JDRF FACTS

About JDRF

JDRF is the leading global organization funding type 1 diabetes (T1D) research. JDRF’s goal is to progressively remove the impact of T1D from people’s lives until we achieve a world without T1D. JDRF collaborates with a wide spectrum of partners and is the only organization with the scientific resources, regulatory influence, and a working plan to better treat, prevent, and eventually cure T1D.

JDRF has research projects in 17 countries totaling $530 million currently taking place. In 2012 alone, JDRF funded more than $110 million in T1D research. And since its founding in 1970, JDRF has awarded more than $1.7 billion to diabetes research. JDRF’s efforts have helped to significantly advance the care of people with this disease and have expanded the critical scientific understanding of T1D.

This is all part of JDRF’s promise of “less until none”: to progressively remove the impact of T1D from the lives of those living with the disease until it is no longer a threat to them or their families.

Innovation and Collaboration

JDRF-funded research has led to many landmark advances in T1D science. JDRF is now in the exciting position of taking that research knowledge and translating it into real therapies that will make life-changing differences for those facing the daily challenges of T1D. Currently, JDRF is funding more than 50 human clinical trials, several of which are in the advanced stages of clinical testing needed before FDA approvals can be sought.

JDRF’s influence and leadership extends beyond funding research. We strategically partner with industry, governments, foundations, academia, healthcare insurers, and clinicians to ensure that JDRF and its partners are aligned and working toward a common goal of a world without T1D.

JDRF’s advocacy efforts help support a variety of issues that are critical to JDRF achieving its research objectives. Our focus includes increased government funding for T1D research and a regulatory environment that allows people with T1D to benefit from potential new therapies and devices as quickly and safely as possible. Finally, JDRF’s outreach efforts provide practical support and resources for people with T1D and their families every step of the way as they live with T1D.

Effective Operations

JDRF has always been dedicated to maintaining the highest levels of efficiency to ensure that our time, resources, and dollars can achieve the greatest possible impact on the lives of people with T1D. We have a solid track record of funding research efficiently and effectively. More than 80 percent of what JDRF spends goes directly to research and research-related education—among the highest percentages for charities nationwide.

Inspiring Results

JDRF was created—and is still led—by people with a personal connection to T1D. Today, volunteers at JDRF’s more than 100 locations worldwide remain the driving force behind our activities. That gives us an unrelenting passion and commitment to work to remove the impact of T1D from people’s lives. Whether it’s providing funding for a late-stage clinical trial, advocating faster regulatory approval of new devices, or partnering with a company on research that might not otherwise receive funding, every decision JDRF makes is driven by our commitment to achieving a world without T1D.
JDRF's research goal is to discover, develop, and deliver advances that progressively remove the impact of type 1 diabetes (T1D) from people's lives until we achieve a world without T1D. As the global leader in the fight against T1D, JDRF's research programs are comprehensive and reflect our strategic plan to bring about a continuous flow of life-changing therapies and, ultimately, a cure for T1D. JDRF is driving research across the entire scientific spectrum, from discovery in the laboratory to delivery of new technologies and treatments to people with T1D.

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Research Funding

JDRF’s research goal is to discover, develop, and deliver advances that progressively remove the impact of type 1 diabetes (T1D) from people’s lives until we achieve a world without T1D. As the global leader in the fight against T1D, JDRF’s research programs are comprehensive and reflect our strategic plan to bring about a continuous flow of life-changing therapies and, ultimately, a cure for T1D. JDRF is driving research across the entire scientific spectrum, from discovery in the laboratory to delivery of new technologies and treatments to people with T1D.

JDRF Research Funding Overview

- JDRF provided more than $110 million for T1D research in 2012, and currently has research projects in 17 countries, totaling $530 million. Since its founding in 1970, JDRF has funded more than $1.7 billion in diabetes research and has dramatically advanced the T1D scientific frontier and the management of this disease.
- More than 80 percent of JDRF’s expenditures directly support research and research-related education. JDRF maintains one of the best records among nonprofits of using supporters’ contributions effectively.

- In 2012, JDRF supported more than 50 clinical studies, evaluating new therapies and treatments for T1D and seeking to better understand the disease’s cause and progression. This growing emphasis on clinical trials testifies to JDRF’s commitment to moving beyond scientific discovery to delivering solutions to better treat and cure T1D.

JDRF’s Research Goals

JDRF is committed to progressively removing the impact of T1D from people’s lives. JDRF is focused on delivering a sustained stream of new, life-changing therapies from the near term to the long term, with the ultimate goal of a world without T1D.

JDRF’s near- to mid-term goals include delivering:

- an automated low-glucose suspend artificial pancreas system, which predicts and prevents severe blood-glucose lows;
- a treat-to-range artificial pancreas system, which automatically keeps blood-glucose levels in a specified range;
- the use of existing type 2 diabetes drugs to improve blood-glucose control in people with T1D compared to the use of insulin alone;
- the use of donated human islets as a treatment for low–blood glucose unawareness.

