

Living with Diabetes

A guide to effectively managing your diabetes to enhance your health



LIFEBRIDGE HEALTH.

CARE BRAVELY

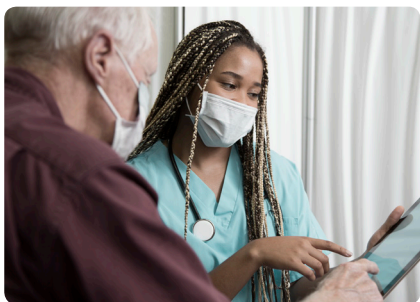


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Welcome



Thank you for taking the first steps toward a better care and keeping of you. Using information from the American Diabetes Association, Centers for Disease Control and Prevention and other reliable resources, our team of nurses, nurse practitioners and certified diabetes educators put together

this guide to provide you with valuable information that will help you manage your diabetes.

Topics include:

- What is diabetes and its different types
- How diabetes affects the body
- Nutrition advice
- Exercise tips
- What to know when checking blood sugar levels
- Understanding medicines to treat diabetes
- Preparing for a provider appointment
- A blood glucose log sheet

Our goal is to provide you with the tools needed to talk to your healthcare provider to further enhance your care. We also hope this is a helpful resource that gives you a better understanding of the details that surround your care.

What is Diabetes?

Our body relies on the food we eat for nutrients and energy. During our normal digestion process, food is broken down into sugar and absorbed by different cells in the body. Insulin is the hormone that the body uses to absorb sugar from the blood into cells of the body. When the body does not make enough (or any) insulin, the blood sugar remains high. Sometimes the body is unable to use insulin correctly and the blood sugar is high. This is known as diabetes.

Diabetes is a common condition that affects millions of people in the United States. Many people do not know they have diabetes.

According to the Centers for Disease Control and Prevention (CDC), diabetes is the seventh leading cause of death in the United States.

Without insulin, the body is not able to use sugar from the food we eat as it normally should (also known as insulin resistance). There are three main types of diabetes: Type 1, Type 2 and gestational diabetes.

Type 1 diabetes

- Usually diagnosed in children and young adults and thought to occur as an autoimmune response (the body's immune system attacks itself)

Type 2 diabetes

- Most common form and can be prevented or delayed with a healthy lifestyle such as making nutritious food choices, exercise and weight loss
- Most often diagnosed in adults, but happening more in all age groups

