

#### Most people don't think about what's floating around in their bloodstream. Or the fact that the blood is essentially the river of life, bringing nutrients and oxygen to all the cells of the body. Most of the time, that's OK. But when you're diagnosed with diabetes, that all changes. Suddenly, what's in your blood is the most fascinating subject of the day.

If you have diabetes, understanding how to best care for yourself is most important. Learning what changes you'll need to make in your life will be key to controlling your diabetes. You may be currently feeling overwhelmed. This book is designed to give you answers to your questions about diabetes and a whole lot more.

**DISCLAIMER.** The information contained in this A Fresh View on Your Diabetes book is for informational purposes only. The information does not constitute medical advice and is not intended to be used for the diagnosis or treatment of a health problem or as a substitute for consulting a licensed heath professional. Consult with a qualified physician or healthcare practitioner to discuss specific individual health needs and to professionally address personal medical concerns.

TINY

PARTICLES

IMPACT

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Before we get too far into this discussion, it's important to define the common words you'll hear now that you're learning about diabetes. Here are some basic terms to know and understand.

## **DIABETES:** A condition in which your body is unable to use glucose (sugar) as energy. There are different types of diabetes:

**PREDIABETES:** This is what you can get before you develop type 2 diabetes. When you're in this stage, your blood sugar levels are higher than normal, but not so out of the range that you have diabetes. You have a chance to change your behaviors before you get type 2 diabetes.

BASIC DIABETES

DEFINITIONS

**TYPE 1:** This diabetes type used to be called "juvenile diabetes," "early-onset" or "insulin-dependent." This type usually develops in the early child or teen years, although it can show up in adults. People with type 1 must take insulin every day, since their pancreas doesn't make enough or makes none at all.

**TYPE 2:** This is the most common form of diabetes and generally shows up in adulthood, although teens and even children have been diagnosed with type 2 in recent years. Obesity is often the biggest cause of type 2 diabetes.

**GESTATIONAL:** This type can happen to pregnant women and usually goes away after the baby is born. Women who have this when they're expecting have a higher risk of getting type 2 diabetes within five to 10 years after giving birth.

**GLUCOSE (GLU-KOSE):** A simple sugar created as carbohydrates (karbody require glucose to live. Because glucose travels in the bloodstream, it's called Blood Glucose. You may also hear the term "blood sugar."

#### **GLUCOSE MONITOR :** A device that measures the amount of

glucose in your blood. Also known as a blood glucose monitor or meter.

#### **HYPOGLYCEMIA** (HY-PO-GLY-SEE-ME-UH): A state in which you have too little glucose in your blood.

## **INSULIN RESISTANCE:**

A state in which your body can't use the insulin being produced by the pancreas. It's also a factor of metabolic syndrome.

## **PANCREAS:**

A small gland behind the stomach that produces insulin and digestive juices. In type 1 diabetes, the pancreas produces little to no insulin. In type 2, the pancreas produces insulin, but the body is unable to use it as well as it should.

#### **HYPERGLYCEMIA** (HI-PER-GLY-SEE-ME-UH): A state in which you have too much glucose in your blood.

## INSULIN (IN-SUH-LIN):

A hormone made in the pancreas that allows glucose to enter cells.



American Diabetes Association: Common Terms:

diabetes.org/diabetes-basics/ common-terms

## BREAK IT DOWN THE JOURNEY OF A BITE OF FOOD

## MISSION:DEFINITION

#### CARBOHYDRATE (kar-boh-HY-drate)

One of the three main nutrients in all food. Starches, fruits, vegetables, dairy products and sugars are all carbohydrates, or carbs for short.

#### You might not give a lot of thought as to what happens to food when you eat it. It's actually pretty cool. This is what happens when you put a bite of food into your mouth all the way to its final destination.

You take a big bite of a ripe red juicy apple and begin chewing. Digestion is already happening in your mouth as saliva mixes with the apple to begin breaking it down.

After chewing, you swallow the now mushy apple and it travels to your stomach.

Your stomach continues the digestion process by breaking down the apple into usable bits. Since the apple is mostly carbohydrate, it breaks down easily into a simple sugar called glucose.

The stuff formerly known as "apple" travels into the small intestine where the apple nutrients are absorbed and shuttled into the blood supply.

The new glucose moves into your bloodstream and provides food to every cell in your body.

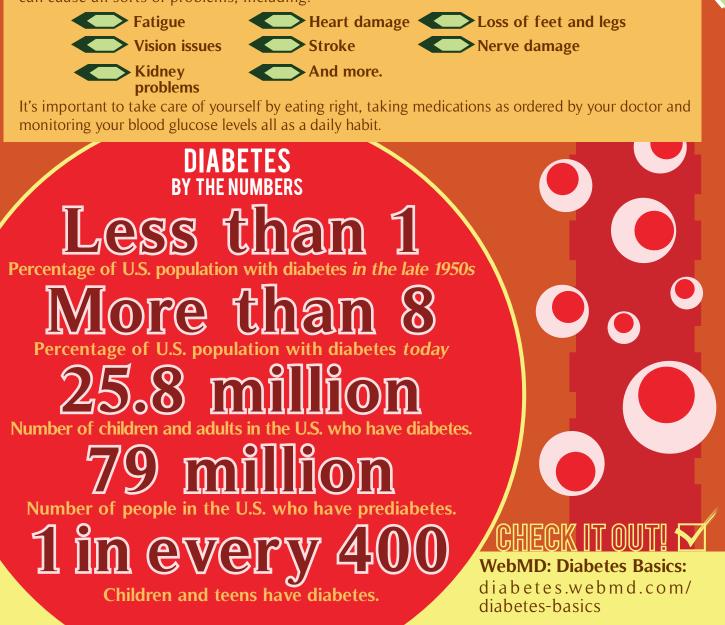
### This is, at least, what happens if you don't have diabetes. When you have diabetes, this process doesn't work as planned.

#### KNOCK, KNOCK. CAN I COME IN?

In order for glucose to enter a cell, it needs permission. Insulin, made by the pancreas, is what allows glucose to get in. Think of glucose as a visitor bringing a gift of food to a hungry cell and insulin as the kindly butler who opens the door.

When you have diabetes, the butler (insulin) can't open the door (as in type 2), or isn't even around to do so (as in type 1). Glucose, unable to get into the cells, continues to float through your bloodstream. As you eat more food that's changed into glucose, your blood glucose level rises. Your bloodstream is getting crowded with all that glucose floating around! At a certain point, you become **hyperglycemic**, meaning you have too much sugar in your blood.

When glucose levels stay too high for too long, diabetes develops. If not taken care of, diabetes can cause all sorts of problems, including:



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# WHAT'S GOING ON IN THERE? CAUSES OF DIABETES

There are a number of ways a person can develop diabetes. Some are under your control and others aren't. The key is taking care of yourself once you are diagnosed to lower the chance of the diabetes causing other problems.

Type 1 diabetes happens when the pancreas doesn't work right. It might make insulin, but not enough or it might not make it at all. There are many possible reasons why this happens, but people with type 1 can control this form with daily insulin shots and regular blood glucose testing.

**Type 2 diabetes** develops later in life, usually after age 45. This has been changing, however, as children, teens and young adults have been diagnosed in recent years.

## **DID YOU KNOW?**

The first known record of diabeteslike problems was in ancient Egypt in 1552 BC.

#### **RISK FACTORS FOR TYPE 2 DIABETES**

**Risk Factors** are lifestyle habits or traits that may make it more likely for you to develop type 2 diabetes. The more risk factors you have, the greater the chance of getting type 2 diabetes. Some are within your control, such as physical activity levels. Others are outside of your control, like your family history.

- Being older than age 45
- Having a family background that is Asian American, African American, American Indian, Hispanic/Latino or Pacific Islander
- Having a parent or sibling with diabetes
- Having a baby that weighed more than nine pounds
- Having gestational diabetes
  - Being diagnosed with prediabetes
  - Having a history of polycystic ovary disease (PCOS)
  - Being overweight
  - Having high blood pressure
  - Reporting high cholesterol levels

<u>CHECK IT MUTI 🗹</u>

National Diabetes Clearinghouse: Causes of Diabetes diabetes.niddk.nih.gov/dm/pubs/causes/ American Diabetes Association: Diabetes Basics diabetes.org/diabetes-basics/?loc=gsa-GlobalNavDB

# A SNEAKY DISEASE

### DIABETES SYMPTOMS AND WARNING SIGNS

Although it might seem like it, diabetes doesn't just show up one day. Diabetes often gives you clues that it's there. The symptoms might seem harmless, unimportant and unrelated. Paying attention to what your body is telling you is a good step toward controlling your diabetes.

