



American Heart Association®  
Healthy for Good™

# Diabetes



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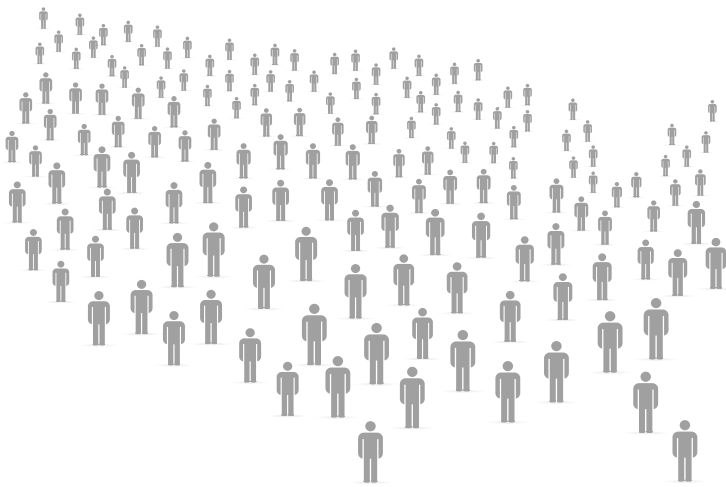
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# Know **Diabetes** by **Heart**™

## What is Diabetes?



More than **37 million Americans** have diagnosed and undiagnosed diabetes.<sup>1</sup>

Diabetes is a condition that causes your blood glucose (or blood sugar) levels to rise too high. These high blood glucose levels can cause damage to your body in different ways, and diabetes makes you more likely to have heart disease or a stroke.

**How it works:** Your body makes and uses insulin (a hormone) to keep your blood sugar in the normal range. When you have diabetes, your body doesn't make enough insulin or can't use insulin efficiently. This causes your blood sugar levels to go too high.

## Common Symptoms



Cuts/bruises that are slow to heal



Feeling thirsty often



Extreme fatigue



Urinating often



Blurry vision

**If you have diabetes, there is a lot you can do.**  
**Start with a doctor's appointment to make a plan.**

You're not in this alone. Find answers to your questions and join the initiative at: [knowdiabetesbyheart.org/join](https://knowdiabetesbyheart.org/join).

1. [cdc.gov/diabetes/basics/quick-facts.html](https://cdc.gov/diabetes/basics/quick-facts.html)

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# Know **Diabetes** by Heart™

## What is Know Diabetes by Heart?

The American Heart Association (AHA) and the American Diabetes Association (ADA), along with industry leaders, have proudly launched the groundbreaking collaborative initiative Know Diabetes by Heart to reduce cardiovascular deaths, heart attacks, heart failure and strokes in people living with type 2 diabetes.

## Why have AHA & ADA created **Know Diabetes by Heart**?

### It's Time to Drive Urgency to the Issue



**Cardiovascular disease** is the leading cause of death for people living with type 2 diabetes.



People living with type 2 diabetes are **two times more likely** to develop and die from cardiovascular disease – such as heart attacks, strokes and heart failure – than people who do not have diabetes.



**Only about half of people** age 45 and older with type 2 diabetes understand their increased risk for developing heart disease or have discussed their risk with their health care provider, according to a recent online survey conducted by The Harris Poll.

## **Know Diabetes by Heart** Focus Areas

The landmark initiative works to implement social change through consumer awareness, patient education, health care provider training and resources and quality improvement measures for clinics and hospitals treating people with type 2 diabetes.



**People Living with Type 2 Diabetes**



**Health Care Providers**



**Quality Improvement & Health Systems**

## Empowering People Living with Type 2 Diabetes



We want to empower people living with type 2 diabetes to lower their risk for cardiovascular disease and death. The initiative encourages patients to:

- Visit **KnowDiabetesbyHeart.org** to learn more about the link between type 2 diabetes and CVD and download tools and resources
- Talk to their health care provider about building a treatment plan to reduce risk of CVD events
- Access Ask the Experts podcasts and ADA's *Living With Type 2 Diabetes*, a free, year-long program

## Engaging Health Care Providers



The initiative aims to elevate understanding of the latest science and guidelines in the management and treatment of type 2 diabetes. Providers can find training and resources, including:

- Webinars and podcasts
- Case studies
- Tools and resources to support adherence to guidelines

## Focusing on Quality Improvement & Health Systems



The initiative will support quality improvement efforts by engaging directly with hospitals and outpatient clinics to provide long-term support to their teams of professionals as they redesign health care to better serve patients with diabetes and cardiovascular disease. Through the course of the initiative, the following will be developed in inpatient and ambulatory settings:

- **Target: Type 2 Diabetes Honor Roll™** — A national honor roll program for hospitals participating in Get With the Guidelines® (HF, Stroke) to reinforce evidence-based guideline adherence. The goal is to provide new educational tools and resources, help support data collection and tracking and encourage improvements in care among participating health care systems.
- **Target: Type 2 Diabetes<sup>SM</sup>** — A new ambulatory care program focused on education, resources and recognition opportunities. This program will bring care teams front and center in the fight against CVD in type 2 patients.
- **Diabetes INSIDE™** — A continuous quality improvement program combining health data analytics, training, clinical guideline support and patient programs, all tailored to address regional needs. Enrollment is complete for this project.

