Healthcare Providers Toolkit

This guide offers information and resources for practitioners to ensure that their patients with type 1 diabetes have access to the best possible resources and programs to help them meet their practical, social, and emotional needs.
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What is JDRF?

JDRF is the leader in setting the agenda for type 1 diabetes research worldwide, and is the world’s largest charitable funder and advocate of type 1 diabetes research. The mission of JDRF is to find a cure for diabetes and its complications through the support of research.

Since our founding in 1970 by parents of children with type 1 diabetes, JDRF has awarded more than $1.4 billion to diabetes research, including nearly $101 million in FY2009. More than 80 percent of JDRF’s expenditures directly support research and research-related education. In FY2009, the Foundation funded centers, grants, and fellowships in 22 countries, including nearly more than 40 human clinical trials.

As an organization whose volunteer leadership largely has a personal connection to type 1 diabetes, JDRF also provides social, emotional, and practical support to people who have been diagnosed with diabetes and their families. Our volunteers are the driving force behind more than 100 locations worldwide that not only raise money and advocate for government spending for type 1 diabetes research, but also offer support and outreach services for people with type 1 diabetes and their families.

You will find more information about JDRF and the research we fund at the back of this booklet.
JDRF Resources

JDRF has a number of resources that offer personalized support to families and adults living with type 1 diabetes. Our goal is to provide information and resources to help families and individuals learn more about type 1 diabetes, diabetes research, and how best to manage and cope with this disease during each new phase of their lives.

Our resources and support services are varied. Healthcare providers and their patients with diabetes can access these resources in a number of different ways. Much of JDRF’s support is provided through our local chapters. Our local chapters have programs that provide mentors for people dealing with diabetes, care packages and resources for families with a newly diagnosed child or adults diagnosed with type 1, and events that bring together groups of people with type 1 diabetes. A list of JDRF chapters with contact information is at the back of this booklet.

Other JDRF support services are accessible online through our web site, www.jdrf.org. These services include our national online diabetes support team, our Clinical Trials Connection where people with type 1 diabetes can locate clinical trials, and Juvenation, a social network that allows people with a type 1 connection to interact.

This booklet will detail all of JDRF’s resources and support programs for people with type 1 diabetes, along with information about how to access them.

You can download additional copies of this toolkit and find the latest JDRF resources for healthcare providers at http://www.jdrf.org/hcp.

What JDRF can do for healthcare providers and their patients

JDRF recognizes the central role that treatment and care from healthcare providers plays in the lives of people with diabetes. Care and attention from endocrinologists, primary care physicians, diabetes educators, nurses, and other healthcare providers is vital to treating one’s diabetes and living a healthy life.

JDRF also recognizes that people with diabetes have other needs as well. They need social and emotional support, daily living advice, shared experiences from others who have “been there,” and information about research that provides them with hope for a cure in the long term, and improved treatments in the near term. Because of their busy schedules and responsibilities, healthcare providers don’t always have the time to fill these needs for their patients with diabetes. This is where JDRF can offer its services and support.

JDRF provides social, emotional, and practical support to people with type 1 diabetes and their families. These services and resources complement the care and treatment offered by the patient’s medical team. JDRF can work hand-in-hand with healthcare providers to ensure that their patients with type 1 diabetes have all their needs met. The result is more time for healthcare providers to focus on the vital medical care they provide, less time to spend on care that is not reimbursed, and improved lives for patients with type 1 diabetes.
JDRF Local Chapters

What our chapters do

In addition to holding events and raising funds to support JDRF’s mission to cure diabetes and its complications, our local chapters offer important support and resources for people with type 1 diabetes and their families. JDRF chapters offer one-to-one connections and practical information, and also raise funds and advocate for type 1 diabetes research. Services range from support groups to the JDRF Bag of Hope and trained mentor program, linking people with JDRF volunteer families.

Our passionate and dedicated volunteers are the backbone of all JDRF chapters. In addition to a small staff, all chapters are led by volunteer boards and committees comprising people with a type 1 diabetes connection. Patients with type 1 diabetes can tap into the local chapter’s vast volunteer network.

How to find your local JDRF chapter

Every area of the country is covered by a local JDRF chapter. Even if your specific chapter office isn’t nearby, the chapter may still support a wide range of volunteer activity in your area.

You can find a list of JDRF chapters and their contact information at the end of this booklet. You can also find a similar list on JDRF’s web site, www.jdrf.org, or you can call 1-800-533-CURE and JDRF will be glad to put you in touch with your local chapter.

Local chapter support

After a new diagnosis of type 1 diabetes, patients and their families often feel alone and overwhelmed by questions. A healthcare team can provide many answers, but patients may want to reach out to others who have similar experiences. By connecting with the local JDRF chapter, people with type 1 diabetes gain access to an array of support services, including:

Mentor Programs

Local JDRF chapters can connect patients with diabetes and their families to another individual or family facing similar life circumstances.

For example, adult patients with type 1 diabetes may be dealing with workplace issues, planning to have children, having financial or insurance concerns, and more. A family, on the other hand, may be facing a new diagnosis, dealing with sending a child to school or college for the first time, or an increasingly independent teenager. Our family and adult mentors are volunteers who can share their personal experiences, answer non-medical questions, and most importantly, lend valuable, specialized support when it’s needed most.