Here's what to look for:

Symptom/Warning Sign	In Type 1	In Type 2
Urinating (peeing) often	X	X
Thirsty all the time	Х	X
Hungry all the time	X	X
Unusual weight loss	X	X
Extremely tired	X	X
Very cranky or crabby, or other mood changes	X	Х
Many infections		Х
Blurry vision		X
Cuts or bruises that take a long time to heal		Х
Numbness or tingling in the hands and/or feet		X
Persistent bladder, gum or skin infections		X

#### Now the Bad News

Sometimes type 2 diabetes is sneaky and doesn't show any symptoms. That's right. You can have it and have no idea. That's why it's important to see your doctor and get regular testing, especially if you have any of the risk factors listed earlier.

#### DIABETES MESSES WITH MORE THAN YOUR BLOOD

People with diabetes often have an increased chance of having other serious health issues. There is good news – by taking care of your diabetes and making necessary lifestyle changes, you may be able to avoid or slow down possible complications. Here are some of the areas affected by diabetes and a few of the possible health issues.

#### HEART DISEASE AND STROKE –

Too much glucose in the blood can create sticky messes on the walls of blood vessels and arteries. This increases your chances of developing high blood pressure, high cholesterol, heart disease and suffering a stroke. **EYES** – People with diabetes are at greater risk for developing glaucoma, cataracts and retinopathy, a disease of the retina located in the back of the eye.

**FEET** – Diabetes can damage the nerves in your feet making it difficult for you to feel pain, heat or cold. This increases your risk for infection if you have an injury that goes untreated. Diabetes can also narrow the blood vessels in your legs. This reduces the amount of blood that can get to your feet easily and makes healing from injuries harder.

SKIN – Your skin is the largest organ on your body and can take a beating. It's the part of you that faces the world each day and, when you have diabetes, your skin can develop problems more quickly. Problems with recurring bacterial or fungal infections are common among people with diabetes. You can also have itchy skin. Cuts and scrapes that are slow to heal or don't ever totally heal may be a sign that your blood glucose level is too high.

American Diabetes Association: Diabetes Complications diabetes.org/living-with-diabetes/complications/?loc=DropDownLWD-complications Centers for Disease Control (CDC): Keeping Your Feet Healthy cdc.gov/Features/DiabetesFootHealth/

## CONTROL YOURSELF GETTING A HANDLE ON YOUR DIABETES

#### IT CAN BE HARD, BUT WORTH IT

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Sometimes dealing with a health issue like diabetes can get you down. You know you should follow the doctor's orders, but it can seem like a

You now have some very good reasons to take charge of your health and your diabetes. When your diabetes is controlled you:

- ➤ Feel better
- Have more energy
- Are less thirsty
- Have fewer infections
  - Have healthier skin, eyes, feet and heart

Visit the bathroom less often to pee

real hassle. When you feel this way, it's good to remember your "WHY" for taking care of yourself. Sometimes that can be as simple as, "I want to feel better." Many times, it's bigger than that, such as, "I want to see my daughter graduate from college" or "I want to go on a cruise with my partner."

#### What's your **BIG WHY**?

My BIG WHY for taking care of me and my diabetes is:

#### **IN IT TOGETHER: YOU AND YOUR HEALTHCARE TEAM**

Controlling your diabetes and its effects is a group effort. Having a supportive and knowledgeable medical team makes the process of managing your diabetes much easier. It also keeps you healthier.

So besides you, who's on your team?



Your doctor – to manage your overall health and make sure you do the proper tests to track your progress

Your dentist – to monitor your gum and teeth health



Your eye doctor – to alert you to any changes in your eyes

Your foot doctor – to inspect your feet for lany possible injuries, infections or other issues that could cause serious problems

Depending upon how you're feeling currently. you may need additional people on your team to help manage your kidney health, mental health and heart health. Other people could include a dietitian to help you learn how to make healthier eating choices and a personal trainer to get you moving.



All glucose meters use strips to catch the drop of blood. Be sure to have plenty of test strips on hand so you don't run out!

#### **TESTING, TESTING**

When you have diabetes, tests are a way of life. Each is important for different reasons. Put together, they create a picture of your health and help you know if you're on track or off in left field.

#### **BLOOD GLUCOSE TEST**



#### What is it?

This self-test uses a small drop of blood and a glucose meter to measure the amount of glucose (sugar) in your blood. You should test before meals and/or one to two hours after meals.



#### How often should I test?

At least once per day, sometimes more often. Talk with your doctor about how often you should do this test.



#### What results am I hoping for?



These are the target glucose levels for most adults with diabetes.

Before meals: 70 to 130 mg/dl (milligrams per deciliter)

#### After meals:

Less than 180 mg/dl (milligrams per deciliter)

### **KEEPING TRACK**

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Keep track of your **Blood Glucose** test numbers using this page. The instructions for using this page are easy:

- Take a reading using your glucose meter
- Write it down under the correct column
- > Take your pages with you when you visit your healthcare team

#### You might not need to put a number into each column. Only test as often as your doctor advises.

Date		After Breakfast #		After		After	Bedtime #
Example: 2/25	99	103	96	105	91	100	118

If this page is helpful in keeping up with your blood sugars, copy this page!

#### ABC The next three tests are called the "ABC Tests" to help you remember them more easily. Each is very important TESTS in helping you manage your diabetes.

#### A1C TEST

WHAT IT IS: The AIC test measures how well you're able to manage your diabetes. Sugar attaches to the red blood cells, and the more sugar in the blood the higher the A1C value. Since a red blood cell lives for about three months, this test measures the average amount of glucose in your blood over that time. The AIC test gives you and your doctor a quick look at vour diabetes control.

HOW OFTEN If you have just been diagnosed, your doctor will probably want to do this test every three months. Once you've been successfully taking care of your diabetes for a while, you may only need to have this test done twice a year. The amount of time between tests really depends on how well your body is handling diabetes.

#### RESULTS Test results are also given as an **Estimated Average Blood Glucose (eAG)**. Most adults with diabetes want to see a score of 7% or less, which equals an eAG of 140 mg/dl or less.

Here's how to understand just what that percentage means.

WHAT YOUR AIC RESULTS MEAN			
A1C Results	eAG	What Your Doctor Might Say	
6%	126 mg/dl	"Great job!"	
7%	154 mg/dl	"Great job!"	
7.5%	169 mg/dl	"Good job! Let's keep working at it."	
8%	183 mg/dl	"This is too high. We need to look at what's going on."	
8.5%	197 mg/dl	"This is too high. We need to look at what's going on."	
9%	212 mg/dl	"We need to work harder to get your diabetes under control."	
10%	240 mg/dl	"We need to work harder to get your diabetes under control."	

## **MISSION:DEFINITION**

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**HYPERTENSION** Also called High Blood Pressure. This occurs when blood pressure stays (hi-per-TEN-shun): higher than normal levels over time.

**SYSTOLIC (sis-TALL-ic):** The measure of how hard the heart must work in order to pump blood through your arteries. The number represents the amount of pressure inside the arteries as the heart pumps. It is the first number (**130**/80) reported in a blood pressure result.

**DIASTOLIC (dy-ah-STOL-ic):** This measures the pressure in the arteries at the point the heart is relaxing between beats. It is the second number in a blood pressure reading (130/**80**).

#### BLOOD PRESSURE CHECK WHAT IT IS:

This test measures how hard your heart has to pump in order to move blood through your body. You've probably heard the result "120 over 80" in TV medical shows. That's considered a normal blood pressure for adults without diabetes. The goal for people with diabetes is 130 over 80. When you have **high blood pressure** (also called **hypertension**), your heart must work harder to circulate your blood. It can lead to problems in many areas of your body, like eyes, kidneys and blood vessels. It can also lead to heart disease, stroke and kidney disease. High blood pressure isn't good for anyone, but if you have diabetes, you are more at risk of developing it.

#### **HOW OFTEN**

You should have your blood pressure checked each time you visit your doctor. In some cases, you may be asked to have it checked more often.

