

Can Diabetes be Cured?

By Philip R Nicol MD

The answer to this question depends on the type of diabetes and the outcome of much current research.

First, let's talk about Type I diabetes. You will recall from one of my earlier articles that the definition of Type I diabetes is based on the mechanism of injury to the pancreas which leads to the diabetic state. The theory that carries the most support at present is that, in genetically susceptible people, exposure to a certain virus initiates a chain of events resulting in injury to the pancreas. Inflammation of the portion of the pancreas concerned with insulin production then commences. At this point the production of insulin begins to drop. Initially there will be no symptoms, but when the insulin level falls sufficiently, blood sugars will rise to abnormal levels. Now, the patient will start to experience symptoms. Also at this time, it is possible to detect antibodies to the injured pancreas in the patient's blood. As the inflammation continues, insulin production falls to virtually zero and the patient must take insulin shots permanently, in order to prevent death.

We have not been able to intervene in this process once the inflammation has begun. It seems that once the process has commenced, it continues until there is almost complete destruction of the beta cells, the pancreatic cells producing insulin.

The intriguing possibility, which is the target of a great deal of research, is the development of a vaccine to the virus that initiates the damage. If the virus can be identified accurately, then it is likely that scientists can develop a vaccine just like they do for other viruses such as influenza, polio, measles, mumps and chicken pox. It sounds like it should be fairly simple, but solutions in biology are sometimes elusive. I remind you that we do not yet have a vaccine for the common cold, another viral infection. It is likely that the research will prove successful eventually. When that happens, we are hopeful that we shall see the elimination of most new cases of Type I diabetes.

However, unfortunately that would only eradicate less than ten percent of the new cases of diabetes. At least ninety percent of the new cases of diabetes that we see are Type II. As far as we know the onset of these cases of diabetes has nothing to do with viral infections or inflammation in the pancreas or the production of antibodies. Type II diabetes is a disease of lifestyle. Years of overeating and under exercising result in multiple changes in the storage and handling of both fat and sugar. These changes result in abnormally high blood sugar levels; very unfavorable lipid components, with too many bad cholesterol particles and not enough good cholesterol particles and high blood pressure and alterations in the lining of the blood vessels resulting in inflammation and the formation of plaque. This leads ultimately to heart attacks, strokes and damage to many organs such as the eyes, nerves and kidneys.

As complicated as all this is, it does have the virtue of being eminently preventable. A lifestyle involving healthy and moderate eating habits, combined with a regular exercise habit, is not likely to result in Type II diabetes. Once the disease has started, it is possible to reverse it by adopting those lifestyle habits. It is important that lifestyle intervention occurs early. Some of the changes described above may reach a point where they become irreversible. If the changes are instituted early and are of sufficient magnitude, then it is possible to return to a non-diabetic state.

So, in that sense, Type II diabetes can be cured also. Not by medicine but by personal actions to undo the destructive things that we do to ourselves with our current lifestyle.

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 the 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.