

Treat Diabetes

Chapter 6

Health Problems with Diabetes

You Will Learn About:

1. The impact of diabetes on your body
2. The health problems that can happen if diabetes is not controlled
 - a. What can happen
 - b. What you can do to prevent these problems
3. The tests you can have done to check for problems

1. The Impact of Diabetes On Your Body

Diabetes means your body is not processing sugar as it should. This can be due to your pancreas not producing enough insulin or your cells not responding to the insulin available. When your body does not process sugar as it should, you can have high blood sugar. High blood sugar levels can lead to serious health problems (known as 'diabetes complications'). Overtime, high blood sugar may cause problems like:

- Heart disease (heart attack)
- Cerebrovascular disease (stroke)
- Kidney disease (kidney failure)
- Eye problems (loss of vision)
- Nerve damage (pain or loss of sensation)
- Skin and gum problems (ulcers, gum disease)
- Amputations (removal of toes, feet or lower leg by surgery)

Diabetes impacts your whole body including your blood vessels. Blood vessels are your veins and arteries that carry blood around your body. Diabetes damages your blood vessels making them more likely to collect plaque and become narrow. Narrow blood vessels mean your blood does not travel through your body as it should. When blood does not travel through your body as it should problems can happen. Health problems may include heart attack, stroke, kidney disease, eye problems, skin and gum problems and nerve damage.

To prevent problems from starting or getting worse, it is crucial to manage your diabetes.

Take Action

If you have diabetes (any type) take action to manage your diabetes.

- Take your medicines as prescribed by your doctor
- Eat healthy
- Exercise and be active
- Manage your stress and depression
- Check your blood sugar
- Avoid smoking and breathing second-hand smoke

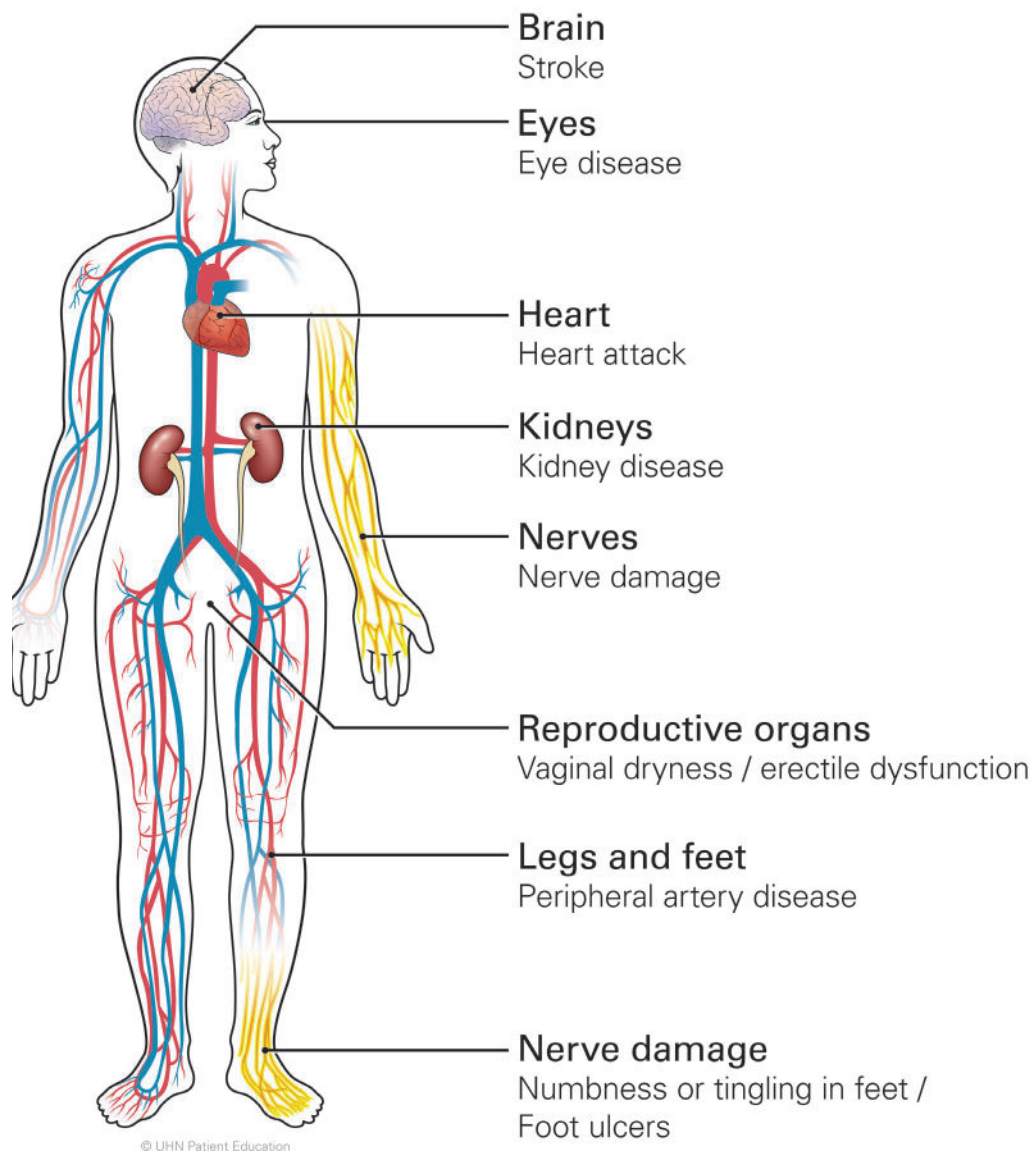
If you follow these tips, you will be able to better manage your diabetes and avoid or delay health problems. You will learn more about how to take action in the, 'Exercise and Get Active', 'Eat Healthy', 'Feel Well' and 'Take Control' sections of this guide. This content explains the health problems that can happen with diabetes.

