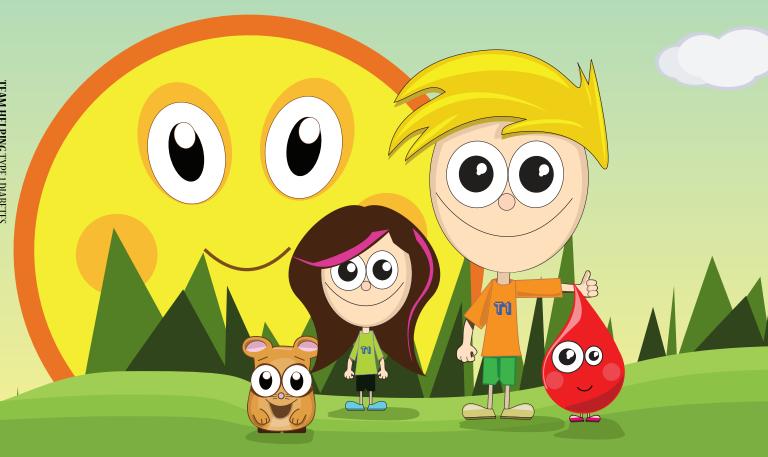
# Type 1 Diabetes





#### Helping Kids & Families Understand T1D

Written by: Jared Bergen, Ilana Bergen & Randi Winter Illustrated by: Maya Bergen & Kris Bergen





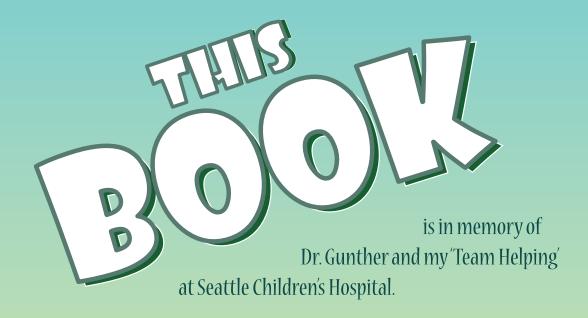
### Team Helping is a prescription for a better world.

This is just an incredible undertaking. I absolutely love the way it is written, the message it sends, and the very practical information it provides. And I love the drawings! They remind me of super hero stuff, which describes Jared perfectly! The most important part is that Jared talked about so many issues that are a vital part of diabetes. Please tell him that I think he did the most wonderful job (and I'm not just saying this - I really mean it) and that I'm proud to be a part of his healing team!

**Joanie Warner**, N.P., C.D.E. Seattle Children's Hospital

What a tremendous gift the Team Helping book is to all newly diagnosed kids and families lucky enough to find this gem! I was diagnosed in 1980 and something like this would have been fabulous to help me and my family adjust! The story makes understanding diabetes so simple. The colorful and playful illustrations are fabulous. It touches also on the importance of reaching out to others to build a community, to counteract the painful loneliness that newly diagnosed families often feel. The idea to get this book to all newly diagnosed families is sheer brilliance. A huge thank you to this family for your vision for it, and your time and efforts to create it!





Joanie Warner, was my Endo Nurse and a special MVP. She has always been an important inspiration to me and my family. She guided us to help kids, their families and everyone who helps kids be kids. You are an important voice I will always hear in my thoughts forever. Thank you.

We hope this book will help people by sharing what we have learned about T1D. Learn the meaning of all the new words you will hear, what to eat, how to stay healthy and take care of ourselves.



From Jared and his Team Helping

Printed in: USA First edition

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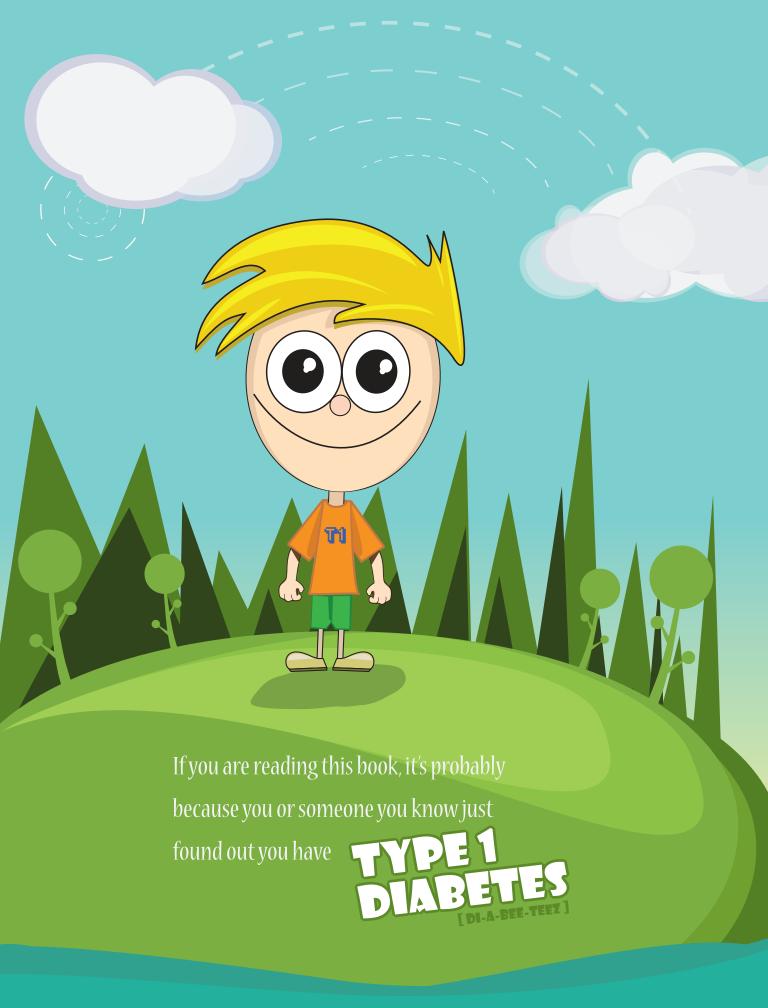
# CARBS MAKE YOUR BLOOD SUGAR GO UP