#### RESULTS

High blood pressure is nothing to ignore. The chart below explains how you know when high is too high. A single high reading doesn't mean you have high blood pressure. It serves to warn your doctor that something might be going on. Your doctor will monitor you more closely and take several readings over time before giving you a high blood pressure diagnosis.

Systolic Reading		Diastolic Reading	What Your Doctor Might Say
Less than 120	and	Less than 80	"Congratulations! You're in the normal range."
120-139	or	80-89	"You could be developing high blood pressure."
140-159	or	90-99	"You have Stage 1 high blood pressure."
160-179	or	100-109	"You have Stage 2 high blood pressure."
180 or higher	or	110 or higher	"Your heart is in a state of emergency. We need to admit you to a hospital NOW."



Can your blood pressure be too low?



Yes! If this happens, your doctor will want to investigate further.



#### **CHOLESTEROL TEST**

WHAT IT IS: This is a simple test to measure the amount of certain fats in your blood. It can also be called a lipoprotein (LIE-poe-pro-teen) or lipid profile. High cholesterol competes for space in your arteries and blood vessels with the added glucose that's floating around. Too much of either spells trouble. But not all cholesterol is bad. In fact, our bodies need cholesterol to work right. But too much of the LDL or "bad" cholesterol and you could be in trouble.

#### **TOTAL CHOLESTEROL**

As the name suggests, this is a measurement of all the cholesterol, good and bad. It's an important number to know, but it doesn't tell you the whole picture. It's also worth noting that you can't add the HDL and LDL numbers together to get your Total Cholesterol number.

#### HDL CHOLESTEROL

HDL cholesterol, the "good" kind, is the cleaning crew in your bloodstream. HDL sweeps through your arteries, blood vessels and veins scrubbing "bad" LDL cholesterol off the walls. It then takes LDL for a trip to the liver, where this important organ processes LDL into something more user-friendly. Our bodies are the ultimate recyclers. A healthy level for HDL is **over 40 mg/dl for men and over 50 mg/dl for women**. An unhealthy level, and one that puts you on the path to heart disease, is **less than 40 mg/dl**.

## **WHAT DOES IT ALL MEAN?**

#### LDL CHOLESTEROL

LDL cholesterol is the uninvited guest who shows up at a party and leaves a mess behind. Too much LDL and arteries, blood vessels and veins become sticky with fatty deposits that begin to narrow your blood pathways increasing your risk for a heart attack. A healthy measure of LDL for adults with diabetes is **less than 100 mg/dl**.

#### TRIGLYCERIDES

Triglycerides give energy to the body, so they are a good cholesterol. Triglycerides turn bad when too much is stored by the body with the hope of using it one day. When this happens, triglycerides act more like LDL cholesterol, clogging things up and generally wreaking havoc. A healthy amount of triglycerides measures less than **150 mg/dl**.

#### **HOW OFTEN**

Doctors recommend you have your cholesterol checked at least once a year. Your doctor may decide to check it more often, depending upon how healthy you are and your risk factors.

#### RESULTS

Remember, a Total Cholesterol number doesn't really tell you anything. You need to know your HDL, LDL and triglycerides numbers to understand your cholesterol levels completely. Just because you might have a low HDL or a high LDL number doesn't mean you cannot change them. Diet, exercise, and possibly medication can help. 18

### A FINAL WORD ON TESTS (FINALLY!)

### There are other helpful tests that can tell you the state of your body:

**Dental exams** – Having your teeth and gums looked at, twice a year if possible, will keep your pearly whites intact and reduce the chance of gum disease. Be sure to tell your dentist you have diabetes.

**Eye exam** – At least once per year, visit your eye doctor for a complete exam including a test where they dilate (DIE-late) your eyes to look at your retinas in the back of your eyes.

**Foot exam** – While you'll want to inspect your feet daily for any issues, you should also visit a foot doctor—also called a podiatrist (poe-Die-A-trist)—at least once a year. If you have had foot problems, you'll want to visit more often. Your primary doctor can check your feet during regular visits, too. Be sure to take your shoes and socks off to remind the doctor to check your feet.

**Kidney function tests** – To know if your kidneys are working well, a urine (pee) test and blood test will look for specific properties that can cause kidney malfunction or failure. Your doctor will recommend a timeframe for these tests.

#### PLANNING THE WORK AND WORKING THE PLAN

You'll go over your test results with your healthcare team. Your team may create or change your treatment plan depending upon your symptoms and what the tests say. These changes may include:

Your medicine schedule
 Your meal plan

Your exercise plan

#### SO MUCH PAPER, SO LITTLE TIME...

If your head is swimming with all the tests and numbers you'll need to understand and manage your diabetes, you're not alone! Here's a quick and easy solution.

- Get a binder or notebook
- Write everything in it about your diabetes
- Include your daily blood glucose monitoring pages
- Keep doctor reports and test results in it, too
  - Take the notebook with you when you visit a member of your healthcare team

#### That was easy!



**WebMD: Medical Tests You Must Have** diabetes.webmd.com/features/three-medical-tests-for-diabetes-patients

**CDC/NIH:** National Diabetes Education Program U.S. Department of Health and Human Services

ndep.nih.gov/i-have-diabetes/KnowYourABCs.aspx

#### American Diabetes Association: Your Healthcare Team diabetes.org/living-with-diabetes/treatment-and-care/whos-on-yourhealth-care-team/your-health-care-team.html

### MENTAL STRESS... LETTING OFF THE STEAM

Whoa. This is a life-changer. Getting a diagnosis of diabetes can affect the way you think about yourself or how you view life. You might feel sad or even depressed that you have this new health issue to deal with – one that you will need to manage the rest of your life. You might even deny there's a problem, at least for a while. It can certainly increase your stress level, which can make controlling your diabetes harder.

### **MISSION: DEFINITION** FIGHT OR FLIGHT RESPONSE:

An automatic physical response in our bodies that releases **cortisol** (COR-tuh-sawl) and **epinephrine** (eh-pin-NEH-fren). Epinephrine is also known as **adrenalin** (uh-DREN-uh-lin). These two hormones give us strength to fight or run away from a perceived threat. In today's society, fighting or running away is usually not an option, which leads to chronic stress.

#### STRESS DOESN'T ALWAYS DO A BODY GOOD

Stress is a normal part of being human. Stress can be good and it can be bad. Good stress, like planning a wedding or learning a new job can be fun and is usually temporary. Bad stress can cause a lot of problems, especially if you have diabetes.

You might have heard of the **fight or flight response**. This is how our bodies learned to adapt to challenges back in the caveman days. When we're always feeling stressed, we're in a constant state of fight or flight called **chronic stress**. If you feel anxious a lot, have trouble sleeping, have an upset stomach a lot and feel you have no control over your life, you may have chronic stress. And chronic stress can raise your blood sugar.

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Being stressed out all the time and having diabetes is a dangerous combination. Chronic stress can raise your blood sugar. Too much cortisol means blood glucose levels are harder to control. Other negative effects can be...

#### Higher blood pressure

**Chest pain** 

Making other conditions you might have, such as heart disease, even worse

Getting a diagnosis of diabetes can add more stress to your life as you try to understand your disease and take care of yourself. It can be scary. This is normal. But if you're feeling sad or blue more than usual, you could be suffering from **depression**. Depression is a serious mental health condition that can affect how you view life. It can bring feelings of hopelessness and make it hard for you to concentrate on other things. You might feel like your brain is "foggy" and that thinking is hard. You might not want to move. If this sounds like you, talk with your doctor about it right away.

## **DID YOU KNOW?**

Breathing deeply is a great way to reduce stress? Here's a simple exercise you can do just about anywhere.

### **DEEP BREATHING EXERCISE**

- Find a quiet space where you won't be bothered by people, telephones, TV, etc.
- Sit in a comfy chair with your feet flat on the floor
- Place your hands on your thighs with the palms facing up
- Before you begin, take a moment to notice where your body is achy, tight, painful, etc.

Now, focus on your breath

### **DEEP BREATHING EXERCISE Continued**

- Bring a deep breath of air into your lungs
- Hold it for just a second and let it all out
- Take in a second deep breath this time, hold it for 10 seconds
- Before letting that breath go, put your mouth into the shape of an "O" as if you were going to blow up a balloon or whistle.
- 🔾 Now, to the count of 10, let that breath go
- O E
  - Empty your lungs as much as you can
  - Continue doing this for at least 10 minutes

When you finish, focus again on your body. Do you notice any changes? Are you feeling more relaxed? Are any tight places looser?