2. The Problems That Can Happen if Diabetes is Not Controlled

High blood sugar damages your body. If you have high blood sugar over many years it causes even more damage.

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This image outlines the impact of high blood sugar over many years to the brain, eyes, heart, kidneys, reproductive organs, legs, feet and nerves.

HEART & BRAIN (CARDIOVASCULAR)

What can happen?

- Diabetes causes the blood vessels in your heart and brain to collect plaque and become narrow. When arteries become narrow due to plaque it is called **atherosclerosis**. Over many years, atherosclerosis can cause a heart attack and/or stroke.

What can I do?

- You can avoid heart attack and stroke if you manage your diabetes.

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If you have diabetes (any type) take action to manage your diabetes.

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- Learn the signs of a stroke so that you can save your own life or the life of a loved one. If you think you are having a stroke, call 9-1-1 or your local emergency number immediately.

Safety Alert!

LEARN THE SIGNS OF STROKE

FACE is it drooping?

A RMS can you raise both?

S PEECH is it slurred or jumbled?

T IME to call 9-1-1 right away.

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If you or someone with you experiences any of these signs, call 9-1-1 or your local emergency number immediately. Acting quickly can improve your survival and recovery.

- Learn the signs of a heart attack so that you can save your own life or the life of a loved one. If you think you are having a heart attack, call 9-1-1 or your local emergency number immediately.

Safety Alert!

Learn the Signs of a Heart Attack

- P** for **PRESSURE**
- A** for **ANXIETY**
- I** for **INDIGESTION**
- N** for **NAUSEA or vomiting**
- S** for **SHORTNESS OF BREATH**

If you think you are having a heart attack, call 911 immediately.

LEGS

What can happen?

- Arteries carry blood from your heart to your legs. Arteries that carry oxygen-rich blood and nutrients to your limbs are called 'peripheral' arteries. When peripheral arteries are narrow from plaque, it is called **peripheral artery disease**. This disease lowers the blood flow to your legs
- Low blood flow to your legs can be painful. Pain in your legs from low blood flow is called **intermittent claudication**. If you have intermittent

claudication, it feels like cramping or pain in your legs when you are walking. This feeling goes away when you stop walking

What can I do?

- If this is new, talk to your doctor about what you are experiencing. Only a doctor can diagnose this problem
- Manage your blood sugar, blood pressure and cholesterol levels to prevent damage to your arteries. This will lower your risk of plaque buildup and narrowing

Take Action

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- Talk to the exercise specialist on your diabetes team. They can create an exercise plan for you. It's ok to take breaks and rest your legs during your walk

EYES

What can happen?

- Diabetes can damage your eyes. It affects the way your eyes function. This can lead to many eye diseases. These diseases can cause vision changes and blindness. Diseases include: **retinopathy, cataract and glaucoma**
- **Retinopathy** means there is damage to the blood vessels in your retina. Your retina is at the back of your eye. Your retina is used to sense light. You need your retina to see. Long term damage to your retina can cause changes in your vision
- A **cataract** is when there is cloudiness on the lens of your eye. Your lens is at the front of your eye. Your lens is what you see through. Cloudiness on your lens causes changes in your vision
- **Glaucoma** means there is a buildup of fluid in your eye. This fluid causes pressure. The pressure can damage the nerve going to and from your eye. The nerve sends information from your eyes to your brain. Damage to your nerve can cause changes in your vision

What can I do?