Support Groups

A support group is a great way for people with diabetes and their families to connect and share common experiences with others who are touched by the disease. Many JDRF chapters have a number of volunteer-led support groups, including groups for families with young children, teenagers, and adults with type 1 diabetes. If the chapter itself doesn’t have a support group, it may be able to direct patients to other groups in the local area.

Outreach Support and Education Events

From time to time, JDRF chapters may host special events for individuals or families with type 1 diabetes. These events may include weekend retreats for families, social events for adults, and talks focused on diabetes research. These events represent another opportunity for patients with type 1 diabetes and their families to connect with others and share their experiences. The local JDRF chapter can provide a calendar of events.
Resources for Patients

JDRF’s support for people with diabetes and their families goes beyond the face-to-face interaction that our local chapters facilitate. We’ve established a number of organization-wide programs and resources that offer social, emotional, and practical support in a variety of different ways.

In creating these programs and resources, we’ve kept in mind the fact that people with diabetes and their families have different needs, depending on where they are in their life stages. A family concerned about the care their child with diabetes receives in school might use JDRF’s School Advisory Toolkit. A young adult considering using a continuous glucose monitor might join a group comprising other CGM users on JDRF’s social network, Juvenation. An adult who is beginning to develop complications may search for a clinical trial using JDRF’s Clinical Trials Connection.

The following listing provides a detailed description of all the JDRF resources available for patients with type 1 diabetes and their families. The descriptions include information on which groups of patients might best benefit from each, and how they can access the resources.

Bag of Hope

The Bag of Hope is a central component of JDRF’s outreach efforts. Through the Bag of Hope program, JDRF delivers care packages with invaluable tools to help families with a newly diagnosed type 1 child learn more about day-to-day living with diabetes.

The Bag of Hope is a sturdy backpack containing a variety of educational and comforting support materials. Some of the materials in the bag are geared toward the child, and some are intended for the caregivers. The most popular item in the Bag of Hope is Rufus, the Bear with Diabetes, a stuffed animal with type 1 that children can identify with. It also includes a support video, children’s books, and an Accu-Chek Blood Glucose Meter.

The Bag of Hope is free of charge, and available to families with a newly diagnosed type 1 child through JDRF chapters thanks to the generosity of our program partner, Roche Diagnostics. Families with newly diagnosed children should contact the local JDRF chapter to inquire about receiving a Bag of Hope.

The Bag of Hope program offers the additional benefit of partnering any newly diagnosed family who wishes with a JDRF family that has faced similar experiences (like the mentor program previously described). Through these connections, newly diagnosed families learn of additional support available in the local community.

Healthcare providers can play a key role by referring newly diagnosed type 1 children and their families to the local JDRF chapter.
JDRF Web Site

The JDRF web site, www.jdrf.org, contains numerous resources that can help patients with type 1 diabetes and their families navigate the many issues that arise for people living with the disease. These resources include:

The Online Diabetes Support Team

The JDRF Online Diabetes Support Team comprises a nationwide group of volunteers working to provide one-to-one support, a sympathetic ear, and practical suggestions to individuals and families touched by diabetes. All volunteers on the team have a personal type 1 connection (through either themselves, a relative, or a friend), and all requests to the team are assigned to team members based on their own relationship to diabetes and life experiences. All requests and questions to the Online Diabetes Support Team receive a prompt personalized reply. (Note that the members of the Support Team are not medical professionals, and their practical advice about living with diabetes is not meant to replace medical advice and treatment from a patient’s healthcare team.)

Life with Diabetes

The Life with Diabetes section of the JDRF web site offers information about diabetes management, answers to frequently asked questions, and personal stories of people with diabetes. This section contains areas for children, teens, and adults, as well as specific information about diabetes in school, diabetes in college, and traveling with diabetes. The Life with Diabetes section of the JDRF web site is also home to JDRF’s Blogger Round Table Series, a group of detailed discussions with prominent type 1 diabetes bloggers about specific topics that relate to their experiences living with diabetes.

Research Updates and Highlights

As an organization dedicated to curing type 1 diabetes and its complications, JDRF provides frequent research updates and a wide variety of scientific information online. The Research section of the JDRF web site contains yearly research progress summaries, as well as overviews for each of JDRF’s cure therapeutic areas. We also post breaking research news and information on our web site, making it a vital source of type 1 diabetes information for healthcare providers and patients.
JDRF Kids Online

JDRF Kids Online is a special section of the JDRF website for children with type 1 diabetes and their peers. The site is located at http://kids.jdrf.org.

On this site, children with diabetes will find answers to their questions, tips to help with day-to-day diabetes management, profiles of positive role models with type 1 diabetes, information about the search for a cure, and ways to be more involved in the diabetes community.

For patients aged four to 18, JDRF Kids Online offers a popular online pen pals program. Kids with type 1 diabetes can go to the site and browse for pen pals by age, or submit their own information and photos so that others can find them. Even family and friends can participate.

Juvenation Social Network

Juvenation (http://juvenation.org) is a social network created by JDRF especially for people with type 1 diabetes and their friends and families.

When patients with type 1 diabetes over the age of 13 register with Juvenation, they can create a profile, participate in online discussion groups and forums, create and comment on blogs, upload videos, and more. Juvenation is the place for patients to share thoughts, concerns, and tips about living with diabetes; educate themselves about new gadgets and technologies; and just have fun meeting others like themselves who are living with the disease.

