On the Road to Living Well with Diabetes

Are you going in the right direction?

TAKE THE QUIZ

Find the answers you need...
On the Road to Living Well with Diabetes

Revision by
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Introduction

Diabetes, Prediabetes, or Low Risk for Diabetes

Where am I?

There are 2 important things to know about diabetes.

1. More and more people in the United States, and around the world, are developing diabetes and pre-diabetes, and are at risk for all of the long-term problems that can come with diabetes.

2. People with diabetes are able to live long and healthy lives, and most can avoid the long-term problems that can come with diabetes. Also, people with pre-diabetes can prevent or delay the onset of diabetes.

The question becomes: “Where are you along the road to living well and what can you do?”

Some of you may already have diabetes, and this booklet will tell you how to avoid the long-term problems of diabetes. A few of you may have diabetes and not know it. You will learn about the A1C test in this booklet. If your A1C result is 6.5% or higher, you may already have diabetes.

Some of you may have pre-diabetes; that is, you have a high risk of developing diabetes in the future. One way to know if you have pre-diabetes is the A1C test. If your A1C result is between 5.7% and 6.4%, you have pre-diabetes. This program will help you find ways to lower your chance of getting diabetes.

If your A1C is below 5.7%, then your chance of getting diabetes is low, but this book can still help you. All of the actions that help people with diabetes and pre-diabetes also help people who want to lower their risk of heart disease and stroke.

The most important thing is to know where you are -- and then decide what to do!
Take Charge

This booklet is for people with diabetes and for people with pre-diabetes. The goal for people in each of these groups is to live long and healthy lives, and we know that this can be achieved by almost everyone who has diabetes or who is at risk for diabetes. We focus on the value of your knowing your important health numbers, taking your diabetes and heart medicines, and thinking about your food and physical activity. We want to help you to be more in charge of your own health.

People with diabetes and people with pre-diabetes can have an increased risk for heart disease. You need to know how well your overall diabetes care is working and you need to know when to take action.

You can take action to prevent diabetes, and to prevent and slow the complications of diabetes.

How do you know if your overall care is working? Should you be worrying about your health, or not? This booklet will tell you about five important tests that will help you decide. Most of them need to be done only once a year. These tests are like smoke alarms in your house — if they detect danger, they warn you that you need to take action. These tests tell you your 5 important health numbers, and give you the long view of your health. These five important test results are:

1. A1C
2. Blood Pressure
3. eGFR
4. LDL Cholesterol
5. Eye Exam Result

Acting on the results can lower your risk for serious problems in the future.

Here’s what you can learn from this booklet:

• What the five tests are and how often they need to be done.
• What the results mean and how to take action.
• How to talk to your healthcare team about these tests.
• How to feel more in charge of your own diabetes care and your health.
For each question, please check one answer that describes you best:

1. **A1C**
   I have an A1C blood test every 3-4 months if I have diabetes, and once a year if I am at risk for diabetes. I know what my last A1C number was and I know what this number means.

   - yes
   - no
   - not sure

2. **Blood Pressure**
   I have my blood pressure checked at least 2-4 times a year and at every visit to my primary care clinic. I know what my last blood pressure numbers were and I know what these numbers mean.

   - yes
   - no
   - not sure

3. **eGFR**
   I have my eGFR checked at least once a year, I know what my last eGFR number was and I know what that number means.

   - yes
   - no
   - not sure

4. **LDL Cholesterol**
   I have an LDL cholesterol test at least once a year. I know what my last LDL cholesterol number was and I know what this number means.

   - yes
   - no
   - not sure

5. **Eye Exam**
   I have a dilated eye exam at least once a year. I know about the results of my last eye exam and I know what these results mean.

   - yes
   - no
   - not sure

Of these 5 questions, how many did you score “yes”? 

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If your total was 5, your score is: **EXCELLENT.** Congratulations. You get all of the five tests done, and you know and understand your results. Even so, this booklet may be useful for you — you can learn even more about these important tests and how to make good use of them.

If your total was 4, your score is: **GOOD.** You get most or all of the five tests done, and you know and understand most of your results.

