Is your type 2 diabetes under control? Good control of your condition could help prevent Parkinson’s disease. In an analysis of 28 studies, people who had type 2 diabetes had a higher chance of having Parkinson’s disease than others do. For those who already had the neurodegenerative disease, type 2 diabetes seemed to cause it to move more quickly. People who had genes that raised their risk for type 2 diabetes had a greater risk for Parkinson’s, too. But taking your diabetes medication appears to help reduce the chances for this disease and slow its progress in people who already have it.

SOURCE: Movement Disorders

1 in 5 Number of people with diabetes who don’t know they have it.

SOURCE: CDC

THE LATEST ON TYPE 2 DIABETES

WEIGHT LOSS IS ESSENTIAL
Severe type 2 diabetes can cause kidney, nerve, and eye problems that lead to dialysis, amputation, and blindness. But new research confirms that weight is key to your risk for these complications. In a study that tracked about 1,000 people with newly diagnosed type 2 diabetes for 10 years, those with the highest BMI at diagnosis had the greatest risk for these more serious problems. Those who gained weight after diagnosis increased their chances of these problems. But those who lost weight slashed their odds of kidney, nerve, and vision problems.

SOURCE: Diabetes 

THE LINK BETWEEN PARKINSON’S AND TYPE 2
Is your type 2 diabetes under control? Good control of your condition could help prevent Parkinson’s disease. In an analysis of 28 studies, people who had type 2 diabetes had a higher chance of having Parkinson’s disease than others do. For those who already had the neurodegenerative disease, type 2 diabetes seemed to cause it to move more quickly. People who had genes that raised their risk for type 2 diabetes had a greater risk for Parkinson’s, too. But taking your diabetes medication appears to help reduce the chances for this disease and slow its progress in people who already have it.

SOURCE: Movement Disorders

STEM CELLS TO THE RESCUE
When you have diabetes, your pancreas doesn’t work as well as it should. Stem cells may help improve the function of cells in this organ in some people with type 2 diabetes. These cells have the potential to become any type of human cell. In an experiment, doctors removed them from patients’ bone marrow and injected them into an artery that carried them to the pancreas. After they received the experimental treatment, people who were not overweight and had diabetes for less than 10 years were able to reduce the amount of diabetes medications they needed to take.

SOURCE: Stem Cells Journals
Still living with a beast of a high A1C? Ask your doctor if your current treatment could be doing more!

For adults with type 2 diabetes, along with diet and exercise, SOLIQUA 100/33 works 5 ways in your body to help control blood sugar.

Important Safety Information for SOLIQUA 100/33

SOLIQUA 100/33 is an injectable prescription medicine that contains 2 diabetes medicines, insulin glargine and lixisenatide, which may improve blood sugar (glucose) control in adults with type 2 diabetes when used with diet and exercise.

■ It has not been studied in people with a history of pancreatitis.
■ It is not recommended for people who also take lixisenatide or other medicines called GLP-1 receptor agonists.
■ It is not for use in people with type 1 diabetes, or people with diabetic ketoacidosis.
■ It has not been studied in people who have a stomach problem that causes slow emptying [gastroparesis] and is not for people with slow emptying of the stomach.
■ It has not been studied in people who also take a short-acting [prandial] insulin.
■ It is not known if SOLIQUA 100/33 is safe and effective in children under 18 years of age.

Stop taking SOLIQUA 100/33 and call your healthcare provider right away if you have pain in your stomach area (abdomen) that is severe, and will not go away. The pain may be felt in the back area. The pain may happen with or without vomiting. Who should not use SOLIQUA 100/33?

Do not use SOLIQUA 100/33 if you:
■ are having an episode of low blood sugar [hypoglycemia]
■ are allergic to insulin glargine, lixisenatide, or any of the ingredients in SOLIQUA 100/33. Symptoms of a severe allergic reaction with SOLIQUA 100/33 may include swelling of the face, lips, tongue, or throat, fainting or feeling dizzy, problems breathing or swallowing, very rapid heartbeat, severe rash or itching, or low blood pressure.