Taking time for this and other stress buster exercises will have great health benefits for you!

### YOU'RE NOT ALONE!

While you might feel like the only person in the world with diabetes, you're not. Consider joining a support group for people with diabetes. It can really help to talk with people who understand what you're going through. Check your local area for in-person groups and search on the Internet for online ones. There's a link at the end of this section to help with your search.

Support groups not your thing? Then talk with someone you trust. This could be a friend, relative, clergy member or coworker. You might find that talking about what's going on helps relieve the pressure you're feeling so you can begin to work toward solutions.

## SHIMMY, SHIMMY, SHAKE

When was the last time you danced around your house to music? Or took a walk in your neighborhood? Moving around can make you feel better and lower stress levels. When you're dancing around, it's hard to focus on a problem. You're too busy being silly and having fun. So – move it! (Within your ability level, of course.)

#### SOOTHING SOUNDS

If you love music, then let it be a part of your stress reduction team. Here's what you do:

- Find a comfortable place where you can lie down with no distractions
- Take off your shoes
- Lie down and be sure your arms and
   legs are stretched out and that your legs aren't crossed
  - Focus on your music let it fill your body with its melody
- Try not to think about anything else
- You might fall asleep and that's OK!
  - Just 15 minutes of music can lift your spirits and lower your stress level

#### **GO THE EXTRA SMILE**

The act of smiling can change your mood, even when you don't feel like smiling. Try this challenge. Smile at everyone you meet – people on the street, in stores, at work, at home. Smile even if you're faking it because you're in a bad mood. The funniest thing happens. The more you smile, the more people will smile back. And that just feels good. Before you know it, you'll be smiling FOR REAL. And a positive outlook reduces stress. It's a true win-win.

#### **ARE YOU GAME?**

Are you ready to lower the stress in your life? Yes? Explore things that will help reduce your stress. Try different things. You never know what might work. And what works one day, might not work the next day. It's always great to have options!



#### WebMD: 10 Stress Reduction Techniques

webmd.com/balance/guide/blissing-out-10-relaxation-techniques-reduce-stress-spot

#### National Institute of Mental Health: Depression and Diabetes National Institute of Health

nimh.nih.gov/health/publications/depression-and-diabetes/complete-index.shtml

#### Defeat Diabetes: Online Support Groups

defeatdiabetes.org/self\_management/text.asp?id=diabetes\_support\_gro

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### **TIME TO GET TO KEY TO YOUR DIABETES MANAGEMENT**

It's difficult, if not impossible to maintain the same lifestyle (eating, activity level, smoking) after learning you have diabetes. In most cases, your doctor (and anyone else who cares about you) will tell you that you shouldn't keep doing the same things. It does take some effort on your part to manage your diabetes and make changes in your life. It might not be the easiest thing you've ever done. But the rewards for making changes can be the difference between living a full, happy life...and not.

When you have diabetes, you have three important jobs:

Control your blood glucose level Take your medicine(s) Lead a healthier lifestyle

We'll explore what each of these means in the next few pages.

## DID YOU KNOW?

Dr. Thomas Willis, a 17th century doctor in London, tested if his patients had diabetes or not by tasting their urine. A sweet taste would warrant a diagnosis of diabetes mellitus, also known as "honeyed" diabetes. This method of monitoring blood sugars was common until the 1900s.



National Diabetes Education Program: I Have Diabetes: ndep.nih.gov/i-have-diabetes

## STEADY AS SHE GOES CONTROL YOUR **BLOOD GLUCOSE LEVEL**

You know your blood glucose levels can get too high. But did you know they can get too low, too?

### **KEYS TO KEEPING CONSTANT**



**O** Try to eat the same amount of food every day.

Omr Don't skip meals.



Eat around the same time each day – that includes snacks.



Take your medicines about the same time every day.

Pretty easy, right? Maybe not. Sometimes things happen that throw you off. Traveling can affect your eating and medicine schedule, and so can holiday gatherings. Working long hours or dealing with a family crisis can also knock your meal plan for a loop.

If you do get off track, you may experience a blood glucose spike or drop.

You may not have any symptoms and be unaware that your blood glucose level is high. Or, you might experience one or more of these:

- Dry mouth, very thirsty
- Dizziness when you stand
  - Hard to breathe
  - Mental confusion
- Sleepiness

Ask your doctor for goals for your blood glucose. If your blood glucose level stays high for several hours, contact your doctor. Left untreated, hyperglycemia can lead to increased problems including coma and, in the worst case, death.

#### WHEN YOUR BLOOD **GLUCOSE LEVEL IS TOO HIGH**

If your blood glucose level reaches above 180 mg/dl, it's too high. At this range, you're in a state of **hyperglycemia**.

Your level will go **too high** for lots of reasons:

Battling infections or illness

Living with a high stress level

- Taking of other medicines
- Forgetting to take your diabetes medicine or taking it late

Eating certain foods log desserts, sodas, candy, too many carbohydrates or too much of any type of food

#### WHEN YOUR BLOOD GLUCOSE LEVEL IS TOO LOW

If your blood glucose level sinks below 70 mg/dl, you're in a state of **hypoglycemia**. Your level will go **too low** for lots of reasons:

- Failing to eat before injecting insulin
- Not injecting insulin soon enough after eating
- Taking medicines incorrectly or taking too much
- Drinking too much alcohol
- Not eating enough before doing a physical activity
  - Effects of other medicines
- Waiting too long to eat or skipping meals or snacks

## TIP-OFF

Keeping track of your blood glucose level is a MUST! When your blood glucose level is low, you might experience one or more of these:

Shaking

- A cold sweat or clammy skin
- Faster-than-normal heart rate
- Mental confusion
- Anxious or crabby behavior
- Extreme hunger
- Headache
- Dizziness

## **DID YOU KNOW?**

When your blood glucose level is low, a hormone called **epinephrine** is released. This is what causes most of the symptoms experienced when you're in a hypoglycemic state.

#### HOW TO RAISE YOUR BLOOD GLUCOSE LEVEL SAFELY

Before taking any action, check your blood glucose level to be certain it's too low. Ask for help, especially if you feel woozy, dizzy or don't feel like you're thinking clearly. If your blood glucose is less than 70 mg/dl, you can

eat or drink the following:



- **3 or 4 glucose tablets**
- 1 serving of glucose gel this equals 15 grams of carbs
- ▶ 1⁄2 cup (4 ounces) of any fruit juice
- 1/2 cup (4 ounces) of regular (not diet!) soda
- 1 cup (8 ounces) of milk
- **5** or 6 pieces of hard candy
- 1 tablespoon of sugar or honey

## WARNING!

Tell others what to do if you become unable to care for yourself. If you pass out, you won't be able to tell them how to treat you. Let them know that if you can't talk or swallow, they shouldn't put any drinks or candy into your mouth because you could choke. Glucose gel is fine, but it should be squeezed between your cheek and gums to avoid it going into your throat and causing you to choke. Just as with hyperglycemia, if a low blood glucose level isn't fixed it can lead to more problems, including coma and possibly death.



Mayo Clinic: Blood Sugar Care mayoclinic.com/health/bloodsugar/DA00007



Being sick is no fun. When you have diabetes, you must be extra careful in monitoring your blood glucose level because being sick can really do a number on it. Follow these steps to safeguard your health:

- Check your blood glucose level every four hours, without fail. Write down the results.
- Keep taking your diabetes medicines, even if you can't keep food down, unless your doctor tells you something different.
- Drink at least one cup (8 ounces) of water or other calorie-free, caffeine-free liquid every hour you're awake.
- If you can't eat your usual food, try eating crackers, popsicles or soup. You can also try drinking juice.
- If you can't eat anything, drink clear liquids like ginger ale. You still need to get calories into your body. If you don't, your blood glucose level might drop too low.

### **DOCTOR, DOCTOR**

Call your doctor if you have any of these symptoms:

- Your blood glucose has been over 240 mg/dl for more than a day
- You're sleepier than usual
- You're having trouble breathing
- > You're not thinking clearly
- You throw up more than once
- You've had diarrhea for more than six hours

### MISSION:DEFINITION KETONES (KEE-tones)

Ketones are made when the body starts burning fat for energy instead of glucose. It's a warning that something isn't right. Ketones are toxic acids that build up in the blood and appear in the urine when the body doesn't have enough insulin. Ketones appear when blood glucose levels are too high in people with type 1 diabetes.

