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Weight loss may be the key to diabetes control

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Your shot to protect yourself and the ones you love

FREE flu shots

no cost to you with most insurance

Vaccines subject to availability. State-, age- and health-educed restrictions may apply, meaner-bias recommission magnetics. At one memorial

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FIBER FACTS

Need a boost with your blood sugar control? Fiber supplements could help. Researchers reviewed 28 studies including 1,394 people, which compared regular diabetes medication plus fiber supplements to medication alone. People who got about 13 grams of viscous fiber a day in addition to their medication saw a big improvement in their blood sugar. Viscous fiber is in psyllium husk-a common fiber supplement that comes in capsules or dissolvable powders. You'll get 13 grams from about two servings of powder per day. You can also find soluble or viscous fiber in foods such as oatmeal, nuts, beans, lentils, and blueberries.

Source: Diabetes Care

Estimated number or people worldwide who will have diabetes by 2045.

Source: BMJ Estimated number of

TWO BIRDS, **ONE STONE**

Nearly one in three people with diabetes also has depression. It may be related to your feelings about diabetes. Those feelings can affect how well you manage your condition. It makes sense then that getting help for your depression might improve your diabetes, too. In a small study, people with type 2 diabetes and depression who had 12 weeks of talk therapy for depression got mental and physical health benefits. They were less depressed, had less distress about taking medicine and checking their blood sugar, and stuck to their medications better than before. If you're depressed, talk to your doctor.

Source: Diabetes Care



KEEP IT LOW

Do you take medication for your blood pressure or eat a special diet to keep it under control? New research shows that when people with type 2 diabetes keep their blood pressure tightly regulated at 130/80 or below, they reap big benefits. The biggest one? Lower risk of an early death for any reason. Other serious perks include lower risk for heart attack, stroke, and other diabetes-related problems.

Source: Hypertension

diabetes Wire

Health care dollars spent on diabetes care. Source: American Diabetes Association



KEEP POUNDS AT BAY THROUGH THE HOLIDAYS

Want to avoid holiday weight gain? Just step on a scale every day, a new study says. Researchers asked 56 adults to weigh themselves daily from November 2017 to January 2018. Another 55 adults continued with life as usual. After the holiday season, those who weighed in every day had either lost weight or maintained. The others gained. When you see daily fluctuations in your weight, the researchers say, you're likely to make the necessary changes to your diet or exercise right away.

Source: Obesity

Number of calories a 155-pound person burns in 30 minutes of fast dancing. If you weigh more, you burn more.

Source: Harvard Medical School



SEASONAL TIPS

It's winter. It's natural to want to cozy up indoors with a warm bowl of comfort food and hibernate till spring. But don't let the shorter days and lower temps derail your health. People with type 2 diabetes are least likely to hit their target blood-sugar, cholesterol, and blood-pressure goals in winter than any other season, new research shows. If you're over 65, overweight, or have had diabetes for 10 years or more, control is especially hard in the winter. This season, find a new recipe to try that's both comforting and healthy. Challenge yourself to an indoor workout like bowling or Zumba.

Source: Diabetes Care

diabetes Wire



BEWARE OF SNORING

People who have type 2 diabetes are more likely to have sleep apnea-a sleep disorder caused by relaxed or obstructed airways that block breathing. Untreated, it can lead to serious health conditions. In a study of close to 1.7 million people who were not already diagnosed with sleep apnea, those with diabetes were more likely to learn they had the condition. Other factors that increased the odds of having the disorder were diabetes-related foot disease and a recent prescription for insulin. Snoring is warning sign. Ask your doctor about your risk.

Source: Diabetes Care

Percentage of people in the U.S. who have diabetes. That's about one in nine people. Ten years ago is was closer to one in 11.

Source: Gallup

ASK YOUR DOCTOR

How do I keep track of my blood sugar levels?

Test your blood sugar with a glucose meter or continuous glucose monitor to find out when you need to give yourself insulin and how much to take. Your doctor will tell you how often to test.

What are the possible side effects of insulin?

You might have some irritation or soreness on your skin where you inject insulin. Other side effects include low blood sugar (hypoglycemia) and low potassium levels.

What should I do if my blood sugar gets too low?

Insulin can sometimes make your blood sugar drop too much. If you feel shaky, sweaty, or dizzy, take 15 grams of carbohydrates in the form of glucose tablets or gels, soda or juice, hard candies, or a tablespoon of honey. Test again 15 minutes later. If it's still below 70, treat again.

Search for the article
The Facts About Insulin for
Diabetes at WebMD.com.



Insulin Basics

Insulin treatment is essential for everyone with type 1 diabetes—and for some people with type 2. Do you know what types of insulin are available and how long they work? Take this quiz to test your insulin know-how.

BY STEPHANIE WATSON

QUIZ

1. Most insulin used in America comes from animals.

__True __ False

2. Rapid-acting insulin starts to work about 15 minutes after you take it.

__True __ False

3. The longest lasting insulin works for about 36 hours.

__True __ False

4. You breathe in one type of insulin through your mouth.

__True __ False

Basal insulin is the type you take with meals.

__True __ False

6. You should always inject insulin in the same area of your body.

__True __ False

ANSWERS

- 1. False. All of the insulin sold in the United States today is made in a laboratory. Animal insulin hasn't been available since the late 1990s.
- **2. True.** As the name suggests, rapid-acting insulin goes to work quickly. You usually take it before a meal, and its effects last up to five hours.
- **3. True.** Ultra-long-acting insulin takes a few hours to go to work, but it will keep lowering your blood sugar for about 36 hours.
- **4. True.** An inhaled version of fast-acting insulin treats adults with type 1 and type 2 diabetes

without the needle stick, but it is not safe for people who smoke or have lung problems like asthma or COPD.

