

5 WAYS TO LOWER BLOOD SUGAR QUICKLY • WAIST MANAGEMENT

DOUBLE ISSUE

33
RECIPES
INSIDE!

Diabetes[®]

SELF-MANAGEMENT

FIRE UP THE

GRILL!

GET READY, GET SET, GO!

TIPS FOR TRAVEL

12 DIABETES
MYTHS DEBUNKED

 SUMMER 2023

+ **KEEP AN EYE ON YOUR SIGHT**

For adults with chronic kidney disease (CKD) in type 2 diabetes (T2D)

The **ABCs** of **CKD**

A is for **Awareness** that CKD in T2D can lead to dialysis.

B is for **Belief** that there may be more you can do to slow its progression.

C is for **Choosing** to learn more about **KERENDIA**.

KERENDIA is a once-daily tablet that is proven to slow the progression of kidney damage that can lead to kidney failure and dialysis in adults with CKD in T2D.

KERENDIA also reduces the risk of cardiovascular death, heart attack, and hospitalization due to heart failure in adults with CKD in T2D.

K is for Kidneys and K is for KERENDIA.

Ask your doctor if KERENDIA could be right for you.



Indication and Important Safety Information

What is KERENDIA?

KERENDIA is a prescription medicine used to treat chronic kidney disease in adults with type 2 diabetes to reduce the risk of:

- Worsening of kidney disease
- Kidney failure
- Death due to cardiovascular disease
- Heart attack
- Hospitalization for heart failure

Do not take KERENDIA if you:

- Have problems with your adrenal glands
- Take certain medications called CYP3A4 inhibitors.

Ask your healthcare provider if you are not sure if you are taking any of these medications

Before you take KERENDIA, tell your healthcare provider about all your medical conditions, including if you:

- Have high potassium levels in your blood (hyperkalemia) or take medications that may increase potassium levels in your blood. KERENDIA can cause hyperkalemia. Your healthcare provider will check your potassium levels before and during treatment with KERENDIA
- Have severe liver problems
- Are pregnant or plan to become pregnant, or are breastfeeding or plan to breastfeed. Avoid breastfeeding during treatment with KERENDIA and 1 day after treatment



Scan code to
learn more.



Tell your healthcare provider about all the prescription and over-the-counter medicines you take, including: salt substitutes, vitamins, and herbal or potassium supplements.

- KERENDIA may affect the way other medications work, and other medications may affect how KERENDIA works. Do not start or stop any medicine before you talk with your healthcare provider. Avoid grapefruit or grapefruit juice as it may increase KERENDIA levels in the blood

The most common side effects of KERENDIA include:

- Hyperkalemia (potassium level in your blood that is higher than normal)
- Hypotension (blood pressure that is lower than normal)

- Hyponatremia (sodium level in your blood that is lower than normal)

You are encouraged to report side effects or quality complaints of products to the FDA by visiting www.fda.gov/medwatch or calling 1-800-FDA-1088. For Bayer products, you can report these directly to Bayer at www.adversereactions.bayer.com.

Please see the KERENDIA Prescribing Information here: go.bayer.com/KerendiaPI

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100 Bayer Boulevard, Whippany, NJ 07981.
PP-KER-US-1327-1 October 2022

Please see Summary of Important Information on the following page.



Important Facts About KERENDIA (finerenone)

About KERENDIA

KERENDIA is a prescription medicine used to treat chronic kidney disease in adults with type 2 diabetes to reduce the risk of:

- Worsening of kidney disease
- Kidney failure
- Death due to cardiovascular disease
- Heart attack
- Hospitalization for heart failure

Who should not take KERENDIA

- Patients who have problems with adrenal glands
- Patients who take certain medications called CYP3A4 inhibitors. Ask your healthcare provider if you are not sure if you are taking any of these medications

Warnings about KERENDIA

KERENDIA can cause the potassium levels in your blood to increase (hyperkalemia). Your healthcare provider will check your potassium levels and kidney function before starting and during treatment with KERENDIA. Before taking KERENDIA, tell your healthcare provider if you have high levels of potassium in your blood, or take medications that may increase potassium in your blood.

Before starting KERENDIA

Tell your healthcare provider if you:

- Have severe liver problems
- Are pregnant or plan to become pregnant, or are breastfeeding or plan to breastfeed. Avoid breastfeeding during treatment with KERENDIA and 1 day after treatment
- Take any prescription and over-the-counter medicines, salt substitutes, vitamins, and herbal or potassium supplements

What you should know while taking KERENDIA

- KERENDIA may affect the way other medications work, and other medications may affect how KERENDIA works. Do not start or stop any medicine before you talk with your healthcare provider
- Avoid grapefruit or grapefruit juice as it may increase KERENDIA levels in the blood

Possible side effects of KERENDIA

The most common side effects seen in people receiving KERENDIA were:

- Hyperkalemia (potassium level in your blood that is higher than normal)
- Hypotension (having blood pressure that is lower than normal)
- Hyponatremia (sodium level in your blood that is lower than normal)

Tell your healthcare provider if you have any side effects that bother you or do not go away.

The risk information provided here is not comprehensive.

How to get more information:

- Talk to your healthcare provider or pharmacist
- Visit www.Kerendia.com to obtain the FDA-approved product labeling
- Call **1-888-KERENDIA**

You are encouraged to report side effects or quality complaints of products to the FDA by visiting www.fda.gov/medwatch, or call 1-800-FDA-1088.

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The Dose

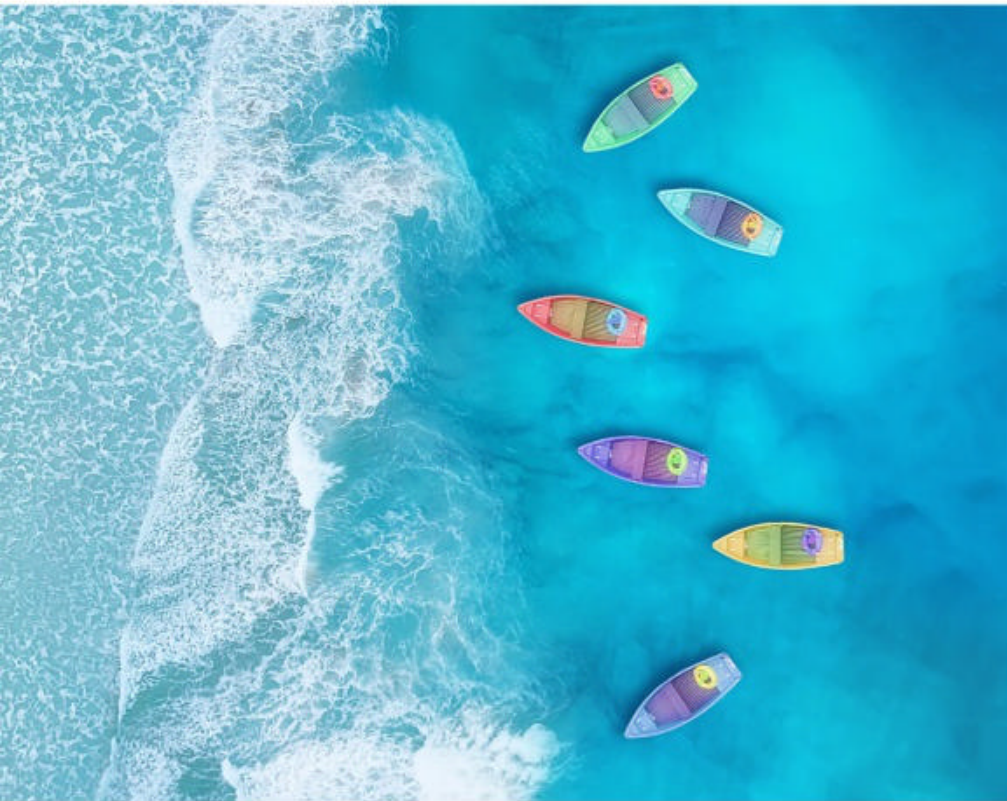
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Dear readers,

As the classic song goes, “Summer days, driftin’ away.” Looking to take advantage of the long days before the season has passed by? You’ve come to the right place!

With school out and vacation season in full swing, perhaps you’ve been bitten by the travel bug. Although taking a trip with diabetes requires a bit more preparation, you shouldn’t let it stop you from hitting the road. Learn about steps to take before your big adventure and factors to keep in mind while you’re away in “Get Ready, Get Set, Go!” (page 26).

The warmer weather and sunnier days may also have you eager to get outdoors and get in a bit of physical activity. But for many people, questions about how to manage glucose levels during exercise can prevent them from getting started at all. And if you use a hybrid closed-loop system to administer insulin, you may be even more unsure of the best approach to take. Fortunately, there are a variety of strategies for making the most of this technology while you work out. Learn more in “Going the Extra Mile With HCL” (page 52).

Perhaps grabbing a good book and spending the day at the beach or park is more your style. In that case, be sure to check out “Diabetes by the Book” (page 30) for some top picks. Whether you’re seeking nuts and bolts information on managing blood sugar, inspiration for handling emotional challenges, diabetes-friendly cookbooks, guidance on pregnancy and parenting, or something different, you’re sure to find a good read here.

Have a fun and healthful summer. And as another classic tune says, “See you in September!”

All the best,

Diane Fennell

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What Is Raynaud's Syndrome?

Everyone gets cold fingers and toes at times, but some people experience an extreme version where the skin turns white or blue. This may be a sign of a condition called Raynaud's syndrome. Learn about risk factors, symptoms, treatments, and more. bit.ly/3KiSht2



NUTRITION



Stock Your Kitchen With These Healthy Foods

Fallen off the healthy eating bandwagon? One way to help you veer back toward a more nutritious meal plan is to do a kitchen refresh. As the saying goes, "out with the old, in with the new!" Check out these food ideas to get you started. bit.ly/3UlrkcN



EXERCISE



Using the FITT Principle to Get Fit

A lot of barriers can pop up when you are trying to become and stay physically active. How can you choose the fitness program that will work best for you? Here's where the FITT principle comes in. bit.ly/3ZTHqvr



MENTAL WELLNESS



Stopping Stress Eating In Its Tracks

Stress is no stranger to any of us. If you find yourself frequently turning to food for comfort when times are tough, read on to find ideas to try to help you end emotional eating. bit.ly/3UgLKDV



RECIPE



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Exercise Protects Beta Cells

BY JOSEPH GUSTAITIS

One of the difficulties of diabetes is that it causes the progressive loss of beta cells in the pancreas. Beta cells create, store, and release insulin, and insulin controls the amount of glucose, or sugar, in the blood. Without enough beta cells, blood sugar can get out of control.

Beta cells have been extensively studied, but researchers have yet to find a medication that will prevent beta cell loss in people with diabetes. Now, however, researchers in Belgium have released a study that might point to a way of protecting these crucial cells—exercise. The researchers, who were from the Université Libre de Bruxelles in Brussels, published their paper in the European medical journal *Diabetologia*.

The researchers recruited 46 healthy young non-obese subjects, 26 women and 20 men, and organized them into two mixed-gender groups of equal size. Each participant was randomly assigned to different exercise regimens, which included stationary bike high-intensity inter-

val training (HIIT), adapted sprint interval training (aSIT), and vigorous-intensity continuous training (VICT) or high-intensity functional training (HIFT) performed at home three times a week for eight weeks. Five additional volunteers were not assigned to any of the exercise regimens but were asked to carry on their normal physical activities. These participants served as a control group.

After the test period was over, the researchers reported that the exercise training was, to use their word, “effective.” The researchers rated what’s known as VO₂ max, or maximal oxygen uptake, a basic measure of endurance that determines the maximum amount of oxygen a person can use during exercise, and found that it improved with all exercise protocols. The authors also observed “significant exercise-mediated beta cell protection ... at 4 and 8 weeks of training.”

That is, they measured cell death (a process that’s known as apoptosis) and reported a 29% to 32% decrease

in women and a 27% to 40% decrease in men. Taking all 46 participants together, there was a 28% to 35% decrease in apoptosis at four and eight weeks. The researchers then sought to find out if the protective effects of exercise lasted after the subjects stopped the exercise program. They collected serum from 13 of the participants two months later and, to their surprise, the protective effect was still there.

Because their study had rated young, non-obese, and non-diabetic individuals, the researchers decided to see if the benefits could be replicated in older overweight people with type 1 or type 2 diabetes and lower VO₂ values. After these participants underwent 12 weeks of aerobic and strength training protocols, the researchers reported that they also had improved VO₂ values and greater beta cell protection.

This research, the authors said, “uncover[s] the unexpected potential to preserve beta cell health by exercise training, opening a new avenue to prevent or slow diabetes progression.” **DSM**

TAKE A JOURNEY TO WELLNESS



If you or a loved one is living with type 2 diabetes, you probably have a lot of questions. In our free 21-day type 2 e-course, you'll find the information you need to live a happier, healthier life like:

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- How to deal with glucose spikes after meals
- How to lower A1C levels naturally
- Steps to preserve brain health and keep memory sharp
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QUIZ

TIME IN RANGE

BY NICOLE BERELOS, PHD, MPH, MSCP, CDCES, FADCES

Living with diabetes has its ups and downs, especially when it comes to blood glucose. For years, the hemoglobin A1C has been the gold standard for providing an overview of average glucose values from the previous two to three months. But now there is a new measurement in town—time in range (TIR). TIR comes from the data provided by CGMs (continuous glucose monitors). These devices obtain a glucose value every five minutes via a sensor worn on the body that transmits the information to a smartphone or personal device manager (PDM). There are currently four companies offering CGM systems in the United States:

- **Abbott** (FreeStyle Libre 3, FreeStyle Libre 2, FreeStyle Libre 14 Day)
- **Dexcom** (Dexcom G7, Dexcom G6)
- **Ascensia Diabetes Care** (Eversense E3)
- **Medtronic** (Guardian Connect)

Research has found that having a TIR (with the range defined as 70-180 mg/dl) at or above 70% is recommended for reducing the incidence of diabetes-related complications. For most people, readings lower than 70 mg/dl and above 180 mg/dl should be minimized. (Speak with your provider about your personal target range.) Take this quiz to see how much you know about TIR.

1. If I have access to my TIR data, then I don't need to get my A1C checked.

- True False

2. Having glucose values above 180 mg/dl is always safer than those below 70 mg/dl.

- True False

3. My blood glucose level on my meter does not match the reading on my CGM. Which is accurate?

- A. Meter. B. CGM. C. Both.

4. If I don't have a CGM, I can't determine my TIR.

- True False

See page 12 for answers.

PPIs LINKED TO CARDIO EVENTS IN T2D

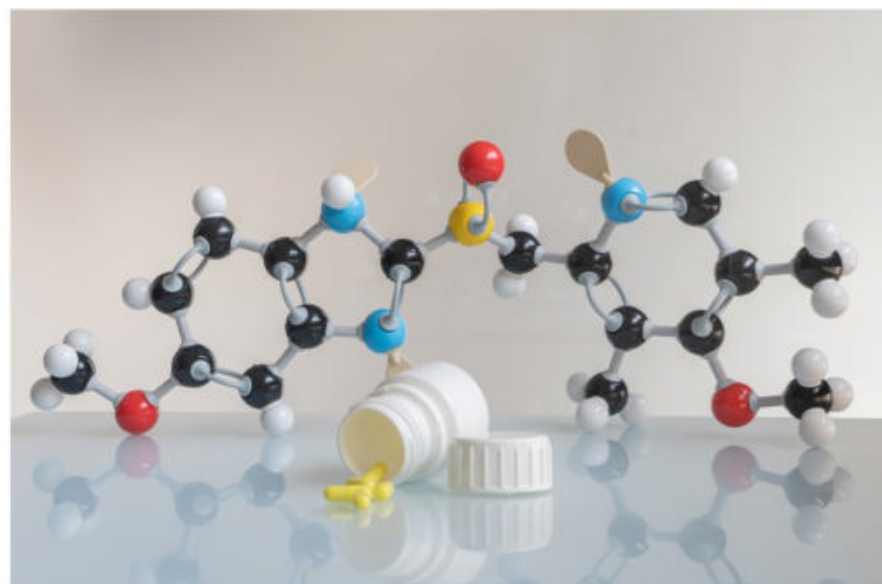
BY QUINN PHILLIPS

People with type 2 diabetes who take a proton pump inhibitor (PPI) drug are at greater risk for cardiovascular disease and death, according to a new study published in the Journal of Clinical Endocrinology & Metabolism.

PPIs are a widely used group of drugs to treat acid reflux and include both prescription and over-the-counter (OTC) options. For the latest study, researchers looked at the relationship between taking a PPI and various cardiovascular and mortality outcomes in 19,229 adults with type 2 diabetes. During a follow-up period that lasted a median of 10.9 to 11.2 years (depending on the outcome researchers looked at), there were 2,971 new cases of coronary artery disease (CAD), 1,827 heart attacks, 1,192 new cases of heart failure, and 738 strokes among study participants, along with 2,297 deaths from all causes.

The researchers found that taking a PPI was linked to a 27% higher risk of developing coronary artery disease, a 34% higher risk of having a heart attack, a 35% higher risk of developing heart failure, and a 30% higher risk of dying from all causes. There was no significant link between taking a PPI and the risk for stroke. These results remained consistent when the researchers looked at smaller groups of participants, including based on why they were prescribed a PPI, what diabetes drugs they took, and whether they took an antiplatelet drug to help reduce the risk for blood clots.

“Our data suggest that PPI use is associated with higher risks of [cardiovascular] events and mortality among patients with [type 2 diabetes],” the researchers concluded. “The benefits and risks of PPI use should be carefully balanced among patients with [type 2 diabetes], and monitoring of adverse [cardiovascular] events during PPI therapy should be enhanced.” (Speak with your health care provider if you have any concerns about a PPI you are taking.) **DSM**





Metformin Failure in Type 2 Diabetes

BY QUINN PHILLIPS

Failure of the type 2 diabetes medication metformin—meaning that the drug doesn’t adequately control blood glucose levels—was found to be common and linked to certain traits, especially a higher A1C level (a measure of long-term blood glucose control) before starting on the drug, according to a study in the *Journal of Clinical Endocrinology & Metabolism*.

Metformin is widely considered the first-line drug for type 2 diabetes, and its overall safety and effectiveness profile is considered excellent. The drug may also carry benefits aside from blood glucose control, including a lower risk for neurodegenerative diseases and a lower risk for needing joint replacement—benefits that may be linked to improvement in cellular function throughout the body. But sometimes metformin isn’t enough to adequately control blood glucose, and a large proportion of adults with newly diagnosed type 2 diabetes stop taking metformin—possibly due to a range of

factors, including the widespread but usually temporary side effect of digestive upset. Metformin also increases the risk for vitamin B12 deficiency, so it’s important to monitor for this.

For the latest study, researchers used electronic health records from a diverse group of 22,047 adults with type 2 diabetes who started taking metformin to identify factors linked to metformin failure. The overall rate of metformin failure—defined as not reaching an A1C level below 7% within 18 months of starting on the drug or needing to add an additional glucose-lowering drug—was 33%. The researchers built a statistical model that included a number of factors potentially linked to metformin failure, including starting A1C level, age, sex, and race or ethnicity.

The researchers found that starting A1C level was the single biggest factor in predicting metformin failure—with a higher A1C level making metformin failure more likely. When

the researchers started with this single factor, adding the other factors—age, sex, and race or ethnicity—improved the effectiveness of the model at predicting metformin failure. Some of the other factors, though, didn’t predict metformin failure by themselves—for example, when the researchers controlled for other factors, race or ethnicity was not significantly linked to the risk for metformin failure. This shows that the interaction between different factors—such as starting A1C level and race or ethnicity—may be important in predicting when taking metformin will not lead to adequate blood glucose control. (Speak with your provider if you have concerns about your blood glucose management on metformin.)

These results “[suggest] that routinely available clinical data could be used to identify patients at high risk of metformin failure who might benefit from closer monitoring and earlier treatment intensification,” the researchers concluded. **DSM**

QUIZ ANSWERS

See page 10 for questions.

1. False. For many years, hemoglobin A1C has been the gold standard for evaluating average glucose values over the preceding two to three months. The concept of TIR, on the other hand, is still very new, and not all providers are aware of this metric or how it can be beneficial for guiding treatment. Adoption of new technology is sometimes slow in health care, so providers will continue to use the A1C until another option is widely available. And for now, many medical professionals will look at both measures to optimize treatment.

2. False. Episodes of severe hypoglycemia (low blood glucose) are associated with a variety of dangerous consequences, including seizures and loss of consciousness. However, high glucose values can also, over time, lead to a variety of diabetes complications that affect multiple parts of the body, including neuropathy (nerve damage), nephropathy (kidney damage), retinopathy (eye damage), cardiovascular conditions, and more. High blood glucose can also result in the potentially life-threatening situations known as diabetic ketoacidosis (DKA, which is characterized by high blood glucose and levels of substances known as ketones in the blood and urine) and hyperglycemic hyperosmolar syndrome (HHS, which is characterized by high blood glucose and severe dehydration). Therefore, both high and low glucose values can potentially be dangerous, which is why maintaining a TIR at or above 70% is so beneficial.

3. C. The simple answer is that both are likely accurate. This is because a meter relies on readings from blood to calculate the glucose values, while a CGM calculates the values using interstitial fluid (fluid under the skin that surrounds the cells). With that being said, if both devices are functioning properly, the readings on your meter and CGM should be within 20% of each other.

4. True. A CGM will produce a new reading every five minutes, but people do not do finger-stick checks with a meter every five minutes to obtain comparable data. If you monitor numerous times per day, you could theoretically calculate the percentage of readings that were in your target range, but this information would not be nearly as accurate as calculations made with the data provided by a CGM. To learn more about TIR, visit bit.ly/3JUxrhH or doi.org/10.2337/ds20-0093.

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DIETARY WEIGHT LOSS EFFECTIVE REGARDLESS OF EXERCISE

BY QUINN PHILLIPS

A diet-based weight-loss program was found to be effective for weight loss and other health improvements regardless of how much physical activity participants were asked to engage in, according to a new study published in the journal *Obesity*.

Research has shown that even moderate weight loss—up to about 10% of body weight—can have significant health benefits in people with type 2 diabetes, including remission of diabetes (normal blood glucose levels without taking any glucose-lowering drugs). For the latest study, 374 adults with overweight or obesity were randomly assigned to one of three groups. The first group (124 people) took part in a diet-based weight-loss program without being asked to engage in more physical activity. The second group (127 people) did the diet-based program and was asked to engage in 150 minutes of moderate-intensity activity each week, and the third group (123 people) did the diet-based program and was asked to engage in 250 minutes of moderate-intensity activity each week. Weight loss and certain blood test results were assessed after participants completed 12 months of their prescribed program.

At the end of the study period, all groups experienced similar levels of overall weight loss. Average weight loss was 10.5 kilograms (23.1 pounds) in the diet-only group, 10.6 kilograms (23.4 pounds) in the group that got 150 minutes of activity, and 9.5 kilograms (20.9 pounds) in the group that got 250 minutes of activity. All three groups also had similar measures of cardiovascular and metabolic health as shown through blood test results, in areas including insulin resistance, cholesterol levels, and systemic inflammation.

“These findings highlight that an average weight loss of approximately 10% profoundly impacts biomarkers of insulin resistance and cardiometabolic disease in adults with overweight or obesity,” the researchers wrote. **DSM**

SHUTTERSTOCK

Cool New Products to Try

BY AMY CAMPBELL, MS, RD, LDN, CDCES



Etekcity Smart Scale

It's good to weigh yourself regularly, but you could be getting so much more from your scale if you use the Etekcity Smart Scale. For starters, using the VeSync app, you can track not just your weight but also 13 body measurements, including body fat, muscle mass, and body-mass index (BMI). You'll also be able to set weight-loss goals, monitor your nutrition and daily calorie intake, and keep tabs on how much water you drink, too. You can even sync your data with a variety of tracking apps. The Etekcity Smart Scale helps to motivate you to reach your personal health and fitness goals by giving you firsthand data. A smart investment in your health!

etekcity.com

Twinnings Cold Infuse Flavoured Cold Water Enhancer

Feeling a bit bored with your beverages? Has water become ho-hum? Maybe it's time to give your drink a refresh with Twinnings Cold Infuse Flavoured Cold Water Enhancers. Made from fruits and herbs and sweetened with stevia, these silky infusers are designed to brew in cold water to give you a delicious beverage that's perfect any time. They're sugar free and caffeine free and naturally flavored, too. One infuser contains just five calories. And they're so easy to use—simply drop one into your glass or water bottle. Wait five minutes, stirring or shaking occasionally, and enjoy! Choose from a wide assortment of fabulous flavors, such as Watermelon & Mint, Peach & Passion Fruit, and Lemon & Ginger.

twinningsusa.com



Copper Compression Arch Supports

If you're plagued with fallen arches, high arches, flat feet, bunions, or plantar fasciitis, you know how uncomfortable and even painful it can be to walk or be active in any way. Maybe it's time to try Copper Compression Arch Supports. These copper-infused compression bands are ultra-comfortable and can be worn under your socks and shoes for all-day relief and support. Just slip them on to lift your arches, reduce muscle strain, and provide soothing relief. Their four-way stretch construction helps with movement, and the moisture-wicking materials keep your feet cool and dry. Try these today and feel the difference in your feet right away!

coppercompression.com

Daily Living Challenges

Driver's license suspension, food aromas and glucose

BY GARY SCHEINER, MS, CDCES



Q At my recent endocrinology office visit, I met with a new physician. They noticed some low blood sugars on my FreeStyle Libre CGM (continuous glucose monitor) history. Without my knowledge, they contacted my state's Division of Motor Vehicles (DMV), and my driver's license is now suspended. Is this legal? I have never had a serious low while driving, and my CGM alerts me when I am starting to drop. What should I do?

A Driving laws, which vary from state to state, are in place to protect both drivers and the general public.

Licensed health care providers have a professional (and, in some cases, legal) obligation to report to the DMV anyone who might cause injury due to driving with an impairment. Reports are usually related to substance abuse or various degrees of dementia, but unstable diabetes

certainly qualifies as well. However, because hypoglycemia (low blood glucose) is episodic and mostly manageable (particularly with new technologies such as continuous glucose monitors), there is a lot of gray area.

In most cases, physicians only report people who are negligent in following reasonable safety precautions and whose hypoglycemia is extreme. They almost always give their patient a chance to “get their act together” before reporting them. Most states will reinstate a driver's license for those who remain free of significant hypoglycemia for a specified period of time and have a letter of support from their physician. But don't be surprised if your physician establishes certain monitoring and safety guidelines that you must follow—many states hold the provider liable if their patient gets into an accident.

I encourage you to have a non-threatening discussion with your

health care team to find out why they feel you are a danger behind the wheel. They may have a valid reason, and safety must take top priority. However, if you feel they are being overzealous and unrealistic, consider looking for a different physician.

Q My blood sugar seems to go up in the morning just from the aroma of breakfast cooking. Can the smell of food make blood sugar rise?

A In fact, just the opposite ... at least in people who still produce insulin.

The sight and smell of a meal stimulate immune cells in the brain known as the microglia. Activating these cells indirectly causes the nervous system to stimulate the pancreas, which triggers the release of insulin. This, of course, leads to a *lowering* of glucose levels.

The glucose rise you experience in the early morning may be due to something called the “dawn phenomenon”: increased production of glucose by the liver in the early morning hours. A healthy pancreas produces extra insulin to offset this temporary glucose rise, but people with diabetes may have to adjust their insulin or diabetes medications in order to keep glucose levels stable. (Visit bit.ly/3DKHBkF to learn more about managing the dawn phenomenon.) **DSM**

Gary Scheiner, MS, CDCES, has lived with type 1 diabetes for 30 years and was named Diabetes Educator of the Year 2014 by the Association of Diabetes Care & Education Specialists.

Have a question about diabetes? Email gary@integrateddiabetes.com.



Water Workouts

BY ROB DINSMOOR

Swimming is a great workout that builds strength and endurance while putting relatively little stress on the joints. If you never learned to swim, you might consider taking lessons, but there are other great exercises you can do in the water that offer many of the same benefits as swimming.