Gestational diabetes

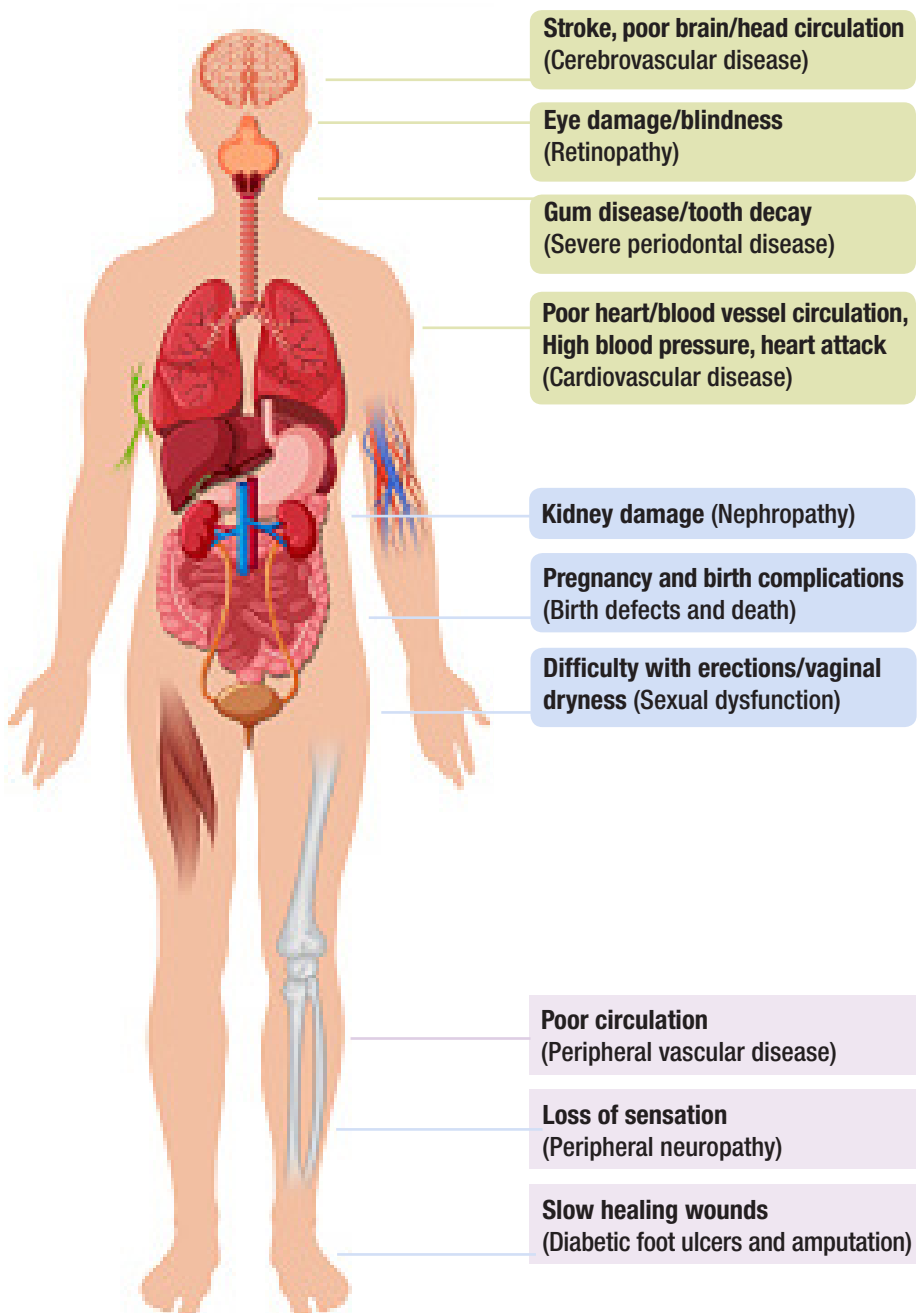
- Appears for the first time during pregnancy when insulin resistance keeps the mother's body from using insulin as it should, causing her blood sugar to remain high. This can hurt mom and baby
- Mom and baby are at risk of developing Type 2 diabetes later in life

What is Prediabetes?

- Happens before Type 2 diabetes and increases the risk of developing diabetes, heart disease and stroke
- Blood sugar levels are higher than normal, but not yet diabetes.
- Millions of people 18 years of age and older are living with prediabetes.
- Most people with prediabetes don't know they have it, but lifestyle changes can reverse it

Long-term Complications

Diabetes can affect every body system



Healthy Eating Habits

Food choices can have a large impact on your blood sugar control as well as your risk of developing diabetes and its complications from diabetes. Eating healthy is one of the most beneficial lifestyle changes to make.

Food is made up of carbohydrates, fat and protein. A healthy diet needs to include all three of these nutrients. Carbohydrates have the greatest short-term effect on your glucose or sugar level. Protein can help you stay full longer, and fat takes the longest to break down and has the most calories.

Your body uses saturated fat to make unhealthy cholesterol known as low-density lipoprotein (LDL). Unhealthy cholesterol increases the risk for heart attack and stroke. Eating more than you need of any nutrient will lead to weight gain. Working with your healthcare team including your provider, a registered dietitian and a diabetes resource program can help you meet your nutrition goals.

Some tips for healthy meal planning:

Eat less. Smaller portion sizes can lead to better glucose levels.

Eat more fruits, vegetables and whole grains. Choose foods that can help your heart health. Dietary fiber is important and fresh (or frozen) fruits and vegetables are excellent sources.

Eat less meat. Extra protein is eventually processed into glucose and meat is often high in saturated fat, which can increase your risk of heart disease. Aim for leaner sources of protein such as seafood, skinless poultry and leaner cuts of pork or beef.