- **5. False.** Bolus (fast-acting) insulin is the dose you take before meals. Basal (long-acting) insulin keeps your blood sugar levels steady throughout the day during times when you're not eating.
- **6. True.** Insulin absorbs at different rates depending on where you inject it. It goes to work quickest when injected into your belly. To get consistent results, stick to the same general area, but don't inject in the exact same spot each time because hard lumps could eventually form.

REVIEWED BY MICHAEL W. SMITH, MD, WEBMD CHIEF MEDICAL EDITOR

Golden Rules

Exercise is an excellent tool for managing your diabetes. But can you work out smarter? Try these tips to maximize results.

BY KARA MAYER ROBINSON



Your doctor or diabetes educator can tailor your fitness routine to your needs. Start with these questions:

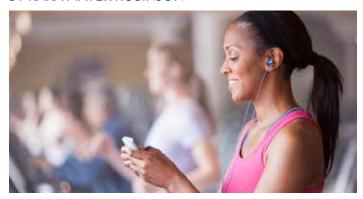
Do I need to change the type, intensity, or duration of exercise because of my diabetes complications?

How will my medication affect my ability to exercise?

Which blood glucose levels are safe for me?

What should I do if they're out of range?





Getting off the couch and working out is a smart move when you have diabetes. Diabetes puts you at a higher risk of cardiovascular disease, but being active cuts the risk. Monet S. Bland, MS, a clinical exercise physiologist at Joslin Diabetes Center in Boston, shares her top tips for exercising with diabetes.

Log your glucose

"Always check your blood glucose before and after exercise," says Bland. "We generally recommend blood glucose over 100 mg/dL before exercise and under 250 mg/dL after." Check with your doctor to be sure. She may adjust her recommendations based on complications like high blood pressure, clogged arteries, eye diseases, and nerve damage.

Don't just check your levels jot them down, along with which type of exercise you're doing. You'll notice patterns that help you understand how exercise affects your body.

Exercise for dessert

The best time to work out may be after you eat. "It can have a profound effect on blood glucose and counteract the effect of your meal," says Bland. Instead of curling up on the couch after dinner, top off your meal by lacing up your shoes. Walk your dog or simply walk in place while watching TV.

Beat the clock

Short on time? Break up your routine. "If you have 15 minutes in the morning and 15 minutes at night, that works," says Bland. If you're really squeezed for time, try chunks of 10 minutes. Or, try interval training or circuit training. Interval training alternates between short bursts of intense exercise and short periods of rest. With circuit training, you move quickly through eight to 10 exercises that alternate muscle groups. Both have powerful health benefits and can be done quickly.

Carry a snack

Exercise can put you at risk of low blood sugar, so always carry a snack if you have type 2 diabetes. If your blood glucose is less than 100 mg/dL before you work out, have a snack. If not, you can probably have one midway through or after exercise.

"We generally recommend 15 grams of carbohydrates for every 30 minutes of exercise," says Bland. Ask your doctor which target levels are best for you.

Strive for a healthy mix

To maximize the benefits of exercise, do a mix of cardio and strength training. Aim for 30 minutes of cardio most days of the week and strength training twice a week. However, if you're new to exercise, you can start with less—even five minutes—and build up from there.

Try to do five days of cardio. Doing what you love, like walking, dancing, or swimming, helps you stick with it over time.

"Strength training helps you build muscle, which increases your metabolism," says Bland. A faster metabolism helps you burn more calories all day long. You'll be less likely to gain weight and keep insulin resistance at bay.

REVIEWED BY MICHAEL W. SMITH. MD. CPT. WEBMD CHIEF MEDICAL EDITOR

ASK YOUR DOCTOR

Do my current medications provide the best control for diabetes?

"If you're spending money on three or four medications, you may not be on the most effective ones," says Wendy Mobley-Bukstein. PharmD. a certified diabetes educator. The most effective drug might be an injectable. "A lot of people think an injectable means they're doing worse, but it's just about making sure their medications are working for them."

Can you prescribe a weight-loss program? If you have a health savings account or a flex savings account through your employer, you might be permitted to use it to join a weight-loss program that your doctor prescribes. Ask your employer or the bank that holds the account.

Search for the article Cost-Saving Tips for Managing Diabetes at WebMD.com.

Cost Savers

Type 2 diabetes can be an expensive condition to manage. Our experts suggest some ways to minimize the hit to your wallet.

BY SONYA COLLINS

People with diabetes now live longer than ever before thanks to medical advancements. But better care and a longer life span come with higher costs. In fact, those with diabetes incur more than twice the health-care expenses of other people. Some of that money comes out of your pocket. These tips can help you save.

Stick to your diet

About 30% of diabetes costs are for medications to treat other diabetes-related conditions. That's one reason controlling your condition is so important. "Eating right will help control your blood sugar, which can reduce the number of medications you need to take and prevent complications you could eventually have," says Wendy Mobley-Bukstein, PharmD, certified diabetes educator

and associate professor at Drake University College of Pharmacy and Health Sciences.

If you need to stick to a budget, use supermarket apps to find coupons and see which items are on sale before you go shopping. Plan meals around coupons and sale-priced items. Canned and frozen vegetables are usually cheaper than fresh. If you have a choice, says Mobley-Bukstein, "a bag of fresh frozen is great because it doesn't have added salt." If you've got to go canned, "drain and rinse the vegetables to remove some of the salt before you cook them," she says.