YOUR BLOOD
SUGAR
GO DOWN







When I was four years old, I was diagnosed (di – ag – no – st) with

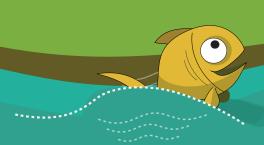


## HOW DID IT

I felt strange. I was very thirsty and peed a lot! I didn't feel like playing and was extra grumpy and always tired.

Instead of ME getting bigger, it was my PANTS that were growing bigger on me.









"What did I do wrong?" How did I get this??

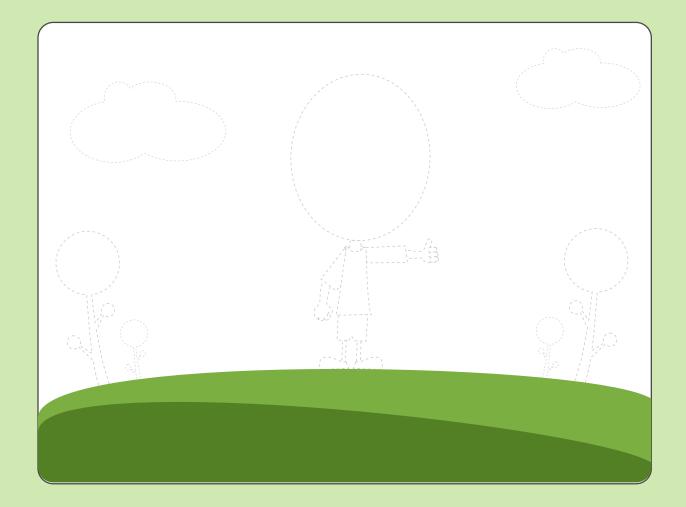
I found out that it wasn't my fault, I didn't catch it from someone, and I can't give it to anyone. Doctors are working hard to figure out why only some people get 'type 1' diabetes.

Many people think diabetes is what you can get if you eat too many sweets and don't exercise or are very old. This isn't true. Now I know there are other kinds of diabetes. I have 'type 1', also called T1. Another is called 'type 2' diabetes.

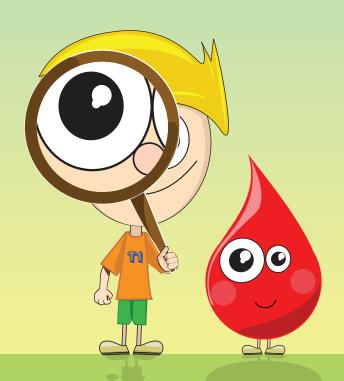
## CALLED TEAM HELPING?

We called it Team Helping because we all need people helping to make sure that kids can be kids - even with diabetes. In the beginning, when I couldn't do it all myself, I realized I would need a a team to help me stay as healthy as possible. You may too!

Have some fun! DRAW yourself and your Team Helping.



Most things don't change, but we have to pay attention to the our body gives us to stay healthy.



My body changed the way it works, mostly when it comes to making The Line of the company of the line of the company of the com

It regulates blood sugar by turning food into energy.

Insulin comes from **CENE-LET** cells in your pancreas.

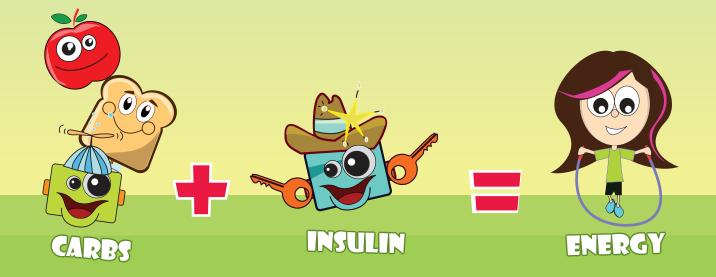
Now, my pancreas still works, but can't make enough

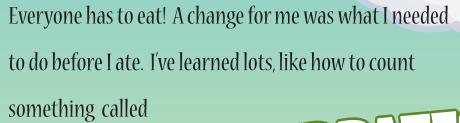
insulin, or any at all, leaving the



stuck in my blood instead of being used in







CAR-BO-HI-DRAY-TS]

'Carbs' are in foods most kids enjoy - like milk, bread, cake, pasta, cereal, fruit, and cookies.