Water workouts make use of the water's resistance to turn ordinary movements into strength and endurance exercises. While some equipment, such as kickboards and foam dumbbells, can enhance your workout, there are plenty of exercises you can do without them.

Ways to get a full-body workout

Legs. For the legs, the simplest exercise is walking waist-deep in water for five or 10 minutes. It may sound easy until you actually try it! Stand tall, engage your core muscles, and walk, moving your arms as you go. You'll be surprised how quickly you get winded and how tired your legs get.

You can also hold onto a kickboard or the edge of a pool and practice kicks that you would normally use for swimming. You can flutter kick, rapidly alternating your legs up and down. You can scissor kick, simultaneously moving your legs in opposite

directions to an open position and then back closed. To do breaststroke kicks (or "frog kicks"), start with your legs extended, then draw your knees apart and toward your stomach, bringing your feet up near your butt, and then straighten and close your legs quickly behind you, bringing them back to the starting position. (Search YouTube for visual demonstrations of how to execute these different types of kicks.) Keep the kicks going for one to three minutes.

To perform leg lifts, start by standing waist-deep in water. Engaging your core muscles, lift your right leg, bending the knee until it is level with the water. After holding this position for a few seconds, straighten your leg and then lower it. Then do the same thing with your left leg, and continue alternating your legs. Work up gradually until you can continue doing this for five to 10 minutes.

Arms. Here are two arm exercises you can try. For the first one, begin standing shoulder-deep in water, keeping your arms relatively straight, your elbows close to your body, and palms facing forward. Raise your forearms out with your palms facing upward, bending at the elbow as if performing dumbbell curls. Then turn

your palms downward and lower your forearms to the starting position. Do this for 10 to 15 repetitions for one or more sets. If this is too easy, try it while holding foam dumbbells.

The second arm exercise involves moving your arms laterally (to the side). Standing shoulder-deep in water, start with your arms straight at your sides. With your palms facing upward, raise your arms to your side until they're level with your shoulders, and then lower them back to your sides with your palms facing downward. You can do this for one or more sets of 10 to 15 repetitions. These exercises, too, can be done with foam dumbbells.

As with any workout, it's a good idea to warm up a few minutes before your workout and cool down for a few minutes afterward by walking around slowly in the water. Staying hydrated is also important when doing any exercise, so keep a water bottle handy. ("Water, water everywhere, and not a drop to drink!")

Float on

Remember to check in with your health care team before getting started and to ease into the routine slowly. And above all, have fun diving into your new workout! **DSM**

Keep Calm and Stretch On

BY LAUREL DIERKING, MED, NASM, 700-ERYT

No matter where you live, a common goal during the summer months is staying comfortable and cool. For some, this is most easily achieved by heading to a shady spot outdoors, while for others, staying inside in the air conditioning is the best bet. But regardless of how the desire to beat the heat is achieved, it is not uncommon for the high temperatures to lead to increased sedentary time in many people's routines.

The health effects of being sedentary have become a popular area of study over the past decade, due at least in part to increasing levels of type 2 diabetes, high blood pressure, heart disease, and a variety of other related conditions. If you find that you are spending more time relaxing, whether it be indoors or out, during the warmer months, take a brief inventory of how much of that time is spent in a chair. (Go ahead and take an honest appraisal of your activity over the past week—no one is watching but you!)

As with anything we do consistently, our bodies adapt, adjust, conform, and compensate to make that activity easier. A great example of this is what happens when we exercise regularly—we get stronger, and the things that were once challenging become increasingly easier. But the same is also true on the completely opposite end of the spectrum. If we are frequently sitting, for example, this practice becomes easier.

The unfortunate pitfall is that

this makes what our bodies actually need to do—move—more difficult. This is because when we sit for extended periods of time, certain muscles become overstretched (namely the hamstrings and glutes, as well as most other muscles in the back side of the body), while others can become chronically shortened (such as the hip flexors, quadriceps, and many of the other muscles in the front of the body). This can lead to chronic poor posture, lower back pain, and poor blood circulation in the lower body and feet, to name just a few side effects of being sedentary.

Fortunately, stretching can be a win-win for those who spend less time moving in summertime. Done regularly, stretching can help improve movement; increase blood flow; decrease tension on the knees, hips, and lower back; and provide a sense of achievement (the ultimate medicine!). Try these simple stretches to keep your body calm, add more movement to your day, and gently help reverse some of the negative effects of being sedentary. **DSM**

Laurel Dierking, MEd, NASM, 700-ERYT, is a movement specialist with a concentration in yoga, strength conditioning, exercise physiology, and postural restoration. With more than 10 years of extensive experience, Dierking seeks to enhance self-awareness by guiding individuals through mindful movement, functional training, body awareness, and breath work.

SEATED FIGURE FOUR STRETCH

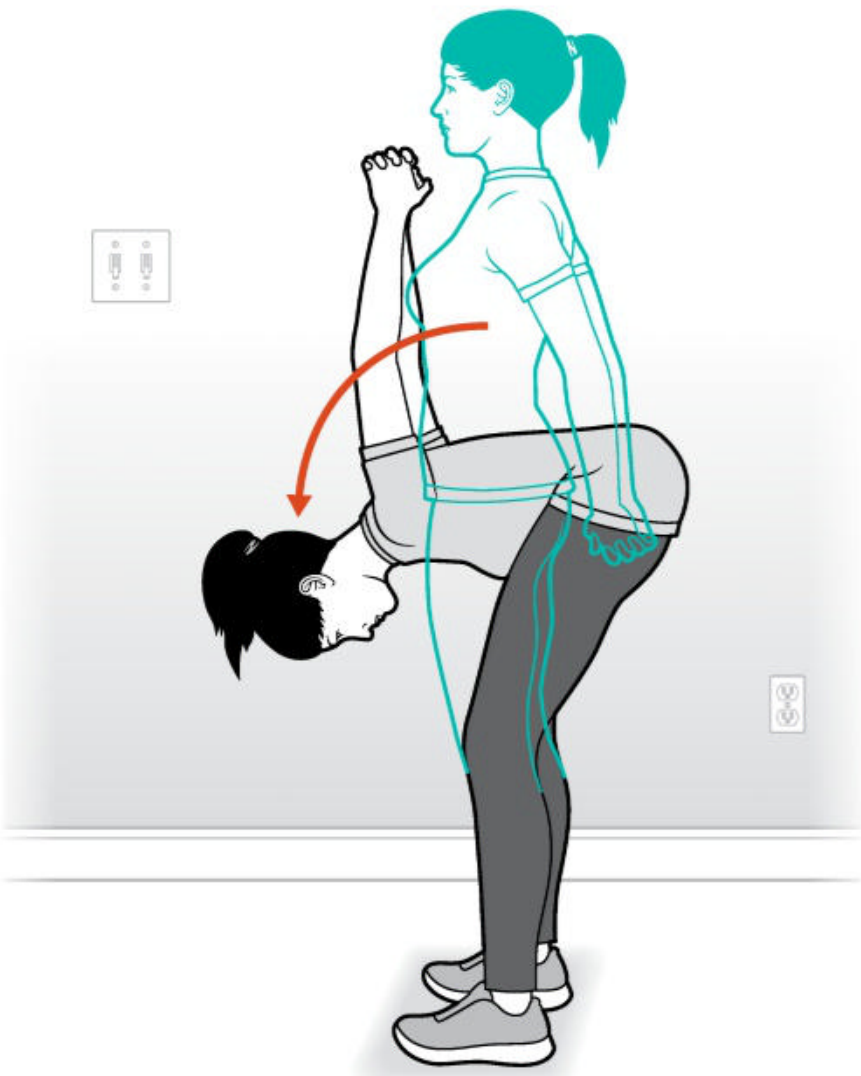
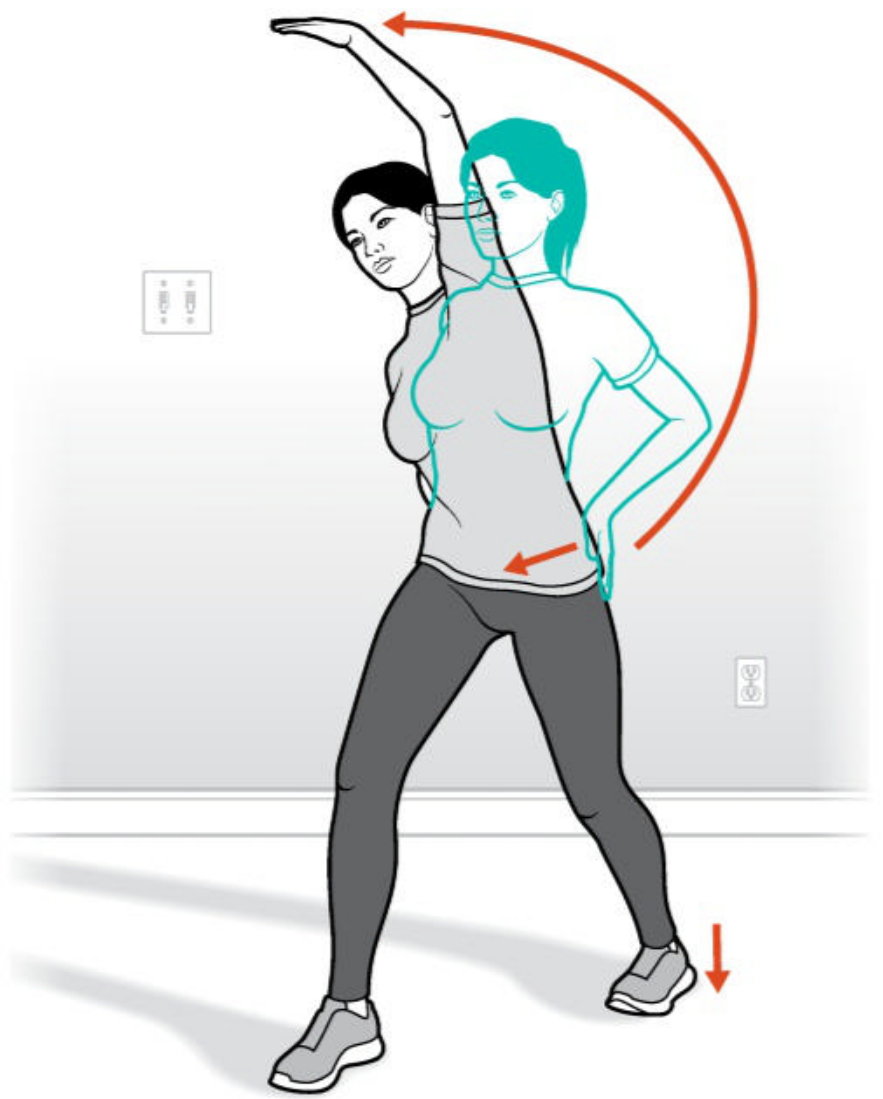
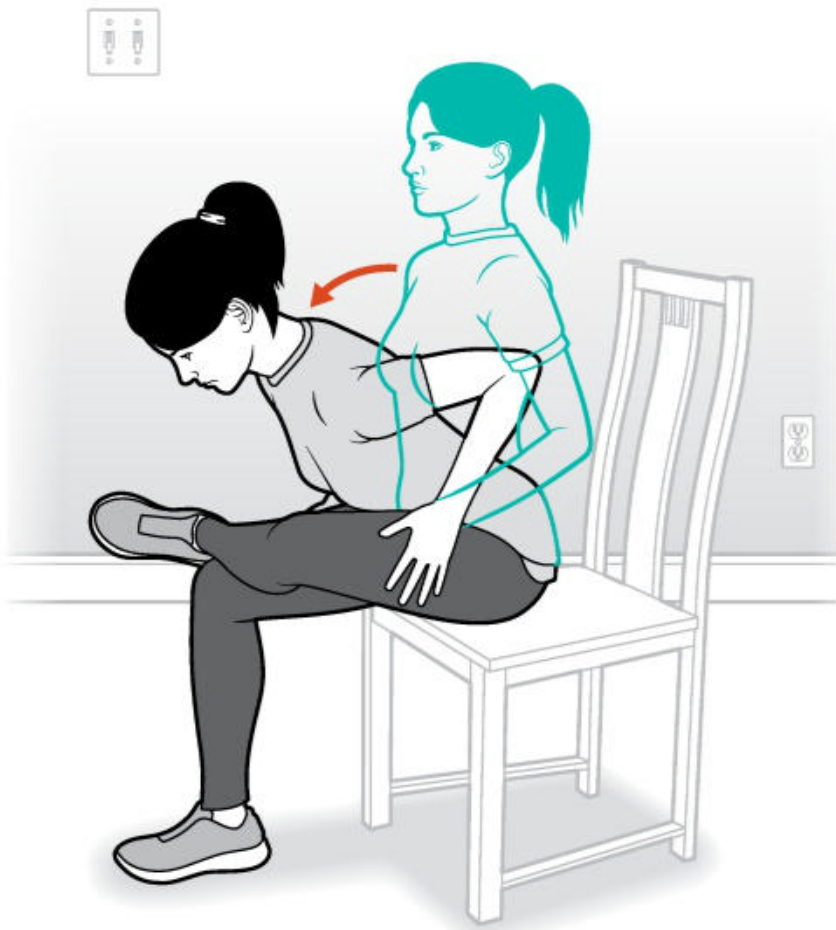
- Sit toward the front of a chair and cross one ankle on top of the opposite knee.
- Sit up very tall and bend forward at the hips, attempting to reach your chin past your top shin. You should feel a stretch in the back or side of the top, folded leg.
- Hold this position and breathe fluidly for five long breaths, or 45 seconds, before repeating on the other side.

STANDING HIP FLEXOR STRETCH

- Stand with one foot a full step (or more) in front of the other. The back heel should be firm on the floor, with your feet separated from side to side as though on railroad tracks (as opposed to with one foot directly in front of the other, like on a tightrope).
- “Push” the back foot into the floor as you attempt to press the same hip forward. If you are wearing pocketed pants, you should feel a stretch along the front pocket area of the back leg.
- To amplify this stretch, raise the arm that's on the same side as your back leg up overhead and side-bend gently to the opposite side.
- Repeat the full set of motions on the other side.

STANDING CHEST STRETCH

- Clasp your hands behind your back (palms facing one another and squeezing together). If you are unable to clasp hands, hold a belt, strap, or hand towel behind you.
- Attempt to raise your arms away from your lower back while lifting the chest upward. Hold this position and breathe for five slow breaths, or 45 seconds.
- To amplify this stretch, attempt to fold forward over bent knees while keeping your hands behind your back.





Make the Most of Summer

BY DR. NICOLA DAVIES, PHD

Summer is the best season for losing or maintaining weight. Indeed, not only do we naturally eat fewer calories at this time of year, but we also tend to be more active because of the longer days. However, too much heat can wreak havoc with glucose levels, making this a time when you need to be extra vigilant about your diabetes self-management. Here are some tips to help you reap the weight benefits of summer without negatively impacting your diabetes.

A summer-based diet

Our bodies need foods with a high water content in the summer to help cool us down and keep us hydrated. This is fantastic for weight management as well because these sorts of foods (such as fruits and vegetables) are typically quite healthful. For tasty summer fruits that won't cause a spike in blood sugar, think of berries and the like:

- Strawberries
- Raspberries
- Blueberries
- Cherries

Some equally tasty summer vegetables include:

- Eggplants
- Peas
- Zucchini
- Carrots
- Kale

Eat these foods on their own or find some delicious and healthful recipes you can include them in.

Summer-friendly exercises

When it comes to physical activity, bright summer days are much more motivating than the cold winter months. Whatever your outdoor activity of choice, whether it be walking, jogging, cycling, or something else, you will likely do it more frequently and for longer in the summer. You also will likely be more active between workouts, whether by taking strolls, gardening, or doing anything else that gets you out of the house. Research has shown that this movement between our scheduled workouts is just as important as the workouts themselves.

That said, it is important not to be overactive in the heat. If you plan to exercise outside, schedule it for early in the morning or in the evening when the sun is setting. It will still be bright, but you will appreciate not having the heat slowing you down.

Swimming—both outdoors and indoors—is the perfect exercise for the summer. It keeps you cool and refreshed while helping you lose or maintain weight.

Feeling good inside and out

The extra vitamin D from the sun isn't only going to help your weight but also your mood. So, as you embark on your summer health regimen, remember that your well-being is about more than your weight. To be healthy, you want to feel good inside as well. Have a wonderful summer! **DSM**

Dr. Nicola Davies, PhD, *health psychology*, is the author of *"I Can Beat Obesity! Finding the Motivation, Confidence and Skills to Lose Weight and Avoid Relapse."*



Condiments

BY AMY CAMPBELL, MS, RD, LDN, CDCES

Condiments can turn a ho-hum food into something fabulous. They are, after all, intended to enhance or complement flavors. Some people are very particular about the kind and even the brand of condiment that they use. And, believe it or not, there is etiquette for the use of some condiments. For example, the National Hot Dog and Sausage Council disapproves of adults putting ketchup on hot dogs!

When it comes to condiments that

give you a boost of nutrition, don't expect too much. That's because these flavorings are intended to be used in small amounts. Instead, focus on what you shouldn't be getting: A lot of carbs, sugar, saturated fat, and sodium, to be exact. Choose condiments that keep the carbs less than 5 grams, added sugar less than 4 grams (look for no-added-sugar options), and saturated fat less than 1 gram per serving. Keep an eye on sodium, too, especially if you have

high blood pressure or other health conditions where you need to limit your sodium intake. Less than 200 milligrams of sodium per serving is a good goal (and even less is better!). Finally, consider calories. Some condiments are so tasty that it's tempting to pile on another squeeze or spoonful. But calories can quickly add up. Go for lower-calorie options, such as hot sauce, mustard, or vinegar, if you just can't resist using a little more. **DSM**

	SERVING SIZE	CAL	CARBS (g)	SAT FAT (g)	PROTEIN (g)	FIBER (g)	ADDED SUGARS (g)	SODIUM (mg)
SMART								
Fix Sriracha, Signature	1 teaspoon	3.1	0.7	0	0.1	0	0.55	127
On the Border Mexican Grill & Cantina Medium Salsa	2 tablespoons	10	2	0	0	0	0	150
Heinz Tomato Ketchup, No Sugar Added	2 tablespoons	10	1	0	0	0	0	190
Dietz & Watson Deli Complements, Zesty Honey Mustard	1 teaspoon	20	4	0	0	0	4	30
Good Food for Good Organic BBQ Sauce, Classic, No Sugar Added	2 tablespoons	20	4	0	1	<1	0	150
Good Foods Chunky Traditional Guacamole	2 tablespoons	40	3	0	1	2	0	160
Cucina & Amore Pesto alla Genovese, Basil	1 ounce	90	2	1	1	0	0	130
SMARTER								
Primal Kitchen Ketchup, Organic and Unsweetened	1 tablespoon	10	2	0	0	0	0	105
Inglehoffer Sweet Hot Mustard With Honey	1 teaspoon	10	2	0	0	0	2	45
Madhava Organic Balsamic Vinegar	1 tablespoon	15	3	0	0	0	0	0
Hellmann's Light Mayonnaise	1 tablespoon	35	1	0.5	0	0	0	110
Herdez Traditional Guacamole	2 tablespoons	60	2	1	1	1	0	110
Boar's Head Traditional Hummus	2 tablespoons	80	3	1	2	1	0	100
SMARTEST								
Bragg Organic Apple Cider Vinegar	1 tablespoon	0	0	0	0	0	0	0
Heinz Malt Vinegar	1 tablespoon	0	0	0	0	0	0	0
Heinz Yellow Mustard	1 teaspoon	0	0	0	0	0	0	60
Westbrae Natural Vegetarian Organic Stoneground Mustard, No Salt Added	1 teaspoon	0	0	0	0	0	0	0
McIlhenny Co. Tabasco Brand Pepper Sauce	1 teaspoon	0	0	0	0	0	0	35
Hamptons Brine Raw Probiotic Cabbage Sauerkraut	2 tablespoons	5	2	0	0	1	0	15
Texas Pete Low Sodium Medium Salsa	2 tablespoons	9	2	0	0	0	0	45



Staying Hydrated: FAQs

BY ALISON MASSEY, MS, RD, LDN, CDCES

We all know we need to stay hydrated, but it is especially important for people managing diabetes. How to maintain adequate hydration, especially during the summer months, is one of the top areas of concern for many of my clients. I've compiled a list of the most popular questions I get on this topic to help guide you toward drinking the right fluids and eating the right foods during the warmest months of the year.

Q I've heard that dehydration can raise my blood sugar levels. Is that true?

A The body thrives when it has an adequate amount of hydration. Dehydration can indeed contribute to elevated blood glucose levels because the ratio of water to glucose (sugar) in your bloodstream has changed. In other words, having less water in your system means that the blood sugar is more concentrated. Some people who have diabetes might notice an increase in blood glucose levels of as much

as 50-100 mg/dl (or higher), even with mild or moderate dehydration. Warm weather, intense exercise, and illness can all contribute to mild or moderate dehydration. It's important to remember that severe dehydration can be life-threatening for someone with diabetes because of factors like concentrated blood glucose levels and potential electrolyte imbalances.

Q Is it true that alcohol and caffeinated beverages are diuretics and contribute to dehydration?

A First, it's important to understand how diuretics function: These substances cause water loss by increasing urine production. However, it's worth noting that increased urine production doesn't necessarily lead to dehydration. It is always a good idea to make a point of balancing beverages that contain diuretics, such as caffeine or alcohol, with hydrating beverages and foods. People with diabetes should also be particularly mindful when drinking diuretic beverages because they can directly impact blood glucose management.

Alcohol

When drinking alcoholic beverages such as beer, wine, and hard liquor, you might notice that you have to make more trips to the bathroom than usual. It's not just the extra fluid consumption that encourages extra urination. When the body processes alcohol, urination increases to help rid the body of the alcohol and waste products more quickly.

If consumed at all, alcohol needs to be used in moderation and with caution by everyone, but especially by those living with diabetes. The combination of alcohol and diabetes medications (particularly insulin and oral medicines from the drug class known as sulfonylureas) can contribute to an increased risk for hypoglycemia (low blood glucose).

In a similar vein, the liver has a variety of functions, one of which is breaking down toxins like alcohol. Another of its functions is to store carbohydrates and release them into the bloodstream between meals and overnight. Unfortunately, the liver is a terrible multitasker, and it will always

prioritize processing alcohol first over releasing stored carbohydrates. This can contribute to an increased risk for hypoglycemia, especially when alcohol is consumed without food.

To make matters more complicated, hypoglycemia due to alcohol consumption can occur hours after drinks have been consumed. Additionally, symptoms of hypoglycemia, such as slurred speech, drowsiness, dizziness, and confusion, can be mistaken for drunkenness.

The keys to staying safe and well-hydrated are to drink responsibly (if at all), eat when consuming alcohol, drink other nonalcoholic beverages, and discuss any questions or concerns about managing diabetes and alcohol consumption with your health care provider.

Caffeine

Many of us start the day with a caffeinated beverage for a boost of

energy. Consumed in moderation, caffeine may have some potential health benefits. It does, however, have a mild diuretic effect, which increases the need to urinate. While consuming a cup or two of coffee or tea in the morning may not contribute to an increased risk of dehydration, it's important for people with diabetes to know that caffeinated beverages can impact blood glucose levels, with effects differing depending on the person.

In some people, caffeine can raise blood glucose levels, while others may not see as much of an impact. Some research suggests that caffeine might increase insulin resistance (a condition in which the body needs extra insulin to maintain normal blood sugar levels), and it also can stimulate the release of adrenaline. Monitor your blood glucose levels the next time you have your caffeinated beverage of

choice to see how it impacts you.

Q Are there any foods that I can eat during the summer months to help me stay adequately hydrated?

A According to the European Hydration Institute, approximately 20-30% of our water or hydration intake comes from solid foods and about 70-80% comes from drinking water and other beverages. In my opinion, the summer months are the best time of year to make the most of hydrating food sources because seasonal, fresh produce is so plentiful. See the table below to learn about some top picks. **DSM**

Alison Massey, MS, RD, LDN, CDCES, is a registered dietitian and certified diabetes care and education specialist in Maryland. She blogs at flourishmyhealth.com.

TOP 20 FOODS TO HELP YOU STAY HYDRATED THIS SUMMER

Here is my roundup, in alphabetical order, of the top 20 foods to choose during the summer months to hydrate. The foods listed here all have greater than 80% water content per serving.

1. BELL PEPPERS (94% WATER)

Nutrition facts (1 cup): 30 calories, 7 grams of carbohydrate

2. BROCCOLI (90% WATER)

Nutrition facts (1 cup): 35 calories, 6 grams of carbohydrate

3. CABBAGE (92% WATER)

Nutrition facts (1 cup): 23 calories, 5 grams of carbohydrate

4. CANTALOUPE (90% WATER)

Nutrition facts (1 cup): 59 calories, 13 grams of carbohydrate

5. CAULIFLOWER (92% WATER)

Nutrition facts (1 cup): 28 calories, 5 grams of carbohydrate

6. CELERY (95% WATER)

Nutrition facts (1 cup): 16 calories, 4 grams of carbohydrate

7. CUCUMBERS (95% WATER)

Nutrition facts (1 cup): 18 calories, 4 grams of carbohydrate

8. HONEYDEW MELON (89% WATER)

Nutrition facts (1 cup): 56 calories, 14 grams of carbohydrate

9. ICEBERG LETTUCE (95% WATER)

Nutrition facts (1 cup): 14 calories, 3 grams of carbohydrate

10. KALE (88% WATER)

Nutrition facts (1 cup): 33 calories, 6 grams of carbohydrate

11. MUSHROOMS (91% WATER)

Nutrition facts (1 cup): 21 calories, 3 grams of carbohydrate

12. ORANGES (87% WATER)

Nutrition facts (1 cup): 86 calories, 18 grams of carbohydrate

13. PEACHES (88% WATER)

Nutrition facts (1 cup): 71 calories, 16 grams of carbohydrate

14. RADISHES (95% WATER)

Nutrition facts (1 cup): 18 calories, 4 grams of carbohydrate

15. ROMAINE LETTUCE (94% WATER)

Nutrition facts (1 cup): 8 calories, 1 gram of carbohydrate

16. SPINACH (92% WATER)

Nutrition facts (1 cup): 7 calories, 1 gram of carbohydrate

17. STRAWBERRIES (91% WATER)

Nutrition facts (1 cup): 53 calories, 11 grams of carbohydrate

18. TOMATOES (94% WATER)

Nutrition facts (1 cup): 32 calories, 7 grams of carbohydrate

19. WATERMELON (92% WATER)

Nutrition facts (1 cup): 47 calories, 12 grams of carbohydrate

20. ZUCCHINI/SUMMER SQUASH (94% WATER)

Nutrition facts (1 cup): 23 calories, 5 grams of carbohydrate



Eat, Drink, and Travel!

Food tips for your trip

BY SUSAN WEINER, MS, RDN, CDN, CDCES, FADCES, AND T'ARA SMITH, MS

Ready to plan your next travel adventure? If you live with diabetes, planning for a trip involves much more than deciding which clothes to pack and when to book travel. In addition to organizing your diabetes supplies, securing extra medication and backup devices, determining whether your diabetes tech can go through security scanning machines, and more, you might also be thinking about what to eat and how different food might affect your blood glucose levels while away from home. The key to managing diabetes and eating well while traveling is having a plan you can rely on. Whether your upcoming trip is a weekend getaway with friends or a lengthy visit to an exotic destination, it's exciting to experience new and

delicious cuisine at a novel locale.

Ready for a great trip? Here are our top seven food and travel tips for your upcoming adventure!

1. Stay hydrated by packing a reusable water bottle.

Bring your favorite reusable water bottle on your trip. In addition to saving money, it's good for the environment, since you won't have to purchase water bottles on your daily excursions. You can fill up your reusable bottle in restaurants, local coffee shops, and gyms, which often have filtered water. Adequate fluid intake can help prevent dehydration. Mild to moderate levels of dehydration (especially if you are vacationing and exercising in hot weather) can elevate your blood glucose levels.

