EMPOWER A HEALTHIER YOU

DOING DIABETES DIFFERENTLY

CHAD T. LEWIS

Including a foreword by

DR. IRL HIRSCH & DR. STEPHEN PONDER

Commentaries by Riva Greenberg, Ginger Vieira,
Dr. Jody Stanislaw, Delaine Wright, and Dr. Randy Elde

RIVER GROVE
BOOKS

This book is intended as a reference volume only, not as a medical manual. The information given here is designed to help you make informed decisions about your health. It is not intended as a substitute for any treatment that may have been prescribed by your doctor. If you suspect that you have a medical problem, you should seek competent medical help. You should not begin a new health regimen without first consulting a medical professional.

Published by River Grove Books
Austin, TX
www.rivergrovebooks.com

Distributed by River Grove Books

Design and composition by Greenleaf Book Group
Cover design by Greenleaf Book Group

Publisher's Cataloging-in-Publication data is available.

Print ISBN: 978-1-63299-599-5

eBook ISBN: 978-1-63299-600-8

First Edition

To Drs. Laird Findlay, Irl Hirsch,
and Richard Bernstein, and Patty—
people who saved my life

CONTENTS

FOREWORD

Dr. Hirsch

When insulin was discovered one hundred years ago, it was thought by many to be a "miracle cure." Soon after, it was clear that wasn't the case. Fast-forward to the 1980s, and patients were told that, with the new insulin pumps and human insulin, they could eat whatever they wanted whenever they wanted. Again, sadly that wasn't the case at all.

While there are many diabetes books to read, few can give such a large amount of information and with so much detail as *Doing Diabetes Differently*. Warning: This is not a book to buy on the day you or a family member are diagnosed with diabetes. Many of the topics and concepts are more sophisticated, and in fact, you would think Chad is a certified health care professional with his knowledge. But Chad's credentials are unimportant.

The greatest strength of this book is the attention provided for lifestyle, perhaps the least discussed topic when visiting a physician for routine diabetes management. The reason for this is understandable: In medical school or primary care residency curricula, very little attention is provided for nutrition and exercise *as it pertains to diabetes management*. When reading this book, it will become clear that some of Chad's comments are controversial. *This is a good thing!* We will never have randomized controlled trials on each aspect of nutrition or exercise, and on how much of this can be related to items also important to overall health such as anxiety, guilt, depression, and yes, even finances.

Aims of any article or book include making the reader more knowledgeable in addition to providing a new way to think about challenges, in this case with diabetes management. The ultimate goal would be to cause behavior changes. Being newly diagnosed with diabetes or even starting a new medication for many does not result in changes in lifestyle. *Doing Diabetes Differently* challenges the reader to think more critically about what they've been taught or how they've been living their life with diabetes.

—Irl B. Hirsch, MD, Professor of Medicine,
University of Washington School of Medicine

Dr. Ponder

Taking charge of one's life and health is an aspirational goal of mature adults. *Doing Diabetes Differently* aims at empowering the busy adult seeking to balance a full life while maintaining effective control over the ever-capricious *diabetes mellitus*.

I first met Chad in San Diego at a national conference. Chad

had read my book *Sugar Surfing* and attended the presentation I delivered on it at the conference. Afterward, we had several in-depth existential exchanges about our diabetes and the paths we had both taken through life with it.

Chad and I quickly recognized the common bond we shared in regard to wishing to share what we had learned through our experiences. In my case, it originated from blending my half-century living with type 1 diabetes with three decades as a clinician and researcher in the field.

Chad's life experiences, combined with his deep intellect, academic accomplishments, and critical thinking skills, make him an ideal vehicle to challenge the status quo of current diabetes self-care paradigms. At the time, Chad shared with me that he was already planning a carefully researched and vetted book aimed at the busy adult with diabetes who is "looking for more" than a formulaic approach to self-care.

Chad approaches this focused book with a passion to share what he has learned. The book takes a refreshing approach that aims to challenge the reader's assumptions about diabetes care. He clearly separates the wheat from the chaff with style and grace and successfully achieves his objective of helping the reader to frame good questions of their care providers. Those of us involved with diabetes care will also benefit from the reading.

