

WebMD[®]

DIABETES

September 2012

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Soup It Up

Give your daily diet a
power boost with these top 10
superfoods **PG. 6**

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DIABETES NOW

HOT TOPICS!

WHAT YOU NEED TO KNOW ABOUT DIABETES

1970

YEAR THE
GLUCOSE
METER
WAS
INVENTED

Source: Journal of Diabetes Science
and Technology



SMALL CHANGE

Losing a little weight and adding just 25 minutes of daily exercise can help people with type 2 diabetes hold on to their mobility as they age, a study shows. That's important, because people with diabetes are twice as likely to have mobility problems as others the same age, says researcher W. Jack Rejeski, PhD, professor of health and exercise science at Wake Forest University in Winston-Salem, N.C. They may struggle to climb stairs, or have trouble pushing a vacuum. The study looked at about 5,000 people ages 45 to 74 with type 2 diabetes.

Source: New England
Journal of Medicine



1 in 4
PROPORTION
OF AFRICAN-
AMERICAN
WOMEN
AGE 55 AND
OLDER WHO
HAVE DIABETES

Source: American Diabetes Association

“I’d recommend that people test their blood glucose before starting their exercise routine, and have a pre-exercise snack if it’s lower than 100 mg/dL. If you’re exercising more than an hour, consider checking in the middle of your workout. If you don’t check before the end of your workout, be sure you do before you drive away from the gym.”

—Laurie Anderson,
MSN, RN, CDOE



CLOCKWISE FROM TOP LEFT: ANNABELLE BREAKEY; FABRICE LEROUGE/GLOW IMAGES; HOWARD SHOOTER/GETTY IMAGES; KROEGER/GROSS/GETTY IMAGES

Sweet Swap

Substituting other non-caloric sweeteners for sugar may help you lose weight and control blood sugar—as long as you don’t overindulge. That’s according to the American Heart Association (AHA) and the American Diabetes Association, which issued a joint statement about “non-nutritive” sweeteners. The AHA had asked experts to evaluate research on six sweeteners: stevia, acesulfame-K, aspartame, neotame, saccharin, and sucralose. The experts found insufficient data to say for sure whether the sweeteners help with weight control and blood sugar control, though they added some data suggest they might. Just use a light hand when you choose to enjoy these sweeteners, the experts suggest.

Source: Circulation



85%

PEOPLE WITH TYPE 2 DIABETES
WHO ARE OVERWEIGHT

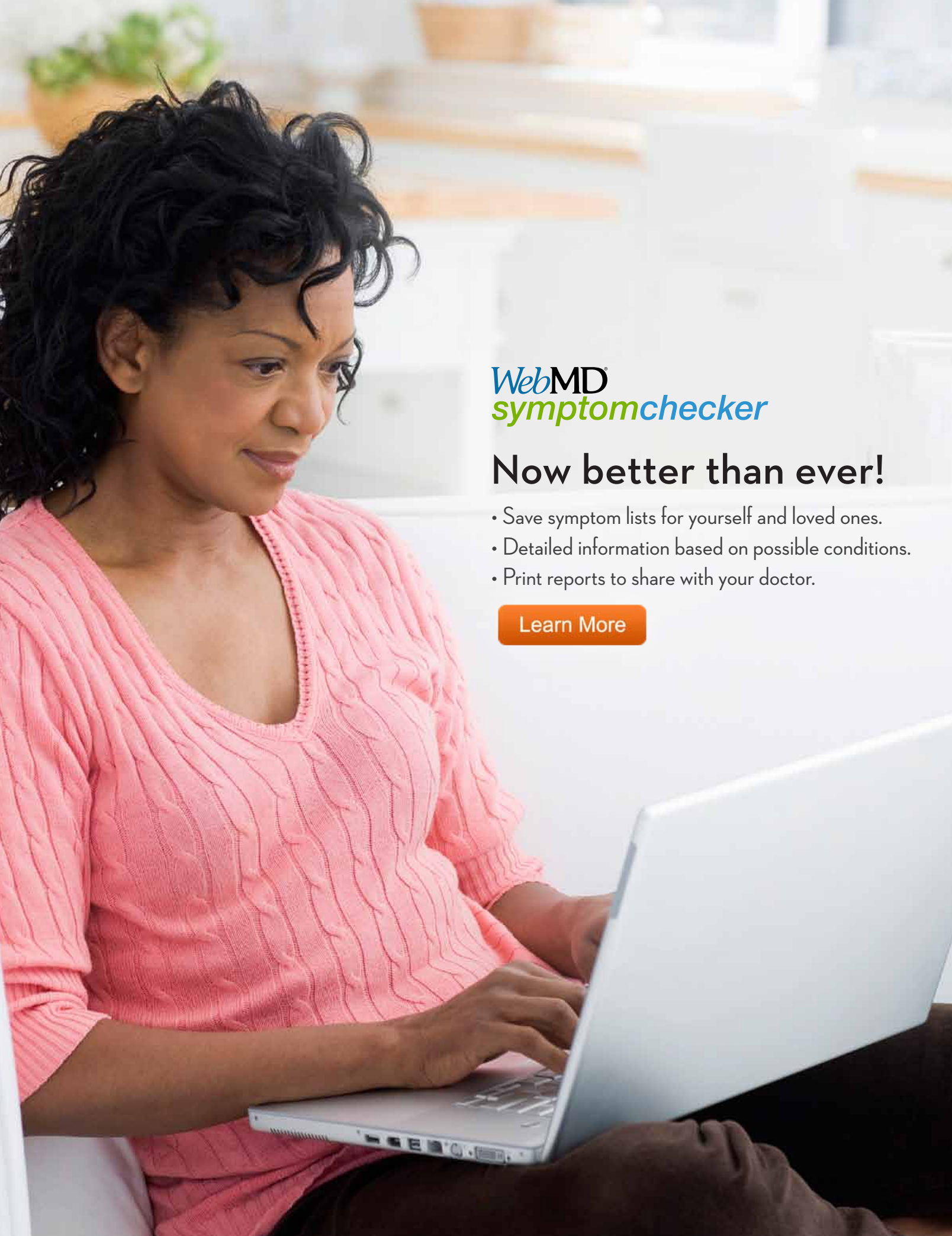
Source: National Institute of Diabetes and Digestive and Kidney Diseases