SUSAN SAYS :

If you're flying, leave the water bottle empty until after you go through security. That way, the Transportation Security Administration (TSA) won't ask you to throw it away. Also, know the water source! Check to see if your destination has a drinkable water supply. When in doubt, don't drink tap or well water or anything that was made with it, including mixed drinks or ice cubes. Fill your reusable water bottle with filtered water only where you completely trust the source. If you can't fill your reusable water bottle with filtered water, opt for sealed, bottled water. The Travelers' Health page from the Centers for Disease Control and Prevention (CDC) has great information: wwwnc.cdc.gov/travel

RESET AFTER YOUR VACATION WITH AN EASY ONE-BOWL RECIPE

T'ara's take: We love the versatility of one-bowl meals—you can have a little bit of everything! You can also throw these bowls together many times throughout the week with different ingredients, making this the perfect meal for people who want variety in their diet without spending a lot of time in the kitchen. This Curry Chicken and Sweet Potato Bowl is packed with sweet and savory flavors, along with nutrients your body needs as you adjust back to life post-vacation. If curry chicken and sweet potatoes aren't for you, make this recipe your own by choosing your favorite ingredients. For example, you may want to use grilled chicken or salmon as the protein

and brown rice or quinoa instead of sweet potatoes for the starch. And though this recipe uses curry powder, garlic powder, and other spices, feel free to experiment with different flavors.

Try these time-saving tips to make a meal like this come together as quickly as possible:

- Use rotisserie chicken or another premade or frozen protein.
- Use frozen or prechopped vegetables.
- If using rice or quinoa, buy the minute-made or microwavable versions.
- Steam veggies in a microwavable container.



T'ARA'S TIPS

If you're worried about the carb count of meals like this, you can adjust the portion of the carbohydrates you're using or you can add leafy greens or other filling vegetables such as cauliflower, carrots, broccoli, beets, fennel, Brussel sprouts, asparagus, and more. These vegetables help keep you full longer without spiking your glucose levels.

Curry Chicken and Sweet Potato Bowl

4 SERVINGS | ¼ OF TOTAL RECIPE

CAL 356 | FAT 11G | PROTEIN 34G | CARBS 36G

- 2 tablespoons canola oil or olive oil, divided in half
- 1 pound boneless, skinless chicken breast
- 1 teaspoon salt and pepper, divided in half
- 2 teaspoons curry powder
- 2 teaspoons garlic powder, divided in half
- ½ pound diced sweet potatoes
- 1 teaspoon chili powder
- 1 teaspoon onion powder
- ½ 15-ounce can low-sodium black beans
- 1 pound frozen broccoli
- ½ 15-ounce can corn
- 1 cup diced red onions
- 2 cups diced cherry tomatoes
- Cilantro or parsley for garnish

1. In a medium pan, heat 1 tablespoon of oil over medium heat and toss the diced chicken with ½ teaspoon of salt and pepper. Sauté until the chicken is slightly browned. Add the curry powder and 1 teaspoon of garlic powder and toss until the chicken is cooked through. Set aside in a food-safe container.

2. In a medium pan, heat the other 1 tablespoon of oil over medium heat and toss the sweet potatoes with the chili powder, onion powder, 1 teaspoon of garlic powder, and ½ teaspoon of salt and pepper. Cook the potatoes until softened. Set aside in a food-safe container.

3. In a microwave-safe container or a small saucepan, microwave or cook the black beans, broccoli, and corn separately. Add salt and pepper to taste.

4. Organize your bowl to include:

- | | |
|-------------------------|---------------------------------|
| 4 ounces chicken | 1 ounce corn |
| 2 ounces sweet potatoes | ¼ cup red onions |
| 4 ounces broccoli | ½ cup cherry tomatoes |
| 1 ounce black beans | Cilantro or parsley for garnish |

2. Let apps be your restaurant guide.

Technology has come a long way when it comes to helping us maintain healthy habits, no matter where we are. For instance, people with diabetes are no strangers to using apps to track their blood sugar, exercise, and food intake. Similarly, apps can help support healthier decisions while traveling.

“As technology has evolved, apps have emerged to offer advantages over scouring websites or using hotel concierge for food recommendations while traveling,” says Rachel Stahl Salzman, MS, RD, CDN, CDCES, of Weill Cornell Medicine in New York City. “Apps can be helpful to use while traveling for several reasons. They can help you find the right restaurant based on specific dietary parameters, location, or budget; offer the ability to make reservations right from the app; and even [provide] promotions or discounts.”

BONUS TIP: Use apps to plan

POPULAR FOOD TRACKING APPS

HAPPY COW TRAVEL

Search for vegan food and restaurants that meet a variety of specific dietary requirements and preferences (e.g., gluten free, cuisine type, takeout, etc.). Over 180 countries included. Restaurants, cafes, grocery stores, and more listed. Read reviews, upload photos. Available in several languages.

\$3.99 in the App Store and Google Play

YELP FOOD

More than 199 million worldwide reviews for businesses including restaurants, coffee shops, and bars. Online reservations.

FREE in the App Store and Google Play

CALORIE KING NUTRITION

Search by food types and brands. Nutrition information for over 150,000 foods and 260 fast-food chains and restaurants. Barcode scanning feature.

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TRIPADVISOR TRAVEL

Restaurant reviews. Online reservations.

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(Chart by Rachel Stahl-Salzman, MS, RD, CDN, CDCES)

your meals ahead of time to get an estimate of how many carbs you'll be consuming and if you need to adjust any medication dosages—especially insulin—to accommodate for it.

3. Plan ahead for snacks and meals.

Healthy eating at the airport? Maintaining balance while on the road? It's possible! Whether you are traveling by car, plane, train, or bus, pack a few of your favorite low-carb snacks. For example, bring a few servings of pumpkin seeds, roasted chickpeas, Brazil nuts, or unsalted almonds, walnuts, or pistachios. Consider mixing them all together in small bags and adding a dash of cayenne pepper seasoning for a flavor kick. Bring along packets of peanut butter and rice cakes, too. If you fly, bring nonperishable food items in your carry-on luggage. Put a few extra snack bags in your checked luggage as well, just in case you need additional snacks during your stay away from home.

Prior to heading to the airport, look online to see which restaurants are in your terminal and their menus. Some chain restaurants may offer an express version of their typical menu. Knowing what's near your gate will allow you to decide if you want to eat there and how to gameplan if you do.

BONUS TIP: Don't forget your favorite “low” snacks or glucose tablets! Keep at least two containers of glucose tablets in your carry-on and checked luggage in the event that you have low blood glucose. This way, you will have easy access to a fast-acting source of carbohydrate if needed. Before you travel, ask your doctor or health care provider to prescribe glucagon for low blood sugar emergencies.

4. Keep your guard up and your hands clean.

Getting sick can make it challenging to manage your glucose levels. To prevent foodborne illness, avoid raw meat, fish, shellfish, and eggs. (You can get sick from undercooked, raw, and contaminated foods and beverages.)

When traveling abroad, also avoid fruits, vegetables, and salads that might have been rinsed with contaminated tap water. According to the Academy of Nutrition and Dietetics, produce that is thoroughly cooked; fruits with a thick, intact peel or covering that you remove yourself (such as bananas or citrus fruits like oranges and grapefruits); pasteurized dairy that is served cold from a factory-sealed container; and well-cooked meat, poultry, and fish are considered safe.

Clean your hands often. Whether you're at home or abroad, proper handwashing is key to preventing foodborne illness. When soap and clean, warm water aren't available, use an alcohol-based hand sanitizer or antibacterial hand wipes instead. Pack them in your carry-on, purse, or backpack for easy access.

5. Go for convenience.

Map out convenience stores or supermarkets on your travel route. You can buy premade salads topped with grilled chicken, nuts, and beans; small bags of nuts; Greek yogurt; cheese cubes; or fresh fruit (keeping in mind the food safety tips noted above). Many convenience stores sell high-protein, low-carb items like hard-boiled eggs, jerky, chicken wraps, and more. Supermarkets often have hot and cold food bars where you can create variety with your meals.

Salzman shares, “If you're planning to prepare meals at your travel destination, using grocery delivery apps can also be helpful. These apps offer convenience and help ensure you have healthy food to prepare. They also are a major time saver—this way, you won't waste time driving out of the way to find what you need or waiting in long lines at the store, which can take away from the fun of your vacation!”

BONUS TIP: Susan says: Stay away from food that has been sitting at room temperature for over two hours, such as in a buffet or at a convenience store. If the food falls in the danger zone (40-140°F), it is

ideal for bacterial growth and may cause foodborne illness. Remember not to leave perishable food in your car for an extended period of time and always keep it in a cooler with ice packs. Foodborne illness is definitely something to be avoided, especially when traveling.

Keep Your Insulin and Other Medications at the Proper Temperature

Consider investing in a Frio pack (frioinsulincoolingcase.com) or similar product to keep your insulin and medications at the proper temperature while traveling. The Frio Insulin Cooling Case is a reusable evaporative cooler and does not require refrigeration. Simply soak it in water for five to 10 minutes, and it retains its cooling properties for a minimum of two full days.

6. Know what's on the menu before you go.

Constance Brown-Riggs, MsEd, RDN, CDCES, CDN, owner of CBR Nutrition Enterprises and coauthor of the “Diabetes Guide to Enjoying Foods of the World,” shares her tips for dining at restaurants when traveling. “It’s

important to do your research before your travel and familiarize yourself with the local cuisine and the restaurants you’d like to visit,” Brown-Riggs says. “What dishes would you like to try? Is it a higher-carb dish or primarily a protein dish? What foods are typically served with the dish? Look up recipes for authentic cuisine from your travel destination; this will help you get an idea of typical ingredients used. For example, do they include added sugar or high-carbohydrate sauces? Experiment with recipes before traveling to determine how your body may respond to particular dishes.”

The “Diabetes Guide to Enjoying Foods of the World” can help you navigate choices from familiar cuisines as well as new dishes. According to the Academy of Nutrition and Dietetics, this convenient guide provides information on native foods and flavors from across the globe, strategies for healthy eating, recommended healthful pleasures, dishes for special occasions (or smaller portions), and carbohydrate counts for popular dishes from 11 popular ethnic cuisines. It’s an easy-to-use reference that can help you quickly identify the best choices for a meal, whether preparing foods at home, eating in restaurants, or traveling abroad.

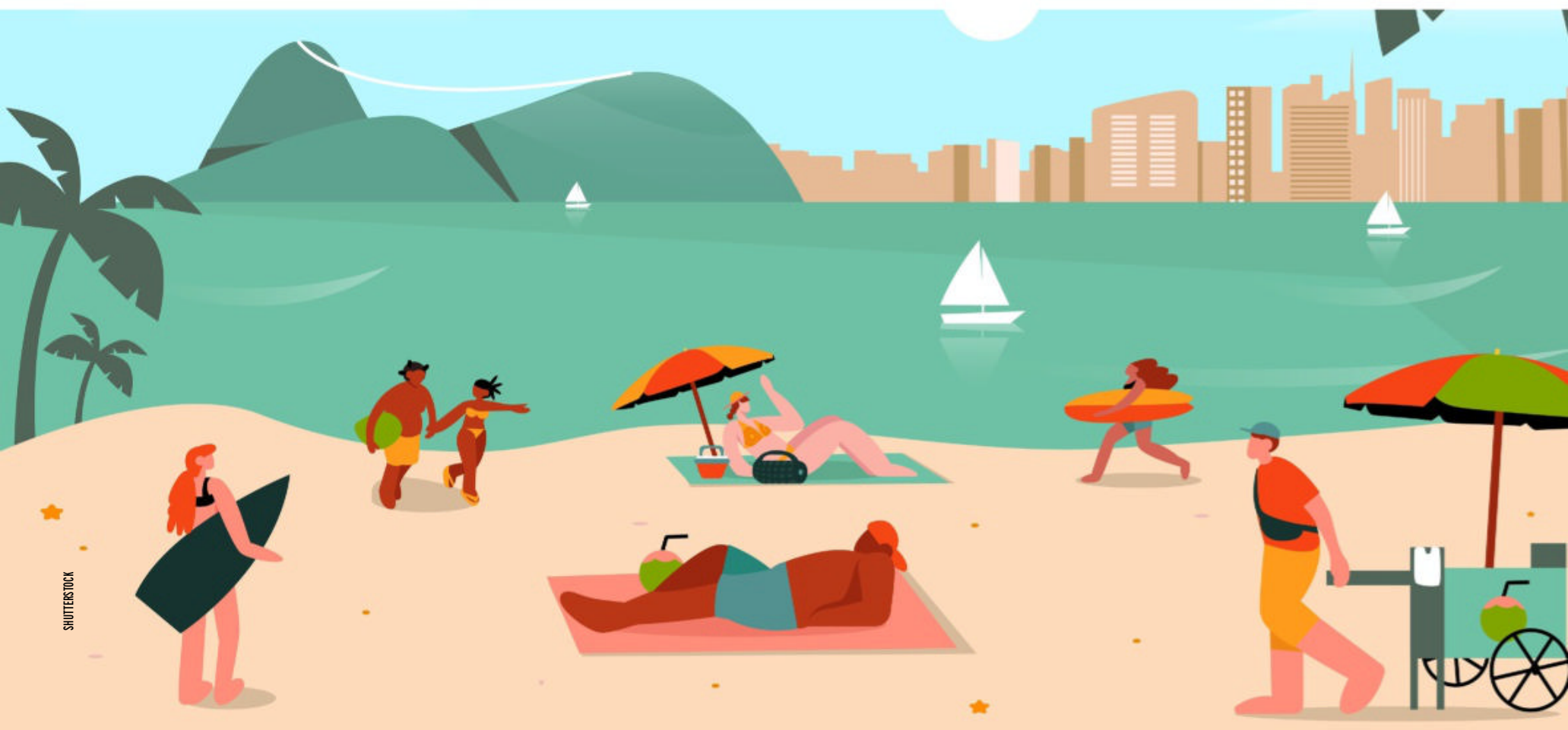
BONUS TIP: Brown-Riggs recom-

mends the Figwee app, which uses a photo-based carb counter that allows you to adjust the portion of food in real time. This feature lets you easily compare what is actually on your plate to images of different portion sizes on Figwee to determine the nutritional and carb content of your food. Brown-Riggs also recommends the Carbs & Cals: Diet & Diabetes app, which includes African, Arabic, Caribbean, and South Asian foods.

7. Don't forget to have fun!

T'ara's take: Along with the tips discussed above, don't forget to have fun! The goal is to manage your diabetes as best you can while traveling, but it's OK if you indulge. After all, that's what vacation is all about. Your regular routine will be waiting for you when you return home. **DSM**

Susan Weiner, MS, RDN, CDCES, FADCES, is the owner of Susan Weiner Nutrition, PLLC, and coauthor of “The Complete Diabetes Organizer” and “Diabetes: 365 Tips for Living Well.” **T'ara Smith, MS,** earned her master's degree in nutrition education and dedicates her professional life to helping people with diabetes thrive. Together, they created “Susan and T'ara's Kitchen” to share nutrition tips, original recipes, and healthy living ideas.



Get Ready, Get Set, Go!

Top tips for traveling with diabetes

BY AMY CAMPBELL, MS, RD, LDN, CDCES



NOTE Due to COVID-19, there may be travel restrictions to, from, and at your destination. Check frequently with the CDC's website for the latest and most accurate information: www.cdc.gov/coronavirus/2019-ncov/travelers.

SHUTTERSTOCK



If you have a goal to travel

the world, see new places, and meet new people, go for it! Don't let diabetes get in the way.

But be prepared. Travel requires a lot of planning, and if you have diabetes, you'll want to ensure you're extra ready so that your trip is both fun and safe. Different time zones, unfamiliar foods, delayed mealtimes, and more physical activity than usual are just a few of the factors that can make managing your diabetes challenging if you aren't prepared. By dealing with these issues before you get to your destination, you'll have a few less things to worry about and can spend your time enjoying your trip!

Get ready.

Once you've decided where you'll go, how long you'll be gone, and how you'll get there, there's still some more legwork to do around your diabetes management.

Check with your health care provider. This is the time to determine whether it's safe, health-wise, to travel. If you'll be flying or cruising the high seas, see your provider at least a month before your trip. Ask that they write you a letter of medical necessity stating that you have diabetes and why you need diabetes medicines and supplies. Ask about any vaccines that you may need and get prescriptions for your medications, as well. In fact, the International Diabetes Federation recommends bringing enough diabetes medicine, insulin, and supplies for the duration of your trip, plus extra in case you run out or something gets lost. (They suggest packing at least twice as much medicine as you think you'll need.)

Meet with your diabetes educator and dietitian. If you'll be traveling to a different time zone and you take insulin, you'll likely need to change the timing and possibly doses of your insulin. You'll also want to discuss other self-care behaviors, such as meal planning, sick-day rules, and foot care tips, with your educator, too.

Plan for medical issues. No one likes to think about becoming ill while

away, but you must be prepared, just in case. Find out where the local hospital, clinics, and pharmacies are in case there's an issue with your health or your medications. Visit wwwnc.cdc.gov/travel to check out any health and safety issues at your destination.

Purchase travel insurance. This is a wise thing to do in case of a missed flight, an illness that forces you to cancel your trip, or the need for medical care while you're away. Patricia DiPietro, RN, CDCES, a diabetes nurse educator at Good Measures, notes, "Medicare doesn't cover medical care outside the country, so consider getting medical travel insurance that will cover the cost of any expenses from illness or injury. If you don't have Medicare, check with your health plan to find out what they cover if you're traveling and need medical care."

Get your medications in order. In addition to making sure you have enough of all of your medications for your trip, along with refills, it's a good idea to identify a pharmacy at your destination. DiPietro advises, "Ask your local pharmacy if they will transfer your prescriptions to the other pharmacy (temporarily) so that you can get refills if you run out or lose your medicines."

Wear or carry medical identification. A bracelet or necklace is ideal, as emergency medical personnel are trained to look around your wrists or neck. (See page 54 to learn more about medical ID jewelry.) At the very least, purchase a medical alert ID card that you can keep in your wallet. Amazon and other online retailers sell medical alert identification. Your local pharmacy may carry medical identification products, as well.

Be choosy about footwear. Whether you're walking the streets of Paris, hiking in Yosemite, or relaxing in the Bahamas, proper footwear to keep your feet safe is a must. Bring appropriate shoes for your trip (walking shoes, hiking boots, beach shoes, etc.). Choose shoes made from soft and stretchable material, shop for shoes in the afternoon (your feet naturally expand over the course of

the day), and try shoes on with the socks that you'll be wearing for an accurate fit. Also, wear your shoes for at least a few hours before your trip to break them in. Consider packing a pair of sturdy slippers to slip into after a long day on your feet.

Get set.

You've booked your trip, met with your doctor, and discussed medications and food choices with your diabetes educator. You're almost ready to go! There are still a few more things to do to make sure your journey is smooth sailing.

Pack wisely. Put your diabetes supplies, such as your meter and medicines, in a carry-on bag. Never put your insulin in checked luggage. Speaking of medication, as noted above, bring at least twice as much as you think you'll need. And if you'll be in a car, bus, or RV, bring a cool gel pack to keep your insulin from overheating. Bring appropriate clothing for the climate, including extra shoes and socks, as well as slippers or sturdy sandals (never go barefoot!). Don't forget to pack unscented wet wipes to clean your hands and, if needed, your injection sites.

Think out food options. Whether you're on the ultimate road trip, flying the friendly skies, or sailing the high seas, you never know if meals might be delayed or served later than usual. Bring snacks that travel well, such as crackers, nuts and nut butters, granola bars, or whole fruits. If you'll be flying, contact the airline about meal options and ask for a diabetes-friendly or heart-healthy meal, if possible.

Be prepared for airport security. The Centers for Disease Control and Prevention (CDC) recommends getting a TSA notification card to help the security process go more smoothly. Download a card at bit.ly/315Dw4s. Don't forget to bring your doctor's letter that explains you have diabetes. If you wear an insulin pump and/or a continuous glucose monitor (CGM), ask to be wanded down as you go through security rather than going through the full-body scanner.

Tell others about your diabetes. If you're traveling alone or with a group of people who don't know you well, it's important that someone knows that you have diabetes in case of an emergency. You can let your flight attendant, ship personnel, or driver know when you board. Give them specifics on what to look out for and how they can help. If you'll be traveling internationally, learn how to say, "I have diabetes" and "I need sugar" in the language of the country you're visiting.

Go!

You're finally on your way! During your travel time and upon arrival, there are a few more things to keep in mind so that you can fully enjoy your trip.

Injecting insulin during travel. You've dutifully packed your diabetes supplies, including your insulin, in your carry-on bag. But now it's time to give yourself an injection. Kathy Casper, RN, CDCES, a nurse educator at Newton-Wellesley Hospital in Newton, Massachusetts, says, "Ideally, head to the restroom to give your injection. That way, if needed, you can make sure your injection site is clean by washing it with soap and water or using a wet wipe or an alcohol wipe. Plus, you'll have some privacy." Casper advises against injecting your medication through your clothing.

Keep tabs on meal and snack times. With all the excitement and chaos when traveling, it's easy to lose track of your routine and delay or even miss eating a meal or a snack. Always keep snacks handy and set an alarm on your phone to remind you when it's time to eat.

Watch out for lows. If you're at risk for low blood sugars, stash treatment for lows in easy-to-access places, such as your purse, tote, or carry-on. Glucose tablets, gumdrops, or other non-chocolate, non-liquid items are your best bets. Also, bring glucagon with you if it's been prescribed.

Move around during travel. To limit the risk of blood clots while you're on a plane, train, or bus or in a car, you should get up and move around at least once an hour. Plus, it's good to move to avoid stiffness. If walking around isn't an option, there are exercises that you can do while seated. Check out some ideas on the Healthy Travel blog at bit.ly/3JOieSt.

Stay hydrated. Be sure to drink plenty of water or other no-calorie beverages while you're traveling, as well as during your trip, especially if you are headed to a hot or humid climate. You'll also need to drink more water than usual if you plan to be doing a lot of sightseeing or physical activity.

Keep tabs on carbs. No doubt you'll want to sample the local cuisine—and you should! As much as possible, though, stick with your usual eating plan. Aim for a balance of foods; this means eating meals that contain some carbohydrate, vegetables, protein, and fat. Use a carb-counting app on your smartphone, such as CalorieKing or MyFitnessPal, to keep track of your carb intake. Or bring a pocket-sized carb-counting book with you.

Go easy with alcohol. Besides being dehydrating, alcohol can make it more challenging to manage your blood sugars. If you take insulin or a type of diabetes pill that lowers your

blood sugar, drinking alcohol can put you at risk for low blood sugar (hypoglycemia), so always eat something that contains carbohydrate if you choose to drink alcohol. Also, choose wine, champagne, light beer, or distilled spirits and shy away from mixed drinks and cocktails that may contain a lot of sugar (carb) and calories.

Check, check, and check your blood sugar. When you're away from home and out of your usual routine, your blood sugars may be very different. To avoid swings in your blood sugars, check more often than usual so that you can make a course correction, if necessary. If you use a CGM, pay close attention to those low and high glucose alerts. And don't go anywhere without treatment for low blood glucose if you're at risk for hypoglycemia.

Get your rest. Part of self-care is making sure you get enough downtime and sleep, no matter where you are. You might be eager to see and do it all, but overextending yourself can sap your energy, put you at risk for getting sick, and possibly lead to higher blood sugars. Take time to relax, de-stress, and get plenty of sleep.

For more tips on traveling with diabetes and other health conditions, as well as resources (including links for finding a doctor abroad), visit the International Association for Medical Assistance to Travellers (IAMAT) at www.iamat.org. **DSM**

Amy Campbell, MS, RD, LDN, CDCES, is a registered dietitian, certified diabetes care and education specialist, and CDCES Lead and Program Manager at Good Measures, LLC.



DIABETES BY THE BOOK

Books written by people with diabetes, for people with diabetes

BY SUSAN WEINER, MS, RDN, CDN, CDCES, FADCES



Bitten by the reading bug? Looking for new thoughts and ideas on how best to manage your diabetes? If so, there's a book out there for you! Books for people living with diabetes cover a wide range of important topics, including lifestyle approaches, blood glucose management, nutrition, exercise, diabetes burnout, organizing, pregnancy, empowerment, cooking, and so much more! But with so many great books about diabetes out there, how do you choose the best ones to add to your reading list?

Here are some of my top picks! All of these selections are written either by people living with diabetes or by parents of a child with the condition. You're bound to find at least one option that meets your needs and offers an abundance of practical tools, tips, and strategies to help you better manage life with diabetes. (Although many of these titles are written by people living with type 1 diabetes, much of the information is also valuable for people living with type 2.)

Get ready to build your bookshelf!

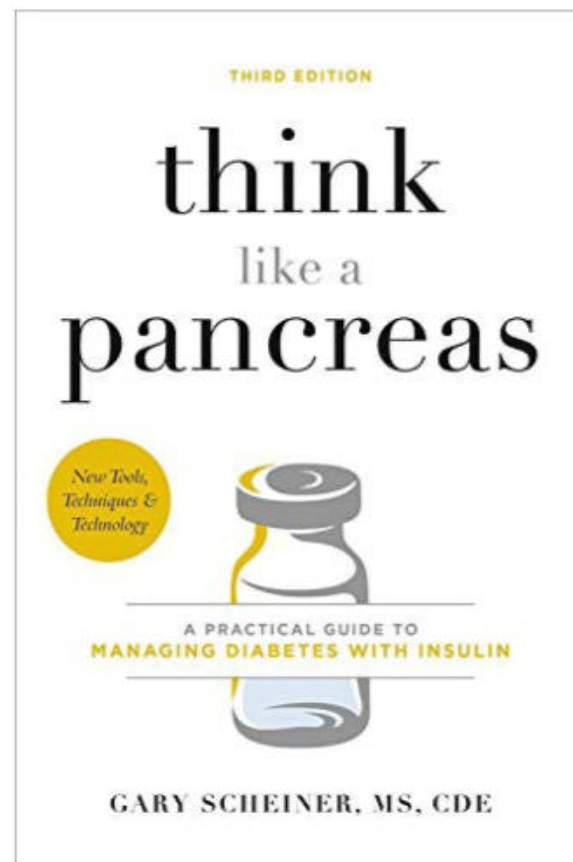
THINK LIKE A PANCREAS: A PRACTICAL GUIDE TO MANAGING DIABETES WITH INSULIN

By Gary Scheiner, MS, CDCES

A columnist for Diabetes Self-Management, Scheiner is a renowned author and speaker as well as the owner and clinical director of Integrated Diabetes Services (integrateddiabetes.com), a private practice specializing in intensive therapy for children and adults. He is also a master's-level exercise physiologist who has lived with type 1 diabetes for 37 years. Scheiner says, "Scientific knowledge is all well and good, but there is no replacement for knowing what it feels like to deal with the day-to-day ups and downs of diabetes."

"Think Like a Pancreas" takes complex ideas and explains them in simple, relatable, and actionable terms. Scheiner shares, "Managing

diabetes and intensive insulin therapy can be difficult and complicated, with multiple factors that influence glucose levels and just as many techniques and technologies to deal with it. This book helps to simplify the whole pro-



cess of diabetes management and gives readers essential tools to deal with a variety of situations." "Think Like a Pancreas" aims to guide the reader on how to self-manage diabetes by identifying patterns and taking a proactive approach to care.

Scheiner's other books include "The Ultimate Guide to Accurate Carb Counting: Featuring the Tools and Techniques Used by the Experts," "Diabetes—How to Help: Your Complete Guide to Caring for a Loved One With Diabetes" (coauthored with Diane Herbert, CDE, MSS, LSW), and "Until There's a Cure: The Latest and Greatest in Diabetes Self-Care."