### EXTRA STEPS IF YOU HAVE TYPE 1 DIABETES

If you have type 1 diabetes, test your blood or urine for ketones if:

## If ketones are present, call your doctor right away.

## TIP-OFF

You can't keep food or liquids down

Your blood glucose level is above 240 mg/dl

#### SICK DAY PREP KIT

Having an emergency sick day kit put together in advance is a smart way to be ready when the flu bug hits. Here are some suggested items for your kit:

- Blood glucose recording sheet for monitoring your blood every four hours
- Ketone recording sheet to monitor your ketones every three to four hours
- Blood glucose strips and ketone strips (check the expiration dates and keep your kit stocked with fresh strips)
- 📹 Drinks with sugar
- Thermometer
- Your doctor's emergency contact info
- Sugar-free cough drops or cough medicine
- Prescribed meds to treat nausea, diarrhea or vomiting

<u>CHECK IT OUT!</u>

#### WebMD: Managing Sick Days

diabetes.webmd.com/managing-sick-days

American Diabetes Association: When You're Sick diabetes.org/living-with-diabetes/treatment-and-care/ whos-on-your-health-care-team/when-youre-sick.html



## TAKE YOUR MEDICINE

This might seem obvious, but it can be easy to forget or put off, especially if you take several medicines. The best thing you can do for yourself, and for those who care about you, is take your medicine as prescribed.

CHECK IT OUT

#### **KEEPING TRACK**

A simple way to keep track is to use a pill container. It can be as large or small and as detailed as necessary to help you remember. Using a watch or other device with an alarm can alert you to the right times to take your medicine.

When you have many medicines, remembering what they all are for and when to take them can be challenging, even with a handy pill box.

You can use the form on the next page to write in this critical information – be sure to copy it a few times first so you can put it into the notebook you're keeping. You are keeping a notebook, right?

Be sure to write down any problems you have with any of your medicines. Your doctor will want to know this. If you have any bad reactions, call your doctor right away.

## 🥌 🌕 🍆 🥌 💊

Mayo Clinic: Managing Diabetes with Insulin mayoclinic.com/print/diabetes-treatment/DA00010/METHOD=print

#### **American Diabetes Association: Insulin Basics**

diabetes.org/living-with-diabetes/treatment-and-care/medication/insulin/insulin-basics.html

#### **American Diabetes Association: Oral Medicines**

diabetes.org/living-with-diabetes/treatment-and-care/medication/oral-medications/

HowMuch Take	When Take It	Description
1 pill	1 morning, 1 before bed	Small white pill
	How Much 1 pill 	HowMuch Take       When Take It         1 pill       1 morning, 1 before bed         1

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### FEELING GOOD, LOOKING GOOD ADOPT A HEALTHIER LIFESTYLE

#### WHAT IS A LIFESTYLE CHANGE?

Most people don't like change and altering a lifestyle can be a big one. But what exactly does "lifestyle" mean? Well, it means changing habits and ways of doing things so keeping your diabetes under control is easier. It's easy to fall into bad habits that don't support a healthy lifestyle. Changing them takes time, but the rewards in how much better you'll feel and how much easier it is to control your diabetes will be worth it.

You don't have to do it alone, either. Remember your healthcare team? A few other people are a dietitian, a health coach and a personal trainer. A dietitian's time may be covered by your insurance plan. You can find plenty of guidelines in this book. As for training, you can find free workouts online, buy DVDs or rent them from a library. Or just get out and walk! Keep reading for ideas on how you can make positive changes to look better, feel better and be healthier.



# **ALL IN GOOD TASTE NUTRITION AND DIABETES**

#### The Good News.

Eating a balanced diet doesn't mean you have to give up things that actually taste good. You might be surprised at how flavorful and filling food that's really good for your body can taste.

### WHERE TO START

Learning how to eat in a healthy way can seem daunting. A good place to start is your doctor or dietitian/health coach. You'll want to discuss your current eating habits and concerns you have about changing the way you eat. They will be able to give you some guidelines as to what you can do to start down the road of healthy eating for diabetes. These guidelines will include:



- What you can eat

- How much you can eat

There are many plusses to eating a balanced diet. Here are five key ones: Eating a healthy diet...



- Helps you feel better
- Helps you lose weight
- Lowers your risk for heart disease, stroke and other health problems
- May prevent or delay long term complications
- Keeps your blood glucose levels, blood pressure and cholesterol in healthy ranges

That last point is important because keeping those three things in check will make taking care of your diabetes a whole lot easier.

#### **REMEMBER...**



No habits change overnight. Be patient with yourself and go slow. You don't need to change everything at once. Trying things one at a time is OK. Your taste buds will need to adapt to new flavors, textures and cooking styles that may seem foreign at first. Over time, you'll discover things you like (or love) and become more comfortable with making different eating choices. Soon it will become second nature.

## WHAT TO EAT

When you begin your new eating journey, it will help to keep the letters V, B and M in mind.

**V = VARIETY -** No one food will give you all the nutrients you need. You need a good mix (and your mouth won't get bored, either).

**B** = **BALANCE** - Choosing foods from different food groups means you won't be overloading in one area and forgetting another. Balance is the key!

**M = MODERATION -** Limiting the amounts you eat will keep you in balance and help you keep from over-eating. This might mean eating smaller portions than you're used to

When you have diabetes. it's the quality of the foods you're eating that's most important, not quantity. It's also important that you not skip meals and eat about the same time every day.

A diabetes-friendly diet plan includes:

Healthy carbohydrates: Fruits, vegetables, whole grains, legumes (beans, peas and lentils), low fat or non-fat milk products



Heart-healthy meats: Lean meats such as white meat chicken and turkey and fish such as cod. tuna, halibut, salmon, mackerel and herring

Healthy fats: Foods containing monounsaturated and polyunsaturated fats, such as avocados, almonds, pecans, walnuts, olives and canola, olive and peanut oils

Fiber-rich foods: Vegetables, fruits, legumes, wholegrain flour and wheat bran

#### FIBER FACTS >> Fiber comes in two types: Soluble and Insoluble. **Soluble** means it can be dissolved. Fiber that's in beans, oatmeal and fruits is soluble. This helps lower your cholesterol. Insoluble fiber (you guessed it) can't be dissolved. Examples of insoluble fiber are whole grains, brown rice and vegetables. Insoluble fiber helps you digest your food, aids in keeping you "regular" and makes you feel fuller faster when you eat. Recommended amount of fiber per day: 25-35 grams How much people usually eat: 15 grams per day **A CONVERSATION** Are carbs good for me or not? Yes. **ABOUT CARBS** OK, let's clear up the confusion. Carbs are in foods like **HIGH-FIBER CARBS** pasta, bread and rice. They're also in starchy veggies like potatoes, corn and peas. There are even carbs in fruits and Here's a short list of good highdairy products such as milk and yogurt. fiber carbs for your diet: The good news is, you don't have to say no to them completely. You do, however, need to be careful how 100% whole grain bread, many you eat because... tortillas and pasta

->

Your body breaks down carbs to make glucose for energy



 When you have diabetes, too many carbs can cause your blood glucose level to rise.

Be smart about your carb choices. Ones high in fiber are better for you. The added fiber helps keep your blood glucose levels more steady. Carefully monitor your portion sizes for all foods. Brown rice

Fresh fruits

Oatmeal

Non-starchy vegetables

Whole-grain cereals

### JUST A LITTLE STARCH

It can be confusing as to what vegetables make the most sense for your new diet. If you're used to eating "starchy" veggies, like potatoes, you'll be eating them less and eating low-starch (low-sugar) veggies more. The list below gives lots of options for vegetables that will work well in your new diet. Remember that raw or steamed is best.

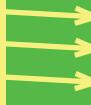
Asparagus	Mushrooms	Broccoli	<b>Okra</b> , not fried
Brussels sprouts	Onions	<b>Cabbage –</b> green, purple, red	<b>Peppers –</b> green, red, yellow
Carrots	Radishes	Cauliflower	Lettuce
Celery	Spinach	Cucumbers	<b>Summer squash –</b> green, yellow
Green beans	Tomatoes	<b>Greens</b> – collard, mustard, turnip	Turnips

#### **A PRIMER ON PROTEIN**

Everyone needs protein. Protein is found in animal products such as meat, eggs and dairy. You can also find protein in beans and tofu. When choosing animal sources of protein, be sure to select lean meats and non-fat and low-fat dairy options.