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"Hypoglycemia" is a top search term at WebMD.com.

LIVING WELL

Ups and Downs

HOW LOW CAN YOU GO?
KNOW THE SIGNS OF HYPOGLYCEMIA

By Christina Boufis

If you have diabetes, you probably know the warning signs of low blood sugar, or hypoglycemia. "It's been described best as a little like the feeling you get when you're sliding on ice in a car: panic, rapid heart rate, [and] sort of a sense of doom," says John Buse, MD, PhD, professor of medicine, chief of the division of endocrinology, and executive associate dean for clinical research at the University of North Carolina at Chapel Hill School of Medicine.

You also probably know that hypoglycemia can come on suddenly and must be treated right away by eating sugar or carbohydrates. Other signs of hypoglycemia include dizziness, shakiness, difficulty paying attention, hunger, headaches, clumsy or jerky movements, and sudden moodiness like crying, according to the American Diabetes Association (ADA).

MARTIN BARRAUD/GETTY IMAGES

What Will Help You Lose Weight?

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*American Journal of Preventive Medicine, August 2008



TOOGA/GETTY IMAGES

But sometimes, people with low blood sugar don't get or even notice these warning symptoms. Instead, they develop a dangerous condition called hypoglycemic unawareness, which, in its worst form, can lead to unconsciousness, coma, or even death, though the latter is rare, Buse says. "Hypoglycemic unawareness is sort of a race," he says. "Will the patient figure out that they're hypoglycemic before they become incapacitated?"

Hypoglycemic unawareness occurs most often in insulin-treated people with type 1 diabetes but also happens in those with insulin-treated type 2 diabetes, says Buse. It's more common in pregnant women and in those who have had diabetes for a long time, according to the ADA.

Often, the very medicines used to treat diabetes can cause hypoglycemia and in turn lead to hypoglycemic unawareness. Under normal circumstances, as blood sugar plummets (less than 70 mg/dL of blood glucose is considered hypoglycemic), the body stops producing insulin and instead produces two other hormones: glucagon and epinephrine to help stabilize blood sugar. It's the epinephrine that causes the jittery "fight-or-flight" symptoms associated with hypoglycemia. But frequent episodes of low blood sugar dampen epinephrine, so warning signs are blunted or diminished.

Frequently, it's another person who is familiar with diabetes who spots hypoglycemia. They may notice that a spouse or coworker is confused and urge that individual to check his or her blood sugar. But the person with diabetes may shrug off the suggestion. "Often, some resistance to the idea that blood sugar is low is part of hypoglycemic unawareness," explains Buse.



EXPERT TIP

"Skipping or delaying a meal, increasing physical activity, or drinking alcohol can trigger an episode of low blood sugar. Even modest alcohol intake can bring it on."—**John Buse, MD, PhD**

Experienced spouses or co-workers know to press and offer a glass of orange juice or soda to a person who appears hypoglycemic, Buse says. Indeed, the recommended treatment is to eat 15 grams of sugar or carbohydrates, such as half a cup of a sugary drink like regular soda (not diet) or juice, a piece of hard candy, three glucose tablets, or glucose gels. Repeat until the blood sugar level returns to normal.