- Talk to your doctor if you have a change in your vision
- Discuss the different treatment options for retinopathy, cataracts and glaucoma with your eye doctor
- Have eye exams done on a regular basis (usually once every year by an optometrist or ophthalmologist)
- It is important to manage your diabetes. This can prevent or delay eye damage

Take Action

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NERVES

What can happen?

- Nerves send messages to and from your brain and body. Arteries feed your nerves oxygen-rich blood and nutrients so they can function as they should. Diabetes can damage the arteries that supply blood to your nerves. This damage to your arteries can lead to damage to your nerves.
- For example, nerves in your fingers send messages about touch and temperature. The messages are sent to your brain. If your nerves are damaged, you will lose this feeling. Losing feeling to your hands and feet is called **peripheral neuropathy**
- When nerves are damaged, many problems can happen in your body. Some problems are:
 - Injury to your hands and feet due to loss of feeling
 - Your stomach takes longer to digest food
 - Problems controlling your blood pressure when changing body positions (such as, from lying down to standing up)

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- You do not notice signs of low blood sugar or heart attack. Your doctor will tell you if you don't show signs. In this case you will need to monitor your blood sugar so that you can treat a low blood sugar when it happens
- Problems with getting an erection (called erectile dysfunction)
- Problems with vaginal dryness or reaching orgasm

What can I do?

- Pay close attention for signs of nerve damage (see chart below). Be aware of what feels 'normal for you'. If you notice any change, talk to your doctor
- It is important to manage your diabetes. This can prevent or delay nerve damage.

Take Action

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Signs and Symptoms of Nerve Damage

Fingers and Toes (most common)

If you feel numbness, tingling, pain or burning in your fingers and toes

Heart

If your heart beats too fast when you're sitting. May only feel mild symptoms or none at all of a heart attack

Symptoms of low blood sugar

If you can't feel common signs of low blood sugar. Such as shakiness or nervousness

Blood Pressure

If you are dizzy or feel faint when you stand up. This can be from low blood pressure

Digesting food

If you:

- Feel bloated
- Feel your always full
- Feel nauseous
- Have vomited
- Have diarrhea
- Can't poop (constipation)

Signs and Symptoms of Nerve Damage

Sex organs

In men:

- if you have trouble getting an erection

In women:

- if you have vaginal dryness
- if you have trouble having an orgasm

Bladder

If you can't fully empty your bladder. If you have urinary tract infections often

Sweat glands

If you can't sweat or control your body temperature in warm weath

Take Action

- Check your feet every day
- See your doctor if you notice signs of infection or nerve damage
- Learn how your body responds to food. Talk to your doctor for help
- You should notice when you have low blood sugar. If you cannot, check your blood sugar more often. This will make you familiar with your body
- Take extra care when exercising in hot, humid weather

KIDNEYS

What can happen?

- Your kidneys have many blood vessels that act as filters. These filters are used to remove waste from your blood. This waste leaves your body when you urinate (pee)
- Diabetes can damage the blood vessels in your kidneys. Over time, this damage causes kidney disease. Kidney disease is also known as **nephropathy**
- Even more damage can happen if you have high blood pressure and high LDL (bad) cholesterol too. This raises your risk of kidney disease

What can I do?

- You may not have symptoms in the early stages of kidney disease. Get your kidney function tested regularly (usually once every year) by your doctor
- As kidney disease progresses, you may experience:
 - Blood pressure that is hard to control
 - Fatigue (feeling very tired)
 - Feeling weak or dizzy
 - Nausea (upset stomach)
 - Changes in your urine (pee)
 - See your doctor if you have symptoms of kidney damage
- It is important to manage your diabetes. This can prevent or delay kidney damage.

Take Action

If you have diabetes (any type) take action to manage your diabetes.

- Take your medicines as prescribed by your doctor
- Eat healthy
- Exercise and be active
- Manage your stress and depression
- Check your blood sugar
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FEET

What can happen?

- Diabetes can damage the blood vessels and nerves in your feet. If your blood vessels and nerves are damaged your feet will feel different. You may not be able to feel pain, pressure or temperature in your feet. Your feet may feel numb, tingly or burning
- Diabetes can also cause your feet to change shape and size. Your feet may no longer sweat or produce oil. As a result, your skin can become dry and cracked. Dry, cracked skin is more likely to become infected
- An infection can occur in a sore on your foot. Sores on your feet are called foot ulcers. Foot ulcers are often found at the base of your big toe or on the ball of your foot. These ulcers need medical help right away. If foot ulcers are left untreated, a foot ulcer may lead to your toe(s) or part of your foot being removed (amputation)
- It is important to notice any changes to your feet. You are less likely to have infections if you get medical help quickly

What can I do?

