

Treat Diabetes

Chapter 3

Manage Your Diabetes

You Will Learn About:

1. How to manage your diabetes
2. Your targets for managing your diabetes
 - a. A1c
 - b. Blood pressure
 - c. Cholesterol
 - d. Depression
 - e. Fitness and activity level
 - f. Stress
 - g. Smoking

1. How to Manage Your Diabetes

Your diabetes can be managed. If you manage your diabetes you will live a healthier life. You can prevent or delay the onset of the health problems related to having diabetes. If you do not manage your diabetes your health will suffer. You will be at high risk for developing the health problems related to having diabetes. You can manage diabetes by:

- 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

It is the health problems of diabetes that cause harm and can lead to disability or death, not the disease itself. Long term health problems include heart attack and stroke. Other problems include kidney disease (kidney failure), eye disease (loss of vision), pain, ulcers and possible amputation. Your health care team will teach you about keeping your blood sugar, cholesterol and blood pressure in a normal range. They will also teach you how to eat healthy, exercise, manage your stress (or depression) and stop smoking.

The next section will describe how to keep your blood sugar, cholesterol and blood pressure in a normal range and how to increase your fitness, manage your stress (or depression) and quit smoking.

2. Your Targets for Managing Your Diabetes

A1c (also known as HbA1c)

A1c is a type of blood test. Recall, your A1c measures how well you managed your blood sugar over the past 3 months. The A1c test results are expressed in percent (%). The A1c test counts the number of blood cells with sugar attached to them. A normal A1c number is less than 7%.

Use a conversion chart to relate your A1c to your average blood sugar. Follow the three steps below:

1. Find your A1c level from your blood work.
2. Look for your A1c level in the conversion chart below.

A1c (%)	Average Blood Sugar (mmol/L)
5	5.6
6	7.5
7	9.4
8	11.4
9	13.3
10	15.3
11	17.2
12	19.2

3. Follow the same row to the right to find your average blood sugar.

For example, 8% A1c means your average blood sugar over the past 3 months was 11.4 mmol/L.

Your A1c tells you and your doctor how well you managed your blood sugar over the past 3 months. Both you and your doctor can use your A1c to guide what changes you need to make to your diabetes medicines or to your lifestyle habits.

If your A1c is less than 7% you are in the right range. Continue doing all of your healthy habits. Talk to your doctor to make sure this number is good for you. If you do not feel well (you are getting too many episodes of low blood sugar) with an A1c number of less than 7%, talk to your doctor.

If your A1c is more than 7%, talk to your doctor. Discuss what you can do to lower your A1c. You may need to change your eating habits, exercise habits, stress (or depression) control or your diabetes medicines. Check your blood sugar more often. Your blood sugar shows if the changes you make lower your blood sugar.

Blood Pressure

When your heart beats, blood is pushed out of your heart and around your body. As your blood travels, it pushes against your artery walls. Blood pressure is the strength of this pushing.

Blood pressure is measured in millimeters of mercury (mmHg). Millimeters of mercury (mmHg) measures the pressure of blood in your arteries. A blood pressure reading is expressed in two numbers such as 120/80 mmHg. Both blood pressure numbers are important. The top number is the pressure when the heart pumps. This is called **systolic blood pressure**. The bottom number is the pressure when the heart relaxes. This is called **diastolic blood pressure**.

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A normal blood pressure with your diabetes is less than 130/80 mmHg. This goal blood pressure can be different from person to person depending on your age. Talk to your doctor about the right blood pressure for you.

High blood pressure can have no warning signs or symptoms. No signs or symptoms is a problem because high blood pressure is harmful. Over time, high blood pressure damages your heart (heart attack), brain (stroke) and kidneys (nephropathy). People living with diabetes often have high blood pressure. Have your blood pressure checked at each doctor's visit. Your doctor may ask you to monitor your blood pressure at home.

Know your blood pressure numbers to know if you are controlling your blood pressure. Your blood pressure goal is less than 130/80 mmHg. If your blood pressure is below 130/80 mmHg, continue with your healthy habits such as healthy eating, exercising, managing your stress (or depression) and taking your blood pressure medicine.

If your blood pressure is more than 130/80 mmHg, talk to your doctor. Ask your doctor what you can do to lower your blood pressure. Lower your blood pressure with healthy eating, exercising, managing your stress (or depression) and taking blood pressure lowering medicine(s). Read Section, 'Eat Healthy' to learn more about how to lower your blood pressure by reducing the sodium in your diet.

Cholesterol

Cholesterol is a waxy fat-like substance found in your body.

Your body needs cholesterol to:

- Keep your cells healthy
- Make hormones like testosterone and estrogen. Testosterone and estrogen are needed for normal growth and reproduction

- Make vitamin D. Vitamin D helps your body absorb calcium and promote bone growth

There are 2 main types of cholesterol in your body. The 2 types of cholesterol are:

- Low-density lipoprotein (LDL) cholesterol: the “bad” cholesterol
- High-density lipoprotein (HDL) cholesterol: the “good” cholesterol

One way to manage your diabetes is to manage your cholesterol level. You want less LDL (bad) cholesterol and more HDL (good) cholesterol in your body.

Too much LDL (bad) cholesterol causes plaque to collect in your arteries. Plaque makes it harder for blood to pass through your arteries. Over time, as plaque collects, your arteries can become narrow or blocked. Blockages can cause a heart attack and stroke.