In the event a person is unconscious, do not put anything in his or her mouth. Call 911, and inject glucagon (a hormone that causes stored sugars to be released into the bloodstream) if it's available—but only if you or a friend or family member are trained in its use, Buse says.

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Diabetes Hot Hits

Check out the most-viewed diabetes articles at WebMD.com.*

1. **Healthy Eating for People With Diabetes**
2. **Best and Worst Foods for People With Diabetes**
3. **Type 2 Diabetes and Men**
4. **What Diabetes Can Do to Your Skin**
5. **Exercise Tips for People With Type 2 Diabetes**

*as of July 1, 2012

Reviewed by **Brunilda Nazario, MD**
WebMD Medical Editor

Is your diabetes under control? Take the **WebMD Diabetes Health Check** for customized info and tips.

WebMD.com



CHECK MATE

To prevent hypoglycemia, the ADA recommends increasing the number of times you check blood sugar levels (particularly before driving), educating family and friends about the condition and how to help you, wearing an ID bracelet that identifies you as a person with diabetes, and filling a prescription for glucagon and making sure those around you know how to use it.

Most important, work with your doctor, who may recommend a continuous glucose sensor that measures blood sugar every few minutes. "The idea is to do away with low blood sugar for a period of weeks or months," says John Buse, MD, PhD, which will "sort of [reset] your body so you'll recognize the signs of hypoglycemia" if it happens again.



POWER EATS

These top 10,
type-2-friendly
SUPERFOODS
should always be on
your shopping list
and in your pantry

BY ERIN O'DONNELL



Some foods are so good for you, you'll want to include them in most of your menus. Yes, variety is essential. But these 10 tried-and-true staples are nutrient-rich, protect against chronic diseases, and are ideal foods for people with type 2 diabetes, says Kathleen Zelman, MPH, RD, LD, WebMD's director of nutrition. Plus, they're delicious.

Berries A smart substitute when you need to limit candy, berries offer sweet flavor, few calories, lots of fiber, and a hefty dose of antioxidants, chemicals that help protect against cancer and heart disease. Raspberries, strawberries, and pomegranates (yes, they're considered a berry) also have plenty of ellagic acid, an antioxidant that may have anti-tumor effects. Toss fresh berries in your morning cereal and noontime salads, and keep dried versions handy for snacking. High-fiber foods like berries help maintain blood sugar levels.

Eggs Eggs are not only an inexpensive protein source, they may even help you lose weight. Research suggests that eating eggs at breakfast

means you're likely to consume fewer calories the rest of the day. The American Heart Association says healthy adults can eat one egg a day. One reason is that they contain little saturated fat, the real culprit in high blood cholesterol, Zelman says. (To be safe, talk to your doctor about your cholesterol level.) Hard-boil eggs while you prepare dinner so they're ready for a quick breakfast.

Extra virgin olive oil EVOO offers great taste plus type-2-diabetes-friendly monounsaturated fat. "Extra virgin" means the oil is minimally processed, which protects its more than 30 antioxidant and anti-inflammatory plant compounds, Zelman says. Drizzle it on salads and use it to sauté meat and veggies. But go easy. Like all oils, it packs a calorie wallop.

Kale If you're stuck on spinach, consider kale. Zelman calls it an overall nutrition booster and one of the healthiest vegetables on the planet. One cup offers a riot of antioxidants: 206% of your daily requirement for vitamin A, 134% of your vitamin C requirement, and 684% of your recommended

LEFT: MAXIMILIAN STOCK LTD/GETTY IMAGES; JAMES BAIGRIE/GETTY IMAGES

intake of vitamin K (critical for blood clotting and bone health). It's also a top source of lutein and zeaxanthin, compounds that may help prevent age-related eye diseases. Add chopped kale to soups, toss it with pasta and pine nuts, or tear the leaves into 2-inch pieces, spritz with olive oil, and bake until crisp for a bowlful of kale chips.

Low-fat milk Milk isn't just for kids. Low-fat varieties, such as 1% and skim, are smart choices for adults. Milk has three nutrients that people skimp on: calcium, vitamin D, and potassium. For carb counters, 1 cup of milk is equal to a small piece of fruit or slice of bread. Use milk in fruit smoothies or steaming-hot chai tea.

Nuts Yes, they're high in calories, but these are calories well spent, Zelman says. Most varieties contain about 170 calories per ounce, along with heart-healthy monounsaturated fats, protein, and fiber. And nuts can help stabilize blood sugar. Reach for a small handful of nuts instead of potato chips.