Resources can be found at **KnowDiabetesbyHeart.org**.

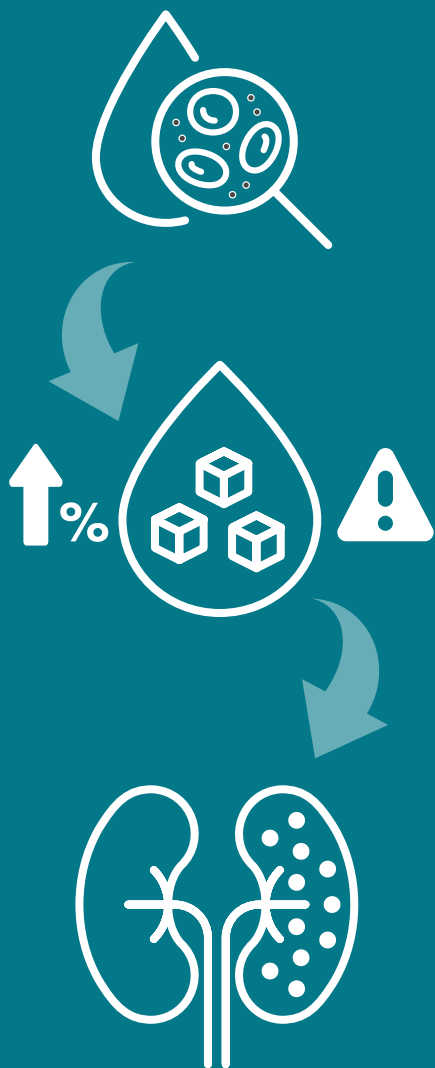
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# Understanding Type 2 Diabetes



## What is Diabetes?

**Diabetes is a condition when blood glucose (also called blood sugar) levels rise higher than normal.**

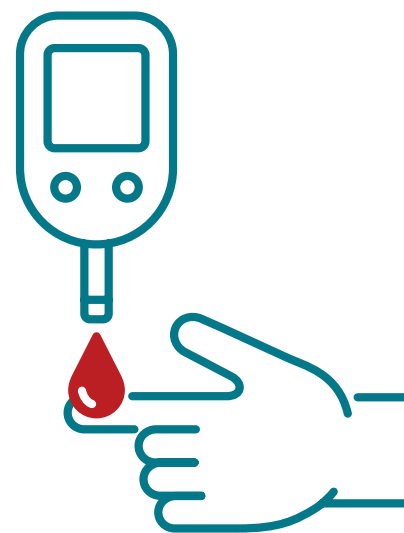
When eating, the body breaks food down into glucose and sends it into the blood. Insulin helps move the glucose from the blood into the cells. When glucose enters the cells, it is either used as fuel for energy right away or stored for later use. Blood glucose will be affected in different ways depending on the type of diabetes.

**TYPE 2 DIABETES** is a progressive disease, meaning its management needs will change over time.

**In TYPE 2 DIABETES, the body does not use insulin properly—this is called insulin resistance.**

At first, the cells in the pancreas make extra insulin to make up for it. Over time, the pancreas can't make enough insulin to keep blood glucose at normal levels.

**TYPE 2 DIABETES** develops most often in middle-aged and older adults but is increasing in young people.



**Over time, consistently high blood glucose levels can lead to complications, such as:**



**Heart disease**



**Stroke**



**Kidney disease**



**Blindness**



**Nerve pain**

## Some people are at higher risk for type 2 diabetes. Risk factors include:



Having a family with a history of diabetes



Being of African American, Hispanic/Latinx, Native American, Asian American, and Native Hawaiian and Pacific Islander descent



Diagnosed with diabetes when pregnant, called gestational diabetes (GDM)



Having high blood pressure



Being overweight or having obesity



Being 40 years or older



Not being physically active

## Come up with a plan with your health care professionals and check your **ABCs**:

# A

### IS FOR A1C:

Tells the average blood glucose for the past two to three months



# B

### IS FOR BLOOD PRESSURE:

Tells the force of blood inside the blood vessels



# C

### IS FOR CHOLESTEROL:

Tells the amount of fats in the blood



***If these are not managed, it can increase the risk for heart disease, stroke and kidney disease.***

## Here are some questions you could ask your doctor to get the conversation started:



# 1

What can I do to lower my risk for heart disease and stroke?