It is important to have your LDL (bad) cholesterol within a normal range. Having high LDL (bad) cholesterol and diabetes puts you at a high risk for heart attack and stroke.

Blood cholesterol is measured in millimoles per litre of blood (mmol/L). Millimoles per litre of blood measures the number of cholesterol particles in your blood. A normal range for LDL (bad) cholesterol is less than or equal to 2.0 mmol/L. Know your LDL (bad) cholesterol level to understand if you are managing your cholesterol.

If your LDL (bad) cholesterol is less than or equal to 2.0 mmol/L:

- You are in the correct range. Continue to do all of the healthy habits that you have been doing

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If your LDL (bad) cholesterol is more than 2.0 mmol/L:

- Talk to your doctor about what you can do to lower your LDL (bad) cholesterol. You may need to make changes to lower your LDL (bad) cholesterol. These changes may include eating healthy and taking cholesterol lowering medicine

Some fats in your diet raise your LDL (bad) cholesterol. The fats that raise your LDL (bad) cholesterol are:

- Saturated fats: Saturated fats are found in all animal products and in tropical oils such as cocoa butter, palm oil, coconut oil, palm kernel oils
- Trans fats: Trans fats are found in processed foods like store bought cakes, pastries, donuts and deep-fried foods

HDL (good) cholesterol protects you from heart disease. A normal range for HDL (good) cholesterol is greater than 1.0 mmol/L. A higher level of HDL (good) cholesterol is better for your heart health.

You may see a total cholesterol to HDL (good) cholesterol ratio, in your blood work. This is a way to know the balance of good and bad cholesterol in your blood. A normal range for total cholesterol to HDL (good) cholesterol ratio is less than 4. A lower ratio is better for your heart health.

Triglycerides are a type of fat in your blood. Having high triglycerides in your blood puts you at risk for heart disease. A normal range for triglycerides is less than 1.7 mmol/L. A lower number is better for your heart health.

Read Section, 'Eat Healthy' to learn more about how to lower your LDL (bad) cholesterol, raise your HDL (good) cholesterol and lower your triglycerides.

The healthy targets for your A1c, blood pressure, and cholesterol levels are shown below.

Targets for A1c, Blood Pressure and Cholesterol

	Target
A1c (also known as HbA1c)	Less than 7% (Normal 4.1-5.5%)
Blood Pressure Systolic pressure Diastolic pressure	 Less than 130 mmHg Less than 80 mmHg
Cholesterol LDL (bad) cholesterol HDL (good) cholesterol Total cholesterol to HDL cholesterol ratio	 Less than or equal to 2.0 mmol/L More than 1.0 mmol/L Less than 4.0
Triglycerides	Less than 1.7 mmol/L

Take action to get your A1c, blood pressure and cholesterol on target.

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

Depression

Depression is a mental health problem that involves how you feel. Depression is more common in people with diabetes. When you are depressed, your self-management decreases which means you may not take good care of your diabetes. Know the signs of depression so you can get help. These signs include:

- Loss of enjoyment in doing the things that used to be enjoyable
- Feeling down, hopeless or sad
- Difficulty falling asleep or staying asleep
- Having very little energy
- Changes in appetite, either loss of appetite or excessive appetite
- Having negative thoughts and feelings about yourself
- Trouble concentrating
- Loss of interest in sex

If you have many of these signs for 2 weeks or longer you may be depressed. Talk to your doctor about how you are feeling. Read Section, 'Feel Well' to learn more.

Fitness and activity level

Exercise is a vital part of health. You can improve how well your body works with exercise. Exercise can increase your body's response to insulin and can help your body manage the sugar in your blood. Read Section, 'Exercise & Get Active' to learn more.

Stress

Stress is your body's response to change. Any part of your life can cause stress. Stress can be the result of good or bad things.

Because your body reacts to stress, how you deal with stress is a vital part of managing your diabetes. Try to notice when you are feeling stressed. Stress causes your blood sugar to rise and it lowers the insulin in your blood. High blood sugar levels without enough insulin can damage your body.

If you notice when you are feeling stress, you can start to track what is causing stress. Knowing the cause of stress can help you get control of it. A 'stressor' is something that causes stress. There are many different types of stressors. Some stressors include changes in:

- Health
- Relationships
- Work
- Family
- Friendships
- Lifestyle
- Finances

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Change itself can be a stressor. Stress that lasts for weeks or months without a break is called **chronic stress**. Chronic stress leads to palpitations (feeling your heart skip a beat), high blood pressure and more plaque collection in your arteries.

If you feel stressed, talk to your healthcare provider about what can help. Read Section, 'Feel Well' to learn more.

Smoking

Smoking is more of a danger for people with diabetes than others. Smoking raises your blood sugar and damages your arteries. If you have diabetes already, your arteries are at major risk.

There are many resources that can help you reduce how much you smoke and quit. Resources include:

- Nicotine replacement such as patches, gum and candies
- Medicines to lower your withdrawal symptoms and cravings
- Quitting smoking programs online or in person

Talk to your doctor or pharmacist if you smoke. Your healthcare team needs to know you smoke, even if you don't plan to quit.

Summary

It is important that you know your:

- A1c level
- Blood pressure
- LDL (bad) cholesterol level

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Once you know these numbers, talk to your healthcare team about what you need to do to get your A1c, blood pressure and cholesterol within a normal range. Taking action will prevent or delay long-term health problems.

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

You are not alone. Your healthcare team is here to support you with the changes you need to make to manage your diabetes.