Since its launch, Juvenation has been a resounding success within the type 1 diabetes community. Participants in the social network have reported that they have begun to better manage their diabetes thanks to ongoing support from the online type 1 diabetes community.

In addition to serving as a resource for patients, Juvenation also features a group for healthcare providers. Using the group’s discussion board and forum, you can connect with other medical professionals who work with the type 1 diabetes community.

JDRF Clinical Trials Connection

As both a service to patients with type 1 diabetes and a move to quicken the pace of diabetes research, JDRF has established Clinical Trials Connection. The connection, located at http://trials.jdrf.org, is an online tool that provides information about and access to clinical trials listed by the National Institutes of Health, with the ability to identify which are funded by JDRF.

Through JDRF’s Clinical Trials Connection, patients can provide certain criteria, like what type of trial they might find of interest, how long they’ve had diabetes, and how far they’d be willing to travel to take part in a trial. The Connection will let them know about clinical trials that might match those criteria. Once registered, individuals can also request to be notified by email if new trials become available matching their criteria.

Patients who sign up for Clinical Trials Connection evaluate information available from the clinicaltrials.gov site and then speak with their healthcare provider to make decisions about which trials may be appropriate for them. Because the Connection provides customized trial information directly to the patient, the healthcare provider spends less unreimbursed time searching for clinical trials. All information collected as part of Clinical Trials Connection is held in the strictest of confidence, and is HIPPA-compliant.

Countdown Magazine

Countdown is an award-winning magazine published quarterly by JDRF. It offers in-depth analysis about cutting-edge research and new treatments. Both healthcare providers and patients with diabetes can benefit from reading Countdown. Patients will learn about new research and treatments that will help improve their lives and eventually lead to a cure. Medical professionals who read Countdown can better address their patients’ questions about promising research and clinical trials, as well as learn about potential new treatments in the pipeline.

More information about Countdown, including how to subscribe, is available at http://www.jdrf.org/magazine.
Countdown for Kids Magazine

Countdown for Kids is JDRF’s magazine aimed at kids with diabetes. It delivers important lifestyle management information in language that is sensitive, clear, and easy to understand.

In addition to information about diabetes research and lifestyle management, Countdown for Kids includes a pen pal section, recurring cartoons, and feature stories on kids, teens, and adults who serve as role models despite the challenges presented by living with diabetes. The magazine lets children with diabetes know that they are not alone in dealing with their condition, and that they can have a positive outlook despite the difficulties of living with diabetes.

Countdown for Kids is bound within each issue of JDRF’s feature magazine, Countdown. More information, including how to subscribe, is available at: http://kids.jdrf.org/cfk.

JDRF E-Newsletters

Life with Diabetes E-Newsletter

JDRF’s Life with Diabetes e-mail newsletter provides information and support for individuals and families dealing with a recent type 1 diagnosis, or ongoing issues related to living with type 1 diabetes.

Each issue of the newsletter offers practical advice and inspiration from experienced JDRF volunteers and medical experts. Recent topics include managing sick days, supporting a partner with type 1 diabetes, and coping with depression. The newsletter is specifically written to include practical advice that complements a patient’s medical care.

Subscription information, as well as back issues, is available at http://www.jdrf.org/lwdnewsletter.

Emerging Technologies E-Newsletter

In recent years, JDRF has become actively involved in the development of a closed-loop artificial pancreas as well as related technologies, such as the continuous glucose monitors (CGMs). JDRF’s Emerging Technologies e-newsletter provides the latest information on CGM and insulin pump technology, legislation on insurance coverage, and other issues related to the development of an artificial pancreas.

Emerging Technologies is useful for both patients with type 1 diabetes and healthcare providers for staying up to date on the latest devices available to better monitor and control one’s diabetes. The newsletter also contains information and tips about insurance coverage of these new technologies.

Back issues of Emerging Technologies and subscription information are available at: http://www.jdrf.org/artificialpancreasproject.

Research Frontline E-Newsletter

JDRF’s Research Frontline e-mail newsletter is published eight times a year to provide the latest breaking news about research on type 1 diabetes and its complications. JDRF often reports breaking research news in Research Frontline first, before more in-depth articles appear in other publications.

Medical practitioners and their patients are encouraged to sign up for Research Frontline to stay on top of the latest type 1 diabetes research advances. Subscription information, as well as past issues, is available at www.jdrf.org/research/enews.
School Advisory Toolkit

The JDRF School Advisory Toolkit helps parents and school personnel ensure that students with type 1 diabetes have the best possible school experience. The Toolkit was written by a retired school administrator who is also the parent of a child with type 1 diabetes. As a result, it helps parents and school personnel understand each other’s points of view, as well as the needs of students with type 1 diabetes.

The Toolkit includes:

• practical information on everyday medical needs for students with type 1 diabetes,
• helpful charts with information on low and high blood sugar symptoms,
• steps to prepare substitute teachers for students with type 1 diabetes,
• tear out sheets and sample tools for the classroom,
• sample letters and care plans for parents and school personnel,
• information about the legal rights of children with type 1 diabetes, and
• real-life scenarios to help parents and schools understand each other’s concerns and communicate better when a student has type 1 diabetes.