#### **LEAN MEATS**

Here's a short list of lean meats for your table:



• White meat chicken and turkey with the skin taken off

Most fish

Lean cuts of beef, pork, veal and wild game with the fat removed

#### **DAIRY** Good choices include:



Fat-free (skim) or 1% milk

Reduced fat cheese



Non-fat or 1% cottage cheese



Non-fat or low-fat yogurt with no added sugar or syrup



#### FACTS ABOUT FRUIT

Just because you have diabetes doesn't mean you still can't enjoy fruit. In fact, ALL fruits are good for you. You just need to watch the portions. When you eat the whole fruit (think apples or grapes), you get all the benefits of the fiber in the skin. So, eat the entire fruit when it makes sense.

Fruit juice doesn't provide the fiber and can contain lots of added sugars. If you drink fruit juice, read the labels and choose 100% pure fruit juice, which does not contain added sugars or syrups.

#### **Fruits**

Apples, Apricots, Bananas, Berries (all kinds including blackberries, blueberries, raspberries, strawberries), Melons (all kinds including cantaloupe, honeydew, watermelon), Cherries, Citrus fruits (all kinds, including oranges, tangerines, grapefruit), Grapes, Kiwi, Mango, Nectarines, Papaya, Peaches, Pears, Pineapple and Plums

#### **FOODS/DRINKS TO WATCH OUT FOR**

Some fats are good for you in moderation. Other fats are just plain bad for you. They can increase your risk for heart disease, high blood pressure and chance of stroke. Other things to limit are sodium (salt), sweet treats, sweet drinks and alcohol.

A diabetes-friendly diet plan does not include or limits:

**Fats:** limit or avoid fried foods, gravies, or creamy sauces

**Saturated fats:** High-fat animal proteins, like fatty cuts of beef and pork, hot dogs, sausage and bacon and high-fat dairy products. Saturated fat tends to be solid at room temperature.

**Trans fats:** Processed snacks, baked goods, shortening and stick margarines. You'll want to take these out of your diet completely.

**Cholesterol:** This includes high-fat animal proteins, egg yolks, high-fat dairy products, liver and other organ meats and shellfish. Eat at most 200 milligrams (mg) of cholesterol per day.

Sodium: Eat less than 1,500 mg of sodium per day (about 3/4 teaspoon).



**Sweets, sodas:** These may have added sugar or syrup, which will raise your blood glucose levels.



**Alcohol:** Ask your doctor about specific limits on drinking alcohol (wine, beer and hard liquor).

## DID YOU KNOW?

The chemistry to develop hydrogenated oils, also known as trans fats, was invented in the 1890s. When hydrogen is added to oil, it changes the properties, making the oil solid. The first product developed in the U.S. with this new process was 1911.

DIABETES BY THE NUMBERS

FDA (U.S. Food and Drug Administration) recommended amount of calories per day for a man.

FDA (U.S. Food and Drug Administration) recommended amount of calories per day for a woman.For those needing to lose weight, the daily calories may not need to be this high.

-2.

<u>2,000 -2,50(</u>

#### **READING FOOD LABELS**

Part of the puzzle of learning how to shop for, buy and cook new foods is understanding food labels. They're designed to tell you a lot about what's in the food product you're about to buy.

In the **Nutrition Facts** box on the food label, you'll find lots of information. But you only need to read a few areas to know if a product is good for your diabetes or not. We'll just focus on those.

First things first – **Serving size**. This important piece of information may not actually match the amount of food you actually eat. The serving size is used as a basis for all the other information you see on the food label. If you eat

a half-cup of food when the serving size is one cup, you'll need to cut the other numbers on the label in half. Here are the numbers to look for:

#### A Fresh View on your Diabetes

Calories	This is the number of calories you get if you eat the listed serving size. If you're trying to lose weight, you need to eat fewer calories than your body uses each day. To learn how many calories you should eat each day, talk with your doctor or dietitian.
Total fat	Total fat includes good and bad fats. Fat has twice the calories as carbohydrates or protein. For a healthy weight, fat must be eaten in moderation, no more than 20-30% of your daily total calories.
Saturated fat	This fat raises your LDL (bad) cholesterol, and you'll want to avoid it as much as possible. It's found in things like fatty meat, butter and cheese.
Cholesterol	This also increases your LDL cholesterol. Limit this to 200 mg per day at most.
Sodium (Salt)	Limit this to 1,500 mg or less per day.
Total carbohydrate	This number includes sugar, complex carbs and fiber. Sugar and fiber are listed separately, too. To understand how much carbohydrate is actually in a food, subtract half of the total fiber number from the total carb number. Example: Total fiber = 6, Total carbs = 12, so take 12 minus 3 (half the total fiber number) = 9. This food contains 9 grams of carbs. A place to start is 30-60 grams of carbohydrate per meal and 15—30 grams of carbohydrate per snack. Ask your doctor or dietitian health coach.
Dietary fiber	Eat at least 25 grams every day.
Sugar alcohols	These include sorbitol, sylitol and mannitol and have fewer calories than sugars and starches. Use of these doesn't always make the product low carb or low calorie. Even if the package says "sugar-free," always check the carbohydrates and calories. Half of sugar alcohols can be subtracted from the Total carbs, just like fiber.
Ingredient list	Ingredients are listed in the order of weight in the product, so the first ingredient makes up the largest portion of the food. Stay away from products with coconut oil or palm oil, which are saturated fats. Say no to trans fats, also called hydrogenated oils. Look for olive, peanut or canola oils and whole grains, for a healthy heart.

Nutrition experts suggest that shopping the outside edges of your grocery store is where you need to focus most of your attention. It's the edges that provide fresh fruits and vegetables, meats, dairy and breads. It's the inner aisles that contain processed foods that may not be part of your new diet. That's where reading labels will come in very handy.

## **COOKING FOR HEALTH**

Part of learning to live with diabetes is experimenting with new ways of cooking. High-fat oils, creamy sauces and dressings are replaced with low fat, low-carb alternatives. Using a grill and steamer is the new normal. Here are some tips on ways to cook that give an overall boost to your health.

## TIPS FOR VEGGIES

Buy fresh or frozen vegetables. Canned veggies tend toward higher salt content, which isn't good if you also have high blood pressure. Look for veggies labeled "No Added Salt."

Steam or grill your vegetables. Boiling takes away the vitamins and cooking in heavy oil makes them less healthy. You can also try gently cooking them in a non-stick pan with a touch of olive or canola oil or baking them in the oven.

To give your veggies more flavor, drizzle them with low-fat salad dressing, lemon juice, vinegar or herbs. Stay away from cream- or cheese-based sauces.

## TIPS FOR MEATS



### THE DINING OUT DILEMMA

If you dine out a lot, you know that many times portion sizes are big. Food comes drenched in calorie-rich sauces and desserts are a mile high. Staying on a stricter, healthier diet may seem impossible, but it's not.

### FOUR WAYS TO WIN:

Select places to eat that offer the chance to switch out one food choice for another. Say, green beans instead of fries.



If you're eating at a restaurant that has big portion sizes, try splitting your dinner with a friend or asking the server to wrap half of your dinner to go before you're served.

To stop mindless munching before dinner, ask the server not to bring free bread, crackers or chips to the table until dinner, if at all. If others with you want to eat these things before dinner, ask that they be kept out of your reach.

3

Arrange your dinner date around the time you would normally eat so you don't risk becoming hypoglycemic. Be sure to eat something to maintain your blood glucose level, if you end up having to wait for a table.

#### TIPS FOR THE TABLE: Here are some quick tips to keep in mind:



- Choose foods that are baked, broiled or steamed instead of fried
- Substitute vegetables for fries or potatoes



- Have salad dressings and sauces served on the side so you control the quantity you eat
- Dip your fork points in the dressing or sauce before you spear your bit of food
- Ask for olive oil or margarine instead of butter
- Trim visible fat from meat and remove the skin from poultry
- For salad bar visits, take a pass on the bacon bits. cheeses and croutons
  - For dessert, choose fresh fruits or order one dessert for the table and share with your dining companions. Or wait until you get home to enjoy a treat allowed on your meal plan.