Salmon Rich in omega-3 fatty acids, fatty fish such as salmon may protect against age-related dementia. Omega-3s also boost heart health by lowering triglycerides. That's why the American Heart Association recommends eating omega-3-rich fish at least twice a week.

Sweet potatoes A superior source of the antioxidant beta-carotene, sweet potatoes also contain vitamin C and potassium. Zelman roasts them in a 400-degree Fahrenheit oven for an hour for a delicious caramelized flavor that needs nothing more than a sprinkle of cinnamon, a spice that may help lower blood sugar. Cook with the skin on, since most of the nutrients are next to it.

Tea Black, green, oolong, or white tea has powerful antioxidant flavonoids



known as catechins in each calming cup. (The longer you steep tea, the more flavonoids you get, Zelman says.) Research suggests three cups of tea a day may reduce your heart attack risk. Zelman's pantry is full of flavored teas, which are tasty enough to enjoy without sweeteners.

Whole grain cereal One of the healthiest ways to start your day, whole grain cereal can help reduce blood pressure and LDL ("bad") cholesterol, research shows. Whole grains contain powerful plant chemicals, lignans and flavonoids, which may play a role in preventing heart disease. Zelman recommends cereals with at least 5 grams fiber to help control blood sugar and stave off hunger. When you're in a hurry, she adds, cereal makes a healthy lunch or dinner.

Reviewed by **Laura J. Martin, MD**
WebMD Medical Editor

READER TIP

"Eat colorful fruits and veggies, herbs, and spices. Not much meat. Fresh food when possible. Worry about eating healthy foods in moderation."—*DeadManWalking37, WebMD community member*

SUPER MEALS

Add these superfood-rich recipes to your regular repertoire

Crunchy Fruit and Yogurt Breakfast Parfait

This breakfast or anytime parfait is a nutritional trifecta, packed with three superfoods: nuts, berries, and whole grains. Together they help normalize blood sugar levels and keep you feeling full.

Makes 6 servings

Ingredients

Nutty Granola

- 3 ½ cups old-fashioned oats
- 1 ½ cups finely chopped almonds, walnuts, and pecans
- ½ cup maple syrup
- pinch of salt
- 1 tsp allspice

Directions

1. Mix all ingredients together, stirring well to combine.
2. Line a jelly roll pan with parchment paper. Spread granola on pan and bake at 325°F 30–40 minutes, turning once, until golden brown.

Ingredients

Parfait

- 3 cups fresh or frozen fruit without added sugar (thawed)
- 3 cups nonfat plain Greek yogurt
- ¾ cup Nutty Granola (recipe above)

Directions

1. In a medium bowl, combine all the fruit.
2. Layer ¼ cup yogurt in 6 tall clear parfait glasses, and top with ¼ cup fruit and 1 tbsp Nutty Granola; repeat once more in each glass.
3. Serve immediately.

Per serving:

202 calories, 14 g protein, 28 g carbohydrate, 4 g fat, 5 g fiber, 18 g sugar, 46 mg sodium. Calories from fat: 19%

Sweet Potato Pecan Pancakes

Once you taste these delicious pancakes, loaded with disease-fighting antioxidants, you won't make them any other way. Portion the batter to yield two pancakes per serving, and top with reduced-calorie syrup and crunchy nuts to start your day.

Makes 6 servings

Ingredients

- 1 lb sweet potatoes, roasted, peeled, and mashed
- 2 cups skim milk
- 2 large eggs, beaten
- 4 tbsp reduced-calorie pancake syrup, divided
- 1 tsp vanilla extract
- 1 cup all-purpose flour
- 1 cup whole wheat flour
- 4 tsp baking powder
- 1 tsp pumpkin-pie spice
- ¼ tsp salt
- ¼ cup chopped pecans, toasted

Directions

1. Place sweet potatoes, milk, eggs, 1 tbsp pancake syrup, and vanilla extract in a medium bowl and blend thoroughly.
2. In a separate bowl, sift together flours, baking powder, pumpkin-pie spice, and salt.
3. Blend sweet potato mixture with flour mixture, and whisk until smooth.
4. Coat a flat griddle with cooking spray and preheat over medium-high heat. Ladle batter onto hot griddle by heaping tablespoons and cook until golden brown, turning once when surface begins to bubble (about 2 minutes per side).
5. To serve, warm remaining syrup with pecans and pour over pancakes.

Per serving:

92 calories, 11 g protein, 50 g carbohydrate, 6 g fat (1 g saturated fat), 63 mg cholesterol, 5 g fiber, 8 g sugar, 188 mg sodium. Calories from fat: 18%

Tuscan Kale Soup

You don't need to live in Italy to enjoy this easy, healthy soup. The combination of kale and beans powers up the protein, vitamins, and minerals while helping lower cholesterol and regulate blood sugar levels.