JDRF’s long-term goals include delivering:

- a beta cell encapsulation product providing insulin independence for more than a year without the need for chronic immunosuppression;
- novel therapies for beta cell survival and immune modulation that when used in combination can extend the period of insulin independence after diagnosis for more than two years;
- advanced-generation artificial pancreas systems such as those that deliver two hormones and those that have full (24-hour) automation features that further improve glycemic control;
- a glucose responsive insulin that provides glycemic control with a single shot per day, or less often;
- novel therapies that improve eye disease in people with T1D;
- therapies that prevent or delay the onset of insulin dependence for at least two years in people with autoantibodies for T1D.

For more information, visit the JDRF website at jdrf.org, or call 800-533-CURE.

Updated February 2013
### 2012 JDRF Research Funding

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<td>Beta Cell Health &amp; Regeneration Therapies</td>
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<td><strong>TOTAL 2012 RESEARCH FUNDING</strong></td>
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JDRF and Diabetes Statistics

Diabetes Statistics (T1D and T2D combined)
Number of Americans with diabetes: nearly 26 million¹
Number of people worldwide with diabetes: more than 371 million (expected to increase to 552 million by 2030)²
Amount spent annually on healthcare costs related to diabetes in the U.S.: more than $245 billion³

Type 1 Diabetes Statistics
Number of Americans with T1D: as many as three million⁴
Number of children diagnosed with T1D in the U.S. each year: more than 15,000⁵
Number of adults diagnosed with T1D in the U.S. each year: more than 15,000⁵
Percentage of people in the U.S. living with T1D who are adults: 85%⁴
Percentage of people in the U.S. living with T1D who are children: 15%⁴
Increase in the prevalence of T1D in people under age 20 between 2001 and 2009: 23%⁶
Healthcare costs of T1D in the U.S. each year: $14.9 billion⁷

JDRF Research Funding
Amount of research funding in 2012: more than $110 million
Total amount of research funding since founding in 1970: more than $1.7 billion
Total amount of investments in current JDRF research projects worldwide: $530 million
Percentage of JDRF expenditures directly supporting research and research-related education: more than 80%
Number of countries in which JDRF funded research projects last year: 17
Number of human clinical trials JDRF is currently funding: more than 50

JDRF Statistics
Current number of locations: 100 chapters, branches, and affiliates worldwide

About TID
Type 1 diabetes (T1D) is an autoimmune disease in which a person’s pancreas stops producing insulin, a hormone that enables people to get energy from food. It occurs when the body’s immune system attacks and destroys the insulin-producing cells in the pancreas, called beta cells. While its causes are not yet entirely understood, scientists believe that both genetic factors and environmental triggers are involved. Its onset has nothing to do with diet or lifestyle. There is nothing you can do to prevent T1D, and—at present—nothing you can do to get rid of it.

Whom TID Affects
Type 1 diabetes strikes both children and adults at any age. It comes on suddenly, causes dependence on injected or pumped insulin for life, and carries the constant threat of devastating complications.

How TID Is Managed
Living with TID is a constant challenge. People with the disease must carefully balance insulin doses (either by injections multiple times a day or continuous infusion through a pump) with eating and other activities throughout the day and night. They must also measure their blood-glucose level by pricking their fingers for blood six or more times a day. Despite this constant attention, people with TID still run the risk of dangerous high or low blood-glucose levels, both of which can be life threatening. People with TID overcome these challenges on a daily basis.

Insulin Is Not a Cure
While insulin injections or infusion allow a person with TID to stay alive, they do not cure the disease, nor do they necessarily prevent the possibility of the disease’s serious effects, which may include: kidney failure, blindness, nerve damage, heart attack, stroke, and pregnancy complications.

The Outlook for Treatments and a Cure
Although TID is a serious and difficult disease, treatment options are improving all the time, and people with TID can lead full and active lives. JDRF is driving research to progressively remove the impact of the disease from people’s lives until we ultimately achieve a world without TID.

Statistics
- As many as three million Americans may have TID.¹
- Each year, more than 15,000 children and 15,000 adults—approximately 80 people per day—are diagnosed with TID in the U.S.²
- Approximately 85 percent of people living with TID are adults, and 15 percent of people living with TID are children.¹
- The prevalence of TID in Americans under age 20 rose by 23 percent between 2001 and 2009.³
- The rate of TID incidence among children under age 14 is estimated to increase by three percent annually worldwide.⁴
- TID accounts for $14.9 billion in healthcare costs in the U.S. each year.⁵

¹ Type 1 Diabetes, 2010; Prime Group for JDRF, Mar. 2011
² NIDDK: diabetes.niddk.nih.gov/dm/pubs/statistics/index.html#i_youngpeople
³ SEARCH for Diabetes in Youth data by the Centers for Disease Control and Prevention and the National Institutes of Health.
⁴ IDF: idf.org/diabetesatlas/diabetesyoung-global-perspective
Warning Signs
Warning signs of T1D may occur suddenly and can include:
• Extreme thirst
• Frequent urination
• Drowsiness or lethargy
• Increased appetite
• Sudden weight loss
• Sudden vision changes
• Sugar in the urine
• Fruity odor on the breath
• Heavy or labored breathing
• Stupor or unconsciousness

What Is It Like to Have T1D?
Ask people who have T1D, and they will tell you: it’s difficult. It’s upsetting. It’s life threatening. It never goes away. But at the same time, people with T1D serve as an inspiration by facing the disease’s challenges with courage and perseverance, and they don’t let it stand in the way of achieving their goals.