If your total was 3 or less, your score is: **FAIR.** You get at least some of the tests done, but you still have more work to do. And you probably need to know more about your results and what they mean. This booklet is likely to be a good start for you.

For your information, most people with diabetes and those at risk for diabetes score a total of two or less. In other words, few people really know about these important diabetes tests or have them done.
The A1C test is an important test for people with diabetes. This simple blood test shows your average blood glucose over the last 5-12 weeks. Checking your blood glucose at home shows your blood glucose level right now — like a snapshot — and that’s helpful. But the A1C test gives you a longer view of how well your diabetes care is working.

It tells you about your risk for future problems from your diabetes. It helps you and your healthcare team decide if you need to change your diabetes treatment. By giving you the big picture, the A1C test can be a guide for your diabetes care.

If you are at risk for diabetes, this test can help to tell you if your risk is getting bigger or smaller.

What is the A1C test?

It is a blood test done at your doctor’s office or clinic. The A1C test measures how much glucose is in your red blood cells. The higher your blood glucose levels have been in the last 5-12 weeks, the higher your A1C number will be.

How often should my A1C be checked?

• Every 3–4 months if you have diabetes.
• Once a year if you are at risk for diabetes.
• If your doctor isn’t checking your A1C, be sure to ask why!
What does the test result mean?

For people with diabetes, the general target is less than 7.0%, but your goal might be lower or higher. It depends on your age, the type of diabetes you have, and any other problems you might have. Talk to your healthcare team about setting an A1C goal. If your A1C is higher than your goal, your blood glucose levels have been too high and you need to take action!

If you don’t have diabetes and your A1C is between 5.7% and 6.4%, you have pre-diabetes, and need to think about ways to lower the risk that you will get diabetes.

If you don’t have diabetes, and your A1C is above 6.4%, you should see your healthcare provider to find out if you have developed diabetes.

What kind of action can I take?

Talk with your healthcare team about making an action plan to lower your A1C number.

You can do several things to lower the number:

- Change your diabetes medicines, or take medications you may be skipping.
- Be more active.
- Work out a meal plan that suits you—and use it well!
- Check your blood glucose and use the results to adjust your diabetes care.

The A1C test can help you catch blood glucose problems before they become serious. Lowering your A1C number will help prevent eye, kidney and nerve problems. Every one-point drop reduces your risk by almost half—that’s a big help!

Your A1C number can be your guide to good diabetes care — and to a long and healthy life!
Do you know your blood pressure numbers? These numbers can tell you how hard your blood is pressing against your blood vessel walls. Think of it this way: if you filled a garden hose with more and more water, the pressure would get so high that the hose would burst. The same thing can happen in your body. The pressure against the walls of your blood vessels can rise higher and higher — and you won’t be able to feel it. You are even more likely to have high blood pressure if you have diabetes!

High blood pressure increases your risk for stroke, heart attacks and kidney disease. If you check your blood pressure often, you can catch any problem early and stop it before it can harm your blood vessels.

What is the blood pressure test?

Your healthcare provider will put a blood pressure cuff on your upper arm and inflate it until it is tight. She then lets the air out slowly, and listens with a stethoscope to a blood vessel in your arm. Sometimes they will use an automatic machine to do this. This shows the pressure against the walls of your blood vessels.

How often should my blood pressure be checked?

At least once a year, but it is a good idea to have it checked every time you see your healthcare team. Sometimes people don’t bother checking their blood pressure because they think that they can feel it. This is just not true. You can’t feel high blood pressure.

Blood pressure meters in drugstores and grocery stores are not always dependable, so these don’t really count. Make sure your blood pressure is checked at least yearly by your healthcare team.
What does the test result mean?

Your target is to have your blood pressure below 130/80. Find out your blood pressure number and ask your doctor or nurse to explain what it means. If your top number is higher than 130, or if your bottom number is higher than 80, you and your healthcare team need to take action!

What kind of action can I take?

High blood pressure can be treated. You can do many things to lower your blood pressure:

• Ask your doctor about medicines that can help to lower your blood pressure (and these same medicines can also help your heart and kidneys); take medications that you may be skipping.