The School Advisory Toolkit is an excellent resource for healthcare providers to offer the families of their school-age patients with type 1 diabetes. The Toolkit is available from any of JDRF’s local chapters, or can be downloaded at: http://www.jdrf.org/satrequest.

Adult Type 1 Toolkit

The JDRF Adult Type 1 Toolkit is a resource and support network for adults with type 1 diabetes. A diagnosis of type 1 diabetes can be difficult for adults since people often associate the disease with children and don’t understand that adults can have it as well.

The Toolkit acknowledges that adults already have responsibilities and daily tasks, and a diagnosis of type 1 diabetes can lead to new and unexpected changes. The Toolkit helps guide adults with type 1 through these changes.

The Toolkit includes:

• “Diagnosis” Practical information section on being diagnosed with type 1, what it means, and how to manage this new disease;
• “Day to day life with type 1 diabetes” A resource section that discusses a variety of management areas such as the differences between type 1 in men and women, dealing with diabetes at work, managing sick days, traveling with diabetes, and more; and
• “Looking into the future” Diabetes management and research developments.

The Adult Type 1 Toolkit is a great resource for healthcare providers to offer their adult type 1 diabetes patients. The Toolkit is available from any of JDRF’s local chapters, or can be downloaded at http://www.jdrf.org/adults.
Information For Providers

Many of the resources previously described, such as the School Advisory Toolkit and Juvenation, are valuable for both healthcare providers and their patients with type 1 diabetes. JDRF has also created resources specifically for healthcare providers that offer information about improvements in diabetes management tools and accessing new technologies for their patients. We’ve created these resources as part of our Artificial Pancreas Project.

JDRF launched the Artificial Pancreas Project in order to speed the availability of promising new technologies to people with diabetes. In the long term, the ultimate diabetes management device will be a closed-loop artificial pancreas that will monitor blood sugar levels and dispense insulin automatically. In the near term, we expect artificial pancreases to be external devices composed of insulin pumps, continuous glucose sensors, and an algorithm to communicate between the two.

As part of the Artificial Pancreas Project, JDRF is focusing on ensuring that continuous glucose monitors (CGMs), the current generation of diabetes management technology, are approved, widely available, and reimbursed by health insurance. JDRF’s aggressive campaign focuses on accelerating the development, regulatory approval, clinician adoption, and health insurance coverage of an artificial pancreas and its components, including CGMs.

With those goals in mind, JDRF has created specific resources for healthcare providers to assist in providing patients with access to this new technology.

Continuous Glucose Monitors and the New Era of Diabetes Management

JDRF’s Artificial Pancreas Project aims to accelerate the availability of new diabetes technologies, like continuous glucose monitors (CGMs), which JDRF believes can revolutionize diabetes care. Because of the important role healthcare practitioners play in diabetes management, we want to share information about the latest research on these technologies.

On the JDRF web site healthcare providers can:

- Sign up to receive the latest updates on these technologies at www.jdrf.org/clinician.
- Learn more about these technologies, including information about clinical trials and health care coverage, at www.jdrf.org/artificialpancreasproject.

JDRF is working to overcome barriers to patient access to CGMs by disseminating research findings on the devices, funding a clinical trial to gather additional evidence, helping patients apply for individual or “case-by-case” insurance coverage and payment, and organizing an advocacy campaign to urge health plans to cover the devices. JDRF is conducting these efforts independently from the manufacturers of these products.
What is a Continuous Glucose Monitor (CGM)?
A continuous glucose monitor reads glucose levels continuously using a small sensor that is inserted under the skin on the abdomen or arm and transmits data to a hand-held device. The device provides continuous readings and data about trends in interstitial glucose levels—whether they are rising or falling—allowing the patient to intervene earlier in warding off high and low sugar levels. Furthermore, the monitors have alarms to alert a person when they are reaching a predetermined glucose level. The Food and Drug Administration has approved several CGM devices, some of which are limited to adults ages 18 and over.

New JDRF Published Data on CGM
The landmark Diabetes Control and Complications trial (DCCT) demonstrated conclusively that tight glycemic control reduces a patient’s risk for diabetes complications. In October 2008 the New England Journal of Medicine published the results of a new JDRF-funded clinical trial. The results showed that patients with type 1 diabetes who were compliant with CGM use to help manage their disease experienced significant improvements in blood sugar control, and were more likely to achieve the difficult-to-maintain medical guidelines recommended for people with diabetes.1 When compliance was not considered, the CGM trial showed improved glycemic control in all pre-specified measures for adults (age 25+), some measures for children, and none for teenagers/young adults. JDRF-funded researchers concluded these results were likely due to less consistent CGM use among teenagers and young adults, noting that individuals of all ages who used CGM six days a week or more lowered their A1c by at least 0.5. This reduction is enough to lower the risk of microvascular complications by approximately 25 percent (based on historic comparisons). Other published studies show benefits as well.2

The Artificial Pancreas
JDRF is currently funding a consortium of researchers worldwide who are working to “close the loop.” The first step combines continuous glucose monitors with an insulin-delivery system to develop an artificial pancreas. The goal of the artificial pancreas is to enable people with diabetes to maintain normal glucose levels by providing the right amount of insulin at the right time, just like the pancreas does in non-diabetic individuals.

The researchers are testing different versions of an artificial pancreas.