Chad's keen intellect and avoidance of common cognitive traps makes this an informative and insightful book. It's a must-read!

–Stephen W. Ponder, MD, FAAP, DCES, Professor,
Joslin Medalist, and author of *Sugar Surfing:*
How to Manage Type 1 Diabetes in a Modern World

INTRODUCTION

I write to all persons with diabetes.* Although the disease has many faces, those of us with the condition are more alike than different in the challenges we face.

Maybe you're new to the disease, or perhaps it's been part of your life for years. Either way, I assume you've picked up basic information and might be using medication to manage your blood sugar. But things aren't working out. Your average blood sugars are too high. You may be insulin-dependent and experiencing too many lows. You may be on a glycemic roller coaster.

---

* I could have written "diabetic" here. But using *diabetic* as a noun is viewed as being insensitive by some, and doing so was discontinued by the American Diabetes Association in 2016. (After all, we should be defined by *who* we are, as opposed to *what* we are.) I avoid the term or use it sparingly throughout the book, even though viewing oneself as being "a diabetic" can be helpful for reasons covered in Chapter 3.

Care providers may have added more layers of medication. You're knocking yourself out with prescriptions to lower blood sugar as you try to eat correctly.

You've found yourself insanely doing the same things repeatedly while expecting different, favorable results. You're frustrated, distressed, and seeking answers, and you feel the need to do diabetes differently. If that's the case, this book is for you.

Doing Diabetes Differently offers answers in the form of carefully researched frameworks and perspectives, many of which are not taught in medical school. This book shows the importance of the mental part of diabetes and covers an approach for managing it that goes beyond just treating the symptoms of diabetes distress. You'll learn the futility of "dieting" and the *what* and *why* of dietary alternatives that work. The book also offers a new perspective on exercise and a doable way to make it happen. You'll learn why less is more when it comes to diabetes drugs, including insulin, and how this can help your pocketbook. You'll see how all the parts of a diabetes life—related to mental demands, nutrition, exercise, and drugs and devices—fit together in a framework for healthy living.

The book doesn't offer up answers just from me. I realized that other voices were needed, including some that may not always agree with me. Accordingly, I invited diabetes experts to add commentaries that appear throughout the book. These experts and the foreword authors constitute a *Who's Who* in the US diabetes community: Dr. Randy Elde, Riva Greenberg, Dr. Irl Hirsch, Dr. Stephen Ponder, Dr. Jody Stanislaw, Ginger Vieira, and Delaine Wright.

Others who influenced the book's content include internist Dr. Laird Findlay; diabetes medical writer Carol Verderese; clinical nutritionist Karl Minicin; Children with Diabetes

founder Jeff Hitchcock; diabetes author, educator, columnist, and blogger Wil Dubois; and Amber Clour, cofounder of the *Diabetes Daily Grind* and host of *Real Life Diabetes Podcast*.

Doing Diabetes Differently includes questions as well as answers. Each chapter concludes with questions you might ask your care providers—endocrinologist, primary care physician, diabetes care and education specialist (DCES), or nutritionist.† Other sense-making material includes recommended readings and other resources by topic. One-stop shopping! In this book, by topic, you'll discover a diabetes answer, a question you might ask to get one, or a reference you might consult to find one.

I promise that my writing goes well beyond a how-to manual based on a singular ray of light. I didn't write an "If I can do it, so can you!" trope. I also don't slam diabetes standard practice and conventional wisdom and, in the process, invent the One Best Way. Most definitely, I am *not* suggesting that you disregard your health care providers. On the contrary, my goal is to help you have more active and productive conversations with them. Occasionally, I do this by respectfully bouncing off established positions and published work of the American Diabetes Association (ADA) and various experts. But I don't grind an ax. We're all in this together.