SUGAR SURFING: HOW TO MANAGE TYPE 1 DIABETES IN A MODERN WORLD

By Stephen Ponder, MD, FAAP, CDCES, and Kevin L. McMahon

Ponder is a pediatric endocrinologist who was diagnosed with type 1 diabetes at the age of 9. "Sugar Surfing" (sugarsurfing.com), he shares,

"came about after years of using, prescribing, coaching, and speaking about continuous glucose monitoring (CGM) devices. As the technology behind CGMs improved a bit with each development cycle, I realized that this would become a standard of care for people who frequently need to check their blood sugars."

"The way the information from a CGM is presented," he continues, "the tiny data dots form lines that reveal repetitive shapes and patterns that [can] be visually and quickly interpreted by a user. This was how 'dynamic diabetes management' (aka 'sugar surfing') was born." He adds, "When combined with the circumstances of the moment, effective self-management decisions [can] be made to 'steer' the trendline. Things such as most recent insulin doses, food amount and type eaten, activity



How to manage type 1 diabetes
in a modern world

Stephen W. Ponder, MD FAAP CDE
Kevin L. McMahon

levels, and even stress, when combined with prior responses, [have] allowed me to develop a mastery of my glucose patterns 'in the moment.' Terms such as microdosing, pivoting, taking the drop, and nudging are all examples of sugar surfing practices. [Essentially,] sugar surfing is the art of managing blood sugar flux and drift."

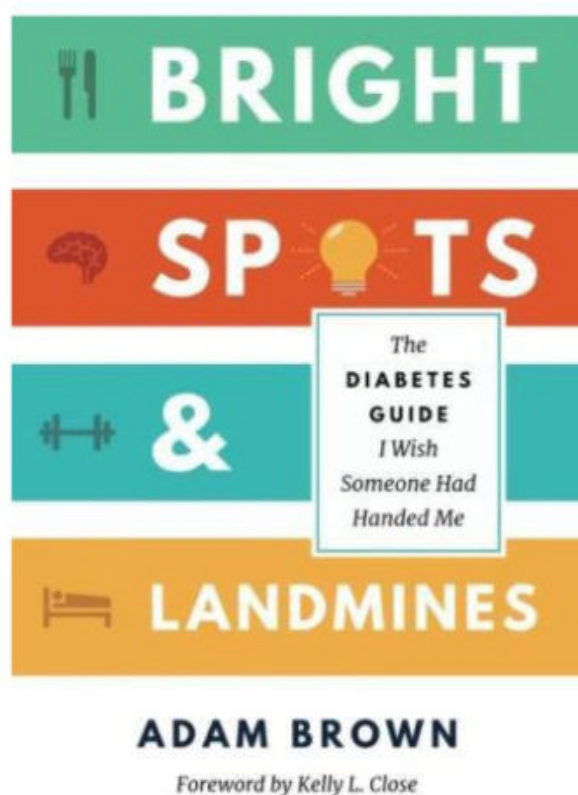
According to Dr. Ponder, sugar surfing is not dependent upon whether someone uses an insulin pump or injections to manage their diabetes. "I

wore an insulin pump for 35 years and have sugar surfed for over a decade now using multidose (injected) insulin," he shares. Highly effective diabetes self-management is rather about how decisions are made based on blood sugar pattern interpretation and analysis "in the moment."

BRIGHT SPOTS & LANDMINES: THE DIABETES GUIDE I WISH SOMEONE HAD HANDED ME

By Adam Brown

Brown is an author, speaker, and diabetes technology expert who earned his master's degree in Counseling Psychology. He has also lived with type 1 diabetes for over 20 years. In "Bright Spots & Landmines," Brown shares the specific foods, mindsets, exercises, and sleep strategies that have had a transformative impact on his diabetes. He includes tools and tips regarding food and how to minimize blood glucose swings; addresses diabetes stress, guilt, burnout, and frustration; explores



how to avoid blood glucose fluctuations during exercise; and more. Above all, he describes how to live life to the fullest with diabetes.

Brown notes that people with diabetes often focus on problems and mistakes, or "landmines," and

miss the bigger opportunities, or "bright spots." He defines bright spots as actions and habits that consistently yield positive results, and he believes these need to be at the center of diabetes care, personal habits, and health care more generally. Brown suggests that identifying what's working and finding ways to do those things more often typically leads to a more positive outcome. For instance, relative to foods, he highlights a "bright spot" thinking approach: "What happens on my smooth days with diabetes, and how can I have more days like that? What foods consistently keep my blood glucose in range, and how can I eat them more often?"

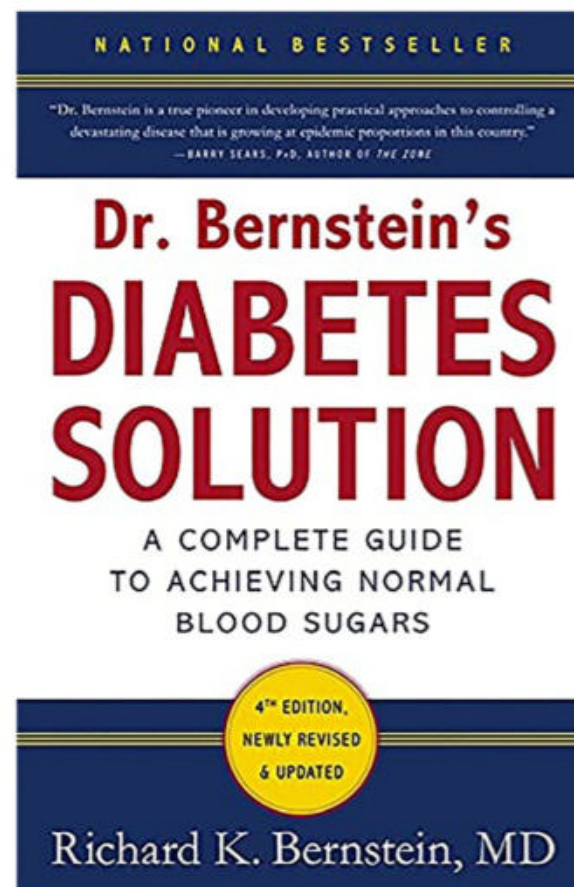
DR. BERNSTEIN'S DIABETES SOLUTION: THE COMPLETE GUIDE TO ACHIEVING NORMAL BLOOD SUGARS

By Richard K. Bernstein, MD

Dr. Bernstein was diagnosed with type 1 diabetes in 1946 at the age of 12. He is an endocrinologist whose diabetes management program is based on the philosophy that "everyone deserves normal blood sugars." Upon his diagnosis, Dr. Bernstein was advised to consume a low-fat, high-carbohydrate diet and dealt with high blood glucose levels and diabetes-related complications. He eventually was able to use a blood glucose meter (new and expensive technology at the time) and realized that he could manage his blood glucose with a combination of a very-low-carbohydrate diet, exercise, and small doses of insulin.

Dr. Bernstein's very-low-carbohydrate eating plan recommends no more than 30 grams of carbohydrate per day, with 6 grams of carbs at breakfast, 12 grams at lunch, and 12 grams at dinner. He concludes that since carbohydrates are ultimately converted into glucose in the body, carbs are sugar, which significantly impacts blood glucose levels.

If low-carb eating is an approach you want to explore, this book pro-



vides suggested timing of meals, food lists, specific low-carb brands, and other strategies to follow (in consultation with your health care team).

PREGNANCY WITH TYPE 1 DIABETES: YOUR MONTH- TO-MONTH GUIDE TO BLOOD SUGAR MANAGEMENT

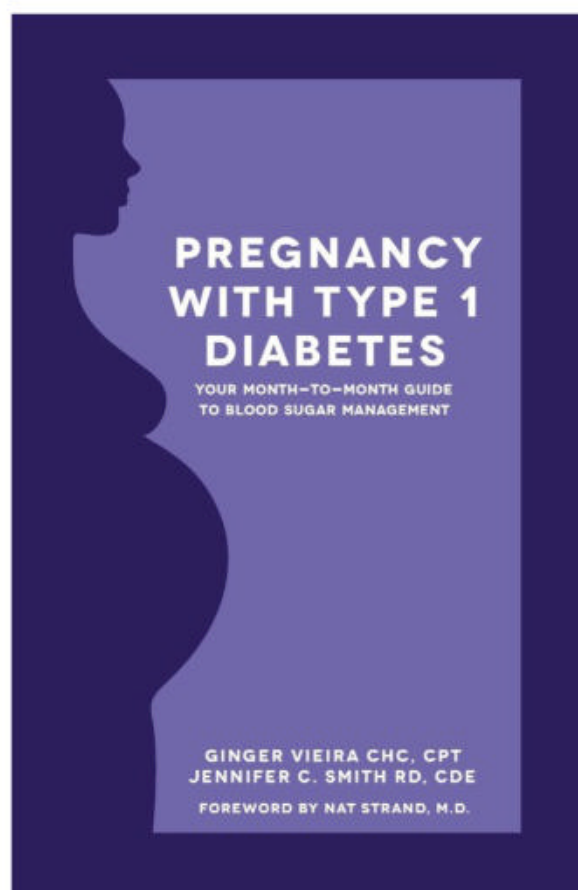
By Ginger Vieira, CHC, CPT, and
Jennifer C. Smith, RD, CDCES

Vieira is the associate director of communications at T1D Exchange, a nonprofit group dedicated to people with type 1 diabetes, and Smith is the director of lifestyle and nutrition at Integrated Diabetes Services. Both live with type 1 diabetes and are busy moms, each with two young children. Smith works with women who live with type 1, assisting them with healthy navigation of diabetes management in pregnancy. Vieira initially sought out Smith's guidance as a clinician for her successful pregnancy, and together they later coauthored this book.

"Pregnancy With Type 1 Diabetes" provides a timeline of what to expect as you progress from preconception planning into early pregnancy and beyond. It takes a woman through each trimester, with information about why changes are happening

and information about strategies for adjustments (along with Vieira's input on her own management through each stage of pregnancy).

The book includes essential information on how to discuss important aspects of pregnancy with your OB-GYN team as well as information related to labor, delivery, and postpartum care. The authors share, "In addition to addressing insulin and blood glucose management, our book acknowledges the immense emotional pressure that comes with pregnancy and diabetes, which is unique for every woman. As change happens throughout pregnancy, a woman with type 1 diabetes should be supported the entire way with information that helps her make the best-informed decisions. Our book remembers the human part of being a pregnant woman with type



1 diabetes. Our goal is to encourage [each woman] to enjoy the journey to motherhood, despite the extra challenges [she] faces while living with diabetes."

Vieira's other books include "Ain't Gonna Hide My T1D!: A Type 1 Diabetes Picture Book," "When I Go Low: A Type 1 Diabetes Picture Book," "Your Diabetes Science Experiment: Live Your Life With Diabetes Instead of Letting Diabetes Live Your Life,"

"Emotional Eating With Diabetes: Your Guide to Creating a Positive Relationship With Food," and "Dealing With Diabetes Burnout: How to Recharge and Get Back on Track When You Feel Frustrated and Overwhelmed Living With Diabetes."

SIX UNTIL ME: ESSAYS FROM A LIFE WITH DIABETES

By Kerri Sparling

Sparling is an author, speaker, and diabetes blogger who has lived with type 1 diabetes since she was 7 years old. "When I was 25 years old, I started a diabetes blog called Six Until Me as a way to connect with others who were living with diabetes," she shares. "I felt alone with diabetes. I didn't have any friends who understood the weird triumph of a soft blood sugar landing after pizza. I didn't know anyone else who had treated a low by having to eat the dirt-covered Swedish Fish candies from the floor mats of the car. I was the only person who was counting carbs and calculating insulin doses."

She continues, "I updated the blog regularly for 14 years, sharing stories about finding love, pursuing a career, high blood sugars, hypoglycemic events, traveling, insurance struggles, marriage, pregnancy, parenting, and diabetes complications. It was a melting pot of real-life experiences from a real person trying to make their way through life with diabetes along for the ride. My stories reached thousands of people in dozens of different countries, serving as a connection point for so many people affected by diabetes. As part of a global diabetes online community, I was no longer alone with diabetes. And knowing that made a huge difference in my care."

She eventually decided to stop updating the blog but didn't want those stories to be lost to internet archives or digital deletion. Sparling shares, "'Six Until Me: Essays From a Life With Diabetes' is a collection of essays from the blog. This book will inspire people to talk about all the

thoughts, experiences, and emotions that diabetes brings to the table. Talking about real life with diabetes helps us, as a community, come together through those common experiences. And we can also draw



information and inspiration from those who share diabetes stories unlike our own."

Sparling's other books include "Rage Bolus & Other Poems" and "Balancing Diabetes: Conversations About Finding Happiness and Living Well."

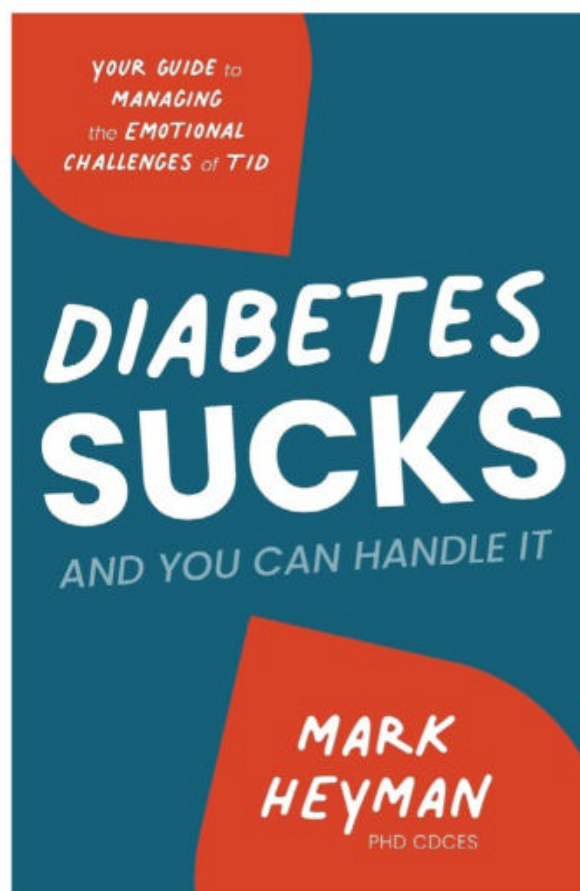
DIABETES SUCKS AND YOU CAN HANDLE IT: YOUR GUIDE TO HANDLING THE EMOTIONAL CHALLENGES OF T1D

By Mark Heyman, PhD, CDCES

Heyman is the founder and director of the Center for Diabetes & Mental Health and a diabetes psychologist who has been living with type 1 diabetes for over 20 years. His book, "Diabetes Sucks and You Can Handle It" provides an "actionable toolkit" to help people with diabetes deal with the emotional burdens of living with the condition.

Dr. Heyman shares, "People tell me that they feel like something is 'wrong' with them because they are experiencing emotional challenges because of diabetes. The reality is that emotional challenges are a normal reaction to

stress—a reaction that any human would have in the same situation. This book acknowledges the unpredictability of diabetes and shows you how you can better manage everyday stresses, reduce the number of challenges you have while living with it, and embrace



practical tools to deal with the stress.”

People with type 1 diabetes should feel seen and heard, says Dr. Heyman. He says, “That’s why I included personal stories about my experience living with T1D [type 1 diabetes] and the stories of people I have worked with. I included exercises the reader can do to practice skills and put them into action. This book is a guide to navigating the emotional challenges of diabetes and helps the reader master skills in order to handle the emotional burden of T1D.”

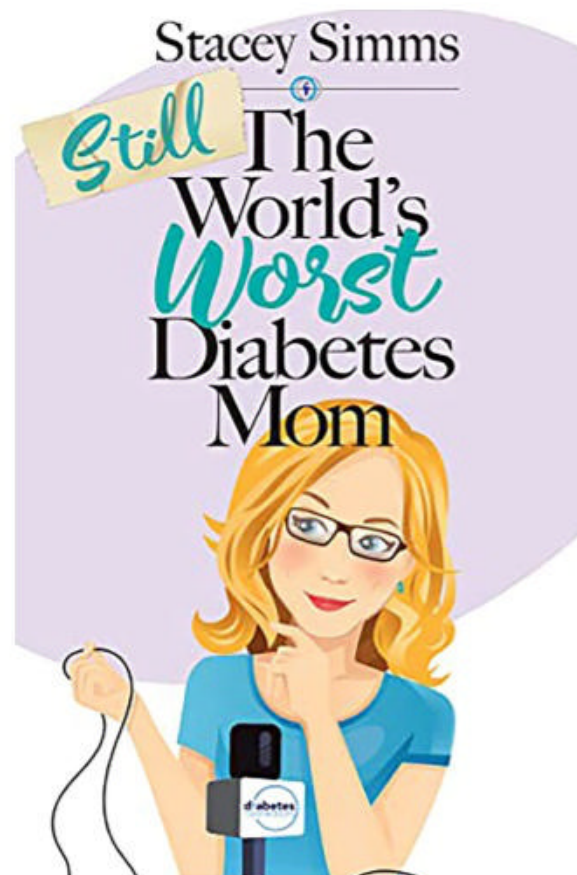
STILL THE WORLD’S WORST DIABETES MOM: MORE REAL-LIFE STORIES OF PARENTING A CHILD WITH TYPE 1 DIABETES

By Stacey Simms

Simms’s son Benny was diagnosed with type 1 diabetes in 2006, just before he turned 2. She started blogging about her family’s experience with T1D and began a podcast in 2015. Since the beginning, her diabetes philosophy has

been “not perfect, but safe and happy.” That mantra was fine until someone on Facebook told Simms she was an awful parent. The conversation sparked the idea for her first book, “The World’s Worst Diabetes Mom: Real-Life Stories of Parenting a Child With Type 1 Diabetes.” In this follow-up, she addresses how mistakes and mishaps can pay off as a child with type 1 moves toward independence as a young adult.

Simms says, “I hope it inspires parents to take a breath and remember that they aren’t raising a number, they’re raising a child. We got that advice early on, and it’s helped shape my parenting style. There is so much pressure on parents to have only straight CGM lines and incredible time in range. Good diabetes management



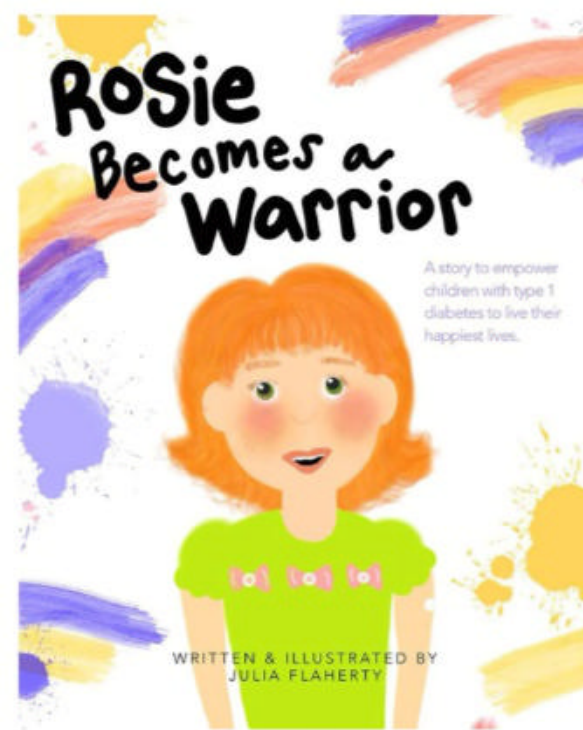
is important, but you don’t have to be perfect with it to have a healthy child. I want parents to be kind to themselves and have a great relationship with their kids and teens.”

ROSIE BECOMES A WARRIOR: A STORY TO EMPOWER CHILDREN WITH TYPE 1 DIABETES TO LIVE THEIR HAPPIEST LIVES

By Julia Flaherty

Flaherty is a marketing campaigns manager at the diabetes nonprofit

Beyond Type 1, author, and illustrator who has been living with type 1 diabetes for over 20 years. She wrote “Rosie Becomes a Warrior” as a



reflection of her lifelong experiences, memories, and feelings surrounding type 1 diabetes.

“Rosie provides children with a source of empowerment and positivity from the beginning of their type 1 diabetes journey,” she shares. “She reminds us that we are capable of anything, even while facing life’s greatest challenges, like diabetes. Rosie resonates with children who can glean the lessons of empowerment Rosie provides.”

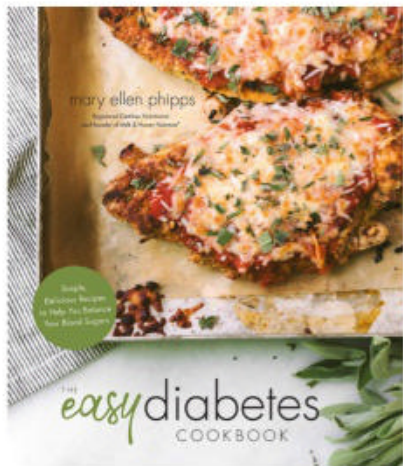
Flaherty continues, “Rosie can be a source of healing for any adults who weren’t given that emotional support when they were initially diagnosed with diabetes and want to heal their inner child. I hope Rosie can help readers live a little lighter and love themselves a little more, whatever they’re going through, whoever they are, whatever their age. Reading ‘Rosie Becomes a Warrior’ is meant to feel like talking to your favorite teacher or best friend or getting a good hug when you really need that extra support.” This book is available in both English and Spanish. **DSM**

Susan Weiner, MS, RDN, CDCES, FADCES, is the owner of *Susan Weiner Nutrition, PLLC*, and coauthor of “*The Complete Diabetes Organizer*” and “*Diabetes: 365 Tips for Living Well*.”

COOKBOOKS FOR PEOPLE WITH DIABETES, BY PEOPLE WITH DIABETES

THE EASY DIABETES COOKBOOK: SIMPLE, DELICIOUS RECIPES TO HELP YOU BALANCE YOUR BLOOD SUGARS

By Mary Ellen Phipps, MPH, RDN, LD



Phipps is a registered dietitian/nutritionist and founder of Milk & Honey Nutrition (milkandhoneynutrition.com) who has been living with type 1 diabetes for 31 years. Her book includes 60 simple, nutritious, and delicious recipes designed for easy meal preparation for anyone living with prediabetes, type 1, or type 2.

This cookbook provides a comprehensive, easy-to-understand guide to managing diabetes through the food you eat and includes nutrition information for all recipes. Phipps says, "I wrote this book for people with all types of diabetes. A lot of diabetes cookbooks feel very 'diet-y' and bland, and I wanted this to be a book that got people excited about blood-sugar-friendly food. 'The Easy Diabetes Cookbook' will bring some joy back to your kitchen while living with diabetes. [It] covers how to enjoy the foods you love in a blood-sugar-friendly way and then put those principles into practice."

5 INGREDIENT RECIPES BOOK

By Mila Clarke Buckley



Clarke Buckley, also known as the Hangry Woman (mila.hangrywoman.com), is an internationally recognized speaker, author, blogger, consultant, and passionate advocate for the diabetes community who has been living with latent autoimmune diabetes in adults (LADA) for six years.

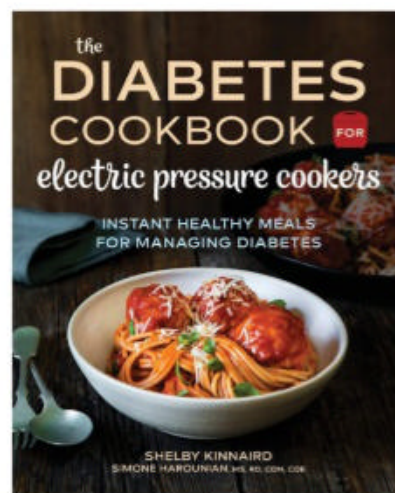
"I created this virtual cookbook because I wanted people to see that cooking meals that

are blood-sugar-friendly and satisfying doesn't have to be that difficult," she says. "I also know the burden of the rising cost of food, and I wanted people to feel like they could create tasty meals with as few ingredients as possible outside of what might be in their spice cabinet."

The book comes with shopping lists, an organized meal-planning chart, and some advice on self-care with diabetes to make planning and prepping the 40 meals in the book as easy as possible. Additionally, for people who use the MyFitnessPal app to track their foods, there's a barcode to scan that automatically enters the macros from the meals into the app.

THE DIABETES COOKBOOK FOR ELECTRIC PRESSURE COOKERS: INSTANT HEALTHY MEALS FOR MANAGING DIABETES

By Shelby Kinnaird and Simone Harounian, MS, RD, CDN, CDE



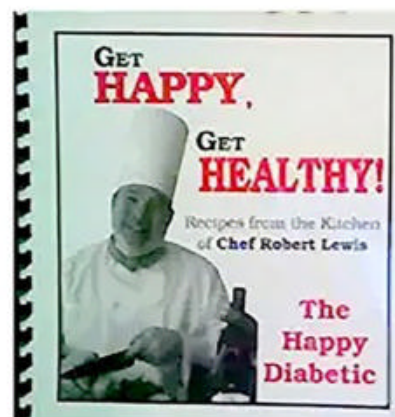
Kinnaird runs a DiabetesSisters peer support group in Richmond, Virginia, and has lived with type 2 diabetes since 1999. She says, "People are busy these days and need to be able to get a meal on the table in a hurry. An electric pressure cooker like an Instant Pot can be a tremendous help in this regard—no planning ahead is required. I wanted to show that the devices are

easy to use and can be a great way to produce diabetes-friendly meals the whole family will enjoy. If you enjoy cooking in a slow cooker, I wrote a cookbook for that appliance, too!"

Kinnaird's other books include "Diabetes Slow Cooker Cookbook: Recipes for Balanced Meals and Healthy Living" and "The Pocket Carbohydrate Counter Guide for Diabetes: Simple Nutritional Strategies to Lower Your Blood Sugar."

GET HAPPY, GET HEALTHY!

By Chef Robert Lewis



Chef Robert, aka the Happy Diabetic, has been living with type 2 diabetes since 1998. "I hope the simple and easy methods used in this book will inspire people with diabetes to cook more often using ingredients that are not highly processed," he says. "Fresh and frozen foods that are lower in carbs and sodium and rich in protein and fiber can and

should taste great!" Chef Robert's motto is "time to turn ordinary ingredients into something extraordinary."

KEEP AN EYE ON YOUR SIGHT

What you need to know about diabetic retinopathy

BY ROBERT S. DINSMOOR



Diabetic retinopathy, damage to the retina of the eye caused by high blood glucose, is the leading cause of new cases of blindness among people ages 20-74 in developed countries. There are several types of treatment for diabetic retinopathy, but the best approach is early detection and treatment, which can reduce the risk of blindness by 95%.

What causes it

The retina is the light-sensitive tissue at the back of the eye. It detects light and sends signals that travel to the brain by way of the optic nerve to create the images that we see. Chronically elevated blood glucose levels associated with poorly controlled diabetes gradually damage the tiny blood vessels in the retina. The damage causes these vessels to leak fluid or bleed, distorting vision. In advanced cases, new, abnormal blood vessels grow (or “proliferate”) on the surface of the retina, which can cause scarring in the retina.

Diabetic retinopathy may progress through four distinct stages. In the first stage, known as mild nonproliferative retinopathy, the tiny blood vessels of the retina develop swellings, or microaneurysms, which leak fluid into the retina. In the second stage, called moderate nonproliferative retinopathy, the vessels that supply blood to the retina may become swollen or distorted and may lose their ability to transport blood. Both of these conditions can change the appearance of the retina and may contribute to the development of diabetic macular edema (DME). (See the sidebar “What Is Diabetic Macular Edema?” for more information.) In the third stage, severe nonproliferative retinopathy, more blood vessels become blocked, and the areas of the retina that are deprived

of blood begin to secrete growth factors, which stimulate the growth of new blood vessels in the retina. In the fourth stage, proliferative diabetic retinopathy, new blood vessels begin to grow along the surface of the retina and sometimes into the vitreous gel, the fluid that fills the inside of the eye. These fragile new blood vessels may leak and bleed, and the resulting scar tissue can contract and cause retinal detachment, in which the retina pulls away from its underlying tissue, which may lead to permanent vision loss.