# 2

Do any of my medications help me manage my risks for heart disease or other complications?



# 3

Are there programs that can help me manage my condition? Can you give me a referral?



# 4

How can I meet others going through my same experience?



Learn more at [KnowDiabetesbyHeart.org](https://www.knowdiabetesbyheart.org)

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# Know **Diabetes** by **Heart**™

## **7** Tips to Care for Your Heart When You Have Type 2 Diabetes

When you have type 2 diabetes, you make a lot of decisions all day long. It can be overwhelming to manage so many things. But you're doing it and tackling each new day.

The American Heart Association and American Diabetes Association built Know Diabetes by Heart™ initiative to help you along the way. We hope you're proud of yourself for all of your hard work!

### **Add these seven tips to your self-care checklist**

to care for your heart and body to make all of your efforts count even more.



**Your doctor  
can help you  
make a plan to:**



Check in with your doctor regularly. Ask about your heart health.



Continue healthy eating habits. Add fruits and veggies as a start. Eating better will help you \*feel\* better.



Keep moving. Alone or with a friend, it can feel great.



Self-care can be heart care. Lowering your stress is good for your mind and body.



Quit smoking. For ALL the reasons.



Monitor your blood glucose, blood pressure, cholesterol and weight.



Take medication(s) as prescribed.

**People with diabetes CAN lead healthier lives.**

You're not in this alone. Find answers to your questions and join the initiative at: <https://knowdiabetesbyheart.org/join>

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# Know **Diabetes** by **Heart**™

## 4 Questions to Ask Your Health Care Provider About Diabetes and Your Heart



What can I do to lower my risk for heart disease and stroke?



Do any of my medications help me manage my risks for heart disease or other complications?



Are there programs that can help me manage my condition? Can you give me a referral?



How can I meet others going through my same experience?

**Take the first step: Make an appointment to talk with your health care provider. You can lower your risks.**

We're here to support you. Find answers to your questions and join the initiative at: **[KnowDiabetesbyHeart.org/join](https://www.knowdiabetesbyheart.org/join)**



Adults with diabetes are

**2X** MORE LIKELY TO HAVE A HEART ATTACK OR STROKE THAN PEOPLE WITHOUT DIABETES.

If you have type 2 diabetes, **learning about your higher risk** for heart disease and stroke is one of the best ways you can take care of yourself.

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# Diabetes & Heart Disease:

## The Numbers You Need to Know

Knowing five numbers can give you a more accurate picture of your health. At your next appointment, talk to your doctor about how to keep them in target range to lower your risk of heart disease and stroke.

Risk Factor	What is It?	How is it Done?	How Often?	Target Range	My Numbers
<b>A1C</b>	Your average blood glucose levels for the past 2–3 months.	Blood test.	Every 6 months or more often if needed.	<b>A1C:</b> ≤ 7% for non-pregnant adults	<b>Recent A1C:</b> _____
<b>BMI</b> (Body Mass Index) & <b>Waist Circumference</b>	A calculation based on height and weight and a measurement around your waist.	Enter height and weight into a BMI calculator.  Measure around your bare waist, at the belly button, just after you breathe out.**	Regularly at home and at every doctor's appointment.	<b>BMI:</b> 18.5-24.9 kg/m <sup>2</sup> *  <b>Waistline:</b> If your BMI is between 25 and 35, your goal is less than 35 inches for women and 40 inches for men.  *BMI should be interpreted with caution for persons of Asian ancestry, older adults, and muscular adults.	<b>BMI:</b> _____  <b>Waistline:</b> _____ _____
<b>Blood Pressure (BP)</b>	The force of blood pumping through your arteries when your heart beats.	At home with an arm cuff and/or at your doctor's office.	Daily at home if possible, and at every doctor's appointment.	Less than 120/80 mmHg  For those that require pharmacological therapy, target BP should be 130/80 mmHg.	<b>Recent BP Reading:</b> _____ /_____ _____
<b>Cholesterol</b>	A waxy substance produced by the liver or from foods derived from animals.	Generally, a fasting blood test.	Yearly or as recommended by your doctor.	Talk to your doctor.  Most people with diabetes age 40–75 will be prescribed a statin for primary ASCVD prevention.	<b>Total:</b> _____  <b>LDL:</b> _____  <b>HDL:</b> _____  <b>Triglycerides:</b> _____