A few words about why I wrote the book: Over the decades of living with type 1 diabetes, I've grown weary of watching people, especially my friends, being challenged by complications and even dying. Consequently, I decided to write a book to help people do the disease differently and better. I also wrote in the

---

† The terms "dietitian" and "nutritionist" are often used interchangeably. However, dietitians have higher education and certification standards, so I use the term "nutritionist" to capture the broader universe of all diet advisor professionals.

hope of expanding the conversation within the diabetes community, especially among care providers.

Also, I wrote to give back. Sales from *Doing Diabetes Differently* will benefit the Diabetes Daily Grind, a nonprofit organization dedicated to providing real support and resources for all people living with diabetes (diabetesdailygrind.com).

The views expressed herein are mine. Also, this is the place where I formally assert that I'm not a diabetes educator, nutritionist, exercise physiologist, or physician. I make no claims on which you should rely without active consultation with your health care providers. Indeed, a purpose of this book is to help you do this.

CHAPTER 1

THE SCOURGE

Diabetes doesn't often appear as a cause of death in obituaries or on death certificates. Of course, bereaved obituary writers may leave out such causes, or another cause is given: heart attack, stroke, kidney disease, and so forth.

The recent death of my friend Les was blamed on a heart attack rather than the real cause—diabetes. Les, a physically fit airborne Army Ranger during the Vietnam era, died in a hospital bed immobilized by diabetic vascular complications and neuropathy. Another friend, Jim, endured twelve hours of kidney dialysis each week and had a leg and the fingers on both hands amputated. He officially died from kidney failure, but diabetes was his real killer.

It's a daily struggle for the diabetic friends I still have with me. My weekly breakfast buddy at Wayne's Corner Cafe here on Camano Island, Washington, no longer goes crabbing; nor can he engage in other island adventures because of debilitating diabetic neuropathy. Another friend struggles, despite using the latest and greatest hybrid closed-loop insulin pump system.

I'm tired of my friends being taken down by a metabolic disorder. Hindsight is 20/20, but I believe their diabetes journey would have differed had they benefited from this book early on and done diabetes differently and better. The same may be true of you as well.

What Are We Talking About?

Making sense of diabetes begins with understanding what it is.

Diabetes is a metabolic disorder in which the body cannot properly use dietary macronutrients, especially carbohydrates. Carbs go beyond simple sugars found in foods like candy, pie, and cake. They include the complex carbohydrates found in supposedly healthy whole-grain bread, the fructose in fruit, and the lactose in milk. Even vegetables such as corn, carrots, and beets are full of carbs.

Eventually, except for some carbohydrates classified as dietary fiber, all carbs convert to circulating blood glucose. Dietary protein and fat also affect blood glucose (protein more so than fat). Circulating glucose signals beta cells in the pancreas to produce insulin that, in turn, lets glucose into body cells for energy, thereby stabilizing blood sugar levels at healthy, lower levels. Diabetes is diagnosed when blood sugar

rises to unhealthy levels because beta cells are destroyed or can otherwise no longer do their job.

High blood sugars are associated with diabetic complications. High-glycemic variability (frequent highs and lows on the glycemic roller coaster) also contribute to complication risk.[1] In the United States, diabetes is the leading cause of blindness, impotence, and neuropathy (which can lead to amputations), and kidney disease (which often leads to dialysis and death). Across studies, people with diabetes are up to five times more likely to have a heart attack or stroke than are nondiabetics.

TYPE 2

Over 90 percent of those with diabetes have type 2 diabetes (T2D). Most experience metabolic syndrome, the label given to a physiological process that leads to both insulin resistance (a reduction in insulin's capability to transport glucose into cells for use as energy) and the eventual inefficiency or failure of insulin-producing beta cells in the pancreas. When people experience insulin resistance, they need more of it, so pancreatic beta cells respond by producing more insulin. Simultaneously, beta cells start to die or otherwise become dysfunctional, which overloads the surviving beta cells left behind. As average blood glucose rises precipitously, full-blown type 2 diabetes is diagnosed.