Risk factors

Having any kind of diabetes puts you at risk for diabetic retinopathy, and the longer you have diabetes, the greater your risk. Chronically elevated blood glucose, blood pressure, or blood cholesterol levels also increase the risk, according to the Mayo Clinic, as do pregnancy, tobacco use, or being Black, Hispanic, or Native American.

Symptoms

In the early stages of diabetic retinopathy, there are usually no symptoms. Sometimes people notice vision changes, like trouble reading, that come and go. In the later stages, as blood vessels begin to leak blood into the vitreous, people may see dark, floating spots (sometimes called “floaters”) or streaks resembling cobwebs. Even if these visual changes go away, it is important to get treated right away to prevent scarring or more bleeding.

Screening

According to the American Diabetes Association’s (ADA’s) 2023 clinical practice recommendations, adults with type 1 diabetes should have an initial eye examination by an ophthalmologist or optometrist within five years of developing diabetes. Since

people may have type 2 diabetes for years before it is diagnosed, the ADA recommends that people with type 2 have their initial eye examination at the time of diagnosis.

Children and adolescents who have had type 1 diabetes for three to five years should also be screened for retinopathy. Children and adolescents with type 2 diabetes should be screened as soon as possible after diagnosis.

Doctors check for retinopathy using a simple and painless dilated eye examination. The doctor applies eyedrops to dilate (widen) the patient’s pupils in order to visualize the retina and the optic nerve better. Specifically, the doctor looks for any changes in blood vessels, such as leaking vessels or fatty deposits in the blood vessels, swelling of the macula, changes in the lens, or damage to nerve tissue.

Diagnosis

If the doctor suspects that diabetic retinopathy or macular edema is present, they may perform another test called fluorescein angiography to visualize damaged or leaky blood vessels in the retina. A fluorescein dye is injected into the bloodstream, typically through a vein in the arm. As the dye reaches the eye, this allows pictures to be taken of the retina’s blood vessels.

WHAT IS DIABETIC MACULAR EDEMA?

The macula is a region of the retina responsible for straight-ahead vision, and it is important for tasks such as reading, driving, and recognizing faces. Diabetic macular edema, the buildup of fluid in this region, causes blurred vision and is the most common cause of vision loss in people with diabetic retinopathy. The three anti-VEGF drugs mentioned in this article—Avastin, Lucentis, and Eylea—have all been shown to improve vision in people with diabetic macular edema.

Treatment

Often, doctors begin treating retinopathy when it starts to progress to the proliferative diabetic retinopathy (PDR) stage, or when diabetic macular edema occurs. For decades, PDR has been treated with panretinal laser surgery, which involves making 1,000 to 2,000 laser burns in the retina, which can shrink the abnormal blood vessels. Panretinal laser surgery, which sometimes requires more than one session, is most effective before these blood ves-

sels have already started to bleed.

In roughly the past decade, another approach to treating diabetic retinopathy called anti-VEGF treatment has gradually moved to the mainstream for treating PDR. VEGF stands for vascular endothelial growth factor, a protein that promotes the growth and leakage of abnormal blood vessels in the eye. Blocking VEGF can reverse the growth of abnormal new blood vessels and decrease the amount of fluid in the retina. Anti-VEGF drugs include bevacizumab (brand name Avastin), ranibizumab (Lucentis), and aflibercept (Eylea). Most people with diabetic

retinopathy require monthly injections for the first months of treatment and less often after that. Lucentis and Eylea are also approved for treating macular edema (see “What Is Diabetic Macular Edema?” for more information).

MEDICAL JARGON AT A GLANCE

ANEURYSM: A localized bulging of a blood vessel wall.

ANGIOGENESIS: The development of new blood vessels.

EDEMA: Swelling caused by excess fluid trapped in the body's tissues.

PROLIFERATION: Rapid reproduction.

RETINA: A layer in the back of the eye containing light-sensitive cells that send nerve impulses to the brain, which translates them into a visual image.

If there is severe bleeding into the vitreous gel, it is often treated with a surgical procedure called vitrectomy. Tiny ports or water-tight openings are placed in the eye, which allow the surgeon to insert and remove tiny instruments. Various instruments are used to remove the vitreous and conduct procedures such as eliminating scar tissue or repairing a detached retina. The vitreous is replaced with a clear salt solution or a bubble made of gas or oil, which is eventually replaced by the body with natural fluid. The procedure may be performed under local or

general anesthesia and is typically done on an outpatient basis.

Prevention

While there are several effective treatments available for treating existing

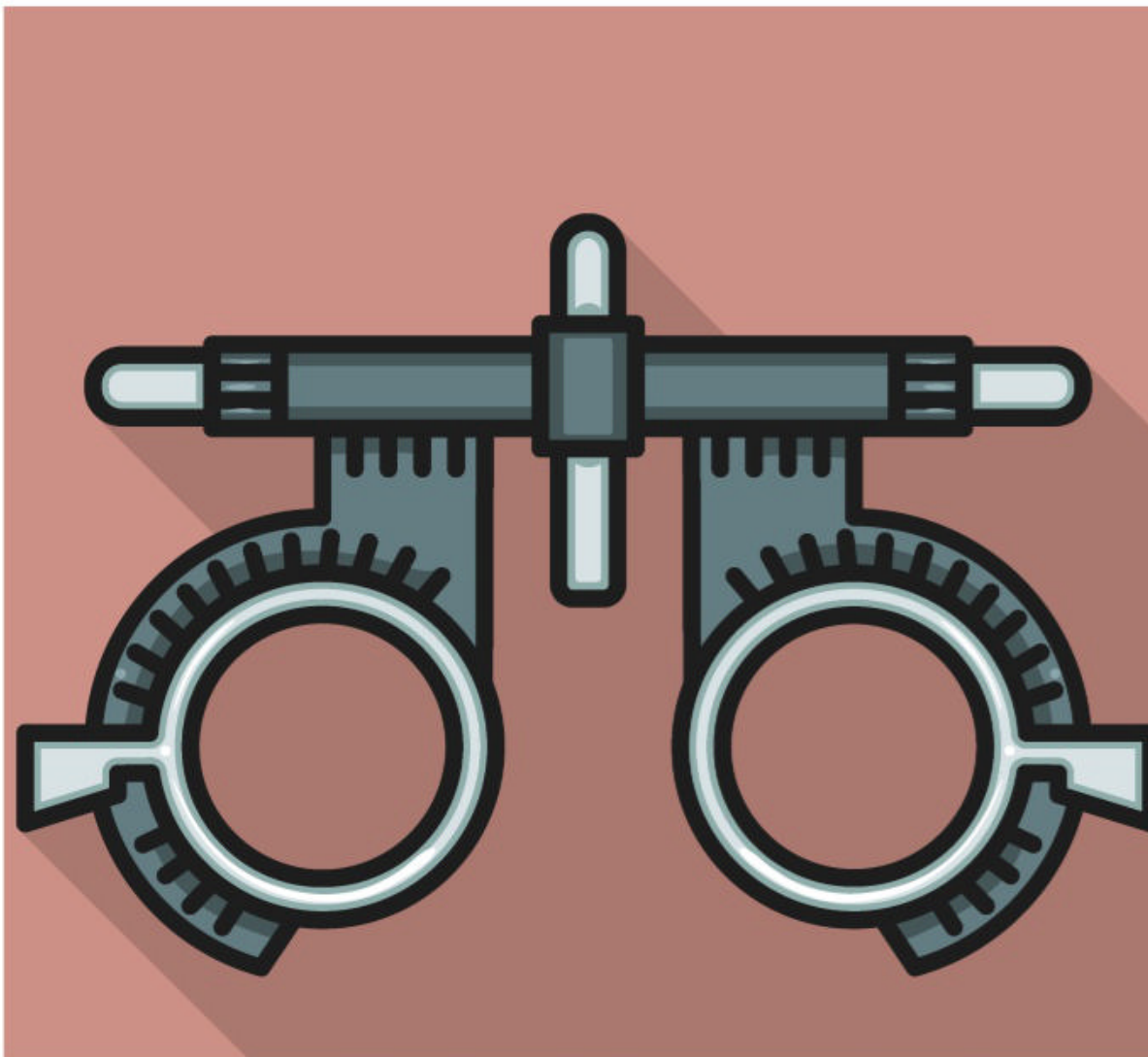
diabetic retinopathy, it's preferable to prevent it in the first place. Prevention of diabetic retinopathy begins with regular dilated eye exams at least once a year. Once it is detected, there are several different approaches to prevention. Lowering blood glucose levels has been proven to prevent or delay the development of retinopathy. Many large clinical studies, most notably the Diabetes Control and Complications Trial (DCCT), have shown that study participants with diabetes who keep their blood glucose levels as close to normal as possible are significantly less likely to develop retinopathy (and other complications) compared with those with less-optimal blood glucose control. High blood pressure and high cholesterol levels also increase a person's risk of diabetic retinopathy, so controlling blood pressure and cholesterol levels with lifestyle changes and medications can also help lower the risk of vision loss.

A bright future

The prognosis for diabetic retinopathy has been constantly improving. For example, one study reported in 2022 in the journal *Diabetes Care* demonstrated that the incidence (new cases) and prevalence (number of people with the condition) of visual loss from diabetic retinopathy in Finland have significantly decreased—despite the fact that the sheer number of people with diabetes has increased and the percentage of people who have it has increased over the same time period. The researchers attributed this decrease in visual loss to many factors, including the trend toward more intensive blood glucose control in the 1990s. Further, they pointed out that these findings underscore the importance of timely screening, diagnosis, and treatment of diabetes and diabetic retinopathy.

So, keep an eye on your sight! The steps you take today can help protect and preserve your vision for years to come. **DSM**

Robert S. Dinsmoor is an award-winning medical journalist who has written hundreds of articles on health and medicine.



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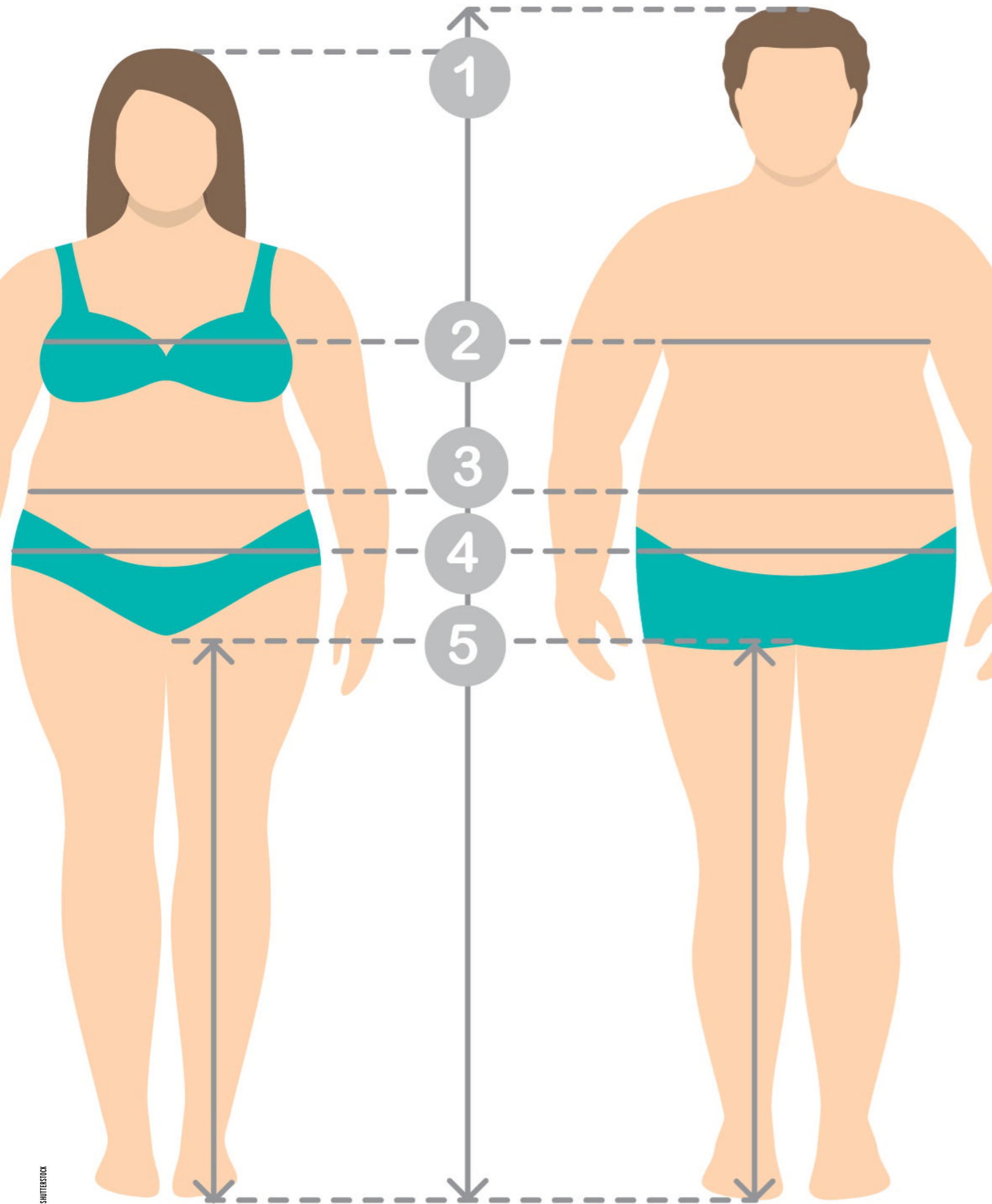
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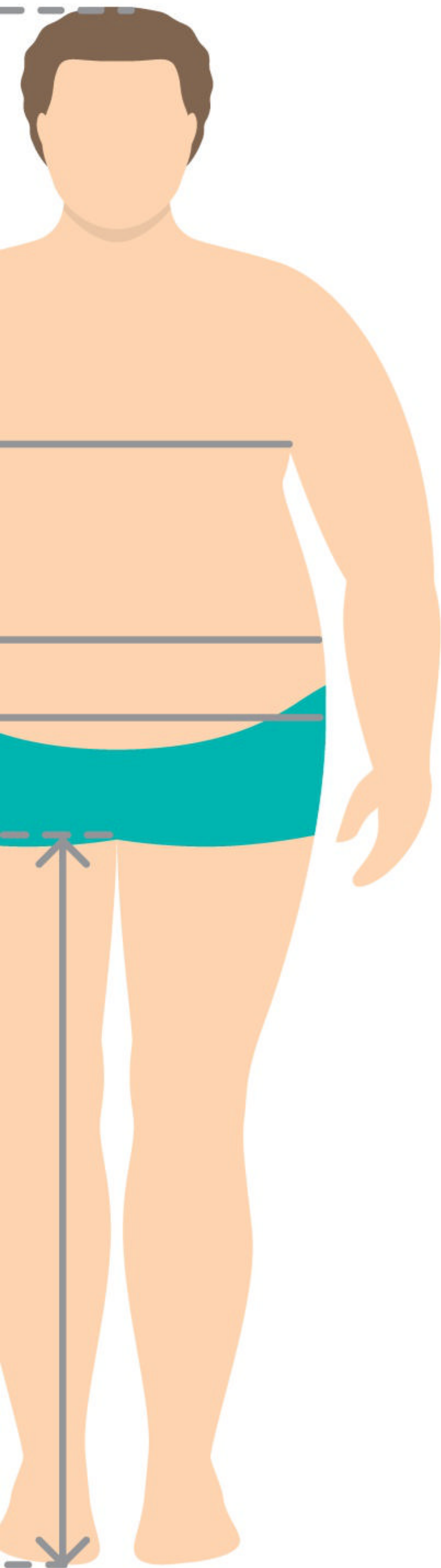
The importance of different body measurements in evaluating health

BY GILLES BEAUDIN, CSEP-CEP, MSC

Anthropometry,

or the science of systematically measuring various physical characteristics of the human body, has been used for centuries to compare proportions and physical variations between people and populations. Today, these measurements are still widely used as a simple way to track changes in a person's health status and to predict their risk of metabolic conditions like diabetes. But some of those measurements are better predictors than others. What is the right number to look at? How do we know if we are trending in the right direction? All that data can be confusing, so let's try to bring some clarity to the matter and simplify things.





Body weight

Let's start with a metric we're all familiar with: body weight. It is a very common point of discussion (particularly when people are setting resolutions at the beginning of the year or when summer is approaching). Many of us would like to weigh less for cosmetic reasons. And in most cases, losing weight also reduces the risk of developing type 2 diabetes—but not in all cases. That's because with a simple body weight measurement, there's no way to know if the weight loss was extra fat, water, or lean tissue (such as muscle). When it comes to diabetes (and many other health issues), muscle is an ally, so while losing some lean tissue may look good on the scale, it certainly does not help in the prevention and management of type 2 diabetes. And additionally, what can be considered a healthy weight if we don't know a person's height?

Body-mass index

One day in the 1830s, a Belgian mathematician decided to create an equation to study body proportions. He simply divided weight in kilograms by the square of the height in meters. And thus, the body-mass index (BMI) was born. To give an example using this formula, a person who is 5 foot 10 (1.78 meters) and weighs 165 pounds (75 kilograms) will have a BMI of 23.7.

In 1985, the National Institutes of Health (NIH) began using BMI as a measurement to define obesity in the United States. Today, a score of 18.5 to 24.9 is considered to be in the normal range, 25 to 29.9 is overweight, and 30 and over is obese. Countless studies have linked obesity and a high BMI with type 2 diabetes. Indeed, BMI is a simple, accessible tool to help measure health trends in a population. And most people with a high BMI will eventually develop one or more cardiometabolic conditions. But a sizable minority of those with a high BMI will remain free of these chronic conditions (a phenomenon that has been described as “meta-

bolically healthy obesity”), meaning that two individuals with the same BMI may not have the same risks.

Here's an example. Do you remember the 1988 movie “Twins,” starring Arnold Schwarzenegger and Danny DeVito? They both had similar BMIs. But they did not have the same risks of developing type 2 diabetes. Why? For one person, the extra weight was largely muscle, while for the other, it was primarily fat.

Body fat percentage

This takes us to another very popular measurement: body fat percentage (BF%). This metric estimates the percentage of body weight that is fat. A study from 2018 published in the journal *BMJ Open* concluded that adding BF% to BMI helps more accurately screen for people at risk of prediabetes, particularly among those who have a healthy BMI but a high BF% or those who are classified as overweight but with a healthy BF%. The study authors also reported that there was no “gold standard” in defining obesity using BF%.

Different techniques can be used to measure BF%, and they offer a wide range of reliability. The most reliable techniques use expensive equipment that is not easily accessible. And even those methods still have their weaknesses. For one thing, an increasing body fat percentage doesn't tell the whole story. That's because it's not just extra weight but where you carry it that makes a difference.

Waist-to-hip ratio

The waist-to-hip ratio (WHR) was popularized in the 1940s by French physician Jean Vague. This measurement is simply your waist circumference (WC) divided by your hip circumference. This is where the descriptions of the “apple” (android) and “pear” (gynoid) body shapes come from. The apple shape, in which extra fat is carried around the abdomen, has been linked to a higher risk of insulin resistance (a condition in which the

body's cells become unresponsive to insulin) and developing type 2 diabetes compared to the pear shape, in which extra fat is distributed around the hips. According to the World Health Organization, the target waist-to-hip ratio is 0.9 or less for men and 0.85 or less for women, with risks for heart disease and other conditions increasing at 1.0 or higher. (The healthy range for women [see sidebar] is different because most women tend to carry extra fat

HEALTHY BODY FAT PERCENTAGES

AGE	WOMEN	MEN
20-39	21-32%	8-19%
40-59	23-33%	11-21%
60-79	24-35%	13-24%

(Source: The American Journal of Clinical Nutrition)

around their hips, thighs, and buttocks, as opposed to men, who generally carry it in their midsection.)

But as with the other metrics we've looked at, this ratio, too, has its limitations. For instance, you may have a lower WHR because you have extra muscle around your hips. This can disguise visceral fat (a dangerous type of belly fat that wraps around the abdominal organs). Also, if a person's weight goes up and they gain an inch on both measurements, the ratio is the same, hiding the reality of their increased body fat levels.

Waist circumference: a key measurement

If WHR goes up, it means that WC has increased, and so, too, have the risks of type 2 diabetes. Ultimately, then, this means that the most critical measurement is WC. Visceral fat is linked to insulin resistance and type 2 diabetes. For one thing, this fat can be stored around the liver and pancreas, hindering their functioning.

Research has indicated that WC is a better estimation of visceral fat and related health risks than certain other types of body measurement. And in 1995, a study published in the journal *The BMJ* outlined general guidelines for waist circumference, suggesting that women with a measurement of 80 centimeters

(roughly 31 inches) or more and men with a measurement of 94 centimeters (37 inches) or more should gain no further weight, and women with a measurement of 88 centimeters (35 inches) or more and men with a measurement of 102 centimeters (41 inches) or more should reduce their weight. Research has shown that for every 1-centimeter increase in WC, the relative risk of cardiovascular disease events is increased by 2% and that for every 5-centimeter

increase in waist circumference, the risk of death increases by 17% in men and 13% in women.

The importance of fat loss

Could losing some of that extra fat return functioning to normal? Happily, the answer is yes. In studies, some people have achieved remission of their type 2 diabetes (defined as normal blood glucose levels without any diabetes medicines) after losing roughly 10% of their body weight (approximately 33 pounds in some participants). Indeed, removal of excess fat from abdominal organs via weight loss can normalize insulin responsiveness of the liver, allowing this organ to take up more glucose from the bloodstream for storage. In a trial published in 2017 in the journal *The Lancet Diabetes & Endocrinology*, 46% of the study participants achieved remission of their type 2 diabetes at 12 months via weight loss. Some medical experts even recommend a reduction in waist circumference as critical for reducing general health risks in both men and women.

Waist-to-height

Do you remember our earlier example of Danny and Arnold? If they have the same WC, do you think they'll have the same risks of developing type 2 diabetes? No, they

won't. That's because we can't apply that guideline to people of different heights. So, waist circumference has to be expressed in relation to height. And that's how we get to the waist-to-height (WHtR) ratio. A review study published in 2011 examined the use of WHtR as a screening tool for cardiometabolic risk factors. The researchers studied results from 300,000 adults and reported that the WHtR was a much stronger predictor for diabetes, hypertension (high blood pressure), and cardiovascular disease than WC.

Now, I know what you're wondering: What WHtR should you aim for? The paper recommended a ratio of 50% or below. Take your height in inches and divide by your waist circumference in inches to find out where you stand now.

The importance of waist management

While the evidence strongly suggests that WC should be a part of routine health examinations, it is still fairly uncommon in many physicians' offices. But even if your doctors are not there yet, here's how you can take that measurement for yourself: First, for it to be valid and reliable, the measurement always needs to be taken at the same spot (and not necessarily where you wear your pants or what you feel is the narrowest part of your abdomen). The measuring tape should be parallel to the floor, and the bottom of the tape should be right above the hip bone (where people often carry "love handles"). The tape should be snug but not too tight. (Visit bit.ly/3lXLtIV for a video demonstration.)

So, you don't have to throw away your scales, but do get out your measuring tapes. Keeping track of your waist circumference will provide important information about your state of health. Turn weight management into waist management. **DSM**

Gilles Beaudin, CSEP-CEP, MSc, is a clinical exercise physiologist at Cleveland Clinic Canada. He can be reached at gilles_beaudin@hotmail.com.

Lifestyle as Medicine

Using mindfulness as an approach to diabetes care

BY ALISON MASSEY, MS, RD, LDN, CDCES



Imagine if your health care provider wrote a prescription for incorporating mindfulness into your routine at least five times a week to improve your diabetes care. This isn't as far-fetched as it may sound. In fact, research suggests that mindfulness actually might just be the lifestyle medicine you need for better diabetes management. While it doesn't take the place of needed medication, this approach can play a positive role in improving many different aspects of diabetes.

The importance of lifestyle in diabetes management

Lifestyle approaches to improving health—including mindfulness/meditation practice, good nutrition, regular physical activity, and sleep hygiene—aren't new concepts, but they can sometimes get less attention than they should during brief health care visits, where conversations can revolve primarily around blood glucose numbers and medication adjustments. But research on the benefits of mind-body practices shows the crucial function that these routines play in overall health, especially for people living with chronic conditions like diabetes. Studies on the health benefits of mindfulness, in particular, have been done in those with both type 1 and type 2, highlighting the important role this practice can play for everyone living with diabetes.

Mindfulness and meditation

According to some sources, meditation practice dates as far back as 5,000 B.C. Today, the term mindful-based practice is often used to encompass meditation and all the other various types of mind-body practice. Research has found that mindful practices, including exercises like deep breathing, meditation, yoga, journaling, and so forth, may help reduce anxiety, depression, diabetes-related stress, and diabetes distress. Additionally, they can help with blood glucose management in diabetes care. For instance, a meta-analysis (analysis of data from several studies) of people with type 2 diabetes found improvements in fasting blood glucose and A1C levels (a measure of long-term glucose control), as well as eating patterns, feelings of support, and diabetes dis-

tress. Randomized studies also point to the benefits of mindful strategies in improving important aspects of overall health, like coping and self-care behaviors, which are critical to meeting the ongoing demands of managing diabetes well.

Emily Gibbons, RD, LD, CDCES, CHWC, a Cleveland-based registered dietitian, certified diabetes care and education specialist, and certified health coach, recognizes how important it is for people with diabetes to develop a healthy self-care, mindful-based practice. "Stress, regardless of the source, can have both physical and emotional ramifications on one's health. Developing a regular routine of mindful practice, whether that's deep breathing, yoga, meditation, or something else, can go a long way in helping individuals better manage stress and their diabetes."

How mindfulness can fight stress

Stress has a direct impact on blood glucose management, as many people living with diabetes are well aware. Gargi Parikh, RDN, CDCES, MPH, YT200, explains, "Stress causes the body to release the hormone cortisol. Cortisol is a key player in our 'fight-or-flight' response and temporarily increases energy production (i.e.,

RESOURCES FOR GETTING STARTED WITH MINDFULNESS-BASED PRACTICE

FIND A COMMUNITY

There are many different types of mindfulness-based communities available—keep searching until you find the right fit for you.

Diabetes Sangha is a community specifically for people with type 1 diabetes and those who are "diabetes adjacent." It is now in its third year of providing meditation and live mindfulness practices, both online and at in-person events. During the summer,

facilitators Peter Friedfeld, Sam Tullman, Sarah Petti, Bri Schiavoni, and Brooke Cassoff will be hosting several live meditation events. Check out a schedule of all current practices at diabetessangha.com. Many of the virtual events are free to attend.

DOWNLOAD AN APP

There are many apps available to help people getting started with mindful-based practice. Options include:

- Headspace
- Healthy Minds Program
- Ten Percent Happier
- Waking Up
- The Breathing App

PICK UP A BOOK

Interested in checking out a book to learn more about meditation and mindfulness-based practices and the benefits of including these practices as part of your regular routine? Here are a few titles to consider:

"The Miracle of Mindfulness" by Thich Nhat Hanh

"Everyday Zen" by Charlotte Joko Beck

"Altered Traits: Science Reveals How Meditation Changes Your Mind, Brain, and Body" by Daniel Goleman and Richard J. Davidson

"Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness" by Jon Kabat-Zinn

sugar), so we can ‘fight the tiger.’ The problem occurs when cortisol levels are chronically high, and our body thinks we are always being chased by a tiger. This can get us stuck in a state of fight or flight and cause cortisol to stay elevated, leading to higher blood sugar levels. Mindfulness practices help us break out of that fight-or-flight mode. They deactivate your sympathetic nervous system and turn on the parasympathetic branch, which helps bring down stress levels and, in turn, cortisol and blood sugars.”

It’s not just cortisol levels that can change with mindful-based practice. Several studies using magnetic resonance imaging (MRI) have found both structural and functional changes to the brain as a result of mindful practices. Results also suggest that there is increased brain activity in areas of attention and self-awareness and decreased activity in the areas involved with fight or flight.