Makes 6 servings

Ingredients

- 1 tsp olive oil
- 2 medium onions, chopped
- 2 oz Spanish chorizo sausage, finely chopped
- 3 cloves garlic, minced
- 1 large sweet potato, peeled and chopped
- 1 bay leaf
- 6 cups low-sodium chicken stock
- 1 (16-oz) can cannellini beans, rinsed and drained
- 4 cups fresh kale, chopped
- 1 tsp dried basil
- ¼ tsp salt
- freshly ground pepper

Directions

1. Heat oil in a large, heavy-bottom Dutch oven or soup pot over medium-high heat.
2. Add onions, and sauté 5 minutes. Add sausage and garlic and continue cooking 1–2 minutes.
3. Add potato, bay leaf, and stock. Cook 8 minutes until potato is soft.
4. Add beans, kale, basil, salt, and pepper and simmer 5 minutes or until thoroughly heated. Discard bay leaf before serving.

Per serving:

204 calories, 12 g protein, 29 g carbohydrate, 5 g fat (2 g saturated fat), 8 mg cholesterol, 6 g fiber, 1 g sugar, 311 mg sodium. Calories from fat: 22%



Veggie Frittata

Perfect for breakfast, lunch, or dinner, this nutrient-rich dish is full of satisfying and waist-friendly protein that will fill you up and keep your blood sugar steady. Even though it is an egg dish, the dietary cholesterol is a third less than your daily limit.

Makes 6 servings

Ingredients

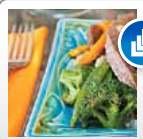
- 1 (10-oz) package fresh spinach
- 2 large onions, chopped
- 1 tsp olive oil
- 1 large red bell pepper, chopped
- 1 cup red potato, cooked, peeled, and diced
- 6 large eggs, lightly beaten
- 4 large egg whites, lightly beaten
- ¼ tsp salt
- ½ tsp freshly ground black pepper
- ¼ cup (1-oz) part-skim mozzarella cheese, shredded
- 2 tbsp shredded Parmesan cheese

Directions

1. Coat a 10-in nonstick skillet with cooking spray and heat over medium-high heat. Add spinach, and sauté 2 minutes until wilted. Remove and set aside.
2. Sauté onion in olive oil 8–10 minutes until browned, stirring occasionally. Add red bell pepper, and continue cooking 2–3 more minutes until soft. Add potato and stir in, then add spinach.
3. Combine eggs and whites, salt, and pepper, and whisk to thoroughly combine. Pour egg mixture into the pan and cook over medium-high heat about 7–9 minutes or until bottom of frittata is browned.
4. Preheat oven broiler. Sprinkle cheeses over frittata and broil 5 minutes or until lightly browned.
5. Cut into six wedges; serve.

Per serving:

180 calories, 14 g protein, 13 g carbohydrate, 8 g fat (3 g saturated fat), 188 mg cholesterol, 3 g fiber, 307 mg sodium. Calories from fat: 45%



Eat smart. Watch **Best and Worst Meals for Diabetes**, our second most-popular diabetes slideshow.

WebMD.com



"Type 2 diabetes" is a top search term at WebMD.com.

TAKE 5

Myth Buster

WHICH LIFESTYLE CHANGES REALLY WORK TO GET YOUR TYPE 2 UNDER CONTROL?

By Christina Boufis

If you're one of the nearly 24 million Americans living with type 2 diabetes, you know your body has difficulty using or producing insulin. What can you do to manage the disease? We asked Jill Crandall, MD, professor of clinical medicine and director of the diabetes clinical trials unit at Albert Einstein College of Medicine in New York City, to debunk some myths and help you learn to live well.

1 Does having type 2 diabetes mean you have to give up sugar completely?
Not really. It's a misconception that people with diabetes can never have a dish of ice cream. The diet we recommend for people with diabetes really isn't very different from the diet we recommend for everybody.

For most people, eating balanced meals of protein, carbohydrates, and

modest amounts of unsaturated fat is the best approach. Large carb meals (pasta, bread, potatoes, rice) and concentrated sweets (fruit, fruit juice, cake) raise blood sugar, so it's best to eat those foods in moderation.

The plate method is often helpful: Think of dividing your dinner plate into three sections. Half the plate should be vegetables or salad, a fourth should be protein (for instance, meat or fish), and a fourth should be starch (such as rice or pasta, preferably whole grain).

We all know junk food like candy and donuts is not good for anybody. Junk food is especially problematic for people with diabetes because it tends to be high in carbohydrates and excess calories. But we try to stay away from saying there are certain things you can never have, because sometimes the idea of deprivation just makes foods all the more appealing.