Metabolic syndrome is associated with several risk factors: excessive belly fat in apple- versus pear-shaped individuals, high blood sugars toxic to beta cells, a poor diet high in both fat and carbohydrates, a sedentary lifestyle, and genetics. The underlying physiology is complex. One study identifies *eight* different

pathophysiological mechanisms involving insulin resistance and beta cell function that occur in insolation, or combination, that can lead to type 2 diabetes.[2]

Type 2 diabetes and being overweight go hand in hand. The condition is even referred to as "diabesity" in the literature.[3] Over 85 percent of those with T2D are overweight or obese; even being slightly overweight increases the risk of diabetes by five times. But being significantly obese increases the chances of type 2 diabetes by *sixty times*.[4] Height-weight-proportionate people with T2D are a puzzle, though. Nephrologist Jason Fung still attributes this, along with genetics, to excessive fat that's less visible because it is visceral as opposed to abdominal.[5]

Obesity is defined in the United States as having a body mass index (BMI) of 30 or greater. A BMI of 25 to 30 is simply overweight. A 5'11" man is obese at 215 pounds; a 5'2" woman, at 145. The *average* American comes close to these numbers. Based on the Centers for Disease Control and Prevention (CDC) data, the average American man is 5'9" and weighs 198 pounds; the average woman is 5'4" and weighs 171 pounds.[6] Go to any retail store or shopping mall in the United States and look around. A 5'9" male shopper weighing in at 198 pounds looks normal relative to everyone else walking by. Television programs have jumped on the bandwagon, with titles such as *My 600 Lb. Life*, *Family by the Ton*, *1000-Lb Sisters*, and *The Biggest Loser*. "Fat shaming" is discouraged in society, and that's a good thing. However, as individuals, should we also accept being overweight or obese as okay because it's commonplace?

T2D usually surfaces later in life. After years of poor nutrition, little exercise, and a growing waistband, a person with T2D might go to the doctor because of a funny numbness in their feet, or a man might have become impotent. There might be

vision problems. Whatever the complaint, T2D is diagnosed, and diabetes education typically follows.

A person with T2D is usually told they can live a long and normal life *if* they lose weight, exercise, *and* eat a balanced, healthy diet. Sometimes metformin, a drug that slows down the release of glycogen (stored sugar) in the liver and muscles, is also prescribed. But things often don't work out. The person keeps gaining weight and blood sugar remains high, so another drug or two (possibly a DPP-4 inhibitor, a GLP-1 agonist, an SGLT-2 inhibitor, a TZD [thiazolidinedione], a sulfonylurea, or a meglitinide) is added to the regimen to drive down hemoglobin A1c, a measure of blood sugar control over a two- to three-month period. A1c values may improve initially. Then, they don't.

All along, the health care provider may talk about the need for dieting and exercise and may even refer the T2D patient to a nutritionist, exercise physiologist, or both. But these interventions may still not work. The patient may be perceived to be uncooperative or "noncompliant." Eventually, as diabetes worsens, the prescribing care provider cuts to the chase and adds basal insulin to the mix. Eventually, mealtime boluses of fast-acting insulin may be added. All along, the drug regimen may include medication for the high blood pressure common in overweight or obese individuals and a statin to lower cholesterol. The person with type 2 diabetes might end up taking four, five, or more medications a day.

Again, A1c levels may improve until they don't. The person continues to battle weight gain. Complications progress. In the worst case, the person with type 2 diabetes falls apart and dies at a younger age than they might have, often from the cardiovascular disease that killed my friend Les or the kidney failure that killed my friend Jim.

TYPE 1

Type 1 diabetes, the other main type of diabetes, afflicts just 10 percent of the diabetic population. It occurs because of an autoimmune reaction that kills insulin-producing pancreatic islet cells. Myriad causes have been attributed to triggering this autoimmune reaction, such as drinking cow's milk as an infant, being exposed to a virus, and stress, to name a few, all accompanied by having a genetic predisposition.[7]

As insulin-producing pancreatic beta cells die off or otherwise become dysfunctional, cells in the person's body can't access free-circulating glucose, which accumulates in the bloodstream. The body is left to rely on fat stores rather than glucose for energy. Ketone bodies produced by fat burning make the blood more acidic, eventually leading to diabetic ketoacidosis (DKA).