“Both children and adults like me who live with type 1 diabetes need to be mathematicians, physicians, personal trainers, and dietitians all rolled into one. We need to be constantly factoring and adjusting, making frequent finger sticks to check blood sugars, and giving ourselves multiple daily insulin injections just to stay alive.”

— JDRF International Chairman
Mary Tyler Moore

“It is a 24/7/365 job. We never get to relax and forget about food, whether we’ve exercised too much or too little, insulin injections, blood-sugar testing, or the impact of stress, a cold, a sunburn, and on and on. So many things make each day a risky venture when you live with T1D.”

— Mary Vonnegut, adult, Rhode Island

“Unlike other kids, I have to check my blood sugar 8 to 10 times a day; everything I eat is measured and every carbohydrate counted. My kit goes with me everywhere I go ... Too much exercise or not eating all my food can be dangerous. I think I’m too young to have to worry about all this stuff.”

— Jonathan Platt, 8, California

“It controls your life in ways that someone without it doesn’t even see. For me, the worst part of living with T1D is the fear that my three children or their children might develop the disease.”

— Nicky Hider, adult, New York

For more information, visit the JDRF website at jdrf.org, or call 800-533-CURE. Updated February 2013
What Is Diabetes?
Diabetes is the name given to disorders in which the body has trouble regulating its blood-glucose, or blood-sugar, levels. There are two major types of diabetes: type 1 and type 2.

Type 1 Diabetes and Type 2 Diabetes: Not the Same
Type 1 diabetes (T1D) is an autoimmune disease in which a person's pancreas stops producing insulin, a hormone that enables people to get energy from food. T1D usually strikes in childhood, adolescence, or young adulthood, and lasts a lifetime. Just to survive, people with T1D must take multiple injections of insulin daily or continually infuse insulin through a pump.

Type 2 diabetes (T2D) is a metabolic disorder in which a person's body still produces insulin but is unable to use it effectively. T2D usually strikes in adulthood and does not always require insulin injections. However, increased obesity has led to a recent rise in cases of T2D in children and young adults.

Taking insulin does not cure any type of diabetes, nor does it prevent the possibility of the disease's devastating effects: kidney failure, blindness, nerve damage, heart attack, stroke, and pregnancy complications.

The Scale of Diabetes
- Nearly 26 million Americans have diabetes (8.3% of the population).
- Diagnosed: 18.8 million
- Undiagnosed: 7 million
- As many as three million Americans may have T1D.
- Diabetes currently affects more than 371 million people worldwide and is expected to affect 552 million by 2030.
- In the U.S., a new case of diabetes is diagnosed every 30 seconds; more than 1.9 million people are diagnosed each year.

The National Cost of Diabetes
- Diabetes is one of the costliest chronic diseases.
- Type 1 diabetes accounts for $14.9 billion in healthcare costs in the U.S. each year, while all types of diabetes combine to account for $245 billion in annual costs.
- The annual cost for healthcare was $11,700 for each person with diabetes in the U.S. in 2009, compared to $4,400 for each person without diabetes.
- Americans with diabetes incur medical expenses that are approximately 2.3 times higher than those incurred by Americans without diabetes.

- The average annual medical costs of children and teens with diabetes in the U.S. is $9,000, compared to about $1,500 for those who don't have diabetes.

The Healthcare Toll of Diabetes
- Diabetes is the leading cause of kidney failure, nontraumatic lower-limb amputations, and new cases of blindness among adults in the U.S.
- Diabetes is a major cause of heart disease and stroke.
- Poorly controlled diabetes before conception and during the first trimester of pregnancy among women with T1D can cause major birth defects in 5% to 10% of pregnancies and spontaneous abortions in 15% to 20% of pregnancies. Furthermore, for women with pre-existing diabetes, optimizing blood-glucose levels before and during early pregnancy can reduce the risk of birth defects in their infants.
- Diabetes is the seventh leading cause of death in the United States. The risk of death for people with diabetes is about double that of people of similar age without diabetes.
1 CDC: cdc.gov/diabetes/pubs/factsheet11.htm
2 Type 1 Diabetes, 2010; Prime Group for JDRF, Mar. 2011
3 IDF: idf.org/diabetesatlas/5e/Update2012
5 The Economics of Diabetes in the United States, 2009; Lewin Group for Novo Nordisk: diabetesbarometer-us.com/downloadable-resources/economic/Economic-Research-Articles.pdf
8 Diabetes Care: care.diabetesjournals.org/content/34/5/1097.abstract

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