If you know you want to have that piece of cake at the end of dinner, then don't eat any bread with dinner, or have a very small portion of rice.

2 Is it better to eat frequently throughout the day?

Some people find frequent, small meals work for them—they don't get too hungry, and their bodies can handle smaller amounts of carbs better. But others find they end up gaining weight this way—the frequent meals may not be that small. However, skipping meals is probably not a good idea because people get hungry, then can't control their next meal very well.

Keeping a food diary, along with testing blood sugar before and after meals, is a good way to see the effect of particular foods on blood sugar level. The immediate feedback can be helpful.

And pay attention to portion sizes. Food labels are useful (they provide information about carbohydrate content as well as total calories), but the portion sizes they list are often

unrealistically small (how many people eat half a muffin?). Although weighing food servings can be annoying, it might help train your eyes as to what a "6-ounce serving" of something really looks like.

3 How do stress and sleep affect diabetes management?

There's emerging evidence that people who are chronically sleep-deprived tend to eat more and gain weight, so sleep can be important for diabetes management.

There is definitely a biological connection between stress and managing diabetes, too. [The levels of] stress hormones like cortisol and epinephrine go up when people are stressed, and we know those hormones tend to elevate blood sugar.

It's also difficult for people to focus on managing their diabetes when they're distracted by work problems, family issues, or other kinds of stress.

Many doctors' offices and hospitals have diabetes education programs that will help people develop skills for managing diabetes. Try stress reduction techniques, and don't forget that exercise is wonderful for helping to manage diabetes and can relieve stress, too.

4 Why do I need to exercise?

There's evidence that exercise can have profound effects on blood sugar control—even if you don't lose weight. When you exercise, insulin's ability to help bring glucose into the cells improves. Aerobic exercise, like running on a treadmill, bicycling, or jogging as well as weight or resistance training can help control blood sugar. Some studies indicate that weight training may be even more effective than aerobic exercise, which is a bit surprising.

It's interesting to note that exercise is effective at improving insulin sensitivity even in older people—those in

their 60s, 70s, and 80s who get into a regular exercise program.

The key is to exercise on a regular basis: 30 minutes a day, at least five days a week. That recommendation comes from the Diabetes Prevention Program study, which was designed to see if we could prevent diabetes in people who are at high risk. The lifestyle intervention included a low-fat, reduced-calorie diet and 30 minutes a day of moderate-intensity physical activity—mostly people did brisk walking. The intervention was very effective at reducing the rate of diabetes—by 58%—in people who were at high risk.

Check with your doctor before beginning an exercise program to find out which exercise is best for you, and whether you need to make changes to your medication.

5 Are there any promising treatments ahead for type 2 diabetes?

The most promising treatment is something that's gotten some play in the news recently, and that's bariatric or weight-loss surgery. It obviously can lead to dramatic weight loss, [and] in most cases reverses diabetes completely, which is an amazing thing. Even before people have lost any significant amount of weight, blood sugar levels often dramatically improve. It probably has to do with alteration of hormones that are secreted within the intestine, and factors that regulate appetite and energy expenditure.

Not everybody who is overweight or obese would want to have weight-loss surgery or would be appropriate for it. But what we're learning about how these procedures can radically change how the body handles calories and regulates appetite may lead to new insights that will result in other treatments.

Reviewed by Michael W. Smith, MD
WebMD Chief Medical Editor



Q

"Is weight loss important? Why?"

A

"Losing even a modest amount of weight can help you manage type 2 diabetes. That's really a No. 1 goal for just about everybody because most people with type 2 diabetes are overweight or obese. If you lose weight, your blood sugar control will be much better. Sometimes when people lose weight they don't even need any medication."

"We don't want people to feel that unless they lose 50 pounds, [weight loss] won't help them. That's not true. A number of studies suggest that losing 15 or 20 pounds, or 7% of your body weight, can be helpful in improving blood sugar."

Jill Crandall, MD
professor of clinical medicine,
Albert Einstein College of Medicine,
New York City



READER TIP
"Bought the wife a bike, and we [ride] bikes every other night. We walk on the odd nights. My kayak is out of the basement. All in all, things are good."—betaboo, WebMD community member

"Swollen feet" is a top search term at WebMD.com.

HEALTHY HABITS

Body Shop

GET YOUR DIABETES UNDER CONTROL. MAKE THESE TIPS THE TOP 6 ON YOUR TO-DO LIST

By Erin O'Donnell

Living well with type 2 diabetes means making certain precautions part of your routine, says Amy Campbell, MS, RD, CDE, manager of clinical education programs at Joslin Diabetes Center in Boston. She offers this advice.