As ketoacidosis progresses, the body tries to unload excess blood glucose through the kidneys. The undiagnosed person with T1D experiences incredible thirst and drinks fluids continuously and excessively. They pee away the day and night. Significant weight loss, hunger, and malaise follow. Hopefully, someone notices before the person slips into a coma and dies. A diagnosis is made after a trip to the doctor or emergency room.

Insulin therapy is restorative, so much so that when first widely available in 1922, it was viewed as a cure. Diabetes education follows. The person with T1D is informed that they can live a long and normal life *if* they eat a balanced, healthy diet *and* properly administer daily insulin delivered via pump or injection. However, this approach usually doesn't work very well. Most T1Ds live on a glycemic roller coaster, with many eventually experiencing significant complications. They may even plunge off the roller coaster and succumb from hypoglycemia or DKA long before a heart attack, stroke, or kidney failure kills them.

There are happy exceptions. Some people with T2D can reverse their metabolic syndromes through a healthy diet and exercise and thus eliminate their need for medication. Their blood sugars become normal, not because drugs, insulin, or both are driving them down, but because their metabolic processes have healed and are maintained in homeostasis while adequate pancreatic beta cell function remains. Some people with T1D survive for decades without significant complications. The famous Joslin Clinic in Boston awards a medal to fifty-year T1D survivors (see Figure 1.1).

Figure 1.1. Chad and his medal. Fifty-four years and counting!

No One Size Fits All

Diabetes is complex. For example, obesity is not always a precursor to type 2 diabetes. The fact that 85 percent of those with T2D are overweight or obese means that 15 percent are not. In

recent decades, children have been diagnosed with T2D, and 20 percent of American adolescents are now prediabetic.[8] There are now "double diabetics": obese, autoimmune people with T1D who have metabolic syndrome and insulin resistance. There is also an autoimmune variation of diabetes—latent autoimmune diabetes (LADA)—in which adults end up with the same treatment challenges as those with traditional T1D. Five novel subgroups of adult-onset diabetes were recently defined.[9] There is gestational diabetes that for many women eventually morphs into diabetes. Joslin Clinic researchers are among those who recently found that some persons with T1D still have insulin-producing beta cells that smooth disease management and prolong life expectancy. (A new sort of T1D?)

Different diabetes types and individual physiologic and metabolic differences determine the diabetes treatment protocols offered by care providers as well as the choices we must make about them. There are few pat definitions or answers across the board when managing the disease. For example, it would appear to be a no-brainer that you should eat a low-carbohydrate diet if you have diabetes. But even here, a special case allows for higher-carb eating for some (more on this in Chapter 5).

The Costs

Diabetes drives an unprecedented and costly health care crisis in the United States. As of 2017, almost one-third of all adult Americans either have diabetes or are prediabetic.[10] Only 10 percent of prediabetic people are even aware of their status, and according to one study, 70 percent of those who are prediabetic end up with the full-blown condition.[11] As impossible as it may

sound, by 2040 one-third of all Americans could have diabetes; that's more than *100 million people* who will require diabetes-related medical care.

In 2017, diabetes cost the United States $327 billion—$237 billion in direct medical costs and another $90 billion in indirect costs, such as those associated with missed workdays or reduced productivity.[12] That's 25 percent of all health care costs.[13] At $16,750 per year, the average health care cost of each person with diabetes is more than *double* that of one who doesn't have the condition.[14] Of course, financial costs will grow along with new cases. Can you just imagine the individual and societal financial burden when one-third of us have diabetes?

And yet, this epidemiological disaster hasn't triggered front-page treatment. That's surprising. During the fourteenth century, approximately one-third of all Europeans died from the bubonic plague. It's not a big stretch to contemplate an American future where one-third of all deaths are tied, at least indirectly, to diabetes. True, those killed by the medieval plague died immediately, whereas physical decline typically occurs over many years with diabetes. (But at least those who died of the plague died quickly and not in wheelchairs, blinded, impotent, or gangrenous.) You can bet the citizens of medieval England were keenly focused on the Black Death. Why isn't there the same sense of urgency with the diabetes epidemic?