\* per [heart.org/en/healthy-living/healthy-eating/losing-weight/bmi-in-adults](https://heart.org/en/healthy-living/healthy-eating/losing-weight/bmi-in-adults)

\*\* per [cdc.gov/healthyweight/assessing/index.html](https://cdc.gov/healthyweight/assessing/index.html)

Risk Factor	What is It?	How is it Done?	How Often?	Target Range	My Numbers
<b>Kidney Function</b>	<p>Kidneys filter waste and fluid from the body.</p> <p>Albumin and creatinine are proteins that can pass into the urine when the kidneys are damaged.</p>	<p><b>Urine &amp; Blood Tests:</b></p> <p>Estimated glomerular filtration rate (eGFR) tests how well the kidneys are filtering blood.</p> <p>A urine test, called ACR, checks levels of albumin compared to creatinine.</p>	Yearly or as recommended by your doctor.	<p><b>GFR test:</b></p> <p>eGFR &gt; 60 is normal</p> <p>eGFR &lt; 60 may mean you have kidney disease</p> <p>eGFR &lt; or = 15 is kidney failure</p> <p><b>Albuminuria test:</b></p> <p>30 mg/g or less is normal</p> <p>&gt; 30 mg/g may be a sign of kidney disease</p>	<p><b>eGFR test:</b></p> <hr/> <p><b>Albuminuria test:</b></p> <hr/>

### You Have the Numbers, Now What?

Following up on your numbers and keeping healthy routines can reduce your risk for heart disease and stroke.



**Start a conversation with your care team** to build a plan together to keep these numbers in check and your heart and kidneys healthy.



**Build habits that can make a big difference**— eat smart, move more and stick to your medication plan.



**Develop a solid network of support** to help you stay motivated.

### Building A Plan with Your Care Team: Discussion Guide

1. Which numbers should I be most concerned about?
2. What can I do to get them within target range?
3. What else can I do to reduce my risk for heart disease and stroke?
4. Share any concerns that you have with your doctor/care team around your treatment plan. Discuss solutions to address those concerns.

For more information, visit

[KnowDiabetesbyHeart.org/know-your-numbers-lower-your-risk](https://www.knowdiabetesbyheart.org/know-your-numbers-lower-your-risk).

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# Type 2 Diabetes and Cholesterol

People with diabetes tend to have lower “good” cholesterol levels (HDL) and higher “bad” cholesterol levels (LDL), which increases their risk for heart disease and stroke. What you eat can affect your cholesterol.

**The foods you eat can impact your cholesterol numbers. Here are 3 ways to improve your cholesterol:**

- increase fiber intake
- increase healthy fats
- decrease unhealthy fats

## Fibra:



- Fruits
- Nonstarchy Vegetables
- Whole Grains

## Healthy fats:



- Fish
- Nuts
- Avocados
- Canola Oil

## Unhealthy fats:



- Butter
- Shortening
- Coconut Oil
- Palm Oil

**And there's more you can do!**



Stay active



Get to, or stay at a healthy weight



Take medications as prescribed



Stop smoking



Cut back on alcohol

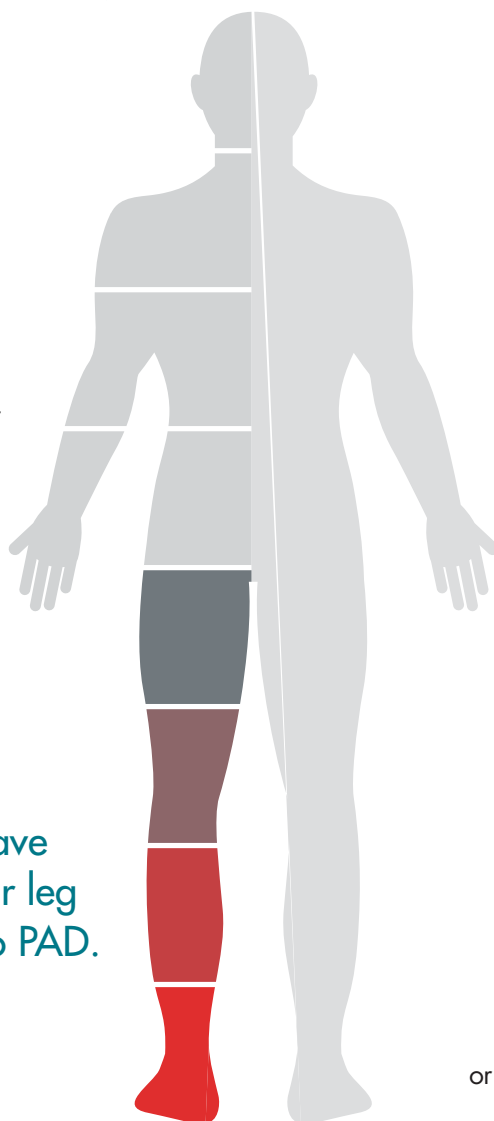
**IF YOU HAVE DIABETES, THERE IS A LOT MORE YOU CAN DO TO REDUCE YOUR RISK FOR STROKE.**