Before using SOLIQUA 100/33, tell your healthcare provider about all your medical conditions, including if you:
■ have or have had problems with your pancreas, your kidneys, or your liver, stones in your gallbladder, or a history of alcoholism.
■ have heart failure or other heart problems. If you have heart failure, it may get worse while you take this medication.
■ have severe problems with your stomach, such as slowed emptying of your stomach or problems digesting food.
■ are taking certain medicines called glucagon-like peptide 1 receptor agonists (GLP-1 receptor agonists).
■ have had an allergic reaction to a GLP-1 receptor agonist.
■ are pregnant or breastfeeding or plan to become pregnant or to breastfeed. It is not known if SOLIQUA 100/33 will harm your unborn baby or pass into your breast milk.

Tell your healthcare provider about all the medicines you take, including all prescription and over-the-counter medicines, vitamins, and herbal supplements. SOLIQUA 100/33 may affect the way some medicines work. Before using SOLIQUA 100/33, talk to your healthcare provider about low blood sugar and how to manage it.

How should I use SOLIQUA 100/33?
■ Do not change your dose without first talking to your healthcare provider.
■ Check the pen label each time you inject to make sure you are using the correct medicine.
■ Do not take more than 60 units of SOLIQUA 100/33 each day. Do not take SOLIQUA 100/33 with other GLP-1 receptor agonists.

Only use SOLIQUA 100/33 that is clear and colorless to almost colorless. If you see small particles, return it to your pharmacy for replacement.

■ Change (rotate) your injection sites within the area you chose with each dose to reduce your risk of getting pitted or thickened skin (lipodystrophy) and skin with lumps (localized cutaneous amyloidosis) at the injection sites. Do not use the same spot for each injection or inject where the skin is pitted, thickened, lump, tender, bruised, scaly, hard, scarred or damaged.

■ Do not remove SOLIQUA 100/33 from the pen with a syringe.
■ Do not re-use or share needles with other people. You may give other people a serious infection, or get a serious infection from them.

Check your blood sugar levels. Ask your healthcare provider what your blood sugar should be and when you should check.

What are the possible side effects of SOLIQUA 100/33?

SOLIQUA 100/33 can cause serious side effects including:

■ See “What is the most important information I should know about SOLIQUA 100/33?”
■ Severe allergic reactions. Severe allergic reactions can happen with SOLIQUA 100/33. Stop taking SOLIQUA 100/33 and get medical help right away if you have any symptoms of a severe allergic reaction. See “Who should not use SOLIQUA 100/33?”

Low blood sugar [hypoglycemia]. Your risk for getting low blood sugar is higher if you take another medicine that can cause low blood sugar. Signs and symptoms of low blood sugar include:

■ headache
■ dizziness
■ drowsiness
■ sweating
■ weakness
■ irritability
■ hunger
■ blurred vision
■ fast heartbeat
■ feeling jittery
■ confusion
■ anxiety

Kidney problems [kidney failure]. In people who have kidney problems, the occurrence of diarrhea, nausea, and vomiting may cause a loss of fluids [dehydration] which may cause kidney problems to get worse.

Low potassium in your blood [hypokalemia].

Heart failure. Taking certain diabetes pills called TZDs with SOLIQUA 100/33 may cause heart failure in some people. This can happen even if you have never had heart failure or heart problems before. If you already have heart failure it may get worse while you take TZDs with SOLIQUA 100/33. Your healthcare provider should monitor you closely while you are taking TZDs with SOLIQUA 100/33. Tell your healthcare provider if you have any new or worse symptoms of heart failure including shortness of breath, swelling of your ankles or feet, or sudden weight gain. Treatment with TZDs and SOLIQUA 100/33 may need to be adjusted or stopped by your healthcare provider if you have new or worse heart failure.