Exercise appears to increase insulin sensitivity. Aim to be active 30 minutes a day, at least five days a week.

Make a date with a dietitian. "It's a myth that there's a one-size-fits-all diabetes diet," Campbell says. A dietitian can help you develop an eating plan that's right for your age, weight, activity level, and medications, and can also set daily calorie and carbohydrate targets. You'll probably meet several times at first; after that, once a year.

Check your feet daily. High blood sugar levels can damage nerves in your feet, leaving you unable to feel cuts, blisters, and other injuries. High blood sugar also increases your risk of infection, allowing a simple blister to develop into a grave problem in a matter of days.



EXPERT TIP

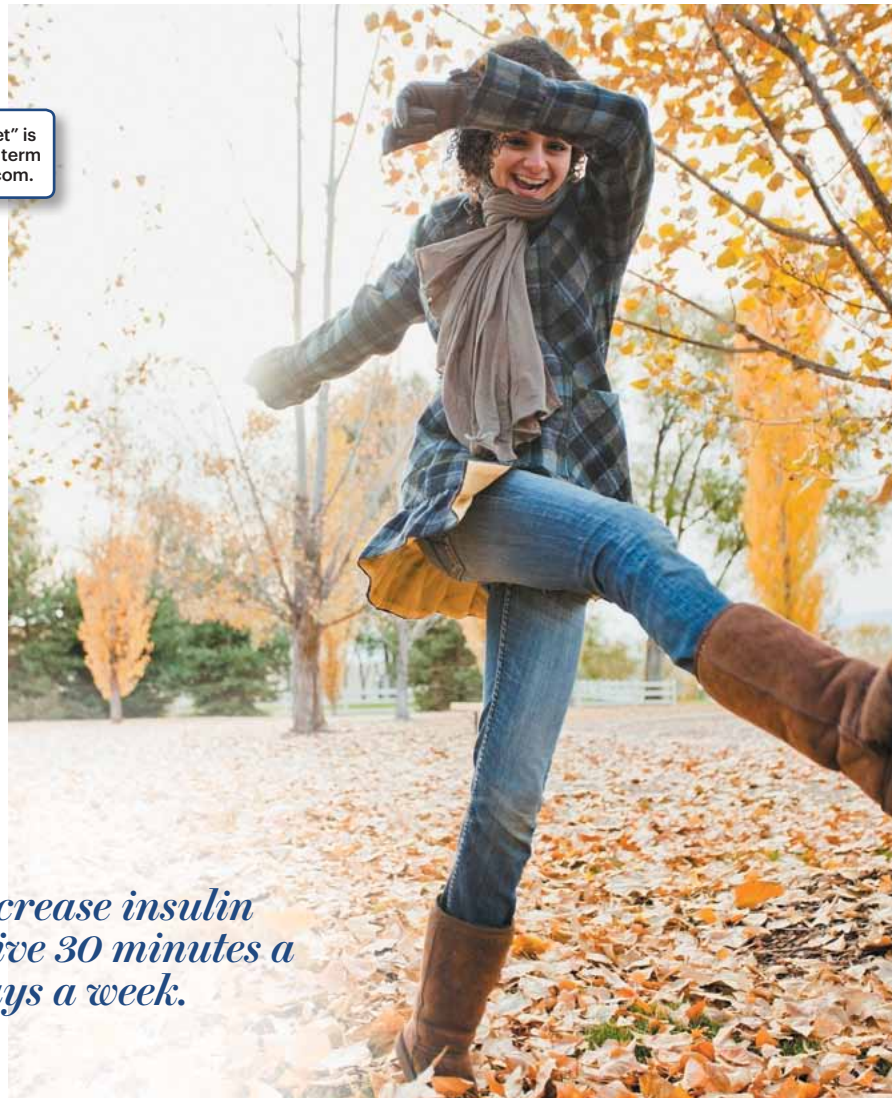
"Sugar-free foods aren't necessarily better. They're often made with sugar alcohols, such as sorbitol and mannitol, which have a laxative effect in some people."—Amy Campbell, MS, RD, CDE

Amputation is a real danger, Campbell says. Can't reach your feet? Ask a family member or friend to give them a daily once-over, or use a mirror. Call your doctor immediately if you spot redness, cuts, blisters, or swelling.

Keep moving. People with type 2 diabetes are often insulin resistant, meaning their bodies don't use insulin properly and they need extra insulin to allow their cells to take in sugar from their blood. Exercise appears to increase insulin sensitivity, improving glucose uptake to your body's cells.

Aim to be active 30 minutes a day, at least five days a week. Any activity that raises your heart rate enough to make it slightly difficult to talk (brisk walking, taking the stairs, vacuuming vigorously) counts toward your daily total. The benefits are real: Shed just 5% to 10% of your body weight to dramatically improve glucose control, Campbell says.