Burn calories, not your savings

Gym memberships are sometimes negotiable. "Don't be afraid to talk to someone about the price," says Mobley-



REVIEWED BY MICHAEL W. SMITH, MD, WEBMD CHIEF MEDICAL EDITOR

diabetes 101

Bukstein. The Y offers scholarships based on need. Silver Sneakers provides free access to participating gyms for adults age 65 and up with certain Medicare Advantage plans.

However, you don't need a gym to exercise. Check your local parks department, community center, and other local, non-profit organizations for free or low-cost fitness classes. Or, "form your own group at work or through any organization you interact with for a brisk walk or to do an exercise video together," says Mobley-Bukstein.

Get more bang for your prescription-drug buck

If you use medications, take generic whenever available, and make sure all your prescriptions are on your health plan's preferred list. Your insurance plan might charge a lower co-pay for one medication over another, even if both options are generic.

You could be eligible for free or low-cost medication through a prescription assistance program. Ask your health care provider or pharmacist for more information or check the drug manufacturer's website. Buying medications and supplies online and enrolling in auto-refill programs might cut costs, too. It may take a little more research and legwork upfront, but it can lead to real savings in the long run.

"FORM YOUR
OWN GROUP
AT WORK
FOR A BRISK
WALK OR
TO DO AN
EXERCISE
VIDEO
TOGETHER."





MUSTARD APPLE CIDER **PORK TENDERLOIN**

Pork tenderloin makes an easy, delicious centerpiece, especially when combined with tart apples—we like Jonathans here—and a flavorful sauce. To ensure that the pork is tender, watch the clock carefully as it roasts and use an instantread thermometer. Remove the pork from the oven when the thermometer registers 145°F. SERVES 8

2 pork tenderloins (about 1½ lb each) 3 tbsp extra virgin olive oil, divided ½ tsp sea salt Freshly ground pepper to taste ¾ cup apple cider 2 tbsp apple cider vinegar 2 tbsp Dijon mustard 1 tbsp low-sodium soy sauce 1 tbsp chopped fresh sage plus more for garnish 4 medium apples, peeled and cut into 8 wedges each

Preheat oven to 425°F.

Place an extra-large, heavy-bottom skillet on medium-high heat and coat with cooking spray. Rub each tenderloin with 1 tbsp olive oil as well as salt and pepper. Add the remaining oil to the skillet and sear meat on all sides until lightly browned, about 8 minutes total. Remove pork from the skillet and set aside.

In the same skillet, combine apple cider, vinegar, Dijon mustard, and soy sauce. Whisk together, scraping up any browned bits from the bottom of the pan, and heat until slightly thickened. Stir in 1 tbsp sage. Cover and keep warm.

Coat a roasting pan with cooking spray. Place apple slices on the bottom of the pan. Top with seared tenderloins. Place pan in oven and roast 10 to 15 minutes, or until an instant-read thermometer inserted into the thickest part registers 145°F. (Do not overcook; this will make the pork tough.)

Remove pork from the pan and let it rest on a cutting board, loosely covered with foil, for 5 to 10 minutes. Cut into 1/2-inch slices.

Place pork on a large serving dish surrounded by roasted apple slices. Pour cider sauce over meat. Garnish with additional sage and serve.

PER SERVING: 214 calories, 21 g protein, 14 g carbohydrate, 9 g fat (2 g saturated fat), 64 mg cholesterol, 1 g fiber, 11 g sugar, 273 mg sodium. Calories from fat: 35%





Read the article Diabetes Care in Special Situations at WebMD.com.

5 TIPS TO NAVIGATE HOLIDAY BUFFETS

Maintaining healthy habits at holiday parties can be a challenge, but it helps to go in with a plan, says Amy Hess Fischl, MS, registered dietitian and certified diabetes educator at the University of Chicago Kovler Diabetes Center.

DON'T SKIP MEALS. You may be tempted to bypass meals before holiday festivities in order to feast at the big event. "I don't recommend that," Fischl warns. "You'll be starving and eat everything in sight, and that's when people get into trouble." Eat responsibly early in the day, and consume a snack beforehand so you enter the party fortified. not famished.

START WITH SAFE FOODS. As you approach the buffet, make your first stop the raw veggie tray. Pair carrots and pepper strips with salsa or another low-calorie dip. Raw fruit such as strawberries is another wise choice, Fischl adds: "This will fill you up without impacting blood sugars as much," making you less likely to overeat less-nutritious fare.

<u>HYDRATE.</u> "Sometimes mild dehydration can manifest as hunger," Fischl says. "But

you might not be hungry, just a quart low." She recommends sipping water throughout the event (say sparkling seltzer or regular water dressed up with a lemon slice), which research suggests can help you feel full and prevent overeating.

SAVOR THE TREATS. We all love those special, once-a-year foods like Aunt Mary's Pecan Pie and your brother's Christmas cookies. Abstaining from such treats can make you feel resentful and deprived. Fischl recommends eating them in smaller quantities, say ½2 of the pie instead of ¼, and making an effort to relish each bite.

BREAKITUP. Fight the urge to eat quickly. Fischl recommends taking breaks between courses. Put down your fork and talk to those around you, which not only allows you to enjoy their company, but also to notice what you're eating and when you're feeling full. Because physical activity reduces blood sugar, Fischl also suggests inviting everyone for a brisk walk to view the holiday lights before moving on to dessert.