Don't skip meals. Some diabetes medications can cause your glucose level to go too low when you don't eat regularly. Ask your provider if you are on a medication that could increase your risk.

Read labels. Labels tell you how much carbohydrates, fat, protein and sodium are in the foods you eat. For example, women should aim for 30 to 45 grams of carbohydrates per meal and men should aim for 45 to 60 grams.

Try new foods. Try more recipes for vegetables and lean meats to make it easier to stick to your goals.

Eat complex carbohydrates. They are an important part of a heart healthy diet.

Choose low-fat dairy foods. This will decrease the number of calories, saturated fat and cholesterol in your meal, while increasing its protein, calcium and most other vitamins and minerals.

Choose and prepare foods that are low in saturated fat. These fats help your heart the most. Examples of these fats include olive and canola oils, fish, beans, nuts, lean meats and buttery spreads such as Smart Balance®. Grilling, broiling, steaming and baking your foods are also good choices.

Be careful choosing foods labeled “fat free.” These foods often contain extra sugar and can still be high in calories.

Avoid processed foods. These foods include sugary beverages and snack foods such as chips and sweets.

When you think about your eating habits, ask yourself:

Are your food choices raising your glucose levels more than you'd like?

- Test your glucose two hours after eating a meal. This can help you understand how that meal affected your glucose levels. If your number is close to 200 mg/dl, consider how many grams of carbohydrates you ate.
- If healthy meals make your glucose go too high, you should speak to your provider.

Think about one diet change you can make in the next two weeks.

Write it down here _____



Recommendations for Meeting Weight Goals

- Talk to your healthcare provider about your weight goals.
- Your eating habits and daily physical activity helps you maintain a healthy weight.
- Try not to lose more than one to two pounds per week.
- Losing five to seven percent of your body weight can help your glucose control. (That is equal to 10 to 14 pounds for someone who is 200 pounds.)



Quitting Smoking

Smoking increases your risk for heart attack and stroke. It increases your LDL and raises your blood pressure. It also lowers the amount of oxygen to your organs and affects your blood vessels. It increases your risk of chronic wounds and amputations. Quitting smoking is important and can improve your health.

Talk to your provider about quitting methods that may work for you. Patches, gums, pills, apps and support groups are all examples of tools you can use.

Here are some smoking cessation resources to get you started:

1-800-Quit-Now • www.smokefree.gov

Contact your local health department. Many have free clinics to help.

Exercise

Regular physical activity is an important part of managing diabetes and dealing with prediabetes. When you're active, your cells become more sensitive to insulin, so it works better, and you feel better. Know your numbers before you start.

Light walking, even 10 minutes is a great place to start and a great habit to keep in your life. Thirty minutes, five days a week is the recommended minimum of physical activity we all need. Taking breaks from sitting can also help control your diabetes. It's best to set goals to get some exercise at least every other day and meet them.

Getting started and setting a goal is the most important part. If you have not been very active or are worried about your health, it is important to consult your healthcare provider about creating your exercise plan.

Write your exercise goal below:

I will (your activity type) _____
for _____ minutes each day, _____ days per week.



When to Check Your Blood Sugar

Checking your blood sugar is a key part of your plan to control diabetes. When to test and how often to test will depend upon your medications and plan of care.

Type of Diabetes	Tests/day	Best times to test
Type 1/Type 2 (on insulin)	At least 4x/day	Before each meal and at bedtime*
Type 2 (not on insulin)	1-2x/day	<ul style="list-style-type: none">• Before a meal• and/or two hours after meal start• choose different meals from day to day to get a wide sample of results*

**or as recommended by your healthcare provider*

The American Diabetes Association has set these target blood sugar goals:

Before meals: 80-130 mg/dl

2 hours after the start of a meal: Below 180 mg/dl

Share your numbers with your diabetes team:

- Record your numbers in a log book or use an app such as mySugr.
- Bring or tell your healthcare providers what your numbers are at each visit, whether in clinic or via telehealth.
- Think about how activity, food and illness can change your numbers.
- Did you take a walk that day and notice your fasting blood sugar was lower the next morning?
- Did you eat cookies at lunch and have a higher reading before dinner?
- Look at your blood sugar results. Are they going up or going down?
- If you are feeling ill, test your blood sugar every four hours and notify your provider if it is above 250 mg/dl or below 70.