Gallbladder problems. Gallbladder problems have happened in some people who take SOLIQUA 100/33. Tell your healthcare provider right away if you get symptoms of gallbladder problems which may include:

■ pain in your upper stomach (abdomen)
■ yellowing of skin or eyes (jaundice)
■ fever
■ clay-colored stools

The most common side effects of SOLIQUA 100/33 include:

■ low blood sugar [hypoglycemia]
■ diarrhea
■ nausea
■ upper respiratory tract infection
■ stuffy or runny nose and sore throat
■ headache

Nausea and diabetes usually happen more often when you first start using SOLIQUA 100/33.

These are not all the possible side effects of SOLIQUA 100/33. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

Please see a Brief Summary of Prescribing Information on the next page.

Sanofi
Developed under the direction and sponsorship of Sanofi
Brief Summary of Information for SOLIQUA® 100/33 (insulin glargine and lixisenatide) injection 100 Units/mL and 33 mcg/mL

SOLIQUA 100/33 is an injectable prescription medicine that contains 2 diabetes medicines, insulin glargine and lixisenatide, which may improve blood sugar (glucose) control in adults with type 2 diabetes when used with diet and exercise. SOLIQUA 100/33 is not for use in people with type 1 diabetes, or people with diabetic ketoacidosis. SOLIQUA 100/33 has not been studied in people who have a stomach problem that causes slow emptying (gastroparesis) and is not for people with slow emptying of the stomach. SOLIQUA 100/33 has not been studied in people who also take a short-acting (prandial) insulin.

What is SOLIQUA 100/33?
SOLIQUA 100/33 is an injectable prescription medicine that contains 2 diabetes medicines, insulin glargine and lixisenatide, which may improve blood sugar (glucose) control in adults with type 2 diabetes when used with diet and exercise.

• Do not use SOLIQUA 100/33 if you:
  • have an episode of low blood sugar (hypoglycemia)
  • are allergic to insulin glargine, lixisenatide, or any of the ingredients in SOLIQUA 100/33. Symptoms of a severe allergic reaction with SOLIQUA 100/33 may include: swelling of the face, lips, tongue, or throat, fainting, fast heartbeat, feeling jittery, confusion, anxiety, headache, dizziness, drowsiness, sweating, weakness, inability to feel pain, vision changes, or difficulty breathing.
  • have heart failure or other heart problems. If you have heart failure, it may get worse while you take SOLIQUA 100/33. Your healthcare provider should monitor you closely while you are taking SOLIQUA 100/33. Tell your healthcare provider if you have any new or worse symptoms of heart failure including shortness of breath, swelling of your ankles or feet, or sudden weight gain. Taking certain diabetes pills called TZDs with SOLIQUA 100/33 may need to be adjusted or stopped by your healthcare provider if you have new or worse heart failures.
  • have gallbladder problems. Gallbladder problems have happened in some people who take SOLIQUA 100/33. Tell your healthcare provider right away if you get heart failure or heart problems before. If you already had heart failure it may get worse while you take SOLIQUA 100/33 with TZDs or other healthcare provider should monitor you closely while you are taking SOLIQUA 100/33. Tell your healthcare provider if you have any new or worsened symptoms of heart failure including swelling of your ankles or feet, or sudden weight gain. Taking certain diabetes pills called TZDs with SOLIQUA 100/33 may need to be adjusted or stopped by your healthcare provider if you have new or worse heart failures.
  • have or have had problems with your pancreas, your kidneys, or your liver, stones in your gallbladder or a history of alcoholism.
  • have heart failure or other heart problems. If you have heart failure, it may get worse while you take thiazolidinediones (TZDs).
  • have severe problems with your stomach, such as slow emptying of your stomach or problems digesting food.
  • are taking certain medicines called glauconyl-like peptide 1 receptor agonists (GLP-1 receptor agonists).
  • have had an allergic reaction to a GLP-1 receptor agonist.
  • are pregnant or breastfeeding, or plan to become pregnant or to breastfeed. It is not known if SOLIQUA 100/33 will harm your unborn baby or pass into your breast milk.

Tell your healthcare provider about all the medicines you take, including all prescription and over-the-counter medicines, vitamins, and herbal supplements. SOLIQUA 100/33 may affect the way some medicines work. Check the pen label each time you inject to make sure you are using the correct medicine. Do not use SOLIQUA 100/33 with another GLP-1 receptor agonist. Do not use SOLIQUA 100/33 if you have had an allergic reaction to a GLP-1 receptor agonist.