I need to eat more protein like cheese, chicken, fish, meats, eggs, and some vegetables to have "balanced" meals.

Now, every time I eat a carbohydrate,

I try to find a PROTEIN buddy so my
blood sugar stays in the range, my doctors and
nurses think is best for me - not too high or too low.



I learned that a regular part of my day would include



which some people call 'finger sticks' or 'pokes' and measures my

blood glucose level. Then, injections of insulin keep my

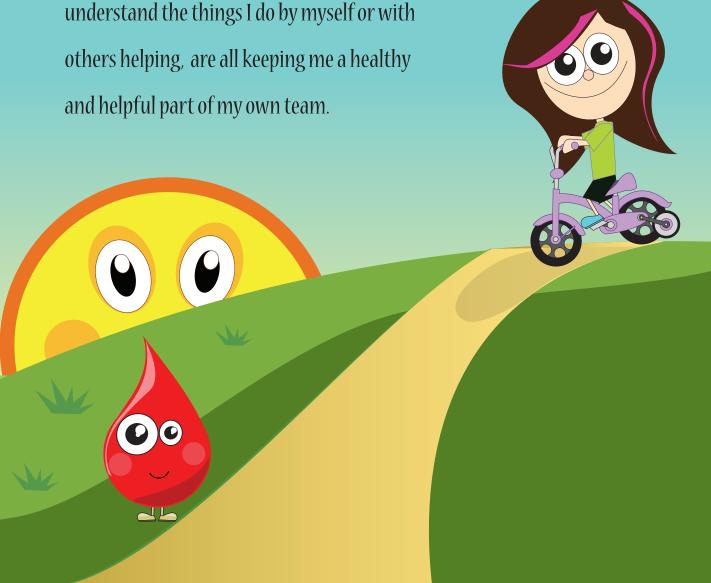
BLOOD ALIGOSE (BG) levels in a

healthy range. My mom and I play detective and try to guess what the BG number will be. Then we see how close we came to the result on the meter.



All my'numbers' (blood glucose and carbohydrates) are written into a log book. I added 'how I feel' stickers which can be looked at as clues to help everyone understand how my blood sugar affected my feelings. In the beginning, my mom or dad did my sugar checks and shots until I was ready to do my own.

Even though I sometimes felt scared, now I understand the things I do by myself or with others helping, are all keeping me a healthy and helpful part of my own team.



While my family and I were being taught what we needed to know, I was told that I was going to need [IN-JECT-SHUNS] or shots. This is how I add insulin to my body, so it can work to turn food into energy like it used to.



is the key to help food turn into energy.



Injections take a while to get used to, and it does get easier.

These injections are always given into the squishy parts of your body, like your tummy, your bottom, the tops of your arms or even your thighs.

First, I thought it was funny when my family had to learn how to give shots to an orange. It wasn't funny when I found out they were actually practicing to give the kind of injections that I need to stay healthy.



What else changed? Well, Glucose checks start every morning when I wake up. Before I eat breakfast, I give myself a little poke with a





It sounds big, but it's just a tiny needle that pops out of the 'blood sugar checker.' Just one little drop of blood goes onto a special strip which is placed in a small machine called a blood glucose meter.

From this, I will know whether I need to have insulin or if I need to have a snack or meal. I quickly learned what works best if my bg is high or low.

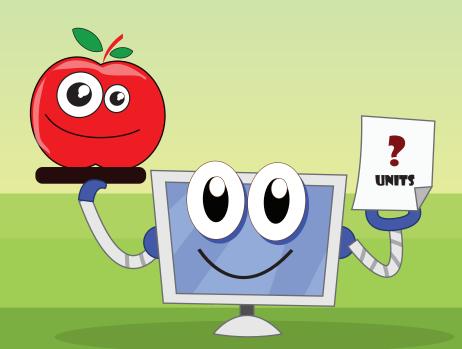




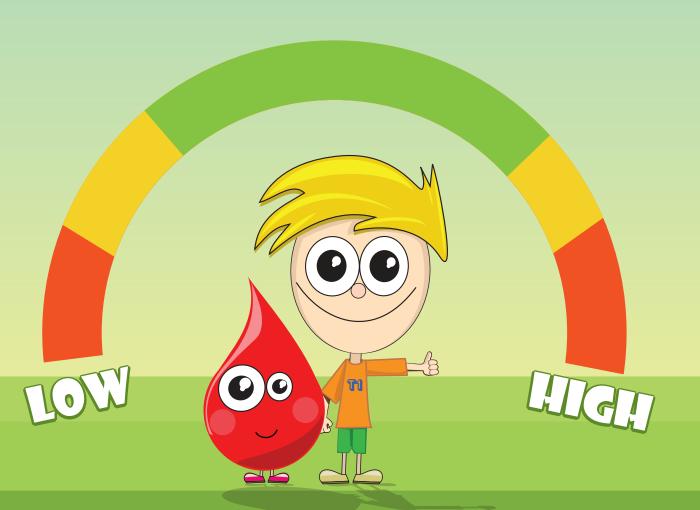
After a while, my team and I decided to try an insulin
Having a pump means I connect a set and pump to my body once
every three days instead of many shots each day.