YUKON GOLD AND SWEET POTATO

GRATIN

Using both Yukon Gold and sweet potatoes makes this side dish extra festive. We like to keep the skins intact to boost flavor and fiber. Choose potatoes of roughly the same diameter and use a mandoline (a slicing tool) or a food processor outfitted with a slicing blade to ensure consistent pieces. While cutting the potatoes, keep the Yukon Gold slices in cold water with a squeeze of lemon juice to prevent browning. Drain and dry slices before assembling the gratin. SERVES 8

3 tbsp extra virgin olive oil, divided
1 large Vidalia or sweet onion, chopped
2 lbs scrubbed Yukon Gold potatoes, cut into ½-inch slices
2 lbs scrubbed sweet potatoes, cut into ½-inch slices
1 tbsp fresh rosemary, finely chopped
½ cup chicken broth
½ tsp sea salt
Freshly ground pepper to taste
1 oz finely shredded Parmesan cheese

Preheat oven to 400°F. In a large skillet, heat 1 tbsp oil over medium heat. Add onion. Sauté 10 to 15 minutes or until onion is browned and caramelized. Remove from heat.

In a large bowl, toss potato slices with 2 tbsp olive oil and rosemary.

Coat a 13 x 9 x 2-inch glass casserole dish with cooking spray. Layer half of the Yukon Gold and sweet potatoes on the bottom of the pan in a slightly overlapping pattern. Top with caramelized onions. Arrange the remaining potatoes on top. Pour chicken broth evenly over potatoes and season with salt and pepper.

Cover with a lid or foil and bake for 30 minutes. Remove cover and sprinkle with Parmesan cheese. Continue baking 20 to 30 minutes more or until browned.

PER SERVING: 202 calories, 5 g protein, 34 g carbohydrate, 7 g fat (1 g saturated fat), 3 mg cholesterol, 5 g fiber, 5 g sugar, 253 mg sodium. Calories from fat: 28%





ROASIED

VEGETABLE MEDLEY

Roasted root vegetables make a satisfying, colorful side dish. Cut them in similar-size pieces to ensure even cooking. Almost any combination of vegetables will work. We chose firm root vegetables here, but if you opt for softer favorites, such as cauliflower or Brussels sprouts, roast them in a separate pan for less time, about 20 to 30 minutes. SERVES 8

2 lbs butternut squash (1 medium), peeled, seeded, and cut into 1-inch pieces

11/2 lbs carrots (about 4 large), peeled and cut into 1-inch pieces

1½ lbs parsnips (about 4 large), peeled and cut into 1-inch pieces

1 lb red or golden beets. peeled and cut into 1-inch pieces

3 tbsp extra-virgin olive oil

2 tbsp balsamic vinegar

½ tsp salt

Freshly ground pepper to taste 1 tbsp minced fresh thyme

Preheat oven to 400°F.

In a large bowl, toss squash, carrots, parsnips, and beets with olive oil, balsamic vinegar, salt, and pepper.

Line a rimmed sheet pan with parchment paper. Arrange vegetables in a single layer on the prepared pan. (Use a second lined sheet pan if necessary.)

Roast 30 to 45 minutes or until tender and lightly browned, turning once after 20 minutes. Toss roasted vegetables with fresh thyme and serve.

PER SERVING: 222 calories, 4 g protein, 42 g carbohydrate, 6 g fat (1 g saturated fat), 0 mg cholesterol, 10 g fiber, 15 g sugar, 261 mg sodium. Calories from fat: 23%

can't drink during the holidays, registered dietitian Amy Hess Fischl, MS.

TALK TO YOUR DOCTOR.

Your health care provider drinking. Note that drinking

KNOW YOUR SERVING SIZE.

of beer, 5 ounces of wine, or 11/2 ounces of distilled spirits, Whether or not you have diabetes, the American Heart

CONSIDER YOUR LIVER. When

drink. Test your blood sugar

GO FOR MINIMAL MIXERS.

Cocktail ingredients often





A Nutrition Plan to Fit Your Life

New diet recommendations give people with diabetes room to tailor eating habits to their tastes and lifestyle

BY SONYA COLLINS

Too often, the focus of diabetes self-care is on everything you can't eat. But new guidelines from the American Diabetes Association, updated for the first time in five years, just gave people with diabetes a lot more freedom. A group of registered dietitians, diabetes educators, doctors, and a patient representative got together to review the available research on the best diets for diabetes management. They published their findings in a new report that will guide the recom-

mendations that health care providers make about your diet.

"We had a one-size-fits-all approach before, but that wasn't very open-minded," says William Yancy, MD, a general internist at Duke Health and a contributor to the new guidelines. "Research now makes it clear that several different, pretty diverse, diets can work—from vegetarian to keto—to control blood sugar and other parameters that are important for people with diabetes."

This new way of thinking gives you

room to experiment and find the nutrition plan that works best for you. That is, a diet that controls your diabetes and that you like well enough to stick to. You may also find that there's a place in your meal plan for dishes that are important in your culture or some of your family's favorites.

MEDITERRANEAN DIET

It seems like every day studies show new benefits of the Mediterranean diet. For starters, it lowers your risk for

REVIEWED BY BRUNILDA NAZARIO, MD, WEBMD SENIOR MEDICAL EDITOR

BY THE NUMBERS

of alcoholic drinks per day women with diabetes should have. Men should limit drinks to two. 38%

PERCENTAGE

by which you could reduce your risk for heart disease when you stick to the Mediterranean diet. 1 in 20
NUMBER OF AMERICANS
who are vegetarian. 1 in 30
Americans are vegan.

heart disease and may be connected to lower rates of cancer and Alzheimer's disease. So, perhaps it's no surprise that it's also good for diabetes. People who follow the plan lower their blood sugar, triglycerides (a type of fat in the blood), and risk of heart attack, stroke, and premature death.