The benefits of mindfulness for diabetes management

And it’s worth remembering that behind every one of these studies are real people living with diabetes who are finding meaning—and improvements in diabetes management—by adding mindful practice to their life.

Diabetes Sangha, a meditation and mindful practice-based community for those living with type 1 diabetes, was founded by Sam Tullman, Brooke Cassoff, and Peter Friedfeld. The founders and facilitators, all living with type 1 diabetes, personally experienced the benefits of mindful-based practice in their lives with diabetes and wanted to create a community space for mindful-based practice.

Friedfeld shared the following about his experience with mindful-based practice and how it has benefited him in living life with diabetes differently:

“My mindfulness practice supports me in so many ways living with diabetes, and it has also changed over time. At the very basic level, my practice encourages me to take a pause! It’s a reminder to just take some time for myself, take a breath, and recognize what is actually going on—and that’s a great starting point. And just that simple reminder can have a profound impact by itself.”

“So often we get swept away in the moment—and we do have lots of moments each day—and the practice is a way to bring us back. Think of it as bringing yourself back to the center. In time, mindfulness practice works both externally (my interactions with the world around me) and internally

(my thoughts and feelings), allowing me to be more present in my life and helping me to live with nonjudgment, nonreactivity (or as I prefer to say, not overreacting), and acceptance. For me, these three aspects of my practice have had [the] profound impact of helping me live my life with more balance and ease.”

Friedfeld noted that one of the benefits of mindful-based exercises is that you can practice them anywhere and in a variety of different ways. The key is just getting started. Explore different types of practice and discover which methods work best for you and your lifestyle. The beauty is there isn’t really a right or wrong way to incorporate mindful-based practice into your life. As Jon Kabat-Zinn, founder of the Mindfulness-Based Stress Reduction program, said, “Mindfulness is a way of befriending ourselves and our experience,” and needless to say, this includes the experience of managing diabetes. Consider this approach another arrow in your quiver for living a happier, healthier life. **DSM**

Alison Massey, MS, RD, CDCES, is a registered dietitian and certified diabetes care and education specialist in Maryland. She blogs at flourishmyhealth.com.

TOP TIPS FOR GETTING STARTED WITH MINDFULNESS AND MEDITATION

Gargi Parikh, RDN, CDCES, MPH, YT200, supports people living with diabetes with real foods, herbs, and a mind-body approach to management. A registered dietitian, certified diabetes care and education specialist, herbalist, and yoga teacher, she provides practical and culturally relevant resources, tips, and education on her Instagram platform (@the.diabetes.nutritionist) with a focus on supporting those with prediabetes and type 2 diabetes. Here, Parikh provides her top tips for incorporating more mindfulness and/or meditation into a regular routine for those living with diabetes.

1. FOCUS ON FIVE MINUTES

Parikh suggests starting slowly when committing to incorporating some type of mindful-based practice into your routine. “Start with five minutes if 15 minutes or longer is hard to carve out on a regular basis.”

2. MAKE GOALS MEASURABLE AND ACHIEVABLE TO SET YOURSELF UP FOR SUCCESS

Parikh also emphasizes creating both measurable and achievable goals—solid advice for incorporating any new type of health-promoting behavior change into your life. She also suggests getting very specific when setting your goals versus aiming for more general or vague goals.

As an example, “Instead of saying ‘I will meditate daily,’ try ‘I will meditate Monday, Wednesday, or Friday for five minutes at 7 a.m.,” which is a much more concrete and specific block in your schedule for making time for meditation.

3. TRY HABIT STACKING

Lastly, Parikh suggests habit stacking for building something into your routine. “Habit stacking is when you stack a habit onto another existing habit. This is much easier for your brain than adding something new at a random time.” So, for example, when you brush your teeth each morning, try adding five minutes of meditation immediately afterward.



NANCY BUNDT

THE SIOUX CHEF SERVES UP A DISEASE-FIGHTING DIET

Chef Sean Sherman believes Indigenous communities can fight diseases like diabetes by returning to the food their ancestors enjoyed

BY TONI FITZGERALD

Sean Sherman, better known as Chef Sean from The Sioux Chef, has witnessed firsthand the impact that lack of accessibility to nutritious food can have on a population. “I grew up with commodity foods,” says Sherman, who is Oglala Lakota. These foods come from the Food Distribution Program on Indian Reservations (FDPIR), a USDA program meant to offer healthy options to Indigenous communities. Unfortunately, the options are often high in saturated fats and rarely fresh.

“I didn’t realize how awful a lot of those foods were. That was just a part of my daily life for a long time, and for a lot of people, it hasn’t changed. It’s still a part of their daily lives,” Sherman says. “It makes sense why we’re battling epidemics like type 2 diabetes in our tribal communities when our food access is literally the commodity food program or gas station food.”

He says he has cousins his age (he is 49) who have passed away due to complications from diabetes. And he knows it doesn’t have to be this way.

Sherman’s frustration with food access and his background in the food industry, where he has worked since he was a teenager, led him to found The Sioux Chef. The mission of the organization, whose members include Anishinaabe, Mdewakanton Dakota, Navajo, Northern Cheyenne, Oglala Lakota, and Wahpeton-Sisseton Dakota, is to “revitalize” Indigenous cuisine, “reclaiming an important culinary culture long buried and often inaccessible.”

Simply put, Sherman believes Indigenous communities would benefit from eating like their ancestors—more whole foods and plants, fewer processed foods and added sugars.

“Looking at the diet we had before colonization, it’s so much more robust than what we eat now,” Sherman notes. “It was healthy—it was extremely low-glycemic, with a ton of plant diversity and some really good natural sugars and natural proteins.”

That rethinking of the traditional diet is critical since Indigenous people have a higher chance of getting

diabetes than any other racial group in the United States, according to the Centers for Disease Control and Prevention (CDC). The CDC suggests providing greater access to and promoting healthy foods could lower the incidence of the disease.

The Sioux Chef, which comprises a catering and food education business and recently opened its first restaurant (Owamni) in Minneapolis, aims to get people excited about eating food that was once a staple of Indigenous diets. And Sherman plans to do it one community at a time. He sat down with us to discuss how he researched Indigenous diets, what they consist of, and his vision for the future.

Diabetes Self-Management: What attracted you to the food industry?

Sherman: Originally, I just got into it because I was young and needed a job. My mom had moved my sister and me off the reservation, and we didn’t have a lot of money. I had a paper

Wild Rice Pilaf With Wild Mushrooms, Roasted Chestnuts, and Dried Cranberries

Psíj na Čħaŋnákpa na Úma Čħeúŋpapi na Wathókeča T'áġa

From Chef Sean Sherman: Wild rice is a flavorful and remarkably satisfying food. The mushrooms add a dark, meaty flavor and texture, while the chestnuts are creamy (and high in protein). This meatless dish will appeal to omnivore and vegetarian alike. Cooked wild rice will keep several weeks in the refrigerator and for at least a year when frozen in a plastic freezer bag.

4-6 SERVINGS | 1/6 - 1/4 OF TOTAL RECIPE

- 2 tablespoons sunflower or walnut oil**
- 1 pound assorted mushrooms, cleaned**
- 1 tablespoon chopped sage**
- 1/2 cup chopped wild onion or shallots**
- 1/2 cup corn or vegetable stock**
- 2 cups cooked wild rice**
- 1/2 cup dried cranberries**
- 1 cup roasted, peeled, chopped chestnuts***
- 1 tablespoon maple syrup to taste**
- 1/2-1 teaspoon smoked salt to taste**

1. In a large skillet, heat the oil over medium-high heat and add the mushrooms, sage, and onion. Cook, stirring, until the mushrooms are nicely browned, and the onion is soft, about 5 minutes.

2. Stir in the stock, wild rice, and cranberries and cook until the liquid is nearly evaporated. Stir in the roasted chestnuts.*

3. Season with maple syrup and smoked salt to taste.

*To roast and peel chestnuts, use the sharp point of a small knife to score an X on the flat side of the chestnut and place on a baking sheet. Roast in a 350°F oven until the skins begin to peel back. The length of roasting time will depend on the freshness and size of the chestnuts and range from about 10 to 25 minutes. Remove, and when cool enough to handle, peel.

From "The Sioux Chef's Indigenous Kitchen," copyright 2017, by Sean Sherman with Beth Dooley. Reproduced by permission of Ghost Dancer, LLC. All rights reserved. Used by permission.



route job, which was awful, being in South Dakota in the middle of winter.

And then, I was able to get a job at a restaurant when I had just turned 13 years old. So I was very young. And I found that job to be a lot more pleasing because it was warm, and I didn't have to be outside. I got free food. I worked restaurants all through high school and college, and then when I moved to Minnesota, I continued to work restaurants and moved my way up very quickly and became a chef when I was still in my 20s.

DSM: What do you enjoy about working with food?

Sherman: I found a passion through food. I moved to Minneapolis because I wanted to go to art school, until I found out how much it cost, and then art became a hobby. And then, I kept working in restaurants, and I moved my way up and found art through food eventually. I was able to figure out how you tell a story with food, and that was something meaningful to me.

I enjoyed art history. And I enjoyed human history in general. So I read a lot of history and food history. I started really getting into it, and all that kind of tied everything together later, that natural curiosity.

DSM: Talk about the history of food that you found interesting and how that influenced your journey.

Sherman: The job that started getting me more curious about food was when I was working at an Italian restaurant. We were just making fresh pasta every day, and I learned a lot of classic traditional country-style Italian dishes from all over Italy. I really liked that style because it's very regional, localized, and it's very particular because they're very interested in their products compared to what's in other regions.

So I applied that with everything I did. My first chef job was at a Spanish tapas bar. I had never been to Spain, but I read a lot, and I understood Italian food pretty well, so I delved into lots of books and history

and got a good sense of "what is Spanish food" without ever going to Spain at the time. And I applied that to pretty much everything I did. I did sushi for a while, never having been to Japan. I just read a lot and absorbed a lot of information.

And then I had this epiphany and vision of doing this from an Indigenous perspective, of realizing the complete absence of Indigenous restaurants or books about food anywhere—even with myself growing up in a tribal community, I knew very little about what my Lakota ancestral foods were.

DSM: How did you research the food of your ancestors?

Sherman: I just produced that same approach of a lot of self-study to understand it. I did talk to a lot of elders. I did find out some really wonderful information. And I started traveling to other Indigenous communities, and it became a process of learning from other people and seeing the world through a whole new lens. Self-study was such a huge part of it, being very curious to understand and wanting to know personally.

DSM: What are some things you discovered that surprised or excited you?

Sherman: I started seeing a lot of commonalities within Indigenous communities from all over the place. I first kind of saw it when I was living in Mexico and realized a lot of commonalities between the Indigenous peoples there and growing up in Pine Ridge, South Dakota. I realized that we all have a lot of these things in common about how we treated food and how we ate, looking at the diet that was there before colonization. It was so much more robust compared to where we are right now today.

DSM: Can you talk a bit more about food access and how that has limited diets?

Sherman: I go to some of these communities, and the gas station is their

only food source for maybe 40 miles. Again, it's no wonder why we're battling so many of these health epidemics that we're literally doing to ourselves because of the food access. So the whole mission of everything that I'm doing now is based on trying to figure out solutions to those issues.

The nonprofit we've developed, which is NATIFS, for North American Traditional Indigenous Food Systems, is all set on trying to create a path to more healthy Indigenous food access out there and access to Indigenous education because the two go hand in hand.

DSM: How can you scale that for other communities?

Sherman: I created this this model under NATIFS so we'd have a nonprofit working kitchen called an Indigenous Food Lab, where we can do a lot of different things. We're able to do research and development to further our own knowledge, and we're about ready to release that into the market space, so our local community will have access to someplace to find curated Indigenous retail food products and products that we're able to create ourselves.

And then we also have an educational classroom studio. We're going to be able to offer all sorts of curriculum around Indigenous education, whether it's food, food processing, cooking, medicinals, language, crafting—pretty much anything that falls in line with what our ancestors would have done.

And then creating a system where we're able to replicate this particular system and move it around. Our goal is to be a regional center point to work directly with tribal communities and entrepreneurs around us to help them develop more instances of Indigenous foodways—whether it's a culinary operation in the tribal community that could be small scale, like catering or doing some elder meals or something out of a community center, or a full-scale restaurant if their tribe wants to go that far and develop something. **DSM**



Going the Extra Mile With HCL

Methods for managing glucose levels during exercise with this technology

BY KATHRYN GENTILE, MS, ACSM-CEP, EIM II, CPT, CSNC, CDCES

In just the past few years, diabetes technology has come a long way. In 2016, the first hybrid closed-loop (HCL) system, produced by Medtronic, received approval from the U.S. Food and Drug Administration (FDA). Since then, manufacturers Tandem and Insulet have also gotten FDA approval on their HCL systems. But despite the availability of this cutting-edge

technology, techniques for using it to achieve optimal glucose management during sport are rarely taught to those with diabetes, creating a barrier to exercise for many people.

Physical activity offers a long list of benefits, both physically and mentally, so it's important that people with diabetes can safely participate in the activities of their choosing. If you're

using an HCL device, there are some strategies that can help.

What is a hybrid closed-loop (HCL) system?

In a nutshell, a hybrid closed-loop system is an insulin pump that communicates with a continuous glucose monitor (CGM) to automatically adjust insulin dosing (via either temporary

basal/background adjustments or automatic bolus dosing) to help blood glucose stay within a person's target glucose range. All of the systems on the market—Medtronic's MiniMed 770G and 780G, Tandem's Control-IQ with Dexcom G6, and Insulet's Omnipod 5—function in a fundamentally similar way but with a variety of differences. Someone interested in using an HCL system should be educated on the specific features and functionalities of each of the commercially available devices to help them decide what would work best for them.

Because each system will automatically lower or turn off basal insulin delivery when the glucose level is predicted to drop below target, many people think that adjustments are no longer needed for physical activity when using these devices. Others think that simply setting the system to its pre-programmed mode for physical activity will do the trick. However, this is typically not the case. That's because systems cannot tell exactly what you plan to do in the future—for some activities, the device still needs additional information ahead of time.

Unfortunately, the current guidelines for managing glucose during exercise focus primarily on people who use multiple daily injections or traditional (open-loop) insulin pump therapy. Because HCL systems work differently, they require a different approach to diabetes management during physical activity. Some of these approaches have yet to be standardized, but there are a variety of principles that can help.

Techniques for exercising with an HCL system

For exercise that tends to lower blood sugar (most types of aerobic/cardiovascular physical activity), here are some strategies that can help you manage your glucose with your HCL system:

- Increase your blood glucose target (or engage the system's activity mode) one to two hours prior to engaging in physical activity. (This must be done in advance due to action time of insulin—if the basal insulin

delivery is not adjusted until the activity starts, it won't have an impact until it is too late.)

- Consider the glycemic index (how quickly a food causes blood glucose to rise) of any carbohydrates you have consumed and the fact that digestion slows down during exercise. Keep this information in mind to avoid having insulin on board that is peaking while digestion is slowed or increases in basal or bolus insulin delivery during exercise. (For example, someone using an HCL system who delivers a bolus for a moderate-glycemic-index food eaten prior to exercise will be going into the workout with the food not yet digested and fully impacting their glucose levels. Additionally, the insulin may be peaking during the workout, and their insulin sensitivity will be increased due to the exercise, so they will most likely end up with a low. Following the activity, they may then be more likely to see a rebound high as the food begins to digest again.)

- Try to avoid rapid rises in blood glucose just prior to exercise.

- Take into consideration what the system is doing in the background and know that less carbohydrate may be needed to maintain your glucose level than what was required before you were using an HCL.

- Be aware that if a meal is being consumed one to three hours prior to exercise, a decrease in the amount of insulin to cover the food is typically warranted due to the glucose-lowering effects of the physical activity.

Each HCL system allows for different automated glucose targets or “temporary presets” to be set in advance of exercise. These targets set prior to exercise are typically higher than standard target glucose levels—this helps prevent the system from giving too much insulin, since physical activity typically increases insulin sensitivity, and administering the usual amount of insulin could lead to hypoglycemia (low blood glucose). Depending on the system, the target blood glucose for exercise is often set for a duration of time, automatically

returning to the usual glucose target after the preset duration. (With Tandem's Control-IQ technology, the user needs to remember to manually exit activity mode.)

It's best to talk to your health care provider about what target is best for you if you use a system that is customizable. On my own HCL device, I use an exercise target of 140 mg/dl. Many of my clients use an alternate profile for exercise with glucose targets that are less aggressive than their usual goals, often somewhere in the range of 120 to 200 mg/dl for types of exercise that lead to a drop in glucose. (Certain types of resistance training, such as hard low-repetition weight training of large muscle groups, can temporarily raise blood glucose.) It's also important to be aware that, because the system is making adjustments automatically, less carbohydrate is typically needed to prevent/treat hypoglycemia during exercise.

Each person will have the best outcomes during exercise with their hybrid closed-loop system with a customized approach. Factors such as the time of day, duration of physical activity, and phase of the menstrual cycle (if applicable) will all need to be taken into account. With the help of their health care team, every user will need to do some trial and error and analysis to determine the approach that works best for them.

Time to get moving

There is more exciting technology in the works that will hopefully someday make glucose management during exercise a worry of the past. But until then, we should use the available tools to their fullest potential. Keep exercising, and definitely don't let diabetes hold you back! **DSM**

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LIFE-SAVING JEWELRY

The importance of wearing medical ID

BY KURT ULLMAN, RN



For those with and without diabetes alike, medical emergencies are an unfortunate fact of life. When it comes to diabetes, there are a variety of factors that are linked to an increased risk. For instance, some of the medicines used for managing high blood glucose can result in

low blood glucose, leading a person to pass out or otherwise become unresponsive. Diabetic ketoacidosis (DKA), in which chemicals called ketones build up to dangerous levels in the blood due to a lack of insulin, is another life-threatening diabetes-related emergency.

Fortunately, if you ever find your-

self in such a situation, there is a valuable tool that can help convey critical information even when you can't: medical identification jewelry. Medical ID jewelry has been available since at least 1953, providing information to both good Samaritans and first responders that can result in better treatment.

How medical ID jewelry can help

“First responders need to know about a condition that has to be addressed immediately,” says Amy Hess-Fischl, MS, RDN, LDN, BC-ADM, CDCES, Diabetes Care and Education Quality Coordinator in the Endocrinology Outpatient Clinic at the University of Chicago. “Use of medical identification jewelry can help guide treatment when you aren’t able to. This information can quite literally save your life.”

Most first responders are trained to look for medical identification around the neck or near the wrist. This is why experts generally suggest either a bracelet, a necklace, or something on your watchband.

Medical ID jewelry is even useful before first responders arrive: A layperson finding someone unresponsive would be able to give the 911 dispatchers and responders information on what to expect.

Who should be considering medical ID jewelry? Although this form of identification is helpful for anyone with diabetes, those who are taking medication that can cause low blood sugar (such as insulin or an oral medicine in the sulfonylurea or meglitinide class) may especially benefit.

A variety of options

Medical ID can take many forms. Often, it is a simple bracelet that has “diabetes” written on it with a medical emergency symbol. There are also a variety of more stylish ID bracelets available, including some that are made with gold or silver or contain jewels. Additional options include necklaces, dog tags, and attachments for watchbands. For children, plastic ID bracelets that come in a variety of colors and patterns are available.

“The style and kind pretty much depend on your preferences,” says Alexandra Dodd, MD, Assistant Professor at the University of Alabama at Birmingham. “Some may want [something] flashier because it suits their personality. Others may want something more subdued. The thing

to remember is that the best medical ID jewelry for you is the one you will actually wear.”

Keep it simple

“In most cases, simplicity is best,” said Hess-Fischl. “I have had first responders tell me that if there is too much fashion jewelry, they have problems telling what is or is not a medical ID. Overall, the most important thing is that the user feels the medical ID fits in with their lifestyle and that they feel comfortable wearing it.”

Less-common medical ID options, such as smartphone cases or tags that go on shoelaces, are not suggested as first-line choices. That’s because these types of ID can easily get separated from the person, and they are also not in areas where first responders are trained to look for information.

Wallet cards can be used as a second-line source of medical information. These contain more details than medical ID jewelry, but because first responders don’t usually look in a wallet at an emergency scene, they are probably more useful for providing contact and other information at the hospital.

Low- and high-tech options

Medical ID jewelry runs the gamut when it comes to technological integration. Many items are, of course, simply jewelry, without any additional tech. Some higher-end items may include a QR code or website address where additional information can be accessed (essentially covering many of the features of a wallet card but at a higher cost). However, there are some concerns about privacy and security issues with this sort of setup, and these also require you to keep the database up to date as your treatment changes.

Needless to say, the amount of information you can include on a standard bracelet or other type of jewelry is very limited. Your medical care provider will be able to guide you on what information you should consider.

“Obviously, the minimum that has to be included is that you are diabetic,” notes Dr. Dodd. “If there

is room, you might want to [also] include the medications you take and allergy information.”

Some guidelines suggest including a contact number, but this may not be a good idea from a privacy standpoint. Other things that should not be put on a medical ID are medical record numbers, Social Security numbers, insurance policy numbers, personal identification numbers, and website login information.

Buying a medical ID

There are various places where you can purchase medical ID jewelry. If you are looking for a more basic bracelet or dog tag, then most drugstores will have them in stock either in the store or on their website for about \$15 to \$30. Many big-box retailers will also have them available. For those with more expensive tastes, a 14K gold medical bracelet can be purchased from Macy’s for roughly \$1,150. Websites like Etsy and Amazon also have a wide array of options at a variety of price points. The best way to start the search for your perfect medical ID is to type “medical identification jewelry” into your preferred search engine and see what comes up.

“Cost is probably more of a brand thing than quality,” said Dr. Dodd. “It is like a car in that you can get a basic model or one with all the bells and whistles, depending on your budget.”

A simple way to help stay safe

Although medical ID jewelry has been available for decades, it is still an underutilized resource.

“We know that [medical IDs] are not used as often as they should be, and for those at risk for low blood sugar, it can be lifesaving,” said Hess-Fischl. “Serious things [occur] all the time, and this is a very simple way to help the medical professionals help you in the unlikely event something happens.” **DSM**

A freelance writer with more than 30 years of experience, Kurt Ullman, RN, has won eight Merit National Health Information Awards and the Media Orthopaedic Reporting Excellence Award.



12 DIABETES MYTHS DEBUNKED

Untruths about diabetes—and people who have diabetes—abound.
Get the facts surrounding 12 common myths.

BY WIL DUBOIS, BS, AAS

Everyone knows everything about diabetes—particularly those who don't have it. Uninformed family members, friends, and even strangers think they know all about your diabetes and are quick to judge you, give you advice, or ask whether you can do whatever the activity under discussion is.

There are numerous myths regarding diabetes. Some are archaic scraps of information that are simply no longer true. Others were never true in the first place but have been believed by people both with diabetes and without it. Finally, some myths are just ... well ... bizarre.

The following are truths to dispel some of the fiction surrounding diabetes.

MYTH #1: People with diabetes can't eat any sugar.

TRUTH: I doubt there's a person with diabetes who hasn't been asked, "Can you eat that?" And while it's true that when a person has diabetes, the body doesn't deal well with high levels of sugar, that doesn't bar sugar completely. In fact, nearly every cell in the body lives on glucose, and it's the primary source of fuel for the brain.

How much sugar can people with diabetes eat? That depends on the person and the medications they take. But sugar in no way is totally banned from modern diabetes meal planning.

Long ago, people with diabetes were told not to eat foods containing sugar. We now know that most people with diabetes can consume sugar safely, but this restriction has remained the most widely held diabetes myth. Myths that start as gospel truths are the most tenacious.

MYTH #2: People who have overweight or obesity always develop diabetes.

TRUTH: To poke a sharp pin in this balloon, consider two statistics. First, the U.S. adult obesity rate is around 42%, and the diabetes rate is just over 11%. If obesity alone caused diabetes, the diabetes rate would be much higher.

The fact is that while excessive weight can increase the risk of and serve as a trigger for diabetes onset (as can age and other factors like race/

ethnicity), there's a lot more to diabetes than just weight. The likelihood of developing diabetes is thought to be an interplay between environmental and lifestyle factors and genes—that is to say, to develop diabetes, you must be genetically predisposed. If you are predisposed, keeping trim and eating a healthy diet delays—but often may not prevent—diabetes.

This myth comes from uninformed observation. While it's true many people who have diabetes are overweight, people sometimes make causal connections that aren't there.

MYTH #3: Insulin causes blindness.

TRUTH: Insulin is a miracle drug. It's a lifesaver. It has fewer side effects than many other diabetes medications, and yet it's nearly universally reviled and misunderstood.

At one time, insulin commonly was used as a drug of last resort, often started too late in the disease course after devastating complications had already set in—including vision loss. This myth still is widely held as truth in some parts of the U.S.

MYTH #4: Insulin causes weight gain.

TRUTH: The weight gain myth is complicated by the fact that many people gain weight after starting insulin therapy. The reason for this is debated even among diabetes experts, and while some experts believe insulin in itself can cause weight gain, there's a more likely explanation. When blood sugar is elevated, glucose is excreted in the urine, eliminating some of the calories consumed. Once insulin treatment is begun, those calories stay in the body, and if a person consumes more calories than they burn, they will gain weight.

MYTH #5: Insulin shots hurt.

TRUTH: Some shots do hurt, including a number of common vaccines. Some even hurt more the next day. But insulin shots are different. Modern insulin needles are thin and short, with beveled tips that are coated with lubricants.

These needles are injected into fat layers under the skin on parts of the body with few nerve endings.

Finger-sticks are much more painful than insulin shots and, done correctly, finger-sticks are barely noticeable.

MYTH #6: It's not safe for people with diabetes to exercise.

TRUTH: There are no physical limitations imposed by diabetes—in fact, a team of type 1 cyclists won the Race Across America, a transcontinental bike race from California to Maryland. (It is worth noting that some activities should not be done by those with certain diabetes complications—for instance, people with proliferative diabetic retinopathy should avoid heavy lifting, high-impact activities, and anything that requires inverting the head for long periods of time.)

This myth no doubt originated from the fact that a risk of low blood sugar is associated with increased physical activity. If someone taking insulin or certain oral medicines (such as sulfonylureas or meglitinides) is much more active than usual (or hasn't adjusted their carb intake to accommodate the exercise), a low sugar level can result. But this doesn't bar physical activity, even extreme activity. Activity merely needs to be balanced with medicine and carbohydrate intake to maintain healthy blood sugar levels.

MYTH #7: People with diabetes are moody.

TRUTH: There is some truth here—depression is more than twice as common among people with diabetes as among the general population, and blood sugar swings can affect mood in the short run.

But depression is a treatable illness, and good diabetes control contains mood swings.

MYTH #8: People with diabetes have limited employment options.

TRUTH: Diabetes is an inconvenience, not a disability. While we've yet to have an astronaut with diabetes, it's only a matter of time. People with diabetes have done amazing things, filled myriad roles, and worked in nearly every vocation—including Olympic medalists; stars of stage, screen, and music; pilots and racecar drivers; political leaders; soldiers; journalists; mountain climbers; and Supreme Court justices.



MYTH #9: Women with type 1 diabetes cannot have children safely.

TRUTH: At one time, it was the medical standard of care to advise women with diabetes, especially those with type 1, not to conceive. Movies such as “Steel Magnolias” keep this myth alive.

Today, while theirs is considered a high-risk pregnancy that should be managed by a team of health care experts, thousands of women with type 1 diabetes safely deliver healthy babies every year.

MYTH #10: People with diabetes have sexual dysfunction.

TRUTH: As in many other parts of the diabetes universe, there’s a difference between diabetes and diabetes control. Simply having diabetes is the

leading cause of nothing. But a person with poorly controlled diabetes is at higher risk of experiencing sexual issues such as erectile dysfunction (ED), vaginal dryness, or reduced libido.

MYTH #11: People with diabetes can’t get tattoos.