There are a lot of great options.

My pump, it is so smart; it is like a little computer. It can calculate how much insulin is needed by knowing what my BG is and how many carbs I am going to eat. It then sends insulin into my body through a tiny tube called a

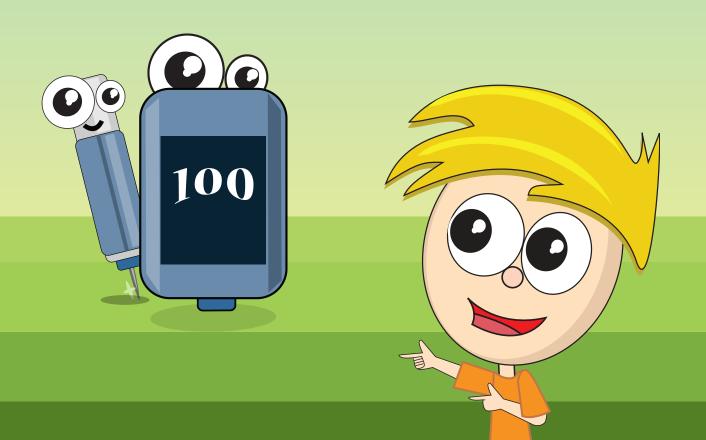






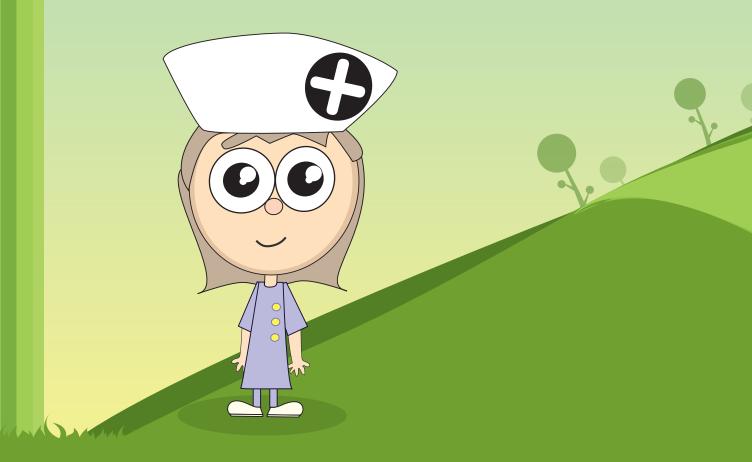
Most people with type 1 diabetes still use needles, while others use pumps or pods. People who use pumps or pods still need to use needles and insulin as a back up.

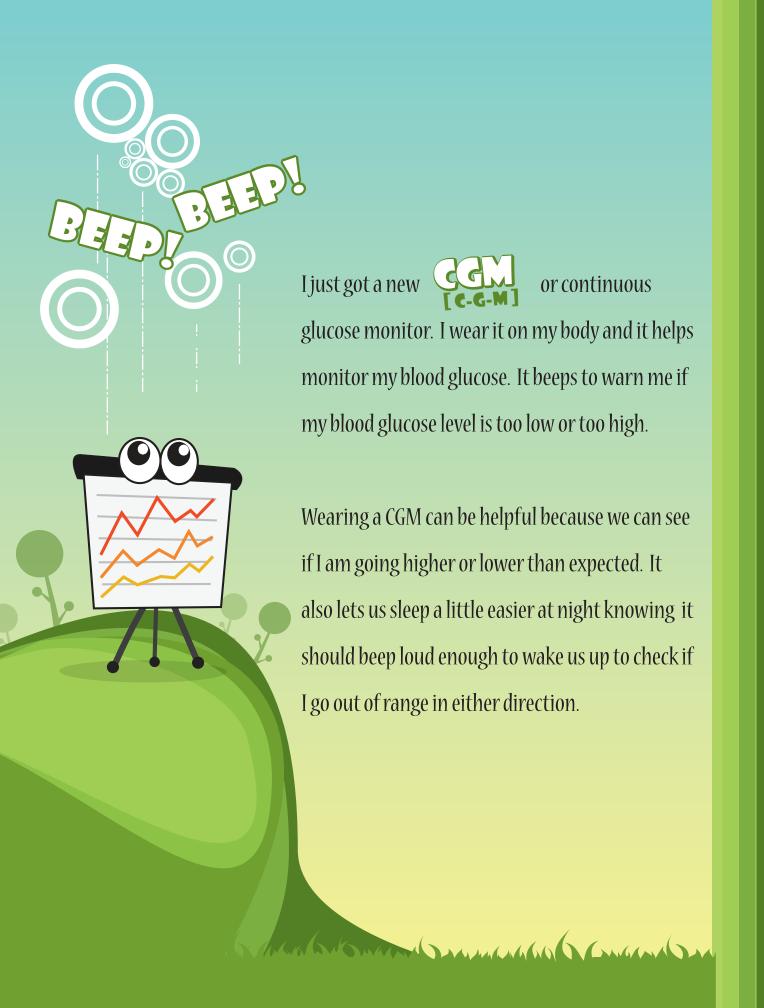
If my blood sugar level changes, so does the amount of insulin I need. It can change during the day or night because we get excited, sad, sick or just growing! I have to work with my team, to get my rates and carb ratios right, just like my own long acting insulin did for me before.