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WHY THIS TEST MATTERS
By Vernita Miller
Reviewed by Bruni Nazario, MD, WebMD Chief Physician Editor, Medical Affairs

A1c is a measure of the percentage of hemoglobin that is saturated with glucose. "A1c gives health care providers insight into your blood sugar levels over time," says Constance Brown-Riggs, RD, CDE, a diabetes care and education specialist and owner of CBR Nutrition Enterprises in Massapequa, NY.

This number gives doctors a better picture of how your blood sugar runs overall, rather than simply in response to your most recent activities. The American Diabetes Association compares this to the difference between how a baseball player hits in one game (that’s blood sugar) and the player’s overall batting average (that’s A1c).

WHITE COMPACT BLOOD GLUCOSE MONITOR (PHOTO COURTESY OF SCHILLER ASSOCIATES)

WHY A1C MATTERS
A doctor needs to see an A1c of 6.5% or higher on two separate tests to diagnose diabetes. After you get a diagnosis, your health care provider will use routine A1c tests, at least twice a year but maybe more, to see how well your treatment is working.

Your treatment plan, which may include weight loss or lifestyle changes, may be adjusted based on A1c levels. "A1c is a measure of the percentage of hemoglobin that is saturated with glucose," Brown-Riggs explains.

A1c gives health care providers insight into your blood sugar levels over time. For example, if you have a normal A1c of 5.7% or below, prediabetes range is over 5.7 and under 6.5. Diabetes range is 6.5% or higher. A 6% A1c means your blood sugar has averaged about 126 mg/dL over the last 3 months. An 8% A1c equals a 3-month average of about 183.

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TIPS FOR LOWERING YOUR BLOOD SUGAR

Weight Loss
Listed just 5% of your body weight—that’s 10 pounds if you weigh 200—can lower blood sugar and make it easier to control.

Exercise
A 15-minute walk after meals can help reduce the blood sugar spike that typically happens after you eat.

A Fiber-Rich Diet
Foods that are high in soluble fiber, such as black beans, avocados, and broccoli, can help improve blood sugar levels.

Sufficient Sleep
Getting enough sleep every night may help control blood sugar. It also helps control cravings for unhealthy food and helps you stick to your treatment plan.

YOUR A1C
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WHITE COMPACT BLOOD GLUCOSE MONITOR (PHOTO COURTESY OF SCHILLER ASSOCIATES)
HEALTHY HABITS

HOW TO LOWER YOUR A1C
LIFESTYLE CHANGES YOU CAN MAKE

By Rachel Reiff Ellis
Reviewed by Brunilda Nazario, MD,
WebMD Chief Physician Editor, Medical Affairs

Hemoglobin A1c is a blood test that measures your average blood glucose levels over a 3-month span. Lowering your A1c is a marathon, not a sprint. You can build toward your goal by focusing on these key areas:

SHED SOME POUNDS
You may not have extra weight to lose, but if you’re overweight or obese, losing weight helps your insulin work better. In fact, losing just 5% to 10% of your body weight will lower your A1c.

“Some people with fairly new onset of type 2 diabetes who are able to lose a significant amount of weight and keep it off may achieve remission in their diabetes and go back to having normal glucose levels,” says Christine Lee, M.D., program director of the Division of Diabetes, Endocrinology, and Metabolic Diseases at the National Institute of Diabetes and Digestive and Kidney Diseases in Bethesda, MD.

Talk to your doctor about practical diet and exercise changes that fit your lifestyle to help you lower the number on the scale.