• Be more active, especially if you are a couch potato.

• Eat more fruits and vegetables, and be careful about the amount of salt that you eat.

• Find some ways to relax and reduce any stress in your life.

If you have high blood pressure and it is not treated, your heart and arteries could be seriously damaged. By checking your blood pressure often, you will catch any problems before they can do great harm. With changes in lifestyle and medications, you can cut your risk of serious heart problems.
The eGFR test is one of the most important tests in diabetes. It shows how well your kidneys are working. This is important because having diabetes means you are at risk for serious kidney problems. When you have this simple blood test done each year, it will catch any problems early. Proper treatment can stop the problems before they become serious.

What is the eGFR test?
It is a blood test done at your doctor’s office or clinic. The eGFR (or estimated Glomerular Filtration Rate) measures how well your kidneys are doing their job, which is to keep your blood clean and free from toxins and waste.

How often should my eGFR be checked?
At least once a year. If your doctor isn’t checking your eGFR, be sure to ask why!

What does the test result mean?
The target number is 60 or higher. It is important to know your eGFR number, and what that number means.
If your number is lower than 60, you need prompt treatment. Without treatment, your kidneys can be damaged. A number lower than 60 means that you and your healthcare team need to take action!
Many people with diabetes will never have serious kidney problems. But some people do, so it makes sense to find out about them. The yearly eGFR test can catch any kidney problems early, so you can keep them from becoming more serious.

What kind of action can I take?
You can do several things to slow or stop kidney problems, especially if you catch the problems early enough:

- Talk to your doctor about medicines called ACE inhibitors or ARBs. These pills can keep your eGFR level from falling.
- Keep your A1C and blood glucose levels in your target range.
- Keep your blood pressure below 130/80.
The LDL cholesterol test helps you know how well your heart and arteries are working. This is important because having diabetes puts you at high risk for heart attacks and strokes.

To avoid heart problems, you need to keep track of the amount of fat in your blood. The most important fat is cholesterol. Your liver makes cholesterol, and it also comes from food. The two main types of cholesterol are HDL (the “good” kind that protects against heart disease), and LDL (the “bad” kind that can damage your heart).

The LDL in your blood sticks to the walls of the arteries, clogging them up and keeping blood from flowing freely. This can lead to heart attacks, strokes and other problems with blood flow. But treatment can lower LDL cholesterol.

**What is the LDL cholesterol test?**

It is a blood test done at your doctor’s office or clinic. By checking your LDL levels, you can catch problems early and stop them before they can damage your heart.

**How often should my LDL cholesterol be checked?**

At least once a year. Ask your healthcare team if they are doing this test. If your LDL cholesterol is not being checked at least once a year, be sure to ask why!
What does the test result mean?

Your target is to have your LDL cholesterol number less than 100. It is important to know your LDL cholesterol number — and make sure that your doctor explains what the number means. If you have a high LDL level, you need to lower it. Without treatment, your heart and arteries could be seriously damaged. A number higher than 100 means that you and your doctor need to take action!

What kind of action can I take?

You can do several things to lower your LDL cholesterol:

• Ask your doctor if one of the statin medicines could help lower your LDL cholesterol.

• Be more active.

• Eat less saturated fat (meat and dairy products); and eat more healthier fats such as those in olive oil, nuts and fish.

• Keep your blood pressure below 130/80.

By having your LDL cholesterol checked each year, you can catch any problems early. You can take action to keep your heart strong and healthy.
Getting your eyes checked every year is an early warning system that can prevent vision loss. Having diabetes puts you at high risk for serious eye problems. You might have cataracts, glaucoma, or diabetic retinopathy. Any one of these can result in vision loss or blindness. However, early treatment can prevent or stop most of these problems. If you have your eyes examined each year by an experienced eye doctor, your chance of having severe vision problems is very low—less than 1%.

**What happens during an eye exam?**

An eye exam requires special equipment, and an eye doctor to do the exam.