Teams of doctors, scientists and inventors are working hard to help make things easier and safer for anyone who has diabetes. When the time is right, you and your family can work with your special diabetes team to figure out whether a pump or pod is available where you live and if it is the right choice for





Holidays are fun, but may feel hard for kids with type 1 diabetes.

I enjoy traditions that are fun with crafts as well as cake and candy.

#### What holidays do you like best?

If I am feeling well, and take the right amount of insulin, I have cake and treats like everyone else. I just have to 'cover' the carbs with insulin for the treats. Sometimes, I don't feel like sweets and that is okay too.



When I go anywhere-out to play, to school or for a longer trip, I always have to take my special kit. In this kit is everything I need to make sure that I stay healthy.



Before school starts each year, it is very important for at least one teacher or helper at school to get special training and be familiar with my supplies and what I need to stay healthy.

This means, they know what signs and clues to look for to keep me healthy and safe in school. At first it might not seem easy to create a Team Helping at your school, but there should always be a way to





When I play, go swimming, or ride my bike, I am just like all the other kids. By checking my blood sugar before and after activities, I make sure that I have enough energy to do my best with diabetes.



I usually need a snack before and sometimes after I play.

If I am really playing hard and can feel I am getting low, it is important to have a snack while playing, to make up for all the energy I used.

At times other kids don't understand why I get a snack and they don't. Once I explain, they understand.



Getting sick is yucky! Nobody likes it. For kids with T1, getting sick means that our bodies get even more mixed up with what it should do to make us better. For me, it changes the way that my insulin works. If I have been above my range twice, or if I am feeling sick, it is important to check for

There are a few ways to check for ketones, either using a 'pee' test strip or with a blood ketone test strip. You should keep the chart handy to compare and see if you have ketones. If I do, we use the sick day plan my doctor gave us or call the doctor who I see for my diabetes, and they can help remind us what to do.



I am not as scared as the first time I was in the hospital. If I have to go again, I remember that the nurses are really nice, and they always try to make us feel better as quickly as possible. We are so grateful to the people who work and volunteer at the hospital. They help keep everyone healthy and happy. Hospital team members can include:

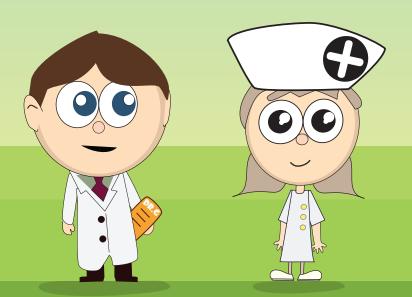
Your Pediatrician or Family Doctor,

**Your Endocrinologist (Diabetes Doctor)** 

**Your Certified Diabetic Educator (CDE)** 

**Dieticians / Nutritionists** 

**Nurses and Counsellors / Social Workers** 





THEY'RE ALL PART OF YOUR 'TEAM HELPING'



## YOU ARE NOT ALONE

It is important to know that you are **not alone**.

There are special events for families with kids who have T1 diabetes. Some of my best friendships have come from these experiences!

Did you know famous athletes, singers and actresses have 'type 1' diabetes, and it did not keep them from living their dreams? Look some up!