CATER TO YOUR DIABETES
The right nutrition helps you keep healthy blood sugar levels on a daily basis, which leads to a lower A1c over time. Lean on healthy carbohydrates, fiber-rich foods, fish, and “good” fats as you fill your plate, such as:

- Vegetables
- Fruits
- Nuts
- Whole grains
- Legumes such as beans and peas
- Low-fat dairy
- Heart-healthy fish such as salmon
- Canola, olive, and peanut oils

Reduce or avoid foods that:
- Have trans or saturated fats
- Have high-cholesterol foods such as fatty meats
- Have foods with lots of sodium

A good rule of thumb is to move toward whole foods and away from anything processed.

PLUG INTO PROFESSIONAL SUPPORT
One of the most important tools for reaching your goals is a good diabetes team. “The day-to-day challenges of managing and monitoring diet, blood sugar levels, activity, and medications can be overwhelming,” Lee says. Education and support services provide people with knowledge, informed decision-making capability, and skills needed to help them manage their diabetes on a daily basis.

For example, Lee says, a diabetes educator can teach you how to better adjust your medication dosage if you’re sick, how to manage low blood sugar levels, or what to do when you accidentally miss a dose.

Focusing on all these lifestyle changes together can do even more than lower your A1c; it can improve your overall wellness. “It also has additional health benefits of improving cardiovascular risk factors, physical functioning, and quality of life,” she says.

DOCTOR Q&A
Christine Lee, MD, at the National Institute of Diabetes and Digestive and Kidney Diseases sheds light on some A1c facts.

Q: What’s a healthy A1c goal?
A: It depends on your personal health history, but most adults should target less than 7% to reduce the risk of diabetes complications.

Q: How much exercise and weight loss will lower my A1c?
A: There’s no one-size-fits-all exercise regimen. The key to sustainability is finding something that fits your lifestyle that you enjoy. However, 200 to 300 minutes of moderate-intensity physical activity per week such as a brisk walk can help keep weight off, which will help lower your A1c.

Q: Are there additional aids to help me lose weight?
A: Certain adults may benefit from weight loss medication or even weight loss surgery, but side effects need to be considered carefully. Be sure to talk to your healthcare provider to ensure they aren’t stopping you from losing weight.

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Focusing on all these lifestyle changes together can do even more than lower your A1c; it can improve your overall wellness. “It also has additional health benefits of improving cardiovascular risk factors, physical functioning, and quality of life,” she says.
Too much sugar in your blood, or hyperglycemia, is a sign that you don’t have enough insulin in your blood, or your insulin isn’t working as well as it should. Often, hyperglycemia is the sign that tells your doctor you have diabetes if you haven’t been diagnosed. Learn what leads to spikes in your blood sugar and how you can tell when you’ve gone too high.

WHY IT HAPPENS
There are many reasons your blood glucose levels may be above normal. These include:

- Something you ate. Foods—especially American fare—can be sneaky when it comes to added sugar. “Often times people don’t realize that certain foods contain a lot of sugar and can set off their blood glucose,” says Emily J. Gallagher, MD, PhD, assistant professor of endocrinology, diabetes and bone disease at the Icahn School of Medicine at Mount Sinai in New York. Check labels before you eat and know what you’re putting in your body.
- Inadequately or incorrect medication use. If you give yourself the wrong dose of your diabetes treatment, or it’s expired, you may not be able to control an influx of glucose in your blood correctly. Talk to your doctor about your treatment dosage if you’re having repeated bouts of high blood glucose.
- Injury, illness, or stress. When you experience a trauma to your body or are under a lot of stress from a busy schedule, heavy emotions, or illness, your body responds by putting out adrenaline and cortisol into your bloodstream. Your body also releases more glucose from your liver. These effects can last up to 6 to 8 hours after the initial stress.

WHAT TO WATCH FOR
While it’s important to get ahead of the game by knowing what causes a rise in blood glucose, it’s also good to know what you might experience once that happens.

“A lot of the time people don’t recognize the symptoms of hyperglycemia,” Gallagher says. In fact, she says, it’s not uncommon to have no symptoms at all until you’re up at 250 or 300 mg/dL, or you develop a complication.

HOWEVER, THERE CAN BE WARNING SIGNS:
You have to pee a lot. “When the glucose goes up, one of the things that people notice first is frequent urination,” Gallagher says. Excess glucose in your body goes into your urine, and the glucose pulls water along with it, which tells your body to make more urine.