Talk to your doctor about your next steps. You're not in this alone. Find answers to your questions and join the initiative: [KnowDiabetesbyHeart.org/join](https://www.knowdiabetesbyheart.org/join).

# Type 2 Diabetes and PAD

**Peripheral artery disease (PAD)** is a narrowing of the arteries leading to your limbs and organs, usually your legs.

Most leg pain is not serious. But if you have type 2 diabetes, your leg pain could be due to PAD.



**See your doctor if you have:**



Leg pain that doesn't go away after exercising.



Foot or toe wounds that won't heal or heal slowly.



Poor nail growth on the toes or hair loss on the legs.



Lower temperature in your lower leg or foot compared to the rest of your body.

**IF YOU HAVE DIABETES, THERE IS A LOT MORE YOU CAN DO TO REDUCE YOUR RISK FOR STROKE.**

Talk to your doctor about your next steps. You're not in this alone. Find answers to your questions and join the initiative: [KnowDiabetesbyHeart.org/join](https://www.knowdiabetesbyheart.org/join)



American Heart Association®

Outpace CVD

## Kidney Health in Type 2 Diabetes

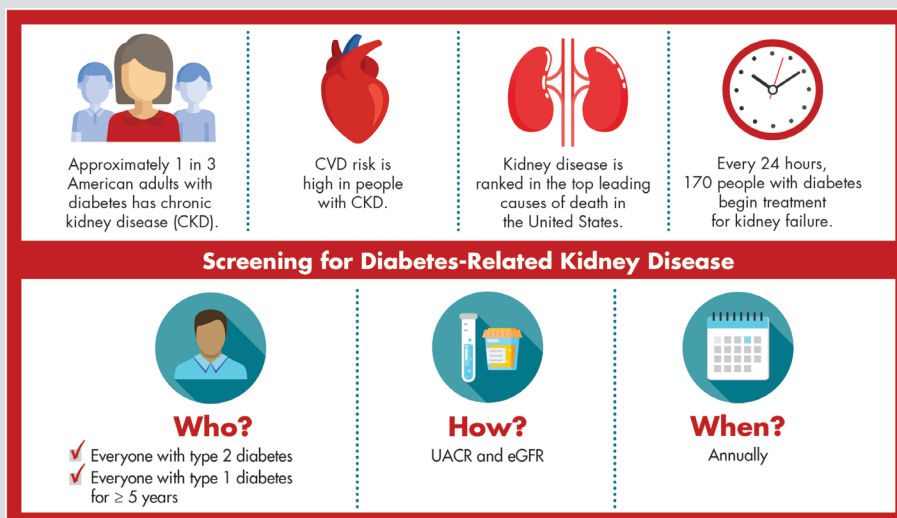
Kidney health is extremely important for patients with Type 2 diabetes (T2D) because of their increased risk of kidney disease. This guide is intended to help health care organizations understand proper screening protocols for kidney disease in those with Type 2 diabetes. Additionally, Target: Type 2 Diabetes<sup>SM</sup> encourages organizations to follow these screening recommendations.



### Does Your Organization Conduct Annual Testing for:

- eGFR
- uACR

Reference the [ADA Standards of Care in Diabetes](#) for comprehensive recommendations for management in patients with diabetes.



**Graphic:**  
Understanding kidney disease management in diabetes



**Consensus Report:** Joint report from American Diabetes Association (ADA) & Kidney Disease Improving Global Outcomes (KDIGO)



**Guide:** Understanding the top 5 treatment recommendations in CKD



**Podcast:** Identifying and managing renal complications in patients with T2D and CVD



**Webinar:** CKD in T2D and how it contributes to CVD



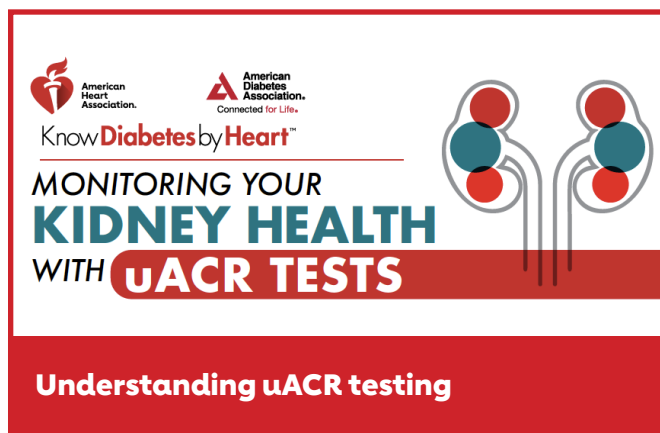
**Webinar:** ADA Scientific Sessions CVD and T2D latest research