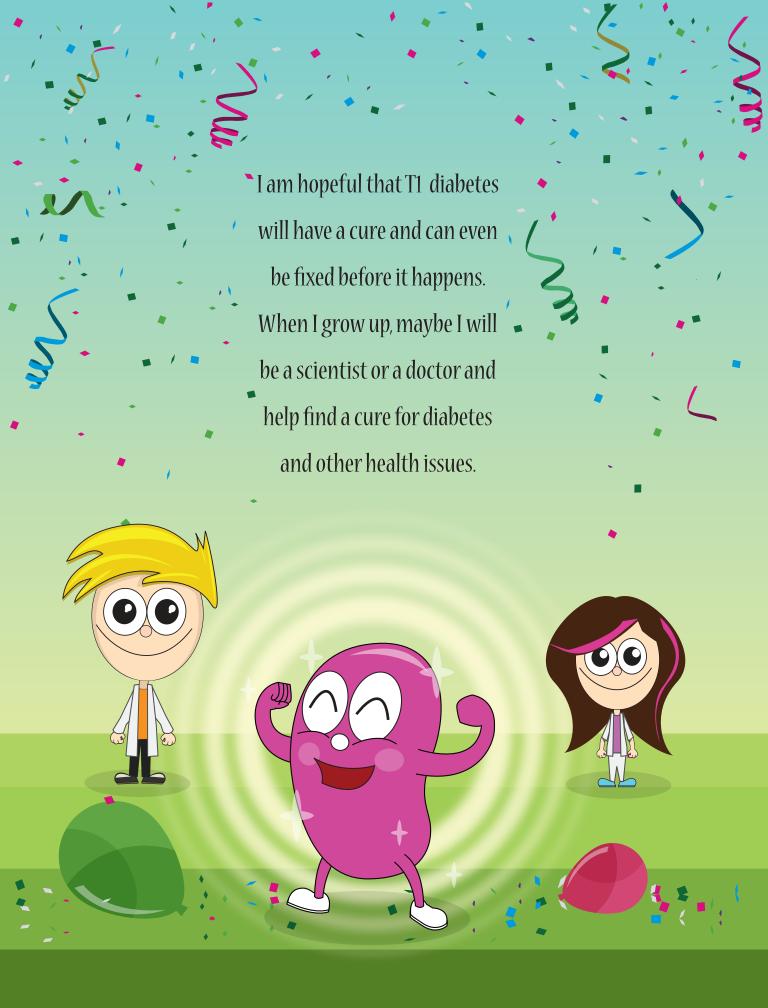


is always a very important word to keep in mind when you have T1 diabetes - especially in the beginning, when you don't really understand what is happening.

We are always thankful when organizations, companies and families help newly diagnosed kids by making sure there are books (like this one) in the hospital, when we really need it. We are grateful to every TEAM HELPING MVP!

As hard as it is for me, I know it can feel hard for the rest of my family too, only in different ways.





Until that day comes, it is very important to remember that we are all part of many types of teams. Everyone needs their own special for different reasons and to work together with their teams to reach their goals, and become awesome, just like you and me.



## RESOURCES FOR TYPE 1 DIABETES

We want to hear from you and hope you will participate and share as we build a community of Team Helping. Use our glossary to help your family, friends and teachers understand what some of the new words mean that are now a part of your life. Of course, let us know anything else you would like us to include!

Please feel free to take a picture of you and your experiences and tag with **#teamhelpingT1** to see others who are also living and thriving with T1 and are on your team!

I hope this book helps all newly diagnosed kids and their families. Check us out at:

www.teamhelping.com

(i) www.instagram.com/teamhelpingT1

eteamhelpingT1



You will be happy to know, that for each book bought, we donate a copy to other newly diagnosed kids!

You would be helping fulfill Jared's dream of a book on the bed of every newly diagnosed child. You can purchase or sponsor books for a community library, hospital, doctor's office, or work with Diabetes and Me, created to provide education and an outreach program for newly diagnosed families.

## About the Authors and Illustrators

## Jared Bergen

Jared is the founder of Team Helping. He has been an inspiration long before he was diagnosed with diabetes, just a few months before his fifth birthday. He has a tremendous insight into the profound changes in his life. His sensitivity and willingness to share his journey with newly diagnosed diabetics and their families helped made this book a reality. His words, ideas, commitment and motivation, are an example and a challenge for us all to increase our "team spirit".

## Ilana Bergen

Ilana is the mom of two Type 1 Diabetic kids (now teens) and has had to go way out of her comfort zone to become a mathematician, medical specialist, inventor, lobbyist, blogger, crisis manager and nutritionist - and all without a full night's sleep. From this she has learned so much and hopes to share this with others through the support groups and books like Team Helping and Diabetes and Me. She is an inspiration for all the other team members and a loved mom, daughter, wife and depending on the day or time... so much more.

## Maya Bergen

Maya is Jared's little sister who prefers to not be thought of as that, she is more of an artist, a creator, a designer and a happy spirit, but still has time to make sure her brother checks his blood sugar and eats right. She loves to draw and work on family projects. She embodies the spirit of Team Helping. Maya was diagnosed with Type 1 diabetes 6 years after her brother was, and took her diagnosis in stride since she always admired how her brother handled his own new responsibilities.

## Kris Bergen

Kris stands tall in our Team Helping, both as a great dad and MVP Team Helping member. His creativity and vision often inspires wonderful family projects and we hope his illustrations will put a smile on your face.

## Randi Winter

Randi is Jared and Maya's grandma. Her goal is to help people find their passion and make a difference in the world every day. This book will help. It has been an honor and privilege sharing the experience of creating this book with Jared and our Team Helping. Hopefully, it will inspire other families create their own Team Helping, whatever the need. She looks forward to many sequels as Team Helping has new ideas to share. She is also writing more books to empower children and teach them that everyone can make a difference!

# **Understanding Diabetes**

If we missed something you think we should include or explain better, please email us and we'll add it to the TeamHelping.com website.

#### A1C

A blood test to get a better idea of your average blood sugar control over the past three months by seeing how much sugar sticks to your red blood cells.

#### Basal rate-(bay-z-al)

Basal insulin refers to insulin that is either given once or twice a day if you are on injections, or given at a constant rate if you are on an insulin pump or pod pump. Basal insulin keeps the blood glucose steady between meals and during sleep. (Lantus and Levemir are examples of basal insulin for those on injection therapy.)