A similar analogy can be drawn to the COVID-19 disaster that struck the United States in early spring 2020. The country had to wreck its economy to slow or stop the pandemic's progress. Hundreds of millions of people masked up and practiced social distancing. That same level of attention to diabetes, *a condition that has and will continue to maim and kill many more people than COVID-19*, just isn't there.

Boatloads of dollars do go into diabetes-related medical care, but that's primarily for treatment. What about public policy directed at prevention and cure? Given the extent of the problem both now and in the near future, you'd expect the equivalent of the Manhattan Project that built the atom bomb, the NASA funding that put us on the moon, or the attention and resources paid to COVID-19. But it's not happening. For example, National Institutes of Health (NIH) funding is at almost three times more for HIV/AIDS research than for diabetes *despite more than 30 times more deaths* attributed to diabetes according to the same data set.[15] (But the actual difference is vastly greater; diabetes-related heart attack and stroke deaths aren't counted in this comparison.)

Part of the problem may be that diabetes devastation happens gradually. It's a slow-moving train wreck rather than a dramatically fast one like COVID-19. As with today's inattention to global warming, it's easily put aside by both sufferers and government policymakers. The problem has crept up at all levels. And the creeping continues.

The good news is that we don't have to rely on the government to save ourselves. In fact, given the inadequacies of the status quo, we *must* rely on ourselves. An important purpose of this book is to help you do this.

Questions for Your Care Providers

- *Why have I been diagnosed with diabetes? What type is it?*
- *What are possible diabetic complications and how might they be prevented?*
- *Am I experiencing complications?*

- *If so, what are they and how might I mitigate or reverse them?*

At this point, it's important to work with your care providers to become as knowledgeable as possible about your type of diabetes and its likely prognosis. From there, it's important to understand the treatment options you have, as well as the rationale for your current treatment.

Further Reading

BOOKS

The following two books represent conventional wisdom and standard practice. The first is a bit dated but still representative. Although the second is written for people with type 1 diabetes, there's a lot there for those with type 2.

- American Diabetes Association. *American Diabetes Association Complete Guide to Diabetes: The Ultimate Home Reference from the Diabetes Experts*. 5th ed. Arlington, VA: American Diabetes Association, 2011.
- Wood, Jamie, and Anne Peters. *The Type 1 Diabetes Self-Care Manual: A Complete Guide to Type 1 Diabetes across the Lifespan for People with Diabetes, Parents, and Caregivers*. Arlington, VA: American Diabetes Association, 2018.

The following book is an example of an integrative (sometimes referred to as "functional") medical approach to diabetes treatment. Integrative medical approaches combine practices and treatments from both traditional and alternative medical care.

- Morstein, Mona. *Master Your Diabetes: A Comprehensive, Integrative Approach for Both Type 1 and Type 2 Diabetes*. White River Junction, VT: Chelsea Green, 2017.

I recommend the following books for all people with diabetes.

- Bernstein, Richard K. *Dr. Bernstein's Diabetes Solution: The Complete Guide to Achieving Normal Blood Sugars*. 4th ed. New York: Little, Brown Spark, 2011.
- Brown, Adam. *Bright Spots and Landmines: The Diabetes Guide I Wish Someone Had Handed Me*. San Francisco: DiaTribe Foundation, 2017.
- Edelman, Steven V. (and Friends). *Taking Control of Your Diabetes*. 5th ed. West Islip, NY: Professional Communications, 2017.
- Fung, Jason. *The Diabetes Code: Prevent and Reverse Type 2 Diabetes Naturally*. Vancouver: Greystone Books, 2018. (This book is not just for those with T2D; it contains plenty of good stuff for people with T1D as well.)
- Greenberg, Riva. *Diabetes Do's and How-To's*. New York: SPI Management, 2013.
- Hirsch, James S. *Cheating Destiny: Living with Diabetes, America's Biggest Epidemic*. Boston: Houghton Mifflin, 2006.
- Ruhl, Jenny. *Blood Sugar 101: What They Don't Tell You about Diabetes*. 2nd ed. Turners Falls, MA: Technion Books, 2016.