See clearly. Make an annual appointment for a dilated-eye exam with an ophthalmologist or an optometrist experienced in treating people with diabetes. Dilation allows the doctor to look for diseases such as retinopathy, one of the most common complications of diabetes. "It used to spell blindness for people, but we now have laser surgery and other ways to prevent it," Campbell says.



Take your best shot. Get a flu shot every fall. People with diabetes are prone to complications if they get the flu. "They're more likely to be hospitalized for the flu than people who aren't diabetic," Campbell says. The flu can also cause blood sugar levels to skyrocket, which may trigger severe complications and slow healing. For added protection, Campbell recommends a pneumonia vaccine. Ask your doctor if you should get one.

Quit smoking. Smoking is especially harmful for people with type 2 diabetes. Smoking appears to increase insulin resistance and also causes blood vessels to narrow, limiting circulation to your legs and feet. Your physician can help you make a plan to quit.

Reviewed by Brunilda Nazario, MD
WebMD Medical Editor

SVEN HAGOLANI/GLOW IMAGES



Know Your Numbers

In addition to recording daily blood sugar levels, be sure to track other numbers, which tell you how well your treatment plan is working.

A1C This number measures your average blood glucose level over the previous two to three months. Aim for a number under 7%, and have your A1C tested at least twice a year.

Lipid levels Your cholesterol and triglyceride numbers offer valuable insights into heart health, which is critical because type 2 diabetes increases heart disease risk. Your target numbers and how often you should have these tests vary depending on your individual risk, so ask your doctor.

Blood pressure High blood pressure (a reading of 140/90 or higher) often goes hand-in-hand with diabetes and increases your risk of heart disease and diabetes complications. Have your blood pressure checked each time you visit the doctor.

Microalbumin This test checks for small amounts of protein in the urine, which is important for gauging kidney health. If caught early, kidney disease can be controlled by keeping A1C, blood sugar, and blood pressure in their target ranges.

What Will Help You Lose Weight?

WebMD Food & Fitness Planner

In just a few clicks, customize a plan to help you reach your weight and fitness goals. Studies have shown that people who keep a food journal lose twice the weight than those who rely on diet and exercise alone.*

Best of all, it's free. So start planning today.

Learn More

*American Journal of Preventive Medicine, August 2008

MIKE KEMP/GLOW IMAGES



HEALTH CHECK

WHAT'S YOUR TYPE 2 IQ?

● If you have type 2 diabetes, you may have friends or family members who don't understand your disease. Take the case of **MockBe**, a member of WebMD's diabetes community. She controls her diabetes well, and lives with a man who does not have diabetes. "Every couple weeks, I have to deal with him yelling at me, telling me I like to be sick. He says he knows about diabetes and tells me I don't take care of it right." Do you live with people who don't have diabetes? Give them this quiz to test their type 2 IQ.

DID YOU KNOW?

DIABETIC RETINOPATHY— THE MOST COMMON EYE DISEASE

ASSOCIATED WITH DIABETES—IS THE LEADING
CAUSE OF BLINDNESS IN AMERICAN ADULTS.



QUIZ

1. People develop type 2 diabetes by eating too much sugar.
☐ True
☐ False
2. Only overweight people get diabetes.
☐ True
☐ False
3. Only adults get type 2 diabetes.
☐ True
☐ False
4. People with diabetes must go on a special diet.
☐ True
☐ False
5. If you have diabetes, you must inject insulin.
☐ True
☐ False

Answers: 1. **False.** Type 2 diabetes is a complicated disease, and eating too much sugar isn't the culprit. Instead, diets too high in calories, excess weight, and genetic and environmental factors contribute to this disease. 2. **False.** While excess weight is one of the most important risk factors for type 2 diabetes, normal-weight and underweight people can develop it, too. 3. **False.** Type 2 diabetes can affect adults, children, and teens who are sedentary, overweight, or obese, or have a family history of the disease. 4. **False.** There is no "diabetes diet." People with type 2 diabetes should aim to eat healthy foods that are low in fat, salt, and calories, and that help maintain normal blood sugar levels. 5. **False.** Some people with type 2 diabetes take medication in the form of pills or injections. Others control their blood sugar levels with diet and exercise.

SOURCE:

American Heart Association, American Diabetes Association, and the WebMD Diabetes Health Center



ASK YOUR DOCTOR

1

How can I determine my risk factors for diabetes? Is there anything I can do to prevent it?

2

What are the warning signs I should watch for if I am at risk?

3

After a diabetes diagnosis, how should I change my diet and exercise habits?

4

What types of complications should I be aware of? What can I do to avoid them?