#### **Blood Glucose Meter** - (Bl-ud Gloo-co-s Me-ter)

A small handheld medical device that measures how much glucose (i.e. sugar) is in your blood.

#### Bolus - (bow-lus)

This is the insulin given to cover for food or to lower a high blood sugar. If you are on a pump, the amount of your insulin bolus is programmed into the pump. If you are on injections, you may have to count how many units of bolus insulin you need for a certain amount of carbohydrates and your blood glucose level.

#### Cannula-(Can-u-la)

A tiny flexible tube placed under the skin for insulin pump wearers. The insulin flows from the pump though this tube and into the body. The cannula is changed every 3 days and is inserted with a small needle. You don't need insulin shots when you are on the pump.

#### **Calibrate** (cal-i-brayte)

Making sure that all the numbers are the same between your blood testing strip and glucose meter, or between your glucose monitor and the Personal Diabetes Monitor.

#### **Carbohydrates**- (car-bo-hi-dray-ts)

A type of food group made up of either simple or complex sugars, or "carbs". Your digestive system turns starchy foods into the sugar your body uses as energy. Breads, pasta, fruit, chips and candy are common forms of carbohydrates.

#### **Continuous Glucose Monitor** - (CGM)

Is also called a CGM. It is a transmitter paired with a sensor you wear on your body to give updated BG information every couple of minutes. It allows you (and/or) a caregiver to see BG levels even if they are in a different place with a CGM receiver or a smartphone app. Data/downloads can be shared with your doctor to help them see patterns and trends and then make decisions for your treatment.

#### **Diabetes** (Di-a-bee-teez)

Is also called diabetes mellitus (mel-ee-tus) which means honey or sweet. It is a condition where an organ in your body called the pancreas (pan-kree-us) stops producing a hormone called insulin, which allows your body to use the sugar in the food you eat and turn it into energy and heat which is your metabolism (me-tab-owe-lis-m). Instead, with diabetes, the sugar remains in your blood instead of going into the body's cells and being used for energy.

There is more than one type of diabetes. Type 1 used to be called 'juvenile (joo-ven-ile) onset diabetes' or 'insulin dependent diabetes', and happens when the pancreas can no longer produce the insulin needed to turn carbohydrates into energy. In type 1, our immune system (our body's disease fighter) gets mixed up and attacks and destroys the cells in the pancreas that produce insulin. It is presently a lifelong condition most often diagnosed in young children. Smarter people than me still have not figured out why or how this can happen. It is not outgrown, and can also be diagnosed in adults. Only 5-10% of diabetics have Type 1. Insulin must be given by injections or through a tube in a pump. Type 2 used to only be found in adults, but now kids are getting it also. People with type 2 diabetes have a resistance to insulin. It does not always require insulin, and can often be controlled by what you eat, how much you weigh and if you get enough exercise. If you have type 2, you may be able to take pills to get their insulin, although they may need injections.

#### **Dip stick or Test strip** – (Dip-stik)

A chemically sensitive strip with small pads on it used to check and identify if you have a 'NORMAL, HIGH or low' reading (when looking for glucose levels or ketones). You can use blood or urine for this test. Be sure to read the instructions or do what your doctor says to find out how to use your strips properly for each test.

## Endocrinologist – (En-do-krin-ologist)

Diabetes doctor.

### **Finger Poke**

(see sugar check)

#### Glucose- (Gloo-co-s)

This is another word for sugar. Sugar in the blood is called blood glucose. Glucose is the main source of energy for your body's cells. Glucose comes from what we eat. Your body can make it from other things. Glucose is carried to the cells through the bloodstream. Several hormones (hor-mownz), including insulin, control glucose levels in the blood.

#### High-(Hi)

This happens when your blood sugar goes above the recommended range. Being above the normal range requires immediate action by correcting with insulin and extra liquids to replace the fluids lost through your urine (yur-in).

#### Hypoglycemia- (Hi-po-gl-eye-see-me-a)

Is a low blood glucose level. It's a temporary condition that happens to a diabetic who has had either too much insulin or not enough to eat or drink during heavy exercise. Hypoglycemia can be very dangerous, that's why it is VERY important to test your blood sugar and be careful about how much insulin you take. Hypoglycemia is corrected by eating or drinking something with sugar or using special glucose tablets. Don't miss any meals, eat enough, and if you are playing or doing too much exercise, don't forget to check and have a snack handy.

#### Insulin – (In-suh-lin)

It's the key ingredient your body needs to turn carbohydrates into energy and be able to use it properly. When you have type I diabetes, it is like a medicine you must always take in the right amount to stay healthy. It took from 1869, when Paul Langerhans found islets in the pancreas and other researchers until in 1921 when insulin was discovered by Dr. Frederick Banting and Charles Best from Canada. Then in January, 1922, Researcher John Macleod and chemist James Collip prepared the first dosage for human use. Cool right?

#### **Insulin Pump**

A medical device that some people who have diabetes can use to control when and how much insulin is used. This machine is worn outside your body with a tube that connects inside you. It helps the insulin travel from outside to inside your body, so there is a slow drip of insulin inside the body at all times, much like a pancreas would do to regulate blood sugars.

