

Helping Patients with Type 2 Diabetes and Other Autoimmune Diseases

Our country is facing a diabetes crisis. Nearly 26 million Americans have diabetes and that figure is growing at an alarming rate. Recent research from the National Institutes of Health (NIH) shows that type 2 diabetes (T2D) in Americans under age 20 rose by 21 percent from 2001 to 2009. At that rate, the disease would almost double for every future generation. Diabetes costs the US economy \$245 billion each year and health costs are expected to triple in the next 25 years.

While the SDP is focused on curing, treating, and preventing T1D, some of the research also benefits those with T2D. While T1D and T2D are different, the complications that can develop due to the disease are often very similar. In addition, the research also benefits those suffering from other autoimmune conditions. For example:

- SDP has accelerated the development of artificial pancreas systems which could help patients with T2D better manage their blood sugar levels and reduce complications.
- SDP research has played a significant role in accelerating a breakthrough treatment combining a drug and laser therapy which reverses vision loss in diabetes patients suffering from diabetic macular edema.
- T2D patients who are prone to glucose fluctuations are now being enrolled in the Diabetes Research in Children Network (DirecNet) trial to determine if continuous glucose monitoring systems will improve glucose control in this patient population.
- NIH reported to Congress that “T1D research also benefits people with other autoimmune diseases. Although many autoimmune diseases are rare, collectively they affect approximately 5-8% of the U.S. population. Some of the type 1 genes identified through research supported by the Special Diabetes Program affect the immune system and are involved in other autoimmune diseases. Therefore, understanding the underpinnings of type 1 diabetes could provide insights into the genetics and pathogenesis of other autoimmune diseases. As therapies effective in type 1 diabetes may involve modulation of the immune system, these treatments could also be effective for other autoimmune diseases.”
- SDP also funds treatment and prevention programs for American Indian and Alaska Native populations, who are disproportionately affected by T2D. The program has awarded grants in 35 states for diabetes treatment and prevention programs, helping participants dramatically improve their diabetes control and reduce their risk for amputation and kidney disease.