JDRF’s worldwide consortium of diabetes researchers, mathematicians, and engineers aims to speed and optimize the process of linking continuous glucose sensors and insulin pumps, including the development of various computer “algorithms” to communicate between the two devices. This research builds from research already funded by JDRF at Yale University which showed that type 1 diabetes patients spent more time in normal glucose ranges when using a closed loop system.3

Steps for Obtaining Case-by-Case Coverage for Continuous Glucose Monitors

As a result of the new evidence from the JDRF CGM trial (www.jdrf.org/cgmtrial), many health plans are increasing coverage for CGM. If a health plan doesn't have a formal coverage policy for CGM yet, a person may still be able to get coverage by applying for “case-by-case” coverage. Here are a few tips we have obtained from insurance experts that can increase the odds of success.

1. **Determine the plan’s coverage policy for CGM.**
   Increasingly, health plans have issued formal decisions on whether or not CGM is covered. Before proceeding with the case-by-case coverage process outlined below, it is important to verify what the plan’s official policy on CGM currently is. The JDRF web site contains information about CGM coverage of select health plans, as well as instructions regarding how to search for policies at other plans. If the plan has a policy that covers CGM, proceed through the normal process to obtain a CGM. If the plan has a policy that does not cover CGM or does not have a formal policy on CGM, follow the steps outlined below. Information is also on the web site for Medicare beneficiaries. See coverage tips at www.jdrf.org/cgmcoverage.

2. **Be prepared and persistent.**
   Seeking case-by-case coverage is difficult; however insurance companies are granting case-by-case coverage to some individuals. Make sure to be prepared and to keep trying.

3. **Get informed and get help.**
   Read the insurance plan’s guide or call the insurance company to learn the proper steps for seeking case-by-case coverage. Contact the continuous glucose monitor manufacturer’s customer service staff to see how they can help. In addition, make sure to include in the paperwork sent to the health plan the HCPCS codes for CGM devices, which help the health plan to identify and process payments for the technology. The codes for CGM are A9276 for the sensor, A9277 for the transmitter, and A9278 for the receiver.

4. **Ask questions.**
   Ask the insurance company if they have a prior authorization policy, an insurance policy that must have approval before purchasing the device, and then satisfy those requirements before asking for coverage.

5. **Communicate the urgency for CGM coverage.**
   To better the chances of receiving a positive coverage decision, communicate urgency by highlighting health problems and the expenses of acute care. In particular, provide the following materials to your insurance company.

- Letter of Medical Necessity from your doctor, which highlights health problems and the patient’s need for a CGM, which may include:

  - Documented glycemic control problems (elevated HbA1c, frequent hypoglycemia, hypoglycemia unawareness, overnight hypoglycemia)
  - Hospitalizations for hypoglycemia or DKA
  - Emergency room visits
  - Glucagon administrations
  - Diabetes complications, whether early or advanced, such as kidney problems, nerve damage, loss of feeling in feet, and eye problems

- Prescription for CGM and sensors from the patient’s doctor

- Description of the patient’s current care plan (e.g. multiple daily injections or insulin pump, and frequency of self monitoring of blood glucose) and a record of adherence to the patient’s care plan from the physician

- Certification that the patient’s physician or other provider (e.g. certified diabetes educator) will be supervising the care and maintaining the treatment plan with the addition of a CGM

- Cite the American Diabetes Association’s 2009 Standards of Medical Care in Diabetes (http://care.diabetesjournals.org/content/vol32/Supplement_1/), which states:

  CGM in conjunction with intensive insulin regimens can be a useful tool to lower A1C in selected adults (aged 25 years and above) with type 1 diabetes.

Although the evidence for A1C lowering is less strong in children, teens, and younger adults, CGM may be helpful in these groups. Success correlates with adherence to ongoing use of the device.

CGM may be a supplemental tool to SMBG in those with hypoglycemia unawareness and/or frequent hypoglycemic episodes.
• Cite the Aetna, CIGNA, Humana, United, and Wellpoint/Anthem policies covering CGM. (For more information go to www.jdrf.org/cgmcoverage)

• Cite current clinical studies which show that CGMs improve glycemic control. They include:

  Results from a recent clinical trial funded by JDRF showed that people with type 1 diabetes using CGM regularly experienced significantly better glucose control.1

  One study found people using CGM spent 26 percent more time each day in their target glucose range, and significantly less time with hyper and hypoglycemia.2

  Another trial showed that diabetes patients using CGM had a statistically significant drop in HbA1c compared with a control group, and they spent significantly less time below 70 mg/dl and above 190 mg/dl.3

  An observational study of people using CGM showed a significant reduction in HbA1c in people using CGM.4

  A fourth study found patients at all A1c levels spent increased time in target glucose ranges when using CGM.5

6. File for case-by-case coverage. Send the materials to the insurance company.

7. Know the insurance company’s appeals process. Since CGM is not covered by all insurers, a patient may be initially denied coverage and will need to appeal the decision.

8. Submit your appeal. Send the appeal to the insurance plan with the materials outlined above in Step 4 within the timeframe outlined by the insurer.

9. Appeal, appeal, and appeal. The more the patient appeals each denial, the more pressure is put on insurance companies and makes them aware of the demand for coverage of these devices. Don’t give up!