TRUTH: Not only can people with diabetes have tattoos, many choose to get medical alert tattoos. But if your diabetes is in poor control, getting a tattoo can be risky because it might not heal properly. An A1C under 7% (or 8%, according to some experts) is best for tattoos, and getting a tattoo if your A1C is higher than 9% is considered high risk.

MYTH #12: I don’t need to check my blood sugar because I can tell when it’s high.

TRUTH: This myth comes from within the diabetes community. No one can accurately guess what their blood sugar is by feel. While lows often have a distinct set of symptoms, these warning signs provide no reliable indication of how low you actually are, and while some people feel vaguely ill if their sugar goes high quickly, these same symptoms rarely are present when sugar creeps higher over a long period of time.

The only way to truly know your blood sugar number is to get out your meter and check. **DSM**

Wil Dubois, BS, AAS, is a writer and author who has published hundreds of articles and four award-winning diabetes books. He has type 1 diabetes.



Diabetic Foot Ulcers

Taking steps to avoid this dangerous diabetes complication

BY AMY CAMPBELL, MS, RD, LDN, CDCES

If you have diabetes, you have a higher risk of getting foot sores, or foot ulcers, as they're often called. Between 15% and 25% of people with diabetes will develop one at some point. Foot ulcers can take weeks or months to heal, and if not caught and treated properly, they increase the risk of amputation. Learn more about foot ulcers and what you can do to prevent them.

What is a foot ulcer, and what does it look like?

Foot ulcers are open sores or wounds that don't heal or that keep recurring. They may develop under a callus on the foot due to pressure and rubbing; they can also result from an injury or trauma to the foot. Foot ulcers usually occur on the bottom of the foot.

What causes foot ulcers?

Foot ulcers can result from several factors, such as:

- Lack of feeling in the foot from nerve damage (neuropathy)
- Poor circulation, possibly due to peripheral arterial disease (PAD)
- Foot deformities
- Trauma or injury
- Edema (swelling)

Diabetic peripheral neuropathy is the main cause of foot ulcers, and this occurs due to chronically high blood sugar levels (hyperglycemia). Peripheral neuropathy can also change the way you walk and may lead to foot deformities, such as bunions, hammertoes, and Charcot foot (a complication that affects the bones and joints in the foot, causing a deformity). A deformed foot can lead to ulcers on

the ankle or the bottom of the foot.

Diabetes can damage the nerves and blood vessels in the feet, leading to numbness and reduced feeling in the feet. As a result, your feet are more likely to get injured—for example, by stepping on a nail or a piece of glass—and they may not heal well. And unless you are checking your feet regularly, you may not realize that you have a foot ulcer because you might not feel any pain.

Foot ulcers are concerning because they can quickly get infected and possibly lead to gangrene. If not caught and treated promptly, the infection can get into the muscle and the bone.

How do you know if you have a foot ulcer?

If you have a foot ulcer, you may have



pain, but you might not if you have a loss of sensation in your feet. Signs of a possible foot ulcer are:

- Drainage or blood that stains your socks or stockings or shoes
- Redness or swelling
- Unpleasant odor
- Tan, brown, or black tissue, called “eschar,” that surrounds the ulcer

Are you at risk for a foot ulcer?

Having diabetes puts you at risk for foot ulcers. Other factors that can increase the risk of foot ulcers include:

- Diabetes for 10 or more years
- Peripheral arterial disease
- Neuropathy
- Kidney disease
- Uncontrolled blood sugars
- Smoking
- Previous foot ulcers
- Corns or calluses
- Foot deformities
- Visual impairment
- High blood pressure

How are foot ulcers treated?

If you have—or think you might

have—a foot ulcer, make sure to see your health care provider as soon as possible. Your provider will likely do the following:

- Check for signs of infection, such as redness, warmth, swelling, discharge, or discoloration
- Look for blisters, cuts, scratches, or ingrown toenails (which could cause additional ulcers)
- Check the pulses in your foot to evaluate the rate of blood flow
- Ask you to stand and walk to check your gait and the shape of your foot

You may need X-rays, an MRI, and/or blood tests, as well.

One way to treat a foot ulcer is debridement, which removes dead skin and tissue. This involves cleaning and disinfecting the skin around the ulcer; the wound is probed to see how deep it is and to see if there is any foreign matter in the ulcer. Dead tissue is cut away, and the ulcer is cleaned out.

Once the wound is clean, special bandages and medications are applied to absorb fluid, protect the wound, and help it to heal. You might be taught to do dressing changes yourself, or you might have a visiting nurse do this for you. Ulcers will heal faster if they're kept covered and moist. Treatment might include the use of growth factors, special dressings, and skin substitutes.

Your provider may prescribe “offloading,” which means taking weight off your foot to let it heal. This might be done with special shoes, a brace, a cast, crutches, or a wheelchair. You will likely be given oral or IV antibiotics to cure the infection and possibly other medications, such as anticoagulating medications.

Depending on how severe the foot ulcer is, you may be hospitalized. Surgery might be indicated if you have a lot of dead tissue around the ulcer, if you have peripheral arterial disease that prevents adequate blood flow to the feet, or if you have repeated ulcers due to poor alignment of bones in your feet. In severe cases, amputation may be needed to prevent the infection from spreading.

How you can prevent foot ulcers

The best defense against foot ulcers is preventing them in the first place. Here's what you can do:

Focus on your blood sugars. Uncontrolled blood sugars can lead to neuropathy, which can lead to loss of feeling in your feet and result in a sore or ulcer going unnoticed.

Take care of your feet. Wash your feet every day, keep your toenails trimmed, make sure your feet stay dry and moisturized, and check your feet daily for cuts, sores, and areas of redness (notify your provider if you see that cuts aren't healing).

Never perform “bathroom surgery.” If you have corns or calluses, see your provider or a podiatrist. Cutting and over-the-counter products can damage your skin and cause an infection.

Trim toenails properly. Trim your toenails with toenail clippers and go straight across. Don't cut into the corners of your toenails. Have a podiatrist trim your toenails if you can't see, feel, or reach your feet; if your toenails are thick or yellowed; or if your nails curve and grow into the skin.

Wear shoes that fit. Make sure the shoes provide enough support and cushioning and have a wide-enough toe box so that they don't pinch your feet. Try on shoes at the end of the day.

Don't go barefoot. Always wear shoes or slippers, even around the house.

Wear clean and dry socks. Socks should wick away moisture and not be too tight or have seams that could irritate your skin.

Protect your feet from hot and cold. Always wear shoes at the beach and on hot pavement. Keep your feet away from heaters and open fires. Avoid using hot water bottles or heating pads on your feet. **DSM**

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FIVE WAYS TO LOWER

BY AMY CAMPBELL, MS, RD, LDN, CDCES

Having high blood sugar, a situation also called hyperglycemia, means that there is too much glucose (sugar) in the blood, often due to a lack of insulin or the body's inability to use insulin properly. (Insulin is a hormone that helps move glucose from the blood into the cells for energy.) For people who have diabetes, other factors can contribute to high blood sugar as well, such as eating too much carbohydrate, not getting enough physical activity, being sick or stressed, forgetting to take or not taking enough diabetes medication, or taking other medications that can raise blood sugar.

The downsides of high blood sugar

Hyperglycemia can cause immediate, or acute, side effects, including thirst, frequent urination, headaches, hunger, and blurry vision. It can also make you feel tired.

Very high blood sugar can cause serious and potentially life-threatening conditions such as diabetic ketoacidosis (DKA, characterized by an extremely high blood glucose level

and a toxic level of ketones in the blood or urine) and hyperglycemic hyperosmolar syndrome (HHS, characterized by very high blood glucose levels, generally without ketones in the blood or urine). These conditions require emergency medical treatment.

Long-term, or chronic, hyperglycemia can lead to complications, including heart disease and stroke, kidney disease, nerve damage, eye problems, foot problems, skin conditions, hearing impairment, and possibly even Alzheimer's disease.

What is considered to be a high blood sugar level?

A fasting blood sugar is considered high if it's above 130 mg/dl. Fasting hyperglycemia (meaning, blood sugar that is high after not eating for at least eight hours) is common. Postprandial, or after-meal, blood sugar is considered high if it's above 180 mg/dl two hours after eating. (Keep in mind that your blood sugar targets may be different, so talk with your provider about your personal goals.)

Of course, blood sugar levels can go much higher—for example, DKA

may occur when blood sugars are above 250 mg/dl. Some people even have blood sugar levels in the 400s or 500s or higher.

How to lower blood sugar

Because hyperglycemia is potentially dangerous and can make you feel unwell, it's important to take steps to lower your blood sugar. Here's how.

1. Take insulin. Taking insulin is the fastest way to lower blood sugar (of course, only do this if you've been prescribed insulin and with guidance from your health care provider or diabetes educator). Generally, a fast-acting type of insulin, such as insulin lispro (brand name Humalog) or insulin aspart (NovoLog) is recommended to lower blood sugars fast. Some people are given guidance on using "correction" doses of insulin if blood sugars go too high.

2. Do some physical activity. Physical activity, whether it's walking, jogging, bicycling, or dancing, helps lower blood sugar both in the short term and long term. When you move, your cells take up glucose from the blood to be used as energy, thereby



BLOOD SUGAR QUICKLY

lowering blood sugars. You don't have to rush to the gym, either—going for a walk, marching in place, or turning on the tunes and dancing at home can do wonders for your blood sugar. However, if you take insulin and your blood sugar is above 250 mg/dl, you should first check your urine for ketones using ketone strips. If you have ketones, don't exercise (your blood sugar could rise even higher) and contact your provider.

3. Cut back on the carbs. High blood sugars happen when you have diabetes, and another way to help counteract this is to eat less carb, temporarily. This doesn't mean you can't eat any carb foods, but curtailing those carbs in the short term can help. Go easy with bread, pasta, rice, fruit, milk, and yogurt—and anything sweet, for that matter. Stick with low-carb veggies, lean protein foods, and healthy fat foods (for example, vegetable oils, nuts, seeds, and avocado).

4. Check your medications. First, determine whether you forgot to take your insulin or other type of diabetes medicine. If you did, contact your provider or diabetes educator to find

out if you should take a dose now or wait until your next scheduled dose. Second, take stock of other medicines you might be taking that could be affecting your blood sugars. Examples include corticosteroids (e.g., prednisone), some antidepressants, statins, and birth control pills. Don't stop taking these medicines, but let your provider know that your blood sugars are running high. They may suggest increasing your diabetes medication dose(s) or changing the other medicines that you're taking.

5. Drink more water. Chances are, if your blood sugar is high, you're probably thirsty and drinking more fluids (make sure you stick with water or other sugar-free beverages!). Hyperglycemia can cause dehydration, so drinking water can counteract that. Plus, staying hydrated also helps your kidneys flush out extra glucose and can help to lower blood glucose levels. Keep a water bottle or a glass within sight to remind you to drink. Ask your provider about the amount of water (and other fluids) that is right for you, since some people may need more or less than others.

Be sure to keep tabs on your blood sugar levels when they're running above target. Ideally, checking hourly, or at least several times a day, is the goal. Whether you do a finger-stick or you check your CGM (continuous glucose monitor), knowing what's going on with your glucose levels gives you valuable information and can help you adjust your food intake and/or your medications.

When to contact your doctor

Finally, call your provider or even seek emergency medical attention if you experience any of the following:

- Consistently high blood sugar readings
- Confusion
- Excessive thirst and/or urination
- Stomach pain, nausea, or vomiting
- Shortness of breath
- Ketones in the urine
- Fruity-smelling breath

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FIRE UP THE Grill

BY LORENA DRAGO, MS, RDN, CDN, CDCES

It's summer barbecue season! Time to gather family and friends in the backyard, pull out your favorite lawn games, and dine al fresco. Whether you're looking for crowd-pleasing sides, cool and crisp salads, juicy burgers and fajitas, or fresh and fruity desserts, we have recipes that are sure to satisfy. Pick out a few favorite dishes, and get ready to enjoy the outdoors!

OUR RECIPES

Like everyone, you're busy—and we keep that in mind when we select recipes. Many of them can be prepared in

30 minutes or less. Others require short preparation times followed by long cooking times. We've also included symbols to help you more easily find those recipes especially high in fiber, low in fat, carbohydrates, and sodium.

▲ **FI HIGH-FIBER RECIPE**
5g or more of fiber per serving

▼ **LC LOW-CARB RECIPE**
15g or less of carbs per serving

▼ **LF LOW-FAT RECIPE**
3g or less of fat per serving

▼ **LS LOW-SODIUM RECIPE**
140mg or less of sodium per serving

Charred Corn Salad

6 SERVINGS | 1/6 OF TOTAL RECIPE

CAL 217 | FAT 10G | SAT FAT 1G | PROTEIN 5G | CARBS 29G | CHOL 0MG | FIBER 3G | SODIUM 301MG

DIETARY EXCHANGE: 2 DIABETIC CARB COUNT, 2 BREAD/STARCH, 2 FAT

3 tablespoons fresh lime juice
1/2 teaspoon salt
1/4 cup extra-virgin olive oil
4-6 ears corn, husked (enough to make 3-4 cups kernels)
2/3 cup canned black beans, rinsed and drained
1/2 cup chopped fresh cilantro
2 teaspoons minced, seeded chipotle pepper (1 canned chipotle pepper in adobo sauce or 1 dried chipotle pepper, reconstituted in boiling water)*

1. Whisk lime juice and salt in small bowl. Gradually whisk in oil. Set aside.

2. Heat large skillet over medium-high heat. Cook corn in single layer 15 to 17 minutes, or until browned and tender, turning frequently. Transfer to plate to cool slightly. Slice kernels off ears and place in medium bowl.

3. Microwave beans in small microwavable bowl on high 1 minute, or until heated through. Add beans, cilantro, and chipotle to corn; mix well. Pour lime

juice mixture over corn mixture; toss to combine.

***Note:** Chipotle peppers can sting and irritate the skin, so wear rubber gloves when handling peppers, and do not touch your eyes.

Note: Chipotle peppers in adobo sauce are available canned in the Mexican food section of most supermarkets. Since only a small amount is needed for this dish, spoon leftovers into a covered plastic container and refrigerate or freeze.



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Festive Corn Casserole

10 SERVINGS | ABOUT ½ CUP

▼ LF | ▼ LC | ▼ LS

CAL 54 | FAT 1G | SAT FAT 0G | PROTEIN 6G | CARBS 7G | CHOL 1MG | FIBER 1G | SODIUM 138MG

DIETARY EXCHANGE: 1 VEGETABLE, 1 MEAT

Nonstick cooking spray
2 cups grated zucchini
1 cup frozen corn
1 cup diced red bell pepper
2 cups cholesterol-free egg substitute (or equivalent of eggs—roughly 8 large eggs; directions and nutrition data use egg substitute)
½ cup evaporated fat-free milk
2 teaspoons sugar substitute
¼ teaspoon celery seed

⅛ teaspoon salt
⅛ teaspoon red pepper flakes (optional)

1. Preheat oven to 350°F. Coat 11x7-inch baking dish with nonstick cooking spray.

2. Mix zucchini, corn, and bell pepper in baking dish. Whisk egg substitute, evaporated milk, sugar substitute, celery seed, salt, and red pepper flakes, if desired, in large bowl. Pour egg mixture over vegetables in baking dish.

3. Bake 45 to 55 minutes, or until golden.



Mexican-Style Corn on the Cob

4 SERVINGS | ¼ OF TOTAL RECIPE

▼ LC | ▼ LS

CAL 96 | FAT 4G | SAT FAT 1G | PROTEIN 3G | CARBS 15G
| CHOL 5MG | FIBER 2G | SODIUM 104MG

DIETARY EXCHANGE: 1 BREAD/STARCH, ½ FAT

- 2 tablespoons reduced-fat mayonnaise
- ½ teaspoon chili powder
- ½ teaspoon grated lime peel
- 4 ears corn, shucked
- 2 tablespoons grated parmesan cheese

1. Prepare grill for direct cooking. Combine mayonnaise, chili powder, and lime peel in small bowl; set aside.
2. Grill corn over medium-high heat, uncovered, 4 to 6 minutes, or until lightly charred, turning 3 times. Immediately spread mayonnaise mixture over corn. Sprinkle with cheese.

TIP

Chile peppers have healthful antioxidant effects. They also have a component known as capsaicin, which causes that burning effect. So how do you tame the heat if you use hot peppers? Some people find relief by consuming dairy products, such as milk or yogurt. Other recommendations for cooling the burn include a bit of sugar, rice, or ice.

Herbed Corn on the Cob

4 SERVINGS | 1 EAR OF CORN

▼ **LC** | ▼ **LS**

CAL 86 | FAT 4G | SAT FAT 2G | PROTEIN 2G | CARBS 14G
| CHOL 8MG | FIBER 2G | SODIUM 106MG

DIETARY EXCHANGE: 1 BREAD/STARCH, ½ FAT

- 1** tablespoon butter or margarine
- 1** teaspoon mixed dried herbs (such as basil, oregano, sage, and rosemary)
- ⅛** teaspoon salt
- Black pepper**
- 4** medium ears corn (6-7 ounces each), husks removed

- 1.** Combine butter, herbs, salt, and pepper in small microwavable bowl. Microwave on medium (50%) 30 to 45 seconds, or until butter is melted.
- 2.** With pastry brush, coat corn with butter mixture. Place corn on microwavable plate; microwave on high 5 to 6 minutes. Turn; microwave on high 5 to 6 minutes, or until tender.

TIP

According to the University of Sydney Glycemic Index, one medium sweet corn on the cob boiled for 20 minutes has a glycemic index of 48, making it a low-glycemic food. (The glycemic index is a system that indicates how quickly a food causes blood glucose levels to rise. Foods low on the glycemic index will cause a slow rise in blood glucose.) This is one reason why a serving of corn will help manage your after-meal blood glucose.

Coleslaw With Snow Peas and Corn

4 SERVINGS (ABOUT ¾ CUP PER SERVING) | ¾ CUP

▼ LF

CAL 85 | FAT 1G | SAT FAT 1G | PROTEIN 3G | CARBS 17G | CHOL 3MG | FIBER 2G | SODIUM 175MG

DIETARY EXCHANGE: 3 VEGETABLE

4 cups (about 8 ounces) coleslaw mix

½ cup trimmed, vertically sliced snow peas

½ cup whole-kernel corn (frozen or fresh)

¼ cup low-fat mayonnaise

¼ cup fat-free sour cream

¼ cup nonfat buttermilk

1 tablespoon cider vinegar

2 teaspoons sugar

¼ teaspoon celery seed

1. Combine coleslaw, snow peas, and corn in large bowl.

2. Meanwhile, whisk mayonnaise, sour cream, buttermilk, vinegar, sugar, and celery seed in medium bowl. Add to coleslaw mixture and mix to combine.



TIP

Corn is a go-to summer vegetable and the star of barbecue grills across the United States. Did you know that corn kernels, in their full form, are also a whole grain? Eating whole grains is associated with a lower risk of diabetes, heart disease, stroke, and certain types of cancer.

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Perfect Corn on the Cob With Chili Lime Butter

4 SERVINGS | ¼ OF TOTAL RECIPE

▼ LS

CAL 107 | **FAT** 5G | **SAT FAT** 1G |
PROTEIN 2G | **CARBS** 17G | **CHOL** 0MG |
FIBER 2G | **SODIUM** 92MG

DIETARY EXCHANGE: 1 BREAD/STARCH,
1 FAT

- 4 tablespoons salted, light margarine**
- 1 teaspoon grated lime peel**
- 1 tablespoon fresh lime juice**
- 1 teaspoon chili powder**
- 4 ears fresh yellow corn on the cob in the husk**

1. Combine margarine with lime peel, juice, and chili powder. Mix until all juice has been incorporated into margarine. Cover and allow to stand at least 30 minutes.

2. Remove outer leaves of corn husk, leaving inner leaves. Remove as much silk as possible. Rinse in cold water and place all 4 ears in plastic storage bag. Close bag, leaving about 1 inch unsealed.

3. Microwave corn on high 6 minutes. Carefully turn bag over and cook on high 4 more minutes.

4. Remove carefully. Cool briefly and peel remaining husk and silk. Serve hot with 1 teaspoon chili lime butter for each serving.

Cornmeal-Crusted Catfish

4 SERVINGS | ¼ OF TOTAL RECIPE

CAL 289 | FAT 16G | SAT FAT 3G | PROTEIN 19G | CARBS 18G |
CHOL 57MG | FIBER 1G | SODIUM 500MG

DIETARY EXCHANGE: 2 FAT, 1 MEAT

- ½ cup cornmeal
- ¼ cup crushed pecans
- 2 teaspoons dried minced onion
- 1½ teaspoons garlic powder
- 1 teaspoon salt
- 1 teaspoon paprika
- ½ teaspoon black pepper
- 3 tablespoons low-fat mayonnaise
- 2 tablespoons apricot preserves or fruit spread
- Nonstick cooking spray
- 1 pound catfish fillets

1. Heat medium nonstick skillet over medium heat. Add cornmeal, pecans, onion, garlic powder, salt, paprika, and pepper; cook and stir 3 minutes, or until cornmeal begins to brown. Transfer to shallow dish.

2. Combine mayonnaise and preserves in small bowl or cup. Coat catfish with mayonnaise mixture. Dredge in toasted cornmeal mixture; turn to coat.

3. Spray same skillet with nonstick cooking spray; heat over medium heat. Add catfish; cook 3 to 4 minutes on each side, or until fish begins to flake when tested with fork.



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Grilled Steak and Asparagus Salad

4 SERVINGS | 1½ CUPS SALAD, 1 TABLESPOON DRESSING, AND 2½ OUNCES STEAK

▼ LC

CAL 189 | FAT 8G | SAT FAT 2G | PROTEIN 20G | CARBS 10G | CHOL 40MG | FIBER 3G | SODIUM 198MG

DIETARY EXCHANGE: ½ FAT, 2 VEGETABLE, 2 MEAT

- 1 boneless top sirloin steak (10 ounces and about 1 inch thick), trimmed of visible fat
- 1 teaspoon salt-free garlic-herb seasoning blend
- 1 pound fresh asparagus, trimmed
- 1 teaspoon canola oil
- 6 cups spring greens
- ½ cup chopped green onions
- ¼ cup light champagne vinaigrette or other light vinaigrette
- 4 teaspoons crumbled blue cheese

1. Prepare grill for direct cooking. Season steak with seasoning blend. Grill steak over medium heat, covered, about 8 to 10 minutes, turning once, until steak is still pink in center. Remove from grill. Cover loosely with foil to keep warm.

2. Toss asparagus with oil. Place asparagus in grill basket. Grill over medium heat 3 to 5 minutes, shaking basket once or twice, until crisp-tender. Remove from grill.

3. While asparagus is grilling, toss together spring greens, onions, and vinaigrette. Divide salad among 4 dinner plates. Slice steak thinly across the grain. Divide among salad plates. Top each salad with grilled asparagus. Sprinkle with blue cheese.



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Mexican Slaw

8 SERVINGS | ½ CUP

▼ LF | ▼ LC

CAL 38 | FAT 1G | SAT FAT 1G | PROTEIN 1G | CARBS 8G | CHOL 1MG | FIBER 2G | SODIUM 157MG

DIETARY EXCHANGE: 1½ VEGETABLE

- 1 (6-inch) corn tortilla, cut into thin strips
- Nonstick cooking spray
- ¼ teaspoon chili powder
- 3 cups shredded green cabbage
- 1 cup shredded red cabbage
- ½ cup shredded carrots
- ½ cup sliced radishes
- ½ cup corn
- ¼ cup coarsely chopped fresh cilantro
- ¼ cup fat-free mayonnaise
- 1 tablespoon fresh lime juice
- 2 teaspoons cider vinegar
- 1 teaspoon honey
- ½ teaspoon ground cumin
- ¼ teaspoon salt
- ¼ teaspoon black pepper

1. Preheat oven to 350°F. Arrange tortilla strips in even layer on nonstick baking sheet. Spray strips with cooking spray and sprinkle with chili powder. Bake 6 to 8 minutes, or until crisp.

2. Combine cabbage, carrots, radishes, corn, and cilantro in large bowl. Combine mayonnaise, lime juice, vinegar, honey, cumin, salt, and pepper in small bowl. Add mayonnaise mixture to cabbage mixture; toss gently to coat. Top with baked tortilla strips.



Berry Spinach Salad

4 SERVINGS | 1½ CUPS

▼ LF

CAL 85 | FAT 1G | SAT FAT 1G | PROTEIN 3G | CARBS 16G | CHOL 3MG
| FIBER 4G | SODIUM 200MG

DIETARY EXCHANGE: 1 FRUIT, 1 VEGETABLE

6 cups fresh baby spinach	⅓ cup fat-free raspberry vinaigrette
2 cups sliced fresh strawberries	¼ teaspoon black pepper
2 tablespoons chopped red onion	¼ cup crumbled reduced-fat feta cheese

1. Combine spinach, strawberries, and red onion in large bowl.

2. Whisk together vinaigrette and pepper in small bowl. Drizzle over salad; toss to coat. Arrange evenly on 4 serving plates. Sprinkle evenly with cheese.



Mango Chicken Salad

2 SERVINGS | ½ OF TOTAL RECIPE

CAL 241 | FAT 7G | SAT FAT 5G | PROTEIN 26G | CARBS 19G | CHOL 57MG | FIBER 2G | SODIUM 398MG

DIETARY EXCHANGE: 1 FRUIT, 3 MEAT

- ¼ cup (plus 2 tablespoons) plain low-fat yogurt
- ¼ cup chopped fresh cilantro
- 1 tablespoon fresh lime juice
- 1 teaspoon Dijon mustard
- ½ teaspoon ground turmeric
- ⅛ teaspoon ground red pepper
- 1 tablespoon mango chutney (optional)
- ⅛ teaspoon salt
- ⅛ teaspoon black pepper
- 1 cup shredded cooked chicken
- ½ mango, peeled, seeded, and diced
- 5 ounces baby spinach
- ¼ cup sweetened shredded coconut

1. Whisk together yogurt, cilantro, lime juice, mustard, turmeric, red pepper, and chutney, if desired, in large bowl. Season with salt and black pepper. Add chicken and mango; toss. Serve on spinach; sprinkle with coconut. (Coconut can be lightly toasted, if desired.)

TIP Fun fact: Do you know which country is the leader in pepper production? According to data from 2021, the answer is China. Another fun fact: Peppers are botanically considered a fruit.

Turkey Club Salad

2 SERVINGS | ½ OF TOTAL RECIPE

▼ LF

CAL 170 | **FAT** 3G | **SAT FAT** 1G | **PROTEIN** 17G | **CARBS** 18G | **CHOL** 23MG | **FIBER** 4G | **SODIUM** 521MG

DIETARY EXCHANGE: 3 VEGETABLE, 2 MEAT

- 8 large romaine lettuce leaves
- 8 thin slices reduced-fat, reduced-sodium deli-style turkey breast (about 4 ounces total)
- 2 medium tomatoes, cut into 8 slices each
- 2 tablespoons soy-based imitation bacon bits or real bacon bits
- ¼ cup fat-free ranch salad dressing
- Black pepper (optional)

1. Layer lettuce, turkey, tomato, and bacon bits on 2 plates. Drizzle with dressing. Season with pepper, if desired.



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Pasta Tuna Salad

4 SERVINGS | ½ CUP PER SERVING

▲ FI

CAL 215 | FAT 6G | SAT FAT 2G | PROTEIN 17G | CARBS 24G | CHOL 34MG | FIBER 7G | SODIUM 321MG

DIETARY EXCHANGE: 3 BREAD/STARCH, 1½ VEGETABLE, 2 MEAT

- 2 cups cooked multigrain macaroni
- 1 can (6 ounces) water-packed, solid white albacore tuna, drained
- 1 medium red apple, cored and chopped
- 1 cup grape tomatoes or cherry tomatoes, halved
- 3 tablespoons chopped sweet or dill pickle
- 3 tablespoons reduced-fat mayonnaise
- 3 tablespoons plain fat-free yogurt
- 3 tablespoons chopped fresh Italian flat leaf parsley or 1 tablespoon dried parsley flakes
- 2 tablespoons pickle juice
- 2 teaspoons Dijon mustard
- 4 large lettuce leaves

1. Combine all ingredients except lettuce in large mixing bowl. Serve mixture over lettuce leaves.

TIP Should you ditch pasta? Not so fast. A 2018 study in the journal *BMJ Open* showed that when eating pasta as part of a low-glycemic-index dietary pattern, there is no weight gain but instead some minor weight loss (less than 1 pound). (The glycemic index is a system that indicates how quickly a food causes blood glucose levels to rise. Foods low on the glycemic index will cause a slow rise in blood glucose.) And whole-grain pasta offers an extra health benefit: Eating whole grains instead of refined grains has been associated with better systolic blood pressure (the top number) and better blood glucose management.