High Blood Sugar

If you have diabetes, you might experience high blood sugar, also called hyperglycemia. Your blood sugar might be high if:

- Your body does not have enough insulin or it is not using the insulin properly.
- Your body is experiencing illness or stress.
- You missed a dose of your insulin or diabetes medication.
- You ate more carbohydrates than what's recommended in your meal plan or exercised less.

If your blood sugar is high, you may not have symptoms. If you have symptoms, you may feel:



Increased thirst



Very hungry



Needing to pass urine more than usual



Blurry vision



Sleepy

Injuries that heal slower than usual

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What to do if your blood sugar is high:

- Be sure to take your medication as directed
- Follow your meal plan
- Follow your exercise plan. Do not exercise if your blood sugar is greater than 250
- Check your blood sugar more frequently
- Drink water



Call your provider if:

- You have symptoms of high blood sugar
- You have questions or concerns about your blood sugar
- Your blood sugar remains high throughout the day despite following your diabetic plan

Low Blood Sugar

Sometimes you might experience low blood sugar, also known as hypoglycemia. Your blood sugar might get low if:

- You skip or delay a meal
- Do not eat enough carbohydrates
- Are more active than usual or over exercise
- You take insulin or other diabetic medications



If your blood sugar is low, you might feel:



- Headache
- Sweaty
- Shaky
- Hungry
- Confused
- Dizzy
- Grumpy

What to do if your blood sugar is low:

Check your blood sugar right away if you are having any symptoms of low blood sugar. If your blood sugar is low (70 or less or having symptoms of low blood sugar), you need to treat it.

Follow these steps:

Treat your low blood sugar by eating or drinking something that has 15 grams of carbohydrates or is high in sugar. Examples are:

- four ounces (1/2 cup) of juice or regular soda
- four glucose tablets or glucose gel
- five or six chewable candies (such as mints or jelly beans)

Wait 15 minutes, then re-check your blood sugar. If it is still low, treat it again. Once your blood sugar returns to normal, eat a meal or snack to help prevent your blood sugar from dropping again.

Sick Days

When you are ill or under a lot of stress, it can cause your blood sugar to rise. It is important to talk to your provider and develop a sick day plan ahead of time.

What to do if you are sick:

- Drink plenty of water.
- If you are able to tolerate some food, try to eat Jello, a popsicle, cup of soup, a few crackers or a slice of toast. You could also drink $\frac{1}{2}$ cup of juice or soda. It's important to offer your body carbohydrates every three to four hours to prevent low blood sugar.
- Continue to take your diabetes medications unless your provider tells you otherwise.
- If you are unable to eat solid foods, try to drink six to eight ounces of fluids every hour. Alternate fluids that have sugar with fluids that do not.
- Check your blood sugar every four hours, or more frequently if your blood sugar is rising.
- Talk to your provider about whether or not you should test your urine for ketones when you are sick.



Call your provider if:

- You are unable to keep food or fluids down.
- You are having persistent diarrhea.
- You have a fever for 24 hours.
- You feel short of breath.
- You have abdominal pain.
- Your blood sugar is high or low for two consecutive readings.

Common Diabetes Medicines

Non-insulin medications

There are lots of medicines other than insulin that can help with diabetes. This chart will give you some of the names and tell you how they work. If you don't see your medication, talk to your pharmacist. Always talk to your provider about which one is right for you.