10. Help us expand plan coverage policies. JDRF is working with health plans to provide coverage for CGMs, but we need your help! Plans need to hear directly from their beneficiaries about this revolutionary technology. The first step is to go to www.jdrf.org/advocacy.


5 Garg S, Jovanovic L. Relationship of fasting and hourly blood glucose levels to HbA1c values: safety, accuracy, and improvements in glucose profiles obtained using a 7-day continuous glucose sensor. Diabetes Care. 2006; 29: 2644-
Healthcare providers often receive requests from their patients for written materials that explain the basics of living with type 1 diabetes. JDRF has created a number of brief fact sheets that explain basic concepts such as what type 1 diabetes is, what to do in case of low or high blood sugar emergencies, how exercise and stress affect blood sugar levels, and more. Patients can use these fact sheets to learn more about their condition, as well as educate friends and family, co-workers, teachers, and others.

Healthcare providers and patients are welcome to download and print these fact sheets directly from the JDRF website at http://www.jdrf.org/diabetesinfo.

A listing and brief overview of available fact sheets follows.

- **What is Type 1 Diabetes?**
  Basic information explaining type 1 diabetes

- **Warning Signs of Type 1 Diabetes**
  List of warning signs and symptoms for type 1 diabetes

- **Diabetes Myths and Misconceptions**
  Common misunderstandings about type 1 diabetes

- **Checking Blood Sugar Levels**
  Basic information about blood glucose testing

- **High Blood Sugar: Causes, Symptoms, and Effects**
  Causes, symptoms, and effects of high blood sugar

- **What to Do about High Blood Sugar Levels**
  How to treat high blood sugar

- **Low Blood Sugar: Causes and Symptoms**
  Causes and symptoms of low blood sugar

- **What to Do about Low Blood Sugar Levels**
  How to treat low blood sugar

- **Glucagon and Severe Low Blood Sugar Emergencies**
  When and how to use glucagon

- **Insulin Delivery Methods**
  Information about injecting and pumping insulin

- **Type 1 Diabetes Control and Management in Children**
  Goals and tips for managing type 1 diabetes in kids

- **Effects of Exercise, Illness, Stress, and Growth on Blood Sugar Levels in Children**
  External factors and blood sugar levels

- **Diabetes and Diet**
  Basic information about nutrition and carbohydrate counting

- **Exercise, Sports, and Diabetes**
  Information about physical activity for people with type 1 diabetes

- **Facing a New Diagnosis of Type 1 Diabetes in Your Child**
  Advice to parents with newly diagnosed children
Helping Your Child or Teen Live with Type 1 Diabetes
Tips for parents with young children or teens with type 1

Caring for an Infant, Toddler or Very Young Child with Type 1 Diabetes
Tips for parents with infants or young children with type 1

Getting the Best Care at College
Tips for students with type 1 planning to attend college

Type 1 Diabetes and Pregnancy
How type 1 diabetes affects pregnancy

Type 1 Diabetes in the Workplace
Tips about what to disclose to your employer

Managing Diabetes: You and Your Doctor
Tips for working with your healthcare provider

Additional Resources

Other than JDRF, a number of organizations offer valuable resources for healthcare providers and their patients with type 1 diabetes. We recommend these resources to supplement the support and information JDRF provides.

For Healthcare Providers

American Association of Clinical Endocrinologists
Professional association for endocrinologists in the U.S.
904-353-7878
http://www.aace.com

Endocrine Society
International professional association for endocrinologists and researchers
1-888-363-6274
http://www.endo-society.org

Lawson Wilkins Pediatric Endocrine Society
International professional association for pediatric endocrinologists
703-556-9222
http://www.lwpes.org

American Association of Diabetes Educators
Professional organization for certified diabetes educators in the U.S.
1-800-338-3633
http://www.aadenet.org

American Academy of Pediatrics
Professional organization for pediatricians in the U.S.
847-434-4000
http://www.aap.org

International Society for Adolescent and Pediatric Diabetes
International professional organization for healthcare providers
http://www.ispad.org

National Association of School Nurses
Professional organization for school nurses in the U.S.
1-866-627-6767
http://www.nasn.org
For Patients with Diabetes and Their Families

Juvenation
*Online social network for people with type 1 and their friends and families*
http://juvenation.org

Children With Diabetes
*Online community for families that have a child with diabetes*
http://www.childrenwithdiabetes.com

Diabetes Exercise and Sports Association
*Information and online community focused on diabetes and physical activity*
1-800-898-4322
http://www.diabetes-exercise.org

Diabetes Camping Association
*Information about camps for children with diabetes*
1-866-980-3322
http://www.diabetescamps.org

For Healthcare Providers and Patients with Diabetes and Their Families

National Diabetes Education Program
*Educational materials about living with and properly caring for diabetes*
1-800-438-5383
http://www.ndep.nih.gov

National Diabetes Information Clearinghouse
*Facts and information about diabetes and its complications*
1-800-860-8747
http://www.niddk.nih.gov

Monogenic Diabetes Web site
*Information about monogenic diabetes*
1-866-780-0096
http://www.monogenicdiabetes.org

ClinicalTrials.gov
*Registry of clinical trials in the U.S. and worldwide*
http://www.clinicaltrials.gov
About JDRF

Facts about JDRF

Dedicated to Finding a Cure

JDRF is the worldwide leader in funding research to cure type 1 diabetes, an autoimmune disease that strikes children and adults suddenly and lasts a lifetime. JDRF sets the global agenda for diabetes research and is the largest charitable funder of and advocate for diabetes science worldwide.