Chicken and Spinach Salad

4 SERVINGS | 2 CUPS SALAD

CAL 218 | FAT 4G | SAT FAT 1G | PROTEIN 23G | CARBS 23G | CHOL 55MG | FIBER 3G | SODIUM 361MG

DIETARY EXCHANGE: 1 FRUIT, 2 VEGETABLE, 2½ MEAT

- ¾ pound chicken tenders**
- Nonstick cooking spray**
- 4 cups shredded stemmed spinach**
- 2 cups washed and torn romaine lettuce**
- 1 large grapefruit, peeled and sectioned**
- 8 thin slices red onion, separated into rings**
- 2 tablespoons (½ ounce) crumbled blue cheese**
- ½ cup frozen citrus blend concentrate, thawed**
- ¼ cup prepared fat-free Italian salad dressing**
- Assorted fresh greens (optional)**

1. Cut chicken into 2x½-inch strips. Spray large nonstick skillet with cooking spray; heat over medium heat. Add chicken; cook and stir 5 minutes, or until no longer pink in center. Remove from skillet.

2. Divide spinach, lettuce, grapefruit, onion, cheese, and chicken among 4 salad plates. Combine citrus blend concentrate and Italian dressing in small bowl; drizzle over salads.



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Cheddar-Stuffed Beef Burger

4 SERVINGS | ¼ OF TOTAL RECIPE

▼ **LF**

CAL 242 | **FAT** 3G | **SAT FAT** 1G | **PROTEIN** 26G | **CARBS** 26G | **CHOL** 40MG | **FIBER** 3G | **SODIUM** 369MG

DIETARY EXCHANGE: 2 BREAD/STARCH, 2 MEAT

- Nonstick cooking spray**
- 2 large baking potatoes, washed and dried**
- 12 ounces extra-lean ground sirloin**
- ½ teaspoon dried thyme**
- 4 slices fat-free sharp cheddar cheese**
- ⅛ cup water**
- 4 slices beefsteak tomato**
- 4 romaine lettuce leaves**

1. Preheat oven to 450°F. Lightly coat

a baking sheet with cooking spray. Cut each potato crosswise into 8 round slices. Place slices on baking sheet. Bake for 25 to 30 minutes, or until lightly browned.

2. Mix together the ground sirloin and thyme in a mixing bowl. Form into 8 balls.

3. Fold each slice of cheese in half 4 times, forming a cube.

4. Press cheese cube in between 2 ground sirloin balls, sealing cheese

inside. Form into a patty by flattening to approximately 1½-inch thick. Repeat for 3 more patties.

5. Lightly coat a deep skillet with cooking spray. Heat skillet over medium-high heat. Add stuffed patties and cook for 3 minutes on each side. Add water; cover and cook for 6 minutes.

6. Place each burger on a slice of potato. Top with tomato slice, lettuce leaf, and another slice of potato.





Mustard-Glazed Tofu Burgers

4 SERVINGS | 1 BURGER

▲ FI

CAL 242 | FAT 8G | SAT FAT 1G | PROTEIN 15G | CARBS 26G | CHOL 0MG | FIBER 7G | SODIUM 237MG

DIETARY EXCHANGE: 2 BREAD/STARCH, 2 MEAT

2-3 tablespoons chopped fresh basil

2-3 tablespoons honey mustard

2 teaspoons olive oil

2 cloves garlic, minced

1 package (14 ounces) extra firm tofu, pressed*

4 multigrain sandwich thin rounds, split and lightly toasted

½ cup packed arugula or watercress

8 thin slices ripe tomato

1. Oil grid; prepare grill for direct cooking.

2. Combine basil, mustard, oil, and garlic in small bowl; mix well. Spread half of mixture over tofu.

3. Place tofu slices on grid, mustard side down. Spread remaining mustard mixture over tofu; grill, covered, 4 minutes per side, or until browned and heated through.

4. Serve in sandwich thins on top of arugula and tomato slices.

***Note:** Cut tofu in half horizontally; cut in half crosswise to make four rectangles. Place it between layers of paper towels. Place a flat heavy object on top; let stand 15 to 30 minutes.

Open-Faced Mini Blue Cheese Burgers

6 SERVINGS (12 BURGERS) | 2 BURGERS

▲ FI

CAL 276 | FAT 11G | SAT FAT 3G | PROTEIN 24G | CARBS 23G | CHOL 72MG | FIBER 6G | SODIUM 423MG

DIETARY EXCHANGE: 1½ BREAD/STARCH, 3 MEAT

2 teaspoons olive oil
1 large onion, thinly sliced
¼ teaspoon garlic salt
1 package (20 ounces) lean ground turkey
Nonstick cooking spray
1½ tablespoons Dijon mustard
¼ cup reduced-fat

crumbled blue cheese
4 lettuce leaves, torn into 12 pieces
6 whole-wheat mini sandwich thin rounds, split and toasted

1. Heat oil in large nonstick skillet over medium-high heat. Add onion; cook and

stir 3 minutes. Reduce heat to medium; cook onion 10 minutes, or until golden brown, stirring frequently.

2. Meanwhile, mix garlic salt into ground turkey. Shape turkey into 12 (¼-inch-thick) patties.

3. Spray large skillet with non-

stick cooking spray; heat over medium heat. Cook burgers in batches 3 minutes on each side, or until cooked through.

4. Combine mustard and blue cheese in small bowl. Place 1 lettuce leaf on bottom of each sandwich thin; top with burger, blue cheese mixture, and onions.



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Grilled Salsa Turkey Burger

1 SERVING | 1 SANDWICH (WITHOUT CHEESE)

CAL 302 | FAT 11G | SAT FAT 3G | PROTEIN 22G | CARBS 29G | CHOL 63MG | FIBER 2G | SODIUM 494MG

DIETARY EXCHANGE: 2 BREAD/STARCH, 1 FAT, 2 LEAN MEAT

Nonstick cooking spray

3 ounces 93% lean ground turkey

1 tablespoon crushed baked tortilla chips

1 tablespoon mild or medium salsa

1 slice (1 ounce) reduced-fat Monterey Jack cheese (optional)

1 whole-wheat hamburger bun, split

Green leaf lettuce

Additional salsa (optional)

1. Lightly spray grid with nonstick cooking spray. Prepare grill for direct cooking.

2. Combine turkey, chips, and 1 table-

spoon salsa in small bowl; mix lightly. Shape into patty.

3. Grill burger over medium-high heat about 6 minutes per side, or until cooked through (165°F). Top with cheese, if desired, during last 2 minutes of grilling. Toast bun on grill, cut sides down, during last 2 minutes of grilling.

4. Place lettuce on bottom half of bun; top with burger, additional salsa, if desired, and top half of bun.

Note: To broil, preheat broiler. Broil burger 4 to 6 inches from heat 6 minutes per side, or until cooked through (165°F).



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Portobello and Feta Burgers

4 SERVINGS | ¼ OF TOTAL RECIPE

▲ FI

CAL 180 | FAT 7G | SAT FAT 2G | PROTEIN 7G | CARBS 25G | CHOL 6MG | FIBER 5G | SODIUM 369MG

DIETARY EXCHANGE: 1 BREAD/STARCH, 1 FAT, 2 VEGETABLE

- 2 teaspoons extra-virgin olive oil
- Olive oil nonstick cooking spray
- ½ cup diced red bell pepper
- ½ cup diced onion
- ¼ teaspoon dried thyme
- ¼ teaspoon salt (optional)
- ⅛ teaspoon black pepper
- 4 portobello mushroom caps (4½ to 5 inches each)
- 8 teaspoons low-fat mayonnaise
- 4 whole-wheat sandwich thins, toasted
- 4 tablespoons crumbled feta cheese
- 4 romaine lettuce leaves

1. Preheat broiler. Meanwhile, heat oil in large skillet coated with nonstick cooking spray over medium-high heat. Add bell pepper and onion; sprinkle with thyme, salt, if desired, and black pepper. Cook, mixing occasionally, 5 minutes, or until lightly browned.

2. Spray mushrooms with nonstick cooking spray. Place on broiler rack and broil about 4 inches from heat source, 4 to 5 minutes on each side, or until tender.

3. Spread mayonnaise on bottoms of sandwich thins; sprinkle with feta. Arrange mushrooms and vegetables on top; add lettuce and sandwich thin tops.

Stuffed Portobellos: Save two Portobello and Feta Burgers (without the bread). Preheat oven to 375°F. Combine ⅓ cup panko; ⅓ cup drained, canned no-salt-added diced tomatoes; 2 tablespoons grated parmesan cheese; 2 tablespoons parsley; and red bell pepper and onion from burgers in large bowl. Mound on top of portobello mushrooms. Transfer to shallow baking dish; bake 15 minutes, or until tops are golden brown. Makes 2 servings

TIP Nutritionally, peppers are very high in vitamins C and A, and they are a good source of folate, vitamins B6 and E, and fiber. Look for ripe peppers if you want more nutrition (for example, a red bell pepper will have more vitamin C than a green bell pepper).

Greek Chicken Burgers With Cucumber Yogurt Sauce

4 SERVINGS | 1 4-OUNCE BURGER AND ¼ OF SAUCE

▼ **LC**

CAL 260 | FAT 14G | SAT FAT 5G | PROTEIN 29G | CARBS 4G | CHOL 150MG | FIBER 1G | SODIUM 500MG

½ cup plus 2 tablespoons plain nonfat Greek yogurt
½ medium cucumber, peeled, seeded, and finely chopped
Juice of ½ lemon
3 cloves garlic, minced, divided
2 teaspoons finely chopped fresh mint or ½ teaspoon dried mint
⅛ teaspoon salt
⅛ teaspoon ground white pepper
1 pound ground chicken breast
3 ounces reduced-fat crumbled feta cheese

1 egg
4 large kalamata olives, rinsed, patted dry, and minced
½ to 1 teaspoon dried oregano
¼ teaspoon black pepper
Nonstick cooking spray
Fresh mint leaves or mixed baby lettuce (optional)

1. Combine yogurt, cucumber, lemon juice, 2 cloves garlic, 2 teaspoons mint, salt, and white pepper in medium bowl; mix well. Cover and

refrigerate until ready to serve.

2. Combine chicken, cheese, egg, olives, oregano, black pepper, and remaining 1 clove garlic in large bowl; mix well. Shape mixture into four patties.

3. Spray grill pan with nonstick cooking spray; heat over medium-high heat. Grill patties 5 to 7 minutes per side, or until cooked through (165°F).

4. Serve burgers with sauce and mixed greens, if desired. Garnish with mint leaves.



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Turkey Burgers With Grilled Onions and Blue Cheese

4 SERVINGS | ¼ OF TOTAL RECIPE

▼ LC

CAL 237 | FAT 10G | SAT FAT 2G | PROTEIN 28G | CARBS 8G | CHOL 60MG | FIBER 1G | SODIUM 491MG

DIETARY EXCHANGE: 1 VEGETABLE, 4 MEAT

- 1 pound ground turkey breast meat*
- 4 cloves garlic, minced
- 2 teaspoons Worcestershire sauce
- 6 teaspoons extra-virgin olive oil, divided
- 1 teaspoon smoked paprika
- ¼ teaspoon ground cumin
- ½ teaspoon black pepper, divided
- ½ teaspoon salt, divided
- 8 ounces thinly sliced onions
- 1 ounce crumbled blue cheese

1. Combine turkey, garlic, Worcestershire sauce, 2 teaspoons oil, paprika, cumin, ¼ teaspoon salt, and ¼ teaspoon pepper in medium bowl. Shape into 4 patties.

2. Heat 2 teaspoons oil in large nonstick skillet over medium-high heat, swirling to

coat bottom of pan. Cook patties 4 minutes on each side, or until no longer pink in center. Remove from heat and place on serving platter; cover to keep warm.

3. Add remaining 2 teaspoons oil to pan residue in skillet. Heat over medium-high heat and cook onions 4 minutes, or until beginning to richly brown, stirring frequently. Stir in remaining ¼ teaspoon salt and ¼ teaspoon pepper. Spoon onions over patties and top with cheese.

***Note:** Ground turkey breast is made from white meat only, with no skin. It's leaner than regular ground turkey, which is made from white and dark meat with some skin. Frozen ground turkey is usually all dark meat with skin and is 15% fat, similar to ground sirloin.

Chicken and Veggie Fajitas

6 SERVINGS | 1/6 OF TOTAL RECIPE

▲ FI | ▼ LC

CAL 159 | FAT 5G | SAT FAT 1G | PROTEIN 21G | CARBS 15G | CHOL 63MG | FIBER 8G | SODIUM 476MG

DIETARY EXCHANGE: 1 BREAD/STARCH, 2 MEAT

- 1 pound boneless skinless chicken thighs, cut crosswise into strips
- 1 teaspoon dried oregano leaves
- 1 teaspoon chili powder
- 1/2 teaspoon garlic salt
- 2 bell peppers (preferably 1 red and 1 green), cut into thin strips
- 4 thin slices large sweet or yellow onion, separated into rings
- 1/2 cup salsa
- 6 (6-inch) high-fiber, low-carb flour tortillas, warmed
- 1/2 cup chopped cilantro or green onions
- Reduced-fat sour cream (optional)

1. Toss chicken with oregano, chili powder, and garlic salt. Heat large skillet coated with nonstick cooking spray over medium-high heat. Add chicken; cook and stir 5 to 6 minutes, or until cooked through. Transfer to bowl; set aside.

2. Add bell peppers and onions to same skillet; cook and stir 2 minutes over medium heat. Add salsa; cover and cook 6 to 8 minutes, or until vegetables are tender. Uncover; stir in chicken and any juices from bowl. Cook and stir until heated through, about 2 minutes.

3. Serve mixture on top of tortillas topped with cilantro and sour cream, if desired.



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Beef Fajitas

4 SERVINGS | 1 FAJITA

▲ FI

CAL 240 | FAT 7G | SAT FAT 2G | PROTEIN 29G | CARBS 28G | CHOL 35MG | FIBER 15G | SODIUM 610MG

DIETARY EXCHANGE: 1½ VEGETABLE, 2½ MEAT

- | | |
|--|---|
| 1 teaspoon ground cumin | 4 cloves garlic, minced |
| 1 teaspoon dried oregano | ½ cup jalapeño-flavored salsa |
| ¾ pound well-trimmed boneless beef top sirloin steak (about ¾-inch thick) | 4 (7-inch) high-fiber whole-wheat flour tortillas, warmed |
| Nonstick cooking spray | ¼ cup chopped fresh cilantro |
| 2 bell peppers (red, yellow, green, or a combination) cut into thin 1-inch strips | 1. Rub cumin and oregano over both sides of steak. Coat large nonstick skillet with nonstick cooking spray. Heat over medium heat. Add steak; cook 3 to 4 minutes per side for medium-rare doneness. Transfer steak to carving |
| ½ cup thinly sliced yellow or red onion | |

board; tent with foil and let stand.

2. Add bell peppers, onion, and garlic to same skillet. Coat with nonstick cooking spray and cook and stir 4 to 5 minutes, or until vegetables are crisp-tender. Add salsa; simmer 3 minutes.

3. Carve steak into thin slices and return to skillet. Toss well and heat through, about 1 minute. Spoon mixture down center of tortillas; top with cilantro and fold in half.



TIP *Tenting with foil is a way to allow grilled meat to continue to cook, without overcooking, while you prepare the rest of a recipe. To tent: Drape a large sheet of foil over cooked meat, fold the foil slightly, and let it sit loosely over the meat.*

Chili Beef and Red Pepper Fajitas With Chipotle Salsa

2 SERVINGS | 1 FAJITA WITH ¼ CUP SALSA AND 2 TABLESPOONS FAT-FREE SOUR CREAM (WITHOUT GARNISH)

▲ FI

CAL 245 | FAT 4G | SAT FAT 2G | PROTEIN 21G | CARBS 31G | CHOL 45MG | FIBER 9G | SODIUM 530MG

DIETARY EXCHANGE: 1½ BREAD/STARCH, 1 VEGETABLE, 2 MEAT

6 ounces boneless beef top sirloin steak, trimmed and thinly sliced
½ lime
1½ teaspoons chili powder
½ teaspoon ground cumin
½ cup diced plum tomatoes
¼ cup mild picante sauce
½ canned chipotle pepper in adobo sauce
Nonstick cooking spray
½ cup sliced onion
½ red bell pepper, cut into thin strips
2 (10-inch) fat-free flour tortillas, warmed

¼ cup fat-free sour cream
2 tablespoons chopped fresh cilantro leaves (optional)

1. Place steak on plate. Squeeze lime juice over steak; sprinkle with chili powder and cumin. Coat well; let stand 10 minutes.

2. Meanwhile, to prepare salsa, combine tomatoes and picante sauce in small bowl. Place chipotle pepper on small plate. Using fork, mash completely. Stir mashed chipotle into tomato mixture.

3. Coat 12-inch skillet with cooking

spray. Heat over high heat until hot. Add onion and bell pepper; cook and stir 3 minutes, or until edges begin to blacken. Remove from skillet. Lightly spray skillet with cooking spray. Add beef; stir-fry 1 minute. Return onion and bell pepper to skillet; cook 1 minute longer.

4. Place half beef mixture in center of each tortilla; fold sides over filling. Top each fajita with ¼ cup salsa, 2 tablespoons sour cream, and cilantro, if desired.

Note: For a less spicy salsa, use less chipotle pepper or eliminate it completely.



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Berries With Banana Cream

**2 SERVINGS | 1 CUP BERRIES
WITH ABOUT 3 TABLESPOONS
BANANA CREAM MIXTURE**

▲ FI | ▼ LS

**CAL 162 | FAT 6G | SAT FAT 3G |
PROTEIN 3G | CARBS 27G | CHOL
20MG | FIBER 6G | SODIUM 26MG**

**DIETARY EXCHANGE: 1 FAT, 1½
FRUIT**

- ½ small ripe banana, cut
into chunks**
- ⅓ cup reduced-fat sour
cream**
- 1 tablespoon frozen orange
juice concentrate**
- 2 cups sliced strawberries,
blueberries, raspberries,
or a combination**
- ⅛ teaspoon ground
cinnamon or nutmeg**

1. Combine banana, sour cream,
and orange juice concentrate
in blender. Cover; blend until
smooth.

2. Place berries in two serving
dishes. Top with banana cream
mixture; sprinkle with cinnamon.



Kiwi and Strawberries With Pine Nuts

4 SERVINGS | ½ CUP

▼ LF | ▼ LC | ▼ LS

CAL 57 | FAT 2G | SAT FAT 0G | PROTEIN 1G | CARBS 10G | CHOL 0MG | FIBER 2G | SODIUM 2MG

DIETARY EXCHANGE: 1 FRUIT

2 kiwifruits
1½ cups strawberries
1 tablespoon orange juice
1 tablespoon pine nuts,
toasted

1. Peel kiwis and slice into thin rounds. Arrange on 4 dessert plates.
2. Wash, hull, and slice strawberries. Arrange over kiwi slices. Drizzle orange juice evenly over each dish. Top evenly with pine nuts.



TIP It's easy to love fruits in the summer when they are at the peak of flavor and juiciness. Kiwis are nutritional powerhouses—savor their vitamin C richness and vitamin K goodness. And that's not where their benefits end. A recent study published in *The American Journal of Gastroenterology* showed that eating whole, fresh kiwis may help relieve constipation.

Grilled Stone Fruit Salad

4 SERVINGS | ¼ OF TOTAL RECIPE

▼ LC | ▼ LS

CAL 119 | FAT 6G | SAT FAT 3G | PROTEIN 4G | CARBS 14G | CHOL 11MG | FIBER 2G | SODIUM 91MG

DIETARY EXCHANGE: ½ FAT, 1 FRUIT, ½ MEAT

Nonstick cooking spray
2 tablespoons fresh orange juice
1 tablespoon lemon juice
2 teaspoons canola oil
1 teaspoon honey
½ teaspoon Dijon mustard
1 tablespoon finely chopped fresh mint
1 medium peach, halved and pit removed
1 medium nectarine, halved and pit removed

1 medium plum, halved and pit removed
4 cups mixed baby greens
½ cup crumbled goat cheese

1. Prepare grill for direct cooking over medium-high heat. Spray grid with nonstick cooking spray.

2. Whisk orange juice, lemon juice, oil, honey, and mustard in small bowl until smooth and well blended. Stir in mint.

3. Brush cut sides of fruits with orange juice mixture. Set remaining dressing aside. Place fruits, cut sides down, on prepared grill. Grill, covered, 2 to 3 minutes. Turn over; grill 2 to 3 minutes, or until fruits begin to soften. Remove to plate; let stand to cool slightly. When cool enough to handle, cut into wedges.

4. Arrange mixed greens on 4 serving plates. Top evenly with fruits and goat cheese. Drizzle with remaining dressing. Serve immediately.



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Spicy Tropical Fruit

4 SERVINGS | $\frac{2}{3}$ CUP

▼ LF | ▼ LS

CAL 97 | FAT 1G | SAT FAT 1G | PROTEIN 1G | CARBS 24G |
CHOL 0MG | FIBER 2G | SODIUM 3MG

DIETARY EXCHANGE: 1½ FRUIT

- $\frac{3}{4}$ cup orange juice
- 1 tablespoon lemon juice
- 1 tablespoon honey
- $\frac{1}{2}$ teaspoon apple pie spice or pumpkin pie spice
- $\frac{1}{4}$ teaspoon ground coriander
- $\frac{1}{4}$ teaspoon vanilla
- 2 medium kiwis, peeled, quartered lengthwise, and cut into pieces
- 1 medium mango, peeled, pitted, and cut into cubes
- Shredded mint leaves (optional)

1. Combine orange juice, lemon juice, honey, apple pie spice, and coriander in small saucepan. Bring to a boil. Boil 5 to 6 minutes, or until reduced to about $\frac{1}{2}$ cup. Stir in vanilla. Pour into small bowl. Cover and refrigerate at least 1 hour.

2. Combine kiwi and mango in medium bowl. Divide fruit equally among four dishes. Pour orange juice mixture over fruit. Top with mint, if desired.

Summertime Fruit Medley

8 SERVINGS | 1/8 OF TOTAL RECIPE

▼ LF | ▼ LS

CAL 112 | FAT 1G | SAT FAT 1G | PROTEIN 1G | CARBS 24G | CHOL 0MG | FIBER 2G | SODIUM 8MG

DIETARY EXCHANGE: 2 FRUIT

- 2 large ripe peaches, peeled and sliced
- 2 large ripe nectarines, sliced
- 1 large ripe mango, peeled and cut into 1-inch chunks
- 1 cup fresh blueberries
- 2 cups orange juice
- 1/4 cup amaretto or 1/2 teaspoon almond extract
- 2 tablespoons sugar or 3 packets sugar substitute
- Fresh mint (optional)

1. Combine peaches, nectarines, mango, and blueberries in large bowl.
2. Whisk orange juice, amaretto, and sugar in small bowl until sugar is dissolved. Pour over fruit mixture; toss to coat. Marinate 1 hour at room temperature, gently stirring occasionally. Garnish with fresh mint.



Pineapple-Orange Fruit Dip

8 SERVINGS | 2 TABLESPOONS DIP

▼ **LF** | ▼ **LC** | ▼ **LS**

CAL 57 | **FAT** 1G | **SAT FAT** 1G | **PROTEIN** 2G | **CARBS** 11G | **CHOL** 4MG | **FIBER** 1G | **SODIUM** 36MG

DIETARY EXCHANGE: ½ FAT, ½ FRUIT

- 6 ounces fat-free vanilla yogurt**
- 3 ounces reduced-fat cream cheese, softened**
- 1 can (8-ounces) crushed pineapple in its own juice, well drained**
- 1½ tablespoons sugar substitute***
- ½ teaspoon grated orange peel**
- ½ teaspoon grated fresh ginger**
- ¼ teaspoon ground cinnamon**

1. Place all ingredients in food processor or blender; process until very smooth.

2. Serve immediately with assorted fresh fruit or refrigerate up to 24 hours, if desired.

***Note:** This recipe was tested with sucralose-based sugar substitute.

TIP Did you know pineapples are thought to have originated in the Amazon rainforest before arriving in Hawaii in the late 1700s? Pineapple is the only natural source of bromelain, a group of enzymes promoted as a dietary supplement for reducing pain and swelling.

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Fresh Fruit Medley With Yogurt Sauce

4 SERVINGS | ¼ OF TOTAL RECIPE

▼ LF | ▼ LS

CAL 93 | FAT 2G | SAT FAT 1G | PROTEIN 3G | CARBS 18G | CHOL 3MG | FIBER 3G | SODIUM 22MG

DIETARY EXCHANGE: 1½ FRUIT

- 1 peach, peeled and diced
- 1 orange, sectioned
- 1 cup blueberries
- 1 cup sliced strawberries
- 1 tablespoon orange juice concentrate
- ¼ cup low-fat yogurt
- 2 tablespoons part-skim ricotta cheese
- ⅛ teaspoon ground ginger
- ⅛ teaspoon ground cinnamon
- ½ teaspoon vanilla extract
- 4 walnut halves

1. Combine fruit and orange juice concentrate in large bowl.

2. Process yogurt, ricotta cheese, ginger, cinnamon, and vanilla in blender.

3. Portion fruit into bowls. Top with sauce and walnuts.

SUSAN AND T'ARA'S KITCHEN

- 23 Curry Chicken and Sweet Potato Bowl

SIoux CHEF

- 50 Wild Rice Pilaf With Wild Mushrooms, Roasted Chestnuts, and Dried Cranberries

CROWD-PLEASING CORN

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BURGERS AND FAJITAS

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Cold, Hard Facts

BY DIANE FENNEL

5 According to the Lonely Planet website, the longest commercial flight in the world, running from 1943-45 between Australia and Sri Lanka, took over 30 hours. The shortest commercial flight, between neighboring locations in the Orkney Islands, takes less than two minutes. Thanks to the location of the Aleutian Islands, Alaska is both the westernmost and easternmost state in the U.S. Interested in more travel facts? Visit "Get Ready, Get Set, Go!" (page 26).



4 President Theodore Roosevelt is rumored to have read a book a day, says the website ImprintDigital.com. One in five adults worldwide can't read or write. Nearly 50 books can be made from one tree. According to one study, reading regularly is linked to a reduced risk of being diagnosed with Alzheimer's disease. Can't get enough reading material? Check out "Diabetes by the Book" (page 30).

3 Hitting the beach or pool this summer? According to the site swimming.org, water helps support the body, putting less stress on joints. The resistance of water also assists with building muscle. Water pressure aids in moving blood around the body, thereby putting less strain on the heart. Exercising in water also helps prevent overheating. Dive into "Water Workouts" (page 15) to learn about water-based movements you can try.



2 People blink an average of 15 to 20 times per minute, according to Saber Healthcare Group. Seventy-five percent of adults use some type of vision correction. Men and women see the color red differently. The most common eye color is brown. Interested in finding out how to protect your vision from diabetic retinopathy? See "Keep an Eye on Your Sight" (page 36) to learn more.

1 According to the website Active, water constantly moves through the body's cells, and different parts of the body contain different percentages of water. Water is necessary for biochemical reactions, and the body cannot function without it. You can measure the amount of water lost during a workout by weighing yourself before and after. Quench your thirst for more hydration information with "Staying Hydrated: FAQs" (page 20).



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