So what's in it? Most of the diet comes from plants. Think vegetables, beans, fruits, nuts, seeds, and whole grains, including whole-wheat breads, brown rice, and whole-wheat pasta. The main source of protein is fish and other seafood. Olive oil is the main source of fat. The plan includes dairy in moderation, mostly from yogurt and cheese. People who follow this diet eat fewer than four eggs a week and have the occasional small serving of red meat. If your doctor says it's OK, you can enjoy wine in moderation. Mediterranean dieters rarely eat sugar or honey.

VEGETARIAN & VEGAN DIETS

Both vegetarian and vegan calorierestricted diets can help you lose weight, lower cholesterol, and control your blood sugar, research shows. So what's the difference between the two? While vegetarians don't eat any meatno beef, poultry, or seafood—they do eat eggs, cheese, and other dairy products. Vegans, on the other hand, don't eat any foods that come from animals, including milk and eggs. They may get protein from a variety of beans, soy products, quinoa, and protein-rich vegetables, including spinach, broccoli, sweet potatoes, and Brussels sprouts.

LOW-CARB DIET

It may not come as a surprise that lowcarb diets can deliver big benefits to people with diabetes. "It's clear from research that carbohydrates are the main driver of our blood sugar," says Yancy. "So, if your emphasis is blood-sugar control, cutting back on carbohydrates as a whole will help you do better."

You've probably heard of some of

the commercial low-carb, high-protein diets, such as Atkins and South Beach. Recently, the very-low-carb keto (short for ketogenic) diet has become popular. These diets cut out or greatly limit sugar, starch, and other carbohydraterich foods such as bread, rice, pasta, potatoes, and fruit. But there's a lot you can eat, including any non-starchy vegetable; fat from meat, butter, oil, and avocado; and protein from meat, seafood, cheese, eggs, nuts, and seeds.

Some people are attracted to this diet because it takes the emphasis off calorie-counting. "We don't pay attention to calories as much on the low-carb diet," says Yancy.

People may lose weight on this diet, boost good cholesterol, and lower their blood sugar, blood pressure, and triglycerides.

ONE SIZE DOES NOT FIT ALL

The eating habits that can help people control their diabetes may be just as diverse as the more than 30 million U.S. adults diagnosed with this condition. There's not a single amount of carbohydrates, protein, or fat that everyone with diabetes should take in. What's more, the blood sugar of each person with diabetes may respond differently to any given food. For example, when you eat a serving of pasta, your sugar might rise a little. However, when your friend with diabetes eats the same thing, her sugar may go through the roof. There's no single food that's a must-eat or a can't-touch for everyone.

That means you can work with your diabetes educator, dietitian, or other health care provider to create a nutrition plan that works for you. "Go in with an open mind about potentially changing some of the foods you eat in order to have the biggest impact," says Yancy. "But, if there's a certain diet approach that appeals to you more, or fits better with your culture, or you'd be more likely to follow, then that's the one you might want to pursue."

ASK YOUR HEALTH CARE PROVIDER

Do you want to try a new eating plan? Ask your health care provider some questions first.

Do I need a diet plan that will help me lose weight or only control my blood sugar?

What diet plans are available to me?

At what times of day should I check my blood sugar to see the effects of my new diet?

Is there a chance my nutrition plan will push my blood sugar too low?

Will a new diet allow me to reduce the medications I take?

Search for the slideshow Best Diets When You Have Diabetes at WebMD.com.



FAMILY MATTERS

HOW A DIAGNOSIS OF TYPE 2 DIABETES CAN BE A CATALYST FOR HEALTHY CHANGES

BY CHRISTINA BOUFIS // REVIEWED BY BRUNILDA NAZARIO,MD, WEBMD SENIOR MEDICAL EDITOR

"Type 2 diabetes is really a family condition," says clinical psychologist and certified diabetes educator Nicole Bereolos, PhD, MPH, CDE. Not only do genes play a role in your risk of developing the disease, lifestyle choices—what foods a family eats and how much exercise they get—can contribute to high blood sugar and insulin resistance.

Diabetes is also a lifelong condition that requires daily management to keep blood sugar under control, which can put a burden on families. "Even if you have radical lifestyle changes, you're still going to be at risk for elevated glucose levels," says Bereolos. "So, we want to make managing diabetes something the whole family can take on, not just something that Mom or Dad has to handle."

How can you get your family on board to support a loved one with diabetes? Here's what one family did, along with advice from our experts.



Reba Mouton was 36 years old, a nurse, and the mother of two when she was first diagnosed with type 2 diabetes. Though she wasn't surprised—years earlier her doctor had told her she had prediabetes—she was disappointed and her family "was kind of terrified," she says. Mouton's grandmother had type 2 diabetes and needed insulin injections. Diabetes also ran on her husband's side; his grandmother had complications from the disease, including amputations and the need for dialysis.

"When I was first diagnosed, this was an awakening for my family," says Mouton. "I knew it was definitely time to make some better choices." She told her husband and kids, "OK. We need to do something. We need to change our eating and start exercising." Fortunately, she says, "my family is really supportive in general, and when I make up my mind to do something, they're like, "We're all in.""