JDRF’s mission has been constant since it was founded four decades ago: to find a cure for type 1 diabetes and its complications through the support of research. Until a cure is found, JDRF is also committed to working tirelessly to develop new and better treatments to improve the lives of people who have type 1 diabetes and keep them as healthy as possible.

Today, people with type 1 diabetes rely on insulin to manage the disease. But insulin is not a cure, nor does it prevent the possibility of the disease’s devastating effects, which can include kidney failure, blindness, heart disease, stroke, amputation, and pregnancy complications. JDRF is dedicated to finding a cure for type 1 diabetes and removing the burdens and threats that the disease carries.

A Global Leader in Type 1 Diabetes Research

JDRF funding and leadership is associated with most major scientific breakthroughs in type 1 diabetes research to date. The Foundation remains a global leader in driving type 1 diabetes science forward by funding more type 1 research than any other charity. JDRF directed nearly $101 million to such research in FY2009, bringing its total research funding to more than $1.4 billion since its founding in 1970. To ensure that it supports science with the greatest potential to produce results as soon as possible, JDRF has established a research review process that involves leading scientists from around the world, as well as lay reviewers who either have type 1 diabetes themselves or have family members with the disease.

Moving Discoveries from Bench to Bedside

JDRF is a leading catalyst for translating research advances into new treatments that can improve the lives of people with diabetes in the near term – and ultimately lead to a cure. In recent years, JDRF has driven a major increase in the number of new drugs and devices being evaluated in human clinical trials, funding more than 40 such trials in FY2009. JDRF has also helped spark new interest in type 1 diabetes science from biotechnology and major pharmaceutical companies; they will be crucial partners in bringing new therapies and cures to market.

JDRF research encompasses multiple areas, with the goal of discovering and developing new drugs and devices to cure, treat, and prevent type 1 diabetes. Areas of focus include developing immune therapies, replacing and regenerating beta cells, achieving tight glucose control, and preventing complications.
Efficiently Organized for Successful Results

JDRF is structured on a business-world model that efficiently and effectively directs resources to research aimed at finding a cure and developing new treatments as soon as possible. More than 80 percent of JDRF’s expenditures directly support research and research-related education. Because of its unwavering focus on its mission to find a cure, JDRF annually receives top rankings from independent sources that rate charitable giving. JDRF leverages its impact by partnering with academic institutions, governments, biotechnology and pharmaceutical companies, other disease organizations and foundations, and people with type 1 diabetes.

A Backbone of Dedicated and Active Volunteers

JDRF was founded in 1970 by parents of children with type 1 diabetes. Today, volunteers at JDRF’s more than 100 locations worldwide remain the driving force behind the Foundation’s success in advancing research toward a cure. Because of their personal connection to type 1 diabetes, JDRF’s volunteers have a passionate and unrelenting commitment to the JDRF mission.

Research Funding Facts

JDRF’s mission is to find a cure for diabetes and its complications through the support of research. JDRF is also committed to developing new and better treatments that improve the lives of people with type 1 diabetes in the near term and keep them healthy while we advance toward a cure.

- Since its founding in 1970 by parents of children with type 1 diabetes, JDRF has funded more than $1.4 billion in research. In FY2009 alone, JDRF funded nearly $101 million, more than $42 million of which represented new scientific projects.
- More than 80 percent of JDRF’s expenditures directly support research and research-related education.
- In FY2009, JDRF funded research projects in 22 countries, including more than 40 human clinical trials.

JDRF’s Research Goals

JDRF is committed to aggressively following the most promising paths to cure, better treat, and prevent type 1 diabetes. We are targeting our resources on science that seeks to:

- Arrest the immune attack on the insulin-producing beta cells
- Restore or replace beta cell function
- Better control blood sugar levels
- Protect people from – or reverse – complications

Healthcare providers and their patients can learn more about JDRF and get involved through the local JDRF chapter.
**Therapeutic Areas**

*JDRF targets its research funding in four “Therapeutic Areas:”*

**Immune Therapies**
This area focuses on ways to stop the immune system attack on the body’s insulin-producing beta cells that causes type 1 diabetes. Within this area, JDRF is prioritizing antigen-specific therapies that would reverse the immune attack in type 1 diabetes without suppressing the entire immune system.

**Beta Cell Therapies**
This area aims to find ways to restore the body’s ability to make insulin through the:

- Regeneration of insulin-producing beta cells (i.e. triggering the body to re-grow beta cells) and
- Replacement of the beta cells lost to diabetes

JDRF is prioritizing regeneration because of its potential to restore beta cell function in the largest number of people living with type 1 diabetes.

**Glucose Control**
This area seeks to identify ways to dramatically improve blood glucose control while avoiding dangerous highs and lows in people at all stages of type 1 diabetes. JDRF is prioritizing the development of a closed loop artificial pancreas, a device combining glucose monitors and insulin pumps, to enable people to achieve tight blood sugar control and reduce their risk of complications. JDRF is also prioritizing the development of novel insulins that are glucose-responsive, faster-acting, easier to use, and more effective.