#### **IV**-(I-V)

Short way of saying Intravenous therapy (intra-vee-nus) which is when liquid substances are put directly into a vein (vayne). The word intravenous just means "within a vein"

#### **Islet cells**, **Islets**- (eye-let cellz or eye-letz)

The Islets of Langerhans is where insulin in produced in the pancreas. They were first discovered in 1869 by a student, Paul Langerhans, in Germany. 'Islet' is the Latin word for island.

#### **Ketones**-(also called ketone bodies) (key-tones)

Are made by the body when it breaks down fats to make energy. This process is called ketosis (key-tow-sis). The body usually gets the energy it needs from sugars (carbohydrates). Ketones are normally found in urine (yur-in). If ketone levels are very high or if you get dehydrated, ketones can start to build up in your blood. High blood levels of ketones may cause fruity-smelling breath, not being hungry, being nauseous and quick, deep breathing. A lot of ketones in the urine (yur-in) may be a symptom of diabetic ketoacidosis (key-tow-as-id-owe-sis), a dangerous condition that is caused by very high blood sugar levels and means you must make a correction very quickly, call the doctor and go to the hospital.

#### Lancet

A small needle at the tip of the blood sugar checker/finger poker.

#### Log book

Everyone needs to have a complete daily record of all blood sugar and blood glucose levels, which is used by your doctors and nurses to be able to help manage the insulin doses, so you can feel your best. Adding how you feel can be very helpful to add to your log book.

#### Low

When your blood sugar goes below the normal range, it must be treated immediately with carbohydrates or a prescribed amount of sugar like orange juice or milk and you must immediately stop any strenuous activity. There can be a risk of fainting or other serious consequences if it is ignored. Both highs and lows can happen while sleeping, so it is important to check blood sugar levels during the night, especially when you are growing. Some people use a continuous glucose monitor which beeps if you swing high or low too quickly.

#### On board

How much insulin is active in your body.

#### Pancreas -(pan-kree-us)

A part of your body (organ) above your intestine, that has special cells called Islets (eye-letz) of Langerhans cells, which produce insulin and other things that help regulate the levels of sugar in your cells and body.

## Pod / Pump / Glucose Meter

This looks like a regular glucose meter but it talks to your pod/pump, to keeps track of all of your blood sugar readings and suggests the amount of insulin you need to take to stay in a safe range. A small drop of blood is taken by a finger poke and applied to the strip. The monitor then reads your current blood sugar and asks questions to see if you are going to eat or not, then decides how much insulin you need before it sends the insulin into your body.

#### **Protein Buddy**

The idea of having a protein with a carbohydrate when having a snack or meal to slow down the absorbtion of carbohydrates.

#### **Pumps and Pods**

A different type of tube or tube-free Insulin Pump. It can looks like a little box with a tube, or it can be shaped like a pod about the size of half an egg, and uses a remote handheld computer called a PDM (Personal Diabetes Manager) to help regulate and record your blood sugars. It is usually changed every three days and the insulin is injected into a special resevoir - in the pump. The insulin drips in smaller amounts, whenever it is needed.

#### Snack

A snack is needed whenever you go low which often means you feel weird and light headed. You'll need 1/2 cup of fruit juice, non-diet soda, or two to four glucose tablets and you should be feeling better within 10 minutes. Check. Then eat half a peanut butter, meat or cheese sandwich. Check again in 10 to 15 minutes.

#### **Sugar Check**

Also called a Finger Stick, or Sugar Check is a way to test your blood sugar. The "poker" has a small needle called a lancet (lan-set) that pricks your skin. The blood is put on a little strip that goes into the blood glucose meter. Then the meter reads how much sugar is in your blood. Most people stick their fingers, but some people prick their lower arms and even their toes! Even though it sounds bad, it really doesn't hurt.

#### Range

Adults, teens and kids all have different scales of low, normal and high blood sugar levels. Your range will be determined by your doctor. Some countries use different measurement scales. Even the United States and Canada use different systems. There are many reasons why you can have a big change between readings, so it is important to work with your doctor to determine your healthy range and learn what to do when you are above or below those numbers.

## Site Change - (s-eye-t)

It is important to keep changing the spot where you get injections or where to attach the pump or pod pump to your body. Rotate fingers, arms, belly, bottom and tummy.

## **Team Helping**

A very special group of people including family, friends, doctors, nurses, teachers and even people you do not always know. They are proud to be part of the support group that helps you to stay happy and healthy and solve problems, hang out and just let you be who you are. They are THE BEST!

## Type 1

(see diabetes)

# Team Helping is a prescription for a better world.

If you, or someone you know, has just been diagnosed with diabetes (or any condition that changes or challenges your life) it is important to have a TEAM HELPING. If you are not sure if you have one, or how big or important it is; do this. Take at least one picture every day and make them into a collage, putting lot of pictures together. You will soon realize that your life is about daily routines, school or work, friends, family, coaches and LOTS of strangers who help you in ways you do not always realize.

My life is not just about diabetes...it is always part of my day, but it is not me, or my day.