You’re really thirsty. If you’re peeing a lot, you’re going to feel parched pretty quick. “Frequent urination leads to dehydration, and your body senses this, and activates the thirst response,” she says. Your head hurts and you feel tired. The dehydration you get from high blood glucose can lead to a lethargic feeling and headaches. But you may also feel tired because you don’t have enough insulin to send glucose to the tissues that need it. “When insulin levels are low, glucose doesn’t go into the muscles, and the protein in the muscles is broken down, causing fatigue,” Gallagher says.

Your vision is blurry. Too much glucose can increase the amount of fluid in your eyes, which reduces how sharply you can see. This should go away once your glucose goes back to normal levels.

If it continues to happen, you can have more serious eye issues. “Larger term, people with diabetes are more likely to have a number of eye conditions, including cataracts and glaucoma,” she says.
THE STRESS FACTOR
HOW THIS TENSION CAN AFFECT YOUR BLOOD SUGAR

Feeling stressed? It might cause fluctuations in your blood sugar.
Stress causes your body to release hormones like cortisol and adrenaline to ensure that you have enough energy to go into “fight-or-flight” mode. As these hormones are released into the bloodstream, your body also releases stored sugars (called glycogen) that elevate your blood sugar.

“When you have type 2 diabetes, insulin resistance combined with the release of additional glucose from the liver may combine to raise blood sugars during stressful situations,” says Mary de Groot, PhD, associate professor of medicine at Indiana University and immediate past president of health care and education for the American Diabetes Association.

Stress also takes an emotional toll that can make it harder to regulate your blood sugar. You might not get enough sleep, might eat more comfort foods, or might skip workouts during stressful periods, which can affect your blood sugar.

“When we’re under stress, we also have less attention to put toward self-care behaviors,” adds de Groot. “Managing diabetes is hard work under the best of circumstances; when we add stressors on top of that, it becomes that much more of a challenge.”

HOW MUCH DO YOU KNOW ABOUT MANAGING TYPE 2 DIABETES?
TAKE THIS QUIZ TO FIND OUT

1. Obesity is the biggest risk factor for developing type 2 diabetes.
   - True
   - False

2. The symptoms of type 2 diabetes are obvious.
   - True
   - False

3. Insulin is the standard treatment for managing type 2 diabetes.
   - True
   - False

4. You can reverse type 2 diabetes.
   - True
   - False

5. You’ll be on the same diabetes medication for the rest of your life.
   - True
   - False

1. True: Research shows that those who are obese have a six times greater chance of developing type 2 diabetes regardless of their other risks.

2. False: You might not experience any noticeable symptoms at all. Symptoms like dry skin, fatigue, and weight loss might develop over several years and may not seem like obvious signs of type 2 diabetes.

3. False: Insulin is just one treatment option. You might be able to manage type 2 diabetes through healthy eating and exercise, weight loss, or oral or injectable medications.

4. True: There is no cure for diabetes, but losing weight through low-calorie diets, low-carbohydrate diets, and bariatric surgery could reverse the disease.

5. False: Your medication needs may change over time. Talk to your doctor about the medication, or combination of medications, to best manage type 2 diabetes.
$327 billion
Total cost of medical care and lost work and wages for people in the U.S. who have diabetes.

422 million
Estimated number of people who have diabetes worldwide.

44%
Amount of new cases of kidney failure that are caused by diabetes.

1 in 3
Number of people in the U.S. who could have diabetes by 2050 based on current trends.

#3
United States’ rank in the world for most confirmed diabetes cases, after China and India.

1 in 6
Number of live births affected by diabetes during pregnancy.

2x
How much risk for type 2 diabetes increases when you have first-degree relatives who have it.

6 in 10
Number of people with diabetes who take oral medication only.

1.5 million
Number of new cases of diabetes that doctors diagnose in the U.S. every year.

Sources: CDC, American Diabetes Association, Albert Einstein College of Medicine, International Diabetes Federation, Journal of Internal Medicine