Drug class	Example(s)	How do they work?	When do you take it?
Biguanides	Metformin	Decreases amount of sugar made and absorbed in your body; makes your own insulin work better.	Pill taken with food usually twice a day, can be mixed with other medicines
DPP-4 Inhibitors (Dipeptidyl Peptidase IV)	Januvia (Sitagliptin) Tradjenta (Linagliptin) Onglyza (Saxagliptin)	Helps your body make just enough insulin while you eat.	Pill taken alone or with another medicine like Metformin
GLP-1 RA (Glucagon-like Peptide Receptor Agonists)	Rybelsus Byetta (Exenatide) Ozempic (Semaglutide) Trulicity (Abiglutide) Victoza (Liraglutide)	Naturally increases how much insulin your body uses. It also helps slow digestion	GLP-1s are taken many different ways: daily in pill form on an empty stomach; daily or weekly injected like insulin.
SGLT2 (Sodium-Glucose Co Transporter 2)	Farxiga (Dapagliflozin) Invokana (Canagliflozin) Jardiance (Empagliflozin)	Brings sugar into the kidneys to be passed in urine	Pill taken once a day
Sulfonylureas (SU)	Amaryl (Glimepiride) Diabeta , Micronase (Glyburide) Glucotrol (Glipizide)	Helps pancreas release more insulin. Can cause blood sugar to go too low.	Pill taken one or two times a day before meals
TZDs (Thiazolidinediones)	Actos (Pioglitazone)	Helps insulin work better in muscles and fat, slows down liver making insulin	Pill taken once a day with or without food

Common Diabetes Medicines

Insulins

Drug class	Example(s)	How do they work?	When do you take it?
Insulin(s)	Fast-Acting: Humalog, Novolog, Lispro, Admelog, Fiasp	Moves sugar from body into cells so that it can be used for energy. Can cause low blood sugar.	Fast-Acting: Inject at mealtime, up to 10-15 min before eating
	Short Acting: Regular, Humulin, Novolin		Short-Acting: Inject at least 20-30 min before meals
	Medium Acting: NPH, N		Medium Acting: Inject twice daily can be combined with fast or short-acting insulin
	Long Acting: Lantus, Basaglar, Levemir, Tresiba, Toujeo		Long Acting: Inject once or twice daily, will cover needs for 24 hrs., can be combined with shorter-acting insulin
	Pre-mixed: Humulin 70/30, Novolin 70/30, Novolog 70/30, Humulin 50/50, Humalog 75/25		Pre-mixed: Can be used twice daily before mealtime

Recommended Routine Diabetes Care

Hemoglobin A1C

The A1C is a blood test that measures your average blood sugar over the last two to three months. For many adults with diabetes, the goal A1C is less than 7%. You should have your A1C checked twice a year, or more frequently if your A1C is not at the goal. Getting this number to the goal reduces the risk of damage to your eyes and kidneys.

A1c (%)	eAG(mg/dl) Estimated Average Glucose
6.0	126
6.5	140
7.0	154
7.5	169
8.0	183
8.5	197
9.0	212
9.5	226
10.0	240

American Diabetes Association: www.diabetes.org/professional/eAG

My A1C goal: _____

My A1C: _____

Date: _____



Blood Pressure

Your blood pressure should be measured at every routine clinical visit. High blood pressure increases the risk of damage to small vessels in your body.

My blood pressure: _____



Blood pressure categories



BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120-129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130-139	or	80-89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

Eye Exams

You should have a dilated eye exam yearly. Diabetes can cause vision loss. Eye doctors can see problems before this happens and correct them.

My eye doctor's name is: _____

My last eye exam date: _____



Dental Exams

You should have a dental exam yearly. People with diabetes are at a higher risk for gum disease so they should also brush and floss regularly to prevent tooth loss.

My dentist's name: _____

My last dental exam date: _____



Immunizations

Ask your diabetes care team about what vaccines are needed. It is recommended that people with diabetes follow age specific recommendations for flu, pneumonia and hepatitis B vaccines.

Lab Tests

You should have your urine and blood tested to monitor how well your kidneys and liver are working. You should also have your cholesterol levels checked every year. It is important to know your LDL level. LDL is known as the “bad” cholesterol. When your LDL level is high, it increases your risk for heart disease and stroke. For many patients, the goal is to have your LDL level less than 100.