For those who use a continuous glucose monitor (CGM) or are interested in close control with a glucometer, the following book is a great resource.

- Ponder, Stephen W., and Kevin L. McMahon. *Sugar Surfing: How to Manage Type 1 Diabetes in a Modern World*. Sausalito, CA: Mediself Press, 2015.

PERIODICALS

- *Diabetes Daily*: diabetesdaily.com
- *Diabetes Daily Grind*: diabetesdailygrind.com. (Check out the outstanding podcasts!)
- *Diabetes Forecast*: This was the ADA's flagship publication for those living with diabetes and their families. The ADA ceased the print publication in September 2020 but replaced it online with *Living Healthily*, at diabetes.org/healthy-living.
- *Diabetes Self-Management*: diabetesselfmanagement.com
- *ASweetLife*: asweetlife.org
- *Taking Control*: tcoyd.org/newsletter. This is the newsletter of the Taking Control of Your Diabetes (TCOYD) nonprofit organization.

BLOGS AND OTHER RESOURCES

Following are great sources of information and support.

- Beyond Type 1: beyondtype1.org
- Bezzy T2D: bezzyt2d.com
- *Diabetes Daily:* diabetesdaily.com
- *DiabetesMine:* healthline.com/diabetesmine
- *Diabetes Strong:* diabetesstrong.com
- *DiaTribe:* diatribe.org
- *Six Until Me:* sixuntilme.com/wp. Kerry Sparling ended her excellent blog, but its fourteen years of archives are worthwhile and still available.

For the best diabetes blogs for 2022 according to *eMediHealth*, see Robert Floyd, "18 Best Diabetes Blogs to Help Manage Diabetes," *eMediHealth*, April 1, 2022, https://www.emedihealth.com/glands-hormones/diabetes/blogs-diabetes-management, and for a list of forums in general, see diatribe.org/diabetes-blogs-and-forums.

For mental health issues, a good reference is the ADA's *Mental Health Provider Directory*, found at professional.diabetes.org/ada-mental-health-provider-directory.

In-person conferences are an excellent way to get the latest and greatest from experts, to compare and contrast diabetes products on display, and to network with new friends with diabetes. The Taking Control of Your Diabetes (TCOYD) nonprofit organization (tcoyd.org/patient-events) does a great job with conferences. They have the top people in the diabetes world as presenters and host exhibits where you can learn about and compare and contrast all types of diabetes products and services. Conveners Drs.

Steve Edelman and Jeremy Pettus can be zany—for example, eating three donuts or three slices of pizza to check out insulin doses and blood sugar effects. Not something I do or recommend, but it's still instructive to watch (see tcoyd.org/2021/04/how-to-eat-three-donuts-and-stay-in-range and tcoyd.org/2021/10/battle-of-the-blood-sugars-the-pizza-challenge). Dr. Pettus also plays a mean guitar!

Families with diabetic children might consider attending the annual Children with Diabetes Friends for Life conference (childrenwithdiabetes.com/conferences). It's truly one of the best places to learn and to connect on behalf of your child.

The following resources are helpful for insulin users from all over the world.

- Integrated Diabetes Services: integrateddiabetes.com. This education service is led by Gary Scheiner. In the United States, call 877-735-3648; outside the United States, call 001-610-642-6055.
- Saluté Nutrition: salutenutritionpllc.com. Led by Jennifer Okemah, this service offers online diabetes nutrition, counseling, and device training. In-person education is available in the Seattle, Washington, area. Call 425-285-5877.
- Dr. Jody Stanislaw: drjodynd.com. The services offered by Dr. Stanislaw include a private program, a free introductory call and sign-up (see drjodynd.com/consultation), online courses (see thriving-with-t1d.thinkific.com/collections), and a monthly T1D membership program (see the-type-1-diabetes-crew.mn.co).