Limit your alcohol intake

## CHECK IT OUT!

#### **Academy of Nutrition and Dietetics: Diabetes and Diet**

www.eatright.org/Public/list. aspx?TaxID=6442452078

#### **Mayo Clinic: Dietary Fiber**

mayoclinic.com/health/fiber/ NU00033

#### **U.S. Food and Drug Administration: Reading Food Labels**

http://www.fda.gov/food/ resourcesforyou/consumers/ ucm274593.htm

Food Network: Diabetes-Friendly Recipes foodnetwork.com/topics/diabetic/ index.html

DIABETES

# MISSION:DEFINITION Obesity (oh-BEE-sitty):

a range of weight that is greater than what is considered healthy for a given height.

## WHY EXERCISE?

Exercise does more than work your muscles. It helps your body in invisible ways, such as improving your mood. It generally gets things moving all around and is an important part of a healthy lifestyle. Obesity is one of the main causes for the increase in type 2 diabetes in the U.S. By developing an exercise habit, you can shed pounds, feel better and potentially lower your need for diabetes medicine.

#### THE BENEFITS OF EXERCISE

- Improves your body's use of insulin
- Provides greater control over blood glucose levels
- Reduces body fat, helping you lose weight and control your diabetes better
- Promotes muscle strength
- Lowers your blood pressure
- Improves your circulation
- Lowers your risk of heart disease
  - Can lower your bad cholesterol and increase your good cholesterol
- Reduces stress
- Increases bone density and strength
- 📒 Improves your energy level
- Helps you sleep better

#### **DIABETES** BY THE NUMBERS

169 - 202

The weight in pounds at which a five-foot nine-inch adult is considered overweight.



The weight in pounds at which a five-foot nine-inch adult is considered obese.

> Source: Centers for Disease Control and Prevention

### WHERE TO START?

#### The best place to begin is with your doctor. Your doctor will advise you on the following:

Exercises right for you	<ul> <li>Those based on your current health, physical stamina and that meet your exercise goals</li> <li>Discuss the exercises you should stay away from</li> </ul>
Heart health	Your doctor may order a stress test may to see how well your heart is working
Exercise frequency	How often and for how long you should exercise in your current health state
Blood glucose monitoring	<ul> <li>Your blood glucose level can go up right after intense exercise</li> <li>You may be told to test your level before, during and after exercise to understand how your body responds and to keep your blood glucose at a safe level</li> <li>What actions to take if your blood glucose level changes drastically</li> </ul>
Insulin dosing	This may need to be changed depending upon the type of exercise, how long and its intensity
Equipment needed	<ul> <li>Properly fitting shoes protect the feet from added stress and blistering</li> <li>The right socks protect the feet from rubbing and wick away sweat</li> <li>An ID bracelet lets others know you have diabetes in case of an emergency</li> <li>Other equipment may be needed, depending upon exercise plan</li> <li>Fast-acting carbohydrates such as glucose tablets or gel</li> </ul>

## MAKE EXERCISE "NOHASSLE"

- Choose activities that you enjoy this makes it easier to stay with a program
- Make it convenient pick locations to exercise close to home or work
- Exercise with a friend so you don't get bored and so you have someone nearby in case of an emergency
- $\succ$  Pick an activity you can easily afford walking around your neighborhood is free
- Exercise at the same time each day to support stable blood glucose levels
- Decide on a routine and don't change those times
- Use an exercise journal or log like the one below to keep track of your progress (put it in your notebook with all your other diabetes information)

## EXERCISE LOG

Date	Activity	Done for how long?	How I felt afterwards
Example: 2/25	Walked around the block	30 minutes	Energized!

#### **COMMON CONCERNS ABOUT EXERCISING**

If it's been a long time since you've exercised, you may have concerns. In fact, the thought of exercising might be more than you want to think about. There are so many benefits to exercising and few downsides.

#### "I don't like to exercise!"

Many things can be thought of as "exercise" in your everyday life. These won't replace a formal exercise program, but are a simple way to support your activity goals. They're also easy to do because they can happen during the normal course of a day!

- Walking around your house or up and down stairs when you're talking on the phone
- Taking the stairs instead of the elevator
- 📕 Walking instead of driving
- Working in the yard, gardening, or doing a bit of housecleaning every day
- **Parking far away from the door at a shopping center lot and walking briskly to the store**
- Walking with your significant other/child/grandchild/dog
- Chasing toddlers around for ½ an hour

You can probably think of many other activities in your normal day that can be considered exercise. It just takes a little creativity. Now that you're thinking, consider those activities that you really enjoy. Do you like to dance? Swim? Lift weights? Walk? It's a fact that if you pick things you like to do, you're more likely to actually do them.



#### "I don't know how to start."

It's easy to feel overwhelmed, especially if you haven't exercised in a long time – or have never exercised. The hardest part is deciding to get moving. The next hardest part? Actually doing it.

Consider this: **Begin where you are**. If you've been inactive for years, your body won't become athletic overnight. You'll need to slowly ease your body into exercising. This might mean exercising for 10 minutes once per day for several weeks. As you begin to notice changes in your stamina, you can increase the amount of time you exercise. As you continue to improve and feel better, you may decide to add other activities into your routine.

"I don't have time."

Remember the list of everyday activities? That counts as exercise. Suddenly, you have time to exercise as you go through your normal day. There's also a misconception that exercise must be done all at one time. There is scientific evidence to suggest exercising for shorter spurts twice or more a day is better for you than busting it out in one session. Break it up. Even if something comes up and you can't get all of your minutes in for a day, you will still have done some exercising – and that's way better than nothing!

"Exercising is expensive, and I'm on a budget."

Actually... exercising doesn't have to be expensive. Sure, you could join a fancy gym or buy tons of equipment for your home, but you don't have to do that. Exercising is as easy as:

- Taking a walk with a friend
- Borrowing an exercise video from the library or a friend
- Participating in free exercise classes at your local community center
- Buying a used treadmill or stationary bike and using it at home
- Dusting off your old bicycle and tooling around the neighborhood
- Using two equally sized cans of soup as weights for strength training
- Incorporating "body weight" exercising all you need is...you!

"I could get hurt or my blood glucose level could drop."

Working with your doctor to figure out the best exercise plan for you will help you stay off the disabled list. Your doctor will also advise you on how to manage your blood glucose level best. Here are some additional points to remember before and after you exercise:



#### "I could get hurt or my blood glucose level could drop." continued

#### **Before exercising**

- Check your blood glucose level if your doctor says you should.
- Bring glucose tablets or a snack so you're prepared to treat low blood glucose if it happens.
- Trink plenty of water before, during and after exercise especially in warm weather.
- Carry identification including information that you have diabetes.

#### After exercising

- Check your blood glucose level. If it's always lower than your goal, talk with your doctor about what to eat before you work out. Your doctor may also need to adjust your medication.
- Keep track of your activity level by using your exercise log or journal.

"I have trouble sticking with exercise programs."

This is a common problem. An easy fix is to invite a friend to work out with you. Having someone else to share the experience will make you more likely to stick with it. You motivate each other and share in the successes you'll each have. You both win.

## **FIT AND FABULOUS**

Now that you've learned how to take care of yourself and what exercise can do for you, there are just a few more things to keep in mind that haven't been mentioned yet.

#### **KEEP EXERCISING.**

If you have a good routine going, keep at it. You can't start and stop exercising and expect to maintain your fitness level. Consistent workouts are what will have you (and everyone else) seeing results. So keep going!

## USE THE "TALK TEST" WHEN EXERCISING.

You should be able to carry on a conversation while exercising without gasping for air. If you're straining to talk, you could be working too hard.

**48** 

#### TIRED, NOT EXHAUSTED AFTER EXERCISE.

Exercise should leave you feeling nicely tired, not exhausted. When you exercise to tiredness, your endorphins should kick in and give you a wonderful sense of happiness. If you're exhausted and too tired to move, you may have overdone it. Lesson learned. Dial it back a bit next time.

## EXERCISING WHEN YOU'RE SICK COULD MAKE YOU SICKER.

Not to mention infecting everyone around you. Hold off on exercise until you feel better. You can exercise with a cold (runny nose, nasal congestion, sneezing and/or a bit of a sore throat) but you might feel better staying in bed. If you have anything else, such as chest congestion, cough, upset stomach, don't exercise. Absolutely hold off on exercising if you have a fever, fatigue or body aches.