**Video:** Understanding kidney health assessment with "Classification of Chronic Kidney Disease" chart


## For Your Patients

Use these resources to help your patients better understand how to protect their kidney health.



The graphic features the American Heart Association and American Diabetes Association logos at the top left. Below them is the text "Know Diabetes by Heart™". To the right is a stylized illustration of two kidneys. The main text reads "MONITORING YOUR KIDNEY HEALTH WITH uACR TESTS". At the bottom, a red banner contains the text "Understanding uACR testing".

**Understanding uACR testing**



The graphic features the American Heart Association and American Diabetes Association logos at the top left. Below them is the text "Know Diabetes by Heart™". To the right is a stylized illustration of two kidneys. The main text reads "MONITORING YOUR KIDNEY HEALTH WITH eGFR TESTS". At the bottom, a red banner contains the text "Understanding eGFR testing".

**Understanding eGFR testing**



**Video:** Ask The Experts, Q & A on kidney disease and diabetes



**Video:** Understanding diabetes and CKD



**Article:** Preventing kidney disease before it starts



**Article:** Understanding the connection between diabetes and kidney and heart health



**Article:** How to discuss kidney health with your health care provider

## Additional Resources:

**American Kidney Fund:** [www.kidneyfund.org](http://www.kidneyfund.org)

**National Kidney Foundation:** [www.kidney.org](http://www.kidney.org)

**[heart.org/OutpaceCVD](http://heart.org/OutpaceCVD)**



American Heart Association®

Healthy for Good™

# Life's Essential

# 8™



Improving and maintaining cardiovascular health, or CVH, can help you enjoy a longer, healthier life. Better CVH also has been associated with decreased risk for heart disease, stroke, cancer, dementia and other major health problems.

**Life's Essential 8 outlines a few easy steps you can take to live a healthier lifestyle.**

## **EAT BETTER**

Aim for an overall healthy eating pattern that includes whole foods, lots of fruits and vegetables, lean protein, nuts, seeds and cooking in non-tropical oils such as olive and canola.

## **BE MORE ACTIVE**

Adults should participate in 150 minutes of moderate or 75 minutes of vigorous physical activity. Walking is great for moderate levels of activity. Kids should have 60 minutes every day, including play and structured activities.

## **QUIT TOBACCO**

Use of inhaled nicotine delivery products, which includes traditional cigarettes, e-cigarettes and vaping, is the leading cause of preventable death in the U.S., including about a third of all deaths from heart disease. And about a third of U.S. children ages 3-11 are exposed to secondhand smoke or vaping.

## **GET HEALTHY SLEEP**

Getting a good night's sleep every night is vital to cardiovascular health. Adults should aim for an average of 7-9 hours, and babies and kids need more depending on their age. Too little or too much sleep is associated with heart disease, studies show.

## **MANAGE WEIGHT**

Achieving and maintaining a healthy weight has many benefits. Body mass index (BMI), a numerical value of your weight in relation to your height, is a useful gauge. Optimal BMI for most adults ranges from 18.5 to less than 25. You can calculate it online or consult a health care professional.

## **CONTROL CHOLESTEROL**

High levels of non-HDL, or "bad," cholesterol can lead to heart disease. Your health care professional can consider non-HDL cholesterol as the preferred number to monitor, rather than total cholesterol, because it can be measured without fasting beforehand and is reliably calculated among all people.

## **MANAGE BLOOD SUGAR**

Most of the food we eat is turned into glucose (or blood sugar) that our bodies use as energy. Over time, high levels of blood sugar can damage your heart, kidneys, eyes and nerves. As part of testing, monitoring hemoglobin A1c can better reflect long-term control in people with diabetes or prediabetes.

## **MANAGE BLOOD PRESSURE**

Keeping your blood pressure within acceptable ranges can keep you healthier longer. Levels less than 120/80 mm Hg are optimal. High blood pressure is defined as 130-139 mm Hg systolic pressure (the top number in a reading) or 80-89 mm Hg diastolic pressure (bottom number).

**Learn more at [heart.org/lifes8](https://heart.org/lifes8)**



American Heart Association.