That's not always true. While research shows that family support is critical for successfully managing diabetes, it can be difficult for families to be supportive in the long term, says registered dietician nutritionist Valari Taylor, MS, RDN, LDN. "In all my years of teaching diabetes education, it's also been one of the biggest challenges people with diabetes face," she says.

TAKE THE FAMILY TO SCHOOL

How can you get your family to make it a team effort? "One of the most important things is that the whole family needs to be educated about diabetes," says Taylor. Take your partner or kids to diabetes education classes so they can learn more about the disease and find out how to help.

Mouton and her husband attended diabetes education classes, which were a lifesaver. "The diabetes educator was awesome," she says. "She broke everything down step-by-step. She taught us about what your numbers mean, how to count carbs, how to examine your feet, how to read labels. It was a wonderful class."

Another way to get your family on board? "Do some goal-setting with everyone in the family," says Taylor. She usually advises families to pick one nutritional and one physical activity goal that everyone can work on together.

One of the first healthy goals that Mouton made was giving up soda. "I loved soda," she says. "And I'd probably drink a six-pack and a half a day, but I stopped cold turkey."

While her kids were also soda drinkers, they didn't have any problem giving it up, says Mouton: "I just gave them alternatives," such as sparkling water or low-sugar drinks. "We don't even have it in the house," she adds.

PREPLAN MEALS

Another change most families have to make concerns food choices, but there are many myths about diabetes and what to eat, says Bereolos.

The most common myth to be debunked? "People with diabetes don't need special meals or foods," she says. "The balanced plate method—half leafy green vegetables on your plate, one-quarter lean protein, one-quarter complex carbs like a sweet potato or quinoa—is what everybody should be following."

But shopping, cooking, and eating healthy meals can be a challenge for busy families. "We were constantly on the go," says Mouton. "My husband was a full-time student and a youth minister, the kids were in sports, I was working

SET YOUR FAMILY MEMBER UP FOR SUCCESS

To support your loved one emotionally, try these tips from certified diabetes educator Nicole Bereolos.

Don't nag. "Nagging is so prevalent in families," she says. "You're not doing the person with diabetes any good by saying, 'You shouldn't eat that.' Or, 'You can't have that piece of cake." Nagging can even lead to reduced motivation, clinical depression, and hopelessness.

Don't make the family member feel different by making special food, like sugar-free gelatin, when everyone else is eating cake. This can make your loved one feel isolated and left out.

Have open communication. Ask your family member, "How do you want me to be involved? What can I do to help?" There are no rules for what's appropriate; it's whatever your family member wants.

Avoid food sabotage.

For some people, having ice cream or cookies in the house when they're trying to eat healthier is too tempting. If that's the case, help your loved one out by not bringing sweets home.

Trips to the drive-thru became far less frequent after her diagnosis. "I started eating better," she says, "Not so much fast food and processed food but more protein and vegetables."

The key to healthier eating for her family was preplanning meals, which they did on the weekend, she says. "Preplanning was probably the hardest part," she adds. "But it became something we did on a regular basis, so we knew we were going to have this on Monday and this for 'taco Tuesday,' and it became so much easier because everybody could help and everybody took credit for what they did."

To make breakfast easy, Mouton would make overnight oats, "In the morning, everyone could grab their oatmeal on the way out or boiled eggs," she says. At night, if her daughter was the first one home, she would cook. Her son also took a night to make dinner. Mouton started adding more fresh or frozen vegetables to salads and cut down on starchy rice and potatoes.

What if you have younger kids who can't cook entire meals? You can still get them involved in meal planning. Let them pick new fruits and vegetables at the grocery store, says Bereolos. Try challenging them, and say, "Let's buy something we've never bought before."

MAKE EXERCISE A FAMILY HABIT

When it came to physical activity, Mouton did "pretty much no exercise" before her diagnosis, she says. But experts agree: Exercise increases heart health, improves blood glucose control, and contributes to weight loss, among other benefits.

Yet there's no need to go to a gym if you don't enjoy it. Something as simple as walking can be built into your day and gets your heart pumping faster. "The benefits of walking are endless," says Taylor. "Walking helps get blood sugar out of the bloodstream and into the muscles. It's something the whole family can do together. And it can be a time for meaningful conversations and sharing your day."

Mouton started walking with her family, but it wasn't always easy. "There were days when I didn't want to get up and walk," she says. "And the kids would come in and say, 'C'mon, Mom. Let's go walk. We want you to be around a long time.' So they've been really, really supportive."

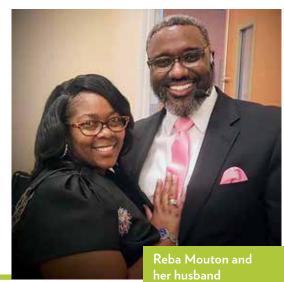
Now she and her husband try to walk at least a mile every day. "And if I don't walk," she says, "then I'll go to the pool and do water aerobics," an activity that she really enjoys.

Though her children are now grown and out of the house, Mouton still reminds them of the importance of

healthy eating and exercise: "I have to remind them that this is a struggle we have in the family, and that they're predisposed to it [diabetes]. You have to get some kind of exercise."

Sticking with healthy changes is a lifelong affair that benefits everyone in the family, says Bereolos. "I would hope that it actually brings the family together," she says. Mouton's family is proof that when everyone is on the same team pulling together, healthy changes aren't a burden but a blessing.