My LDL level: _____



Skin and Feet

You should inspect your skin and feet every day, using a mirror if needed. If you notice any cuts, blisters, cracks, swelling or dry skin or injuries that are not healing, tell your provider. You should have a skin and foot exam at every visit. If you have any sores or thick toenails, you may need to be seen more frequently or be seen by a foot doctor (podiatrist).

My last foot exam date: _____



Things to Talk to Your Provider About:

- Are you having trouble sleeping?
- Are you feeling sad, depressed or overwhelmed?
- Are you having concerns about sex?
- Setting your exercise goals.
- Setting your weight goals.



PHQ-9 Depression Screening

Over the last two weeks, how often have you been bothered by any of the following?

	Not at all	Several days	More than half days	Nearly every day
Little interest or pleasure in doing things	0	1	2	3
Feeling down, depressed or hopeless	0	1	2	3
Trouble falling or staying asleep, or sleeping too much	0	1	2	3
Feeling tired of having little energy	0	1	2	3
Poor appetite or overeating	0	1	2	3
Feeling bad about yourself or that you are a failure or have let yourself or your family down	0	1	2	3
Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

- Not difficult at all**
- Somewhat difficult**
- Very difficult**
- Extremely difficult**

DEPRESSION SEVERITY:
0-4 none, 10-14 mild, 15-19 moderately severe, 20-27 severe

Be Sure to Bring These Things to Your Appointment:

- All prescribed and over the counter medications, including herbs and vitamins.
- Your meter and blood glucose log.
- A list of your questions and concerns that you want to ask your diabetes team.
- You may use this log to record your blood sugar levels as directed by your diabetes care team or provider in the columns below. Note any changes in your diet, medicines, activity or condition in the comment area.

Blood glucose log								
Date	Breakfast		Lunch		Dinner		Bedtime	Comments
	Before (Fasting)	2 hrs after	Before (Fasting)	2 hrs after	Before (Fasting)	2 hrs after		

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References

Diabetes Standards of Care 2020

https://care.diabetesjournals.org/content/43/Supplement_1/S37

www.novomedlink.com/content/dam/novonordisk/novomedlink/resources/generaldocuments/SickTimeFactSheet_EG.pdf

www.healthline.com/health/type-2-diabetes/insulin-chart

<http://main.diabetes.org/dforg/pdfs/2019/2019-cg-medications.pdf>

www.healthline.com/health/diabetes/medications-list#other-drugs

Physical Activity Guidelines for Americans 2nd Edition, (2018) Department of Health and Human Services, USA

www.heart.org

www.diabetes.org

Credits:

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Helpful LifeBridge Health Phone Numbers and Patient Resources

Diabetes Resource Centers at LifeBridge Health

Carroll Hospital: 410-871-7000

Northwest Hospital: 410-601-9729

Sinai Hospital: 410-601-5458

Website: lifebridgehealth.org/diabetes

Your Local Bureau of Aging:

Aging Services for the City of Baltimore:
410-396-2273

Baltimore County Department of Aging:
410-887-2594

Carroll County Bureau of Aging:
410-386-3800

American Diabetes Association
1-800-DIABETES
www.diabetes.org

Cornerstones4Care
1-800-727-6500
www.cornerstones4care.com

Centers for Disease Control and Prevention (CDC)
1-800-242-8721
www.cdc.gov

Helpful Websites on Eating and Recipes

www.diabetesforecast.org/landing-pages/recipes-and-food.html
recipes.heart.org/en
www.diabetesfoodhub.org
www.diabetesforecast.org

Helpful Websites on Fitness:

www.diabetesforecast.org
www.health.gov
www.nia.nih.gov
www.teamingupfordiabetes.com

My primary care provider

My cardiologist (heart)

My nephrologist (kidney)

My endocrinologist (thyroid, diabetes)

If you do not have a primary care provider, call 410-601-WELL or visit lifebridgehealth.org.

Please visit your healthcare provider regularly and keep your scheduled appointment.

In an emergency, call 911 or go directly to the nearest emergency room.