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Life's Essential



# HOW TO MANAGE BLOOD SUGAR



## UNDERSTAND BLOOD GLUCOSE

The first step to managing your blood sugar is to understand what makes blood sugar levels rise

## GLUCOSE INSULIN

The carbohydrates and sugars in what you eat and drink turns into glucose (sugar) in the stomach and digestive system. Glucose can then enter the bloodstream.

Insulin is a hormone made in the pancreas that helps the body's cells take up glucose from blood and lower blood sugar levels.

*In Type 2 diabetes, glucose builds up in the blood instead of going into cells because:*

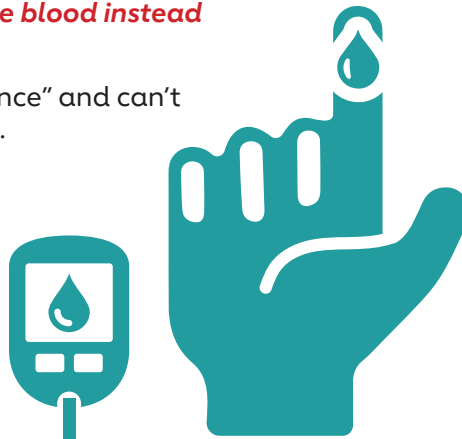
The body develops "insulin resistance" and can't use the insulin it makes efficiently.



The pancreas gradually loses its ability to produce insulin.



The result can be a high blood glucose level.



## TRACK LEVELS

Health care professionals can take blood glucose readings and provide recommendations. If you're diagnosed with Type 2 diabetes, you will need to monitor your blood sugar level regularly.

Know Diabetes by Heart can help you manage Type 2 diabetes.

Fasting Blood Glucose	Diagnosis	What It Means
Lower than 100 mg/dl	Normal	Healthy range
100 to 125 mg/dl	Prediabetes (Impaired Fasting Glucose)	At increased risk of developing diabetes.
126 mg/dl or higher	Diabetes Mellitus (Type 2 diabetes)	At increased risk of heart disease or stroke.



## TIPS FOR SUCCESS



### EAT SMART

Eat a healthy diet of vegetables, fruits, whole grains, beans, legumes, nuts, plant-based proteins, lean animal proteins like fish and seafood.

Limit sugary foods and drinks, red or processed meats, salty foods, refined carbohydrates and highly processed foods.



### MOVE MORE

Being physically active can lower your risk of developing diabetes and help you manage the disease if you already have it.



### MANAGE WEIGHT

Stay at a healthy weight to help prevent, delay or manage diabetes



### NO NICOTINE

Smoking, vaping, exposure to secondhand smoke or using tobacco can increase your risk of heart disease, stroke, many cancers and other chronic diseases. It may also make prediabetes and diabetes harder to manage.

Learn more at [heart.org/lifes8](https://heart.org/lifes8)

## KEEP BLOOD SUGAR IN CHECK

### Getting to Know Blood Glucose

The first step to managing your blood sugar is to understand what makes blood sugar levels rise.

- » **Glucose:** The carbohydrates and sugars in what you eat and drink turn into glucose (sugar) in the stomach and digestive system. Glucose can then enter the bloodstream.
- » **Insulin:** Insulin is a hormone made in the pancreas that helps the body's cells take up glucose from blood and lower blood sugar levels.

Type 2 diabetes occurs when glucose builds up in the blood instead of going into cells because:

- » The body develops "insulin resistance" and can't use the insulin it makes efficiently.
- » The pancreas gradually loses its ability to produce insulin.

The result can be a high blood glucose level.

### Know Your Numbers

Health care professionals can take blood glucose readings, help you understand your levels, and provide recommendations. If you're diagnosed with Type 2 diabetes, you will need to monitor your blood sugar level regularly to help keep your heart healthy.

[Know Diabetes by Heart](#) can help you manage Type 2 diabetes.

#### Fasting Blood Glucose Level, Diagnosis and What it Means:

- » Lower than 100 mg/dl – Normal – Healthy range.
- » 100 to 125 mg/dl – Prediabetes (Impaired Fasting Glucose) – At increased risk of developing diabetes.
- » 126 mg/dl or higher – Diabetes Mellitus (Type 2 diabetes) – At increased risk of heart disease or stroke.

## SECRETS FOR SUCCESS

*Remember these tips to help you stay on track with your blood sugar goals.*

### » EAT SMART

Eat a healthy diet of vegetables, fruits, whole grains, beans, legumes, nuts, plant-based proteins, and lean animal proteins like fish and seafood. Limit sugary foods and drinks, red or processed meats, salty foods, refined carbohydrates and highly processed foods.