**Complications Therapies**
This area focuses on ways to free people from the devastating long-term complications that can accompany diabetes, including diseases of the eyes, nerves, and kidneys. JDRF is prioritizing research in complications protection, or new approaches to assess risk and block complications from developing and progressing.
How to Get Involved

While JDRF is committed to providing support and resources to people with type 1 diabetes, their families, and the healthcare providers who treat them, our primary mission remains finding a cure for diabetes and its complications through the support of research. Healthcare providers and their patients with type 1 diabetes who wish to support JDRF’s mission can get involved in a number of ways.

Fundraising Activities:
The Walk to Cure Diabetes is JDRF’s largest and most successful fundraising program. More than 500,000 people participate in Walks at our 200 sites nationwide each year. The Walk draws people together in a healthy activity for a worthy cause, raising money to help find a cure for diabetes. Walk events are family-friendly, held at great locations, and feature plenty of entertainment, food, and fun. Find out more from your local JDRF chapter or at http://walk.jdrf.org.

The Kids Walk to Cure Diabetes is a special Walk program just for schools. The two goals of this program are to teach students about diabetes and to raise money for type 1 diabetes research. The program gives students an opportunity to help fellow classmates affected by diabetes and raise money for their school. It’s easy and rewarding for both kids and their schools. Find out more about starting a Kids Walk from your local JDRF chapter or at http://www.jdrf.org/kidswalk.

The Ride to Cure Diabetes is an adventure of a lifetime. Riders from around the world take on two challenges: raising the critical money needed to fund the research that will cure diabetes, and reaching a personal training goal that will prepare them for their destination cycling experience. Participants spend the weeks before the Ride working with a USA Cycling certified coach and a JDRF fundraising coach to help them reach their goals. Find out more about joining the team that moves us toward a cure at http://ride.jdrf.org.

JDRF chapters also hold many other exciting special events to raise funds to support JDRF’s mission to find a cure. These events typically include black tie galas, golf outings, food and drink gatherings, family excursions, and others. Contact your local JDRF chapter for information about events near you.

Volunteer Opportunities:
JDRF’s volunteers are the driving force behind our progress toward a cure, giving generously of their time, money, and expertise in an ambitious agenda of fundraising, outreach, and advocacy activities. Since JDRF was founded by parents of children with type 1 diabetes in 1970, the passion of our volunteers has set JDRF’s tone and agenda.

Local JDRF chapters enlist their volunteers to help organize walks, fundraisers, and support and outreach activities. JDRF volunteers also have opportunities to connect with people who are just becoming familiar with type 1 diabetes or who may have questions about the disease. Volunteers address concerns about how diabetes may change their lives or the lives of their children.

JDRF volunteers include people who have diabetes, have a friend or family member with diabetes, and healthcare professionals who provide medical care for people with diabetes. They have a vested interest and are committed to finding a cure for diabetes and its complications. More information about volunteering is available from your local JDRF chapter.

Advocacy and Government Relations:
JDRF has built a nationwide network of advocates who are dedicated to finding a cure for type 1 diabetes. We are all working together to advance the search for a cure faster and more effectively.

JDRF advocates build relationships with their legislative leaders and tell their personal stories about living with type 1 diabetes, and why we need a cure. These relationships strengthen the type 1 diabetes community, provide support for those who are living with type 1 diabetes, and deliver JDRF’s message—the need for a cure—faster and more effectively.

Information about becoming a JDRF advocate is available at http://advocacy.jdrf.org.
Disclaimer

This manual does not give legal or medical advice. The Juvenile Diabetes Research Foundation (JDRF) offers the information in this manual for general educational purposes only. JDRF reserves the right, in its sole discretion, to correct any errors or omissions in any portion of this manual. JDRF may make any other changes to the manual at any time without notice. This manual, and the information and materials in this manual, are provided “as is” without any representation or warranty, expressed or implied, of any kind. Information in this manual may contain inaccuracies or errors. JDRF believes the information contained in this manual is accurate, but reliance on any such opinion, statement, or information shall be at your sole risk. JDRF has no obligation to update this manual, and any information presented may be out of date.

The JDRF staff/volunteers responsible for compiling the resources presented in this manual are not health care professionals. Neither JDRF nor the staff/volunteers engage in rendering any medical professional services by making information available to you in this manual, and your patients should not use this manual to replace the advice of qualified medical professionals. Patients should not make any changes in the management of type 1 diabetes without first consulting their physician or other qualified medical professional.

Under no circumstances will JDRF be liable for any direct, indirect, special or other consequential damages arising out of any use of this manual.
About JDRF

JDRF is the leading global organization focused on type 1 diabetes (T1D) research. Driven by passionate, grassroots volunteers connected to children, adolescents, and adults with this disease, JDRF is now the largest charitable supporter of T1D research. The goal of JDRF research is to improve the lives of all people affected by T1D by accelerating progress on the most promising opportunities for curing, better treating, and preventing T1D. JDRF collaborates with a wide spectrum of partners who share this goal.

Since its founding in 1970, JDRF has awarded more than $1.6 billion to diabetes research. Past JDRF efforts have helped to significantly advance the care of people with this disease, and have expanded the critical scientific understanding of T1D. JDRF will not rest until T1D is fully conquered. More than 80 percent of JDRF’s expenditures directly support research and research-related education.