- It is important to manage your diabetes. This can prevent or delay damage to your feet, nerves, blood vessels and skin.

Take Action

If you have diabetes (any type) take action to manage your diabetes.

- Take your medicines as prescribed by your doctor
 - Eat healthy
 - Exercise and be active
 - Manage your stress and depression
 - Check your blood sugar
 - Avoid smoking and breathing second-hand smoke
-
- Check for these symptoms:
 - Your feet feel: numb, tingling, burning, or pain
 - You have a cut on your foot that will not heal
 - The skin on your feet is dry or cracked
 - Your feet change shape and size

If you have any of the symptoms above then take action:

- Talk to your doctor about any of the symptoms listed above
- Talk to your doctor if you have a cut that will not heal
- Get your doctor to check your feet at each visit

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- Talk to a foot care specialist (chiroprapist). They will tell you how to take care of your feet. Some tips to looking after your feet are:
 - Wash your feet every day with lukewarm water and mild soap
 - Cut toenails straight across to avoid ingrown toenails
 - Put lotion on your feet
 - Check your feet every day. Look for tender spots, sores or cuts
 - Wear microfiber socks instead of cotton. This will keep your feet dry. It will also lower your chance of blisters and infections
 - Wear comfortable fitting shoes
 - Avoid walking around in bare feet

SKIN & GUMS

What can happen?

- Your skin covers your whole body. Your skin has 3 main functions:
 - Protect the inside of your body from the outside environment
 - Control your body temperature
 - Feeling
- Diabetes changes your skin. Your skin will not work as well if your diabetes is not managed. This makes your skin more likely to be dry, cracked and itchy. Your skin is also more likely to have infections
- Diabetes can put you at a higher risk for gum disease, cavities and sores in your mouth

What can I do?

- It is important to manage your diabetes. This can prevent or delay damage your skin and gums.

Take Action

If you have diabetes (any type) take action to manage your diabetes.

- Take your medicines as prescribed by your doctor
 - Eat healthy
 - Exercise and be active
 - Manage your stress and depression
 - Check your blood sugar
 - Avoid smoking and breathing second-hand smoke
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- Maintain good skin care to help prevent infections. Some good skin care tips are:
 - Shower with lukewarm water, a mild soap and mild shampoo
 - Put lotion on your dry skin (try not to put it between your toes)
 - Check your skin for cracks or sores every day
 - Go to your doctor right away if you notice cuts, sores or rashes
 - Keep skin dry
 - Wear comfortable shoes
 - Wear clothes that take sweat away from your skin such as, clothes made from man-made microfibers (dry wicking material). Look at your clothing tags for these materials
 - If you think you have an infection, talk to your doctor right away
 - Maintain good oral care. Brush and floss your teeth daily. Have regular checkups at your dentist (usually 2 times per year)
 - If your gums are red or swollen talk to your dentist right away

3. Tests You Can Have Done to Check For Problems

Your body changes with diabetes. It is vital to listen to your body. There are tests to screen for problems. These tests will assess your nerves, kidneys and eyes.

The table below explains each test. Each test is used to screen for a different problem. Ask your doctor for more information about each test.

Name of Screening Test	What happens	How often should I have this test
A1c (also known as HbA1c)	This test shows your blood sugar over the past 3 months. This test uses a sample of your blood. It doesn't matter when you last ate or drank. The test counts the number of red blood cells with sugar. The results are shown in percent (%). This number can be changed into an average blood sugar.	At diagnosis Repeat every 3 months

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Name of Screening Test	What happens	How often should I have this test
Neuropathy (nerve damage)	Your foot doctor (chiroprapist) will use a monofilament (an instrument made of a soft nylon fiber) to assess your feet for: <ul style="list-style-type: none">– Numbness– Vibration– Light touch– Reflexes	At diagnosis Repeat every year If you have skin changes, see your doctor
Nephropathy (kidney damage) Albumin/Creatinine Ratio (ACR)	Your doctor will ask you to go to a lab to have your blood and urine (pee) tested.	At diagnosis and repeat every year
Retinopathy (eye damage)	Your eye doctor will examine your eyes for signs of eye damage.	At diagnosis Repeat every year If you have vision changes, see your doctor

Summary

- Health problems from diabetes can be very severe (heart attack, stroke, loss of vision, pain, ulcers, amputation)
- You have an active role in managing your diabetes. Manage your diabetes to prevent or delay these serious health problems

Take Action

If you have diabetes (any type) take action to manage your diabetes.

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-
- Screening tests help you catch problems early