is lack of exercise that is driving the explosive growth of diabetes in our youth. When I was at school, we routinely had one to two hours of physical activity per day. That is unheard of in schools today, except in kids who opt for a sport.

So if you want to be able to enjoy yourself next January, start now. Change your diet and begin counting what goes in. Change your daily routine to include some exercise. As a result, you will change your life.

Dr Philip Nicol is the Director of The Diabetes Center, the only medical practice in the region devoted solely to the care of diabetics. Dr Nicol has received recognition from The Diabetes Physician Recognition Program, a joint program of the NCQA and ADA, for the period March 2005 through February 2008, for providing quality care to diabetic patients. The Center offers free, no obligation screening for diabetes and pre-diabetes Monday-Friday. To contact Dr Nicol, or to schedule a free screening, call 843-293-8400.