KNOW THE SIGNS OF LOW BLOOD SUGAR

"Families need to know the signs of low blood sugar and how to treat it," says certified diabetes educator Nicole Bereolos. This is especially true if a family member is on insulin, she says. Here's what to look for:

- Confusion
- Sweating, chills, and clamminess
- Feeling lightheaded
- Dizziness or headache
- Pale skin

- Shakiness
- Hunger

Follow the 15-15 rule to treat lower blood sugar (hypoglycemia), advises the American Diabetes Association:

- Have your family member take 15 grams of carbs (like glucose tablets or ½ cup of juice)
- Wait 15 minutes

- Check blood sugar
- Have another 15 grams of carbs if blood sugar is still below 70 mg/dL



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Your diabetes go-to









What Diabetes Is Not

More than 100 million Americans now have diabetes or prediabetes, yet myths and misconceptions are still rampant

BY BARBARA BRODY

Incorrect information—whether it comes from the internet or is passed like folklore among family and friends-is never a good thing, but it's especially dangerous when people steer away from taking proper care of themselves, says Sandra Arévalo, MPH, RDN, a certified diabetes educator and director of nutrition services and community outreach at South Bronx Health Center in New York.

"Anytime you have doubts or questions, don't keep them to yourself," says Arévalo. "Ask your doctor, dietitian, or diabetes educator, because you might be on the wrong track." In the meantime, she sets the record straight on what diabetes isn't:

Diabetes doesn't happen overnight

Arévalo says she's met many new patients who dismiss their diagnosis by saying something like, "Oh, the test only came out that way because I was at a party the night before and had cake and soda." While it's true that a simple blood glucose test could show elevated glucose levels thanks to something you recently ate, diabetes isn't diagnosed that way.

Most doctors now use an Alc test, which provides an average of your blood sugar levels over the past three months. It's also standard protocol to either repeat the same test or order two different tests (such as an Alc and a fasting glucose test) before confirming a diagnosis. In other words: If you've been officially diagnosed, it probably isn't a fluke.

Diabetes isn't temporary

Diabetes is a chronic condition and something you'll deal with for the rest of your life. "I've seen clients with out-of-control blood sugar who were confused because they 'finished all the pills' their doctor initially prescribed," says Arévalo. But diabetes isn't like treating strep throat with a course of antibiotics;



if your doctor has diagnosed you and prescribed medication, you'll need to keep refilling those drugs (unless your doctor switches you to a different treatment).

Arévalo adds that some people with type 2 are able to bring their blood sugar back into the "normal" range by changing their diet, exercising more, and losing weight, yet doctors still consider them to have diabetes.

Diabetes isn't only for people who are overweight

Being overweight certainly increases your chances of getting type 2, and the majority of those who develop it are overweight or obese. But some people who have a strong genetic predisposition get type 2 as well, even if they happen to be slim. It's also worth noting that weight has nothing to do with your risk of type 1, the autoimmune form of the disease.

No matter what type of diabetes you have or how much you currently weigh, staying active and eating well (ideally under the guidance of a dietician or educator) can help you control your condition and lower your risk of complications.

Diabetes isn't a death sentence

No doubt, diabetes is a serious disease; people who have it are at risk for many complications such as nerve damage, vision impairment and blindness, and heart disease. But taking your medication, monitoring your blood sugar as directed by your doctor, eating well, exercising, and staying on top of recommended tests and checkups can really pay off.

There are many people who have diabetes but don't know it, which means they aren't treating it. "Be happy you found out," says Arévalo, "because you now have a chance to control it and be healthy."

REVIEWED BY MICHAEL W. SMITH, MD. WEBMD CHIEF MEDICAL EDITOR



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Highs—and Lows

Low blood sugar can be as much of a concern as high blood sugar. But an individualized approach is best.

JOHN WHYTE, MD, MPH, CHIEF MEDICAL OFFICER

If you have diabetes, you might check your blood sugar daily or at least have a blood test every few months to help determine whether your diabetes is under control. You are probably focused on making sure your blood sugar is on target. We have known for a long time that elevated blood sugar (hyperglycemia) increases complications like eye and kidney disease. Chronically elevated blood sugars can also increase the risk of heart disease.

Just as high blood sugar is dangerous, so too is low blood sugar. Low blood sugar (hypoglycemia) can cause confusion, tremors, palpitations, and even seizures. More common, people start to feel light-headed and dizzy when their sugar gets too low. Dizziness can lead to a fall, which can create serious injury and even cause an early death. Some studies also show that repeated low blood sugar levels can also lead to complications.

As we get older, the risk of low blood sugar increases and our body doesn't react as quickly. Also, the kidney and liver don't clear drugs as well from our body, so their effects can often be more powerful, even at the same dose at a younger age. Some of us also tend to eat fewer meals and become less active as we get older, and that affects our blood sugar. Overall, our body doesn't react to low blood sugar the same way as we age compared to when we were younger.

Traditionally, HgbAlc <7%, or 6.5%, is used as the standard for good control. We now recognize, however, that one size doesn't fit all. We need to individualize treatment based on your other health conditions and lifestyle. For some people with diabetes, tight control is not necessary or even desirable if there is a significant risk of low blood sugar. Experts agree that an Alc of >6.5% can be okay for people with diabetes who have severe episodes of low blood sugar or who have a limited life expectancy, kidney failure, long-standing diabetes, or extensive medical conditions.

You might be able to be more flexible, allowing slightly higher levels to more effectively manage the risks of both high and low blood sugar. Bottom line: Be sure to talk to your doctor about your specific blood sugar goals as you get older and your lifestyle changes.