### » MOVE MORE

Being physically active can lower your risk of developing diabetes and help you manage the disease if you already have it.

### » STAY WELL WITH WEIGHT

Stay at a healthy weight to help prevent, delay, or manage diabetes.

### » DON'T BE TOXIC

Smoking, vaping, exposure to secondhand smoke or using tobacco can increase your risk of heart disease, stroke, many cancers and other chronic diseases. It may also make prediabetes and diabetes harder to manage.

## GO RED TOGETHER

Help other women in your life keep their blood sugar in check. Share resources and ways to rethink what you drink from [heart.org/sugar](http://heart.org/sugar).

Learn more at [goredforwomen.org/lifes8women](http://goredforwomen.org/lifes8women)





American Heart Association®

Life's Essential 8™

→ for kids

# SWEET TALK

You probably know that sugars are in the foods we eat, like candy, cakes and cookies, but sugars or carbohydrates are also in other foods like bread, pasta, rice and potatoes. Eating too much sugar can be bad for our blood vessels, liver, kidneys, and other organs.<sup>1</sup>

When we eat carbohydrates and sugars, glucose (sugar) enters the bloodstream. Blood glucose, or blood sugar, is like the fuel that gives our bodies energy, just like a car needs gasoline to run.

To make sure our bodies have enough energy, our pancreas, which is a special part inside us, releases a hormone called insulin. Insulin acts like a key that unlocks our body's cells to let the glucose in and do its job. Sometimes, our bodies may not make enough insulin or have trouble using it properly. This can make our blood glucose levels go too high or too low. In people with diabetes, their pancreas doesn't make enough insulin, or their body has trouble using it. It's like having a door that doesn't open easily or a key that doesn't work well. This means that the glucose can't get inside the cells as it should, and it stays in the blood instead.

There are two main types of diabetes: **type 1 diabetes** and **type 2 diabetes**.

- **Type 1 diabetes** is when the pancreas doesn't make enough insulin at all. It's like the pancreas forgot how to make the key to open the cells. People with type 1 diabetes need to take insulin every day to help their bodies use glucose properly. They might need to use a special device called an insulin pen or insulin pump to give themselves insulin.
- **Type 2 diabetes** is when the body has trouble using insulin or doesn't make enough of it. It's like the key is there, but it doesn't work as well as it should to unlock the cells. People with type 2 diabetes should focus on eating healthy foods, being active, and sometimes taking medicine or insulin to help their bodies use the glucose properly.



## TRACK LEVELS

Your doctor can check your blood and measure the glucose levels to determine if you have diabetes. If you're diagnosed with type 2 diabetes, you will need to monitor your blood sugar levels regularly and your doctor may give you medications. Not treating diabetes can harm your kidneys, liver, nerves, eyes, heart, eyes and other parts of your body.<sup>2</sup>

Visit **KnowDiabetesbyHeart.org** to learn how to manage your risk for heart disease and stroke if you have diabetes.

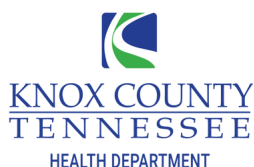


<sup>1</sup>Harvard T.H. Chan School of Public Health, Carbohydrates and Blood Sugar <https://www.hsph.harvard.edu/nutritionsource/carbohydrates/carbohydrates-and-blood-sugar/>

<sup>2</sup>American Heart Association, The connection between diabetes, kidney disease and high blood pressure

Writing assistance for youth framing provided by ChatGPT.

# COMMUNITY RESOURCES



## Knox County Health Department

- Supporting Nutrition Awareness in Communities (SNAC)
- Diabetes Management Classes
- Heart Health Education
- Online/In-Person (English & Spanish)
- Knox County Food Resource Guide
- Healthy Habits Program for Early Childhood Education Centers
- Women, Infants & Children (WIC) Program

[https://knoxcounty.org/health/diabetes\\_management/](https://knoxcounty.org/health/diabetes_management/)

## Knoxville-Knox County Community Health Council Community Health Improvement Plan

Scan to learn more



Health Priority 1:  
Adverse Childhood  
Experiences (ACEs)

Health Priority 2:  
Cancer

Health Priority 3:  
Diabetes

## AHA Support Group Network

You are not alone.

You have the power to overcome heart or stroke challenges. Meet people who are on the same path as you. Benefit from their wisdom and share your own. Explore how to make your experience smoother and easier to manage.

[supportnetwork.heart.org/s/](https://supportnetwork.heart.org/s/)

## Applying for SNAP in Tennessee



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Advancing health and hope for everyone, everywhere.





American Heart Association®

Healthy for Good™

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