

Chapter 1: Diabetes Overview

Introduction

*Note

The word glucose will be used all through the book instead of the word sugar so it does not get confused with the sugar in food.

This section contains information on:

- how diabetes affects your body
- how food, physical activity, stress management and medicines can help you control your diabetes
- how to use a diabetes management plan.

Diabetes is a lifelong disease that cannot be cured but it can be controlled. Having diabetes means that your body is having problems using the energy from the foods you eat. This energy comes from all foods including carbohydrates (starches and sugars), proteins and fat. After you eat, the food is turned into glucose* that is used by your cells for fuel.

It is important to remember that carbohydrates have the biggest effect on glucose levels. With diabetes, your body has trouble moving the glucose from your blood into your cells. This causes the glucose level in your blood to rise.

Keeping your blood glucose as close to normal as possible can help you feel better and give you more energy. Good control also helps you avoid problems with your eyes, heart, kidneys, nerves and blood vessels.

You and your health care team will work together to find the best ways to control your diabetes. You are the key member of your team, which also includes your health care provider, nurse and specialists. Your team may also include a diabetes educator, dietitian, eye doctor, pharmacist, exercise specialist and others.

Your team members are available to help. If you have questions or concerns about your diabetes or about your health in general, it is important to call your clinic.

You will be making changes to manage your diabetes well. Only you can decide to make the changes. Deciding what changes to make may seem overwhelming. Lasting changes are made by taking small steps. You are not expected to change your whole life overnight.

It is common to feel frustrated. Your health care team can help you as you deal with your feelings. They can also help you when you are planning to make changes. It is important to know that you did not cause your diabetes. An understanding of what causes diabetes is far from complete. Your health care provider, nurse or diabetes educator can talk with you about this.

How Diabetes Affects Your Body

There are several types of diabetes. Type 1, type 2 and gestational diabetes are the three most common types.

- **Type 1:** Your pancreas makes very little or no insulin. Your body needs insulin to move glucose from your blood into your cells for energy.
- **Type 2:** Your pancreas still produces some insulin, but your body does not use it like it should. This is called insulin resistance.
- **Gestational:** Your pancreas does not make the extra insulin that is needed during pregnancy.

When insulin does not work correctly, the glucose from food stays in your blood (instead of moving into your cells). You may have the following symptoms:

- increased thirst
- frequent urination
- less energy
- unexplained weight loss
- dry skin
- blurred vision
- hunger
- frequent yeast infections
- sores that do not heal.

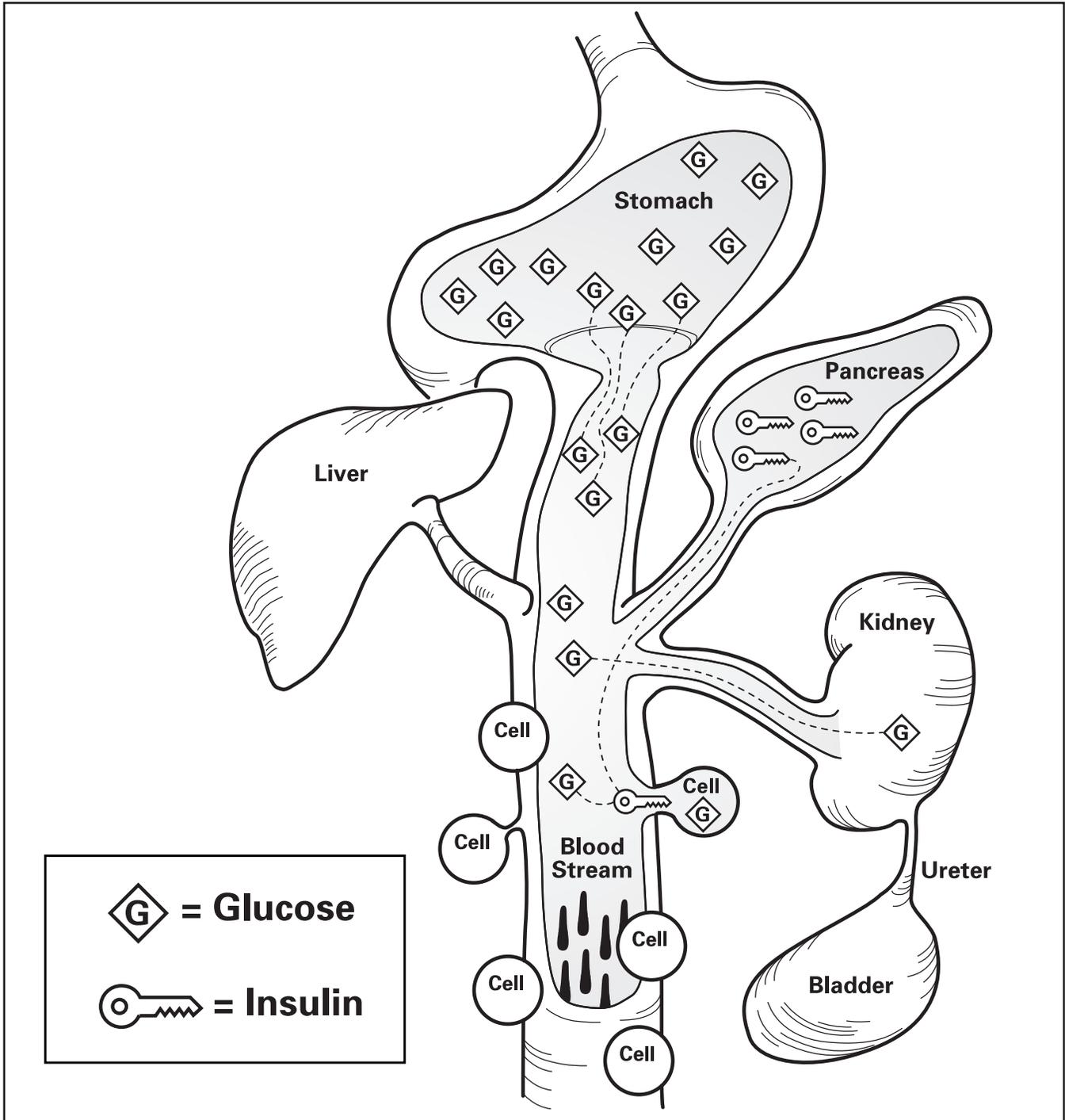
Diagnosing Diabetes

Diabetes is not diagnosed by the symptoms listed on the previous page. You must have a test to measure blood glucose to find out if you have diabetes.

Diagnosis	Tests		A1c
	Fasting	Random	
Diabetes	126 mg/dL or higher on two occasions	200 mg/dL or higher (with symptoms)	6.5 percent or higher
Prediabetes	100 to 125 mg/dL (IFG*: when your blood glucose is too high in the morning)	140 to 199 mg/dL (IGT**: when your blood glucose is too high during the day)	5.7 to 6.4 percent
No diabetes	less than 100 mg/dL	less than 140 mg/dL	5.6 percent or less
*IFG stands for impaired fasting glucose.			
**IGT stands for impaired glucose tolerance.			

How Insulin Works

Insulin acts like a key, opening cells so glucose can enter to provide a source of energy. Insulin is like the key to a car. A car needs fuel to run, but the key provides the spark that releases the fuel. In your body, insulin is used to “spark” the use of glucose as fuel in your cells.



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Insulin helps your body use glucose for energy.