BY THE

MORE THAN

Percentage of

Americans who wear glasses or contact lenses to correct their vision.

Number of Americans with diabetic retinopathy (damage to the eyes or vision). That number is expected to increase to 11.3 million by 2030.

adults who know someone who has either lost sight or is currently losing eyesight because of diabetes.

PERCENTAGE of ophthalmology residents who are women.

Search for the slideshow Diabetes Complications: Eye Problems and Blindness at WebMD.com.

Meet the Ophthalmologist

These highly skilled medical professionals specialize in eye health

BY JODI HEI MER

The next time you're squinting to read the eye chart, remember that your ophthalmologist does so much more than check your vision and write prescriptions for glasses and contact lenses.

Ophthalmologists check your vision and prescribe corrective lenses, but these medical doctors are trained to do so much more. They have the expertise to diagnose and treat eye diseases and perform surgeries. Their specialized knowledge makes them especially important for people who have diabetes.

Keeping an eye on your health

If you have symptoms such as decreased, distorted, or double vision; excess tearing; unusual redness; or eye pain, an ophthalmologist will conduct a thorough exam to look for injuries or signs of eye diseases. Ophthalmologists are also on the front lines of caring for those living with diseases such as diabetes, high blood pressure, thyroid disease, and HIV or AIDS, which can affect vision. Seeking out their expert care could help preserve your eyesight.

Seeing patients with unique needs

Although all ophthalmologists specialize in ocular health, some further narrow their focus to specific diseases such as glaucoma, age-related macular degeneration, or diabetic retinopathy; others focus on certain procedures such as oculo-plastic surgery. Each of these subspecialties requires up to two years of extra training (called a fellowship) in addition to a four-year college degree, four years of medical school, and four years of postgraduate residency training.

A vision for the future

Today, ophthalmologists have high-tech tools to improve how eye diseases are diagnosed and treated. For example, robot-assisted microsurgery of the retina allows for greater precision and could improve outcomes: In one study, patients who had this procedure had fewer hemorrhages and less damage to their retinas. Artificial intelligence uses retinal photos to predict risk factors for diabetes; it could also detect the severity of macular edema, a buildup of fluid in the eye, which is common in those with diabetes.



REVIEWED BY AREFA CASSOOBHOY, MD. MPH. WEBMD SENIOR MEDICAL EDITOR

inside out

QUESTIONS TO ASK YOUR DOCTOR

Hone your personal weight-loss goals with answers to these questions.

What's the healthiest weight range for my body?

What foods should I avoid? What foods should I add to my diet?

Do you recommend any specific weightloss programs for diabetes?

Will I need to change my medications once I lose weight?

Could any of my current medications be preventing me from losing weight?

Search for the article Will Weight Loss Help Your Diabetes? at WebMD.com.

Weight Is Key

Shedding as little as 2% to 5% of your body weight can make a big difference in your diabetes control

BY RACHEL REIFF ELLIS

When it comes to treating type 2 diabetes, having a healthy body mass index (BMI) carries a lot of weight. In fact, being overweight or obese makes it harder to treat your diabetes, which is why losing any extra pounds should be a priority in your diabetes management.

"Insulin, the hormone that helps glucose get into the body's cells, doesn't work as well in people who are obese," says Susan Z. Yanovski, MD, co-director at the Office of Obesity Research and senior scientific advisor for clinical obesity research at the National Institute of Diabetes and Digestive and Kidney Diseases.

In addition to insulin resistance, obesity also leads to inflammation in many organs involved in controlling your blood sugar, including the liver and pancreas. "Overall, obesity makes it more likely that your body loses the ability to make enough insulin to control blood sugar," she says.

As you lose weight, studies show you're likely to need less medication to keep your diabetes under control. You'll also feel physically better overall. "Studies have found that in people who are overweight or obese and have type 2 diabetes, weight loss of as little as 2% to 5% results in modest reductions in fasting glucose and hemoglobin Alc, the primary blood tests for diabetes management," says Yanovski. And the larger your weight loss, the greater the impact, including a reversal or remission of your diabetes.

However, knowing why you should lose



weight is only part of the battle. The how requires commitment to a healthy lifestyle that includes a diabetes-centered diet, regular exercise, and overall wellness. "The most effective weight-management programs target not only diet and physical activity, but also other factors that can affect weight loss such as sleep, social support, and stress," says Yanovski.

Your best bet when choosing foods to help you take weight off and keep it off is to focus on whole, unprocessed fare, including fruits, vegetables, lean meats or other proteins, and low-fat or non-fat dairy. Yanovski says controlling portion size of higher-calorie foods is also important when weight loss is your goal.

She recommends the Diabetes Plate Method for filling up on fewer calories. This method is based on a 9-inch plate loaded with half non-starchy vegetables, one-fourth grains or starchy vegetables, and one-fourth lean protein.

Other dietary patterns Yanovski suggests as healthy guides are a vegetarian diet, a low-carb diet, a low-fat diet, DASH (Dietary Approaches to Stop Hypertension) diet, or a Mediterranean diet (plant-based foods, healthy fats, low-salt, limited red meat). (See page 17 for more on diet.) Ultimately, though, she recommends choosing the system that's easiest to stick with.

"The best diet is the one you enjoy and can live with for the long term," says Yanovski. Consult with your clinician, a registered dietitian, or a certified diabetes educator to choose an eating plan that's right for you.

REVIEWED BY AREFA CASSOOBHOY, MD, MPH, WEBMD SENIOR MEDICAL EDITOR



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