

Type 1 vs Type 2 Diabetes

Dr. John A. Allocca
www.allocca.com

Some endocrinologist think the two shouldn't be called diabetes because they are so very different. They both have high blood glucose in common. However, the causes of high blood glucose are very different.

When glucose enters the bloodstream, insulin is produced to transport glucose from the blood stream into the cells. High sugar intake will result in a high level of insulin produced. Years of constant bombardment of high insulin levels usually causes the insulin receptors on the cells to become resistant to insulin. The pancreas may produce high levels of insulin, but some of it may not get into the cells resulting in high blood glucose levels. This is insulin resistance, which is also called type 2 diabetes. Medication and diet can treat or cure this disease.

The cause of type 1 diabetes is completely different than type 2 diabetes. One day, the immune system decides the beta cells in the pancreas that produce insulin are infectious invaders to the body. Consequently, the immune system destroys the beta cells in the pancreas. Since the pancreas cannot produce insulin any longer, blood glucose levels rise rapidly and significantly. This process can often occur within a short period of time and sometimes almost over night. Hereditary genetics is usually the cause. However sometimes any infection can stimulate the immune system to destroy the pancreas beta cells. Once the beta cells have been destroyed, the body cannot produce insulin any longer and requires external insulin to be injected. Pancreas transplants have been attempted. However, the immune system destroys the new beta cells because it is programmed to do so. The only therapy so far is external injections of insulin. The amount of insulin required is directly proportional to the amount of carbohydrates taken in. A type 1 diabetes can experience hypoglycemia (low blood glucose) if too much insulin is taken because glucagon is also not produced, which elevates glucose in a normal person. Untreated hypoglycemia can be fatal. Type 1 diabetes consist of 5 percent of the diabetic population.