Ask your doctor to suggest an ophthalmologist or another professional who specializes in eyes. During the exam, the doctor will usually put special drops in your eyes. These drops dilate your pupils (make them bigger). This makes it easier for the doctor to see inside your whole eye. The doctor will use several different machines to examine your eyes, looking for any early changes or signs of diabetic eye disease.

**How often should I have an eye exam?**

At least once a year. You might need an exam more often, especially if your doctor has found some changes in your eyes. If you are not having a dilated eye exam each year, ask for one!
What does the test result mean?

If your doctor finds early signs of eye disease, make sure you understand what it means. Your eyes may need treatment. Laser surgery or other surgery, and some types of medicines, can usually stop eye problems before serious damage to your vision occurs. If you have signs of eye disease, talk with your healthcare team about making an action plan!

What kind of action can I take?

You can do several things to prevent, slow or stop diabetic eye disease, especially if you catch the problems early:

• Keep your A1C and blood glucose levels in your target range. Lowering your A1C level can greatly improve the health of your eyes.
• Keep your blood pressure less than 130/80.
• Don’t forget to have a yearly eye exam!

Not too long ago, it was common for people with diabetes to lose their sight. Because of new advances in medicine, this no longer needs to happen. Make sure that you have your eyes checked every year, so any problems can be treated. If you do this, you will greatly lower your risk for serious vision problems.
Did you notice that some of the things you can do to improve your test results are the same for all of the tests? You can take action by becoming more active and by making better food choices. You can stop smoking. You can ask your doctor about medicines. Some of these changes are not easy to make.

**Time for Action**

Actions that I can take to help myself:

- Talk to my doctor
- Take my medicines more regularly
- Make changes in how I eat or exercise
- Other actions ______________

<table>
<thead>
<tr>
<th>The five tests</th>
<th>How often</th>
<th>Usual goals</th>
<th>*My most recent test result:</th>
<th>How am I doing?</th>
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<tbody>
<tr>
<td>A1C Diabetes</td>
<td>Every 3-4 months</td>
<td>Less than 7.0%</td>
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<td>Pre-diabetes</td>
<td>At least once a year</td>
<td>Less than 5.7%</td>
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<td>Blood Pressure</td>
<td>Every time you see your healthcare provider – at least 2–4 times a year</td>
<td>Less than 130/80</td>
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<td>eGFR</td>
<td>At least once a year</td>
<td>60 or over</td>
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<td>LDL Cholesterol</td>
<td>At least once a year</td>
<td>Less than 100</td>
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<tr>
<td>Eye Exam</td>
<td>At least once a year</td>
<td>All clear</td>
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</table>
Talk to your healthcare provider about these tests. Ask about any other tests that you might need. By doing this, you can keep close track of problems before they become serious. You can take action to stay healthy.

*If any of these tests were done as part of a screening program, it is important to remember that they shouldn’t take the place of tests done with a healthcare provider.

### What’s the next step?

I will get this test done…

<table>
<thead>
<tr>
<th>Not yet at goal</th>
<th>I’m not sure</th>
<th>When?</th>
<th>Where?</th>
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## Follow-Up and Stay on the Road

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<th>Test</th>
<th>Usual Goal</th>
<th>My Results</th>
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<td>A1C</td>
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<td>Date</td>
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<td>(every 3-4 months if you have diabetes)</td>
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<td>(at least once a year if you have pre-diabetes)</td>
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Make sure to take this booklet with you when you see your healthcare provider.
Notes:
About Joslin Diabetes Center

Joslin Diabetes Center, dedicated to a world free of diabetes and its complications, is the global leader in diabetes research, care and education. Founded in 1898, Joslin is an independent institution affiliated with Harvard Medical School. Joslin research is at the forefront of discovery aimed at preventing and curing diabetes. Joslin clinic, the nationwide network of Joslin Affiliated Programs, and the hundreds of Joslin educational programs offered each year for clinicians, researchers and patients, enable Joslin to develop, implement and share innovations that immeasurably improve the lives of people with diabetes.

For more information about Joslin, call 1-617-309-2400 or visit www.joslin.org

More Patient Education Materials from Joslin

This book is just one example of the variety of patient information and educational materials available from Joslin.

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