

ADA Research: Confronting the Epidemic of Diabetes

Diabetes is one of the nation's most prevalent, debilitating and deadly diseases.

- Nearly 24 million Americans have diabetes.
- Another 57 million Americans with pre-diabetes are at serious risk for developing diabetes.
- One in three children born in 2000 will develop diabetes in their lifetime. The ratio is one of every two for minority children.
- About 186,300 people younger than 20 have diabetes (type 1 or type 2).
- The total annual economic cost of diabetes in 2007 was estimated to be \$174 billion.

ADA Funded Research: Leading the Way to a Cure for Diabetes

There is no cure for this disease – yet. The American Diabetes Association's commitment to ongoing diabetes research promotes:

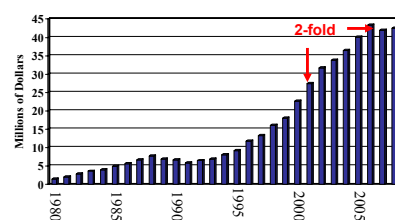
- a **pipeline of new investigators** and new research ideas,
- **knowledge about diabetes** and its relationship to other diseases,
- a course towards an **eventual cure** for diabetes,
- new ways to improve the lives of people with diabetes through enhanced **treatments and self-management strategies**.

ADA's Research Track Record

ADA's commitment is both significant and measurable.

- More than **4,000 research projects** funded since program inception in 1952.
- Since 1980 over **\$500 million** invested in diabetes research.
- Funded research more than **doubling between 2001 and 2007**; \$42.5 million awarded in calendar year 2008.
- There were 492 ADA-funded research projects nationwide in calendar year 2008.

**Yearly Research Funding
1980-Present**



Return on Research Investment

What is the return on this investment? Examples of significant ADA discoveries include:

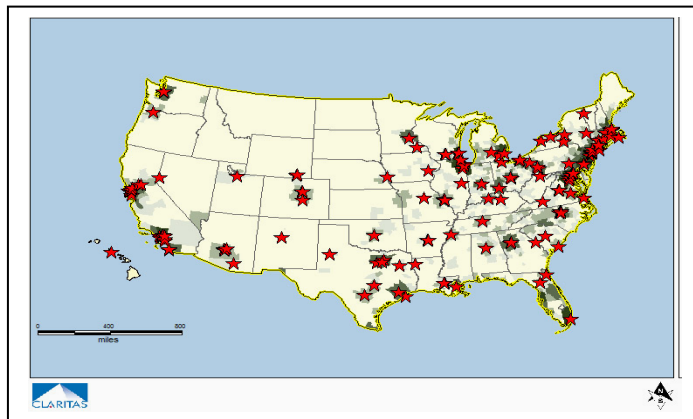
- invention of the first glucose meter
- introduction of more effective forms of insulin
- therapeutic regimens to control both pre- and post-meal blood glucose levels
- invention of the portable insulin pump
- oral diabetes medicines to help control blood sugar levels in type 2 diabetes
- transplantation of new insulin-producing cells from a donor pancreas
- laser treatments to prevent blindness
- insulin receptors discovered on cell membranes
- blood glucose control to prevent eye, kidney and nerve disease
- impact of diet and exercise on diabetes
- mapping the genetics of both type 1 and type 2 diabetes
- new drugs to help people with diabetes control their disease

*During the past 10 years, ADA has funded **over 1300 grants**.*

Of those grants, over 300 were training fellowships and awards.

These include:

- 63 Clinical Scholar Awards
- 32 Clinician-Scientist Training Awards
- 237 Mentor-Based Postdoctoral Fellowship Awards
- 31 Mentor-Based Minority Postdoctoral Fellowship Awards
- 12 Cardiovascular Complications in Diabetes Postdoctoral Fellowship Awards
- 4 Beta Cell Postdoctoral Fellowship Awards



Through this, ADA helps to ensure a **strong pipeline** of diabetes investigators and researchers.

A few examples of current projects involve:

- community health initiatives and promotion strategies for diabetes prevention,
- new drugs to treat type 2 diabetes,
- understanding the autoimmune process behind type 1 diabetes in children to better predict, and so prevent, the disease,
- replacement of beta cells for the treatment of type 1 diabetes,
- preventing childhood obesity,
- the role of inflammation, insulin resistance and genetic factors in premature cardiovascular disease in type 1 and type 2 diabetes,
- the development of programmable implantable insulin pumps
- insulin resistance as it relates to obesity and heart disease,
- slowing the development of diabetic retinopathy,
- understanding the incidence of ulcers, infections, peripheral vascular disease and amputations in diabetic patients,
- the discovery of a protein related to food intake and weight control,
- regenerating islet cells to prevent type 2 diabetes,
- empowering patients to improve their diabetes care,
- the etiology of obesity, Type 2 Diabetes and complications in minority populations,
- the link between diabetes and cognitive decline,

Now More Than Ever

The demand for research funding exceeds the available resources. Recent **decreases in federal funding** of diabetes research have resulted in an **exponential increase in requests for ADA support**, growing from 378 requests in 2000 to 924 in 2008.

The ADA, its donors and partners are dedicated to **research**; mapping a future that ensures qualified investigators, a better understanding of the disease, improved treatments for those living with diabetes, and one day - a cure.

What would be Different with Your Support?

Your financial generosity would allow the American Diabetes Association to award additional researchers, sponsor continuing and new research and bring therapies to the market sooner.