#### **TEMPERATURE MATTERS.**

You may need to exercise indoors when the temperature outside is too hot, too cold, or if it is too humid. Wear a medical ID bracelet or necklace and carry a cell phone when you exercise outdoors or away from home. Always let someone know when you plan to be back. And don't forget to stay well hydrated!

#### **PAT YOURSELF ON THE BACK**

Everyone likes to be recognized for a job well done. The same is true for you. Give yourself little rewards for staying with your exercise goals. Having a reward in mind is a subtle way to keep you motivated. Have a new outfit you've been eyeing? What about that new gadget you've been wanting? Figure out your reward and what it will take to reach it. Celebrate your success!



WebMD: Exercising with Type 2 Diabetes diabetes.webmd.com/guide/exercise-guidelines

National Diabetes Information Clearinghouse (NDIC) Department of Health and Human Services diabetes.niddk.nih.gov/dm/pubs/physical ez

**Diabetes Education Online: Exercising with Type 1 Diabetes University of California – San Francisco** dtc.ucsf.edu/living-with-diabetes/activity-and-exercise/ exercise-guidelines-faqs/exercise-guidelines-faqs

## **SNUFF** THE **PUFF** SMOKING AND

Seriously? You're still smoking? There really isn't a good reason to be smoking these days. After all, there are so many health issues, most of them pretty scary. If you have diabetes, it's more important than ever that you snuff the puff – QUIT SMOKING.



## FOUR FANTASTIC REASONS **TO QUIT SMOKING**



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Lower your risk of other diseases... Smoking raises the chance of having heart disease, kidney and foot problems.



**2** Reduce circulation problems... and small blood vessels, reducing blood flow throughout the body.



Look better... Smoking causes facial wrinkles and dull skin.



Improve your health overall... Smoking can cause coughing, reduce lung capacity and cause sore throats.

#### **CHOOSING HEALTH OVER HABIT**

There's no question that quitting smoking is hard. It can be difficult to make the decision to quit. In this case, however, the benefits far outweigh the difficulty of quitting. It helps to have a plan of attack so you set yourself up for success. But remember, anytime is a great time to quit, but it helps a lot if you're not under stress or dealing with other conflicts or problems at the same time.

Think about putting these steps in place before you actually stop smoking.



Set your quit date. Consider calling it something positive such as "My New Life Day." This helps focus on the fact that you're making a wise and healthy new lifestyle choice.



Write your reasons for quitting. They could be like the reasons above, or additional ones, such as "smell better," "protect my kids out from secondhand smoke," etc.



Toss out all your cigarettes, matches, lighters and ashtrays, preferably in a place where you can't get them back.

STEP 4:

Tell people what you're doing. Some smokers become more emotional when they quit, so letting others know what you're doing will aid in their understanding if you're cranky, weepy or quieter than usual.



Decide how to quit. Some people just stop "cold turkey." Others taper off gradually. Still others need some extra help through cigarette replacements like nicotine gum or smokeless alternatives. Talk with your doctor about what makes the most sense for you.

### FIGHTING THE URGE

It's going to happen. You'll have an almost uncontrollable desire to smoke, likely more than once. That's just your body trying to feel "normal." It doesn't matter if you smoked for months or years. Smoking changes how the body feels – and when you quit, it will fight you mightily to get its "fix." Fight the urge with the suggestions below.

> Take in a deep breath and hold it for 10 seconds when the urge to smoke hits you. Then, release it slowly. Continue breathing in this way until the urge passes. This mimics smoking, except you're breathing in air, not cigarette smoke.

> Chew sugarless gum, suck on a sugar-free hard candy, eat a bit of beef jerky. In other words, keep your mouth busy.

- Hang out in places where smoking isn't allowed.
- Exercise to take your mind off smoking.
- Take up a hobby to keep your hands busy.
- When the urge to smoke hits, take a drink of water.

Change your habits. People tend to smoke during certain times: on a break, when studying, a night out. Understanding when you might be triggered to smoke can help you either stay away from those situations or give you a chance to plan to do something other than smoke.

> Quitting smoking is serious business and it isn't easy. Over time, once you quit, you'll be amazed at how different you feel, how good food tastes and, possibly, how much easier it is to control your diabetes.

## DIABETES **BY THE NUMBERS**



The ranking of diabetes in the Centers for Disease Control and Prevention's TOP 10 CAUSES OF DEATH IN THE U.S. Smoking with diabetes makes the risk all the more deadly.

**American Diabetes Association: Smoking** diabetes.org/are-you-at-risk/lower-yourrisk/smoking.html

WebMD: Diabetes and Smoking diabetes.webmd.com/diabetes-smokingcessation-tips

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## NONE FOR THE ROAD DIABETES AND ALCOHOL HEAD FOR THE MONITOR



Remember how we said sweets and foods high in carbs or too much of most any kind of food can send your blood sugar into the clouds? Alcohol can also affect your blood sugar. Alcohol contains "empty" calories, and almost as many calories as fat. Monitor your blood glucose levels whenever you drink alcohol.

#### LIMIT ALCOHOL TO OCCASIONAL TIMES WHEN YOUR BLOOD SUGAR IS WELL CONTROLLED

#### Ways alcohol can affect diabetes:

- Alcohol can lower blood sugar, causing it to drop to dangerous levels
- Alcohol increases appetite, making you want to overeat, which can raise blood sugar
- > Alcohol can lessen the effects of diabetes meds taken by mouth
- Alcohol can increase triglycerides and blood pressure
- Alcohol can raise blood sugar over time

Have diabetes and like to drink alcohol? Remember these Do's and Don'ts.

DO	DON'T
<ul> <li>Drink only when your blood glucose level in under control.</li> <li>Drink alcohol only with food.</li> </ul>	Drink more than two drinks of alcohol a day for men or more than one a day for women. Drink sugary mixed drinks, sweet wines or cordials.
<ul> <li>Drink slowly.</li> <li>Mix alcohol with water or diet soda to dilute it.</li> <li>Sip slowly to make it last longer.</li> </ul>	Forget to wear your medical alert ID stating that you have diabetes. Drive for several hours after drinking.

Mayo Clinic: Alcohol and Your Body: mayoclinic.com/health/alcohol-and-diabetes/MY01138

## YOUR DIABETES A CHANGE FOR LIFE



Living with diabetes will change your life. You'll have to adopt new habits such as monitoring your blood glucose levels regularly, eating a healthier diet and exercising. You'll have to leave old habits behind like smoking.

For many, especially those who develop diabetes later in life, it's a wake-up call. And a second chance to live life to the fullest.





Where you rank as a team member on your Diabetes Management Team. If you haven't yet started your diabetes treatment plan, this is it. Step up to the plate and swing for the fences. The rest of the team is counting on you.

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## NOTES

# RESOURCES

American Diabetes Association 1-800-DIABETES or 1-800342-2383 diabetes.org

Academy of Nutrition and Dietetics 1-800-877-1600 or 1-800-877-0877 eatright.org

U.S. Food and Drug Administration: Food Safety for People with Diabetes Department of Health and Human Services w w w f d a g o v / F o o d / FoodbornelllnessContaminants/ PeopleAtRisk/ucm312706.htm

**Centers for Disease Control and Prevention: Diabetes Public Health Resource** cdc.gov/diabetes

National Diabetes Information Clearinghouse (NDIC) Department of Health and Human Services diabetes.niddk.nih.gov **Diabetes Health Hotline** 1-800-342-2383

National Diabetes Education Program Activity Tracking Form: n d e p . n i h . g o v / r e s o u r c e s / ResourceDetail.aspx?ResId=426

MedicineNet: Diabetes Supplies: What Medicare Covers medicinenet.com/script/main/art. asp?articlekey=21534

USDA ChooseMyPlate.gov

**President's Council on Fitness, Sports & Nutrition** fitness.gov

Smoke Free smokefree.gov

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# RESH VIEW ON YOUR DIABETES

Diabetes can happen to anyone, especially if you have a family history of it. This book offers insightful

information to help you manage your type 1 or type 2 diabetes. And if you're Prediabetes, you'll learn how to care for yourself now, so you don't develop type 2 diabetes later. You'll learn:

WHAT DIABETES IS
 EXERCISE
 WHAT CAUSES IT
 REDUCING STRESS
 SYMPTOMS TO BE AWARE OF
 QUITTING SMOKING
 NECESSARY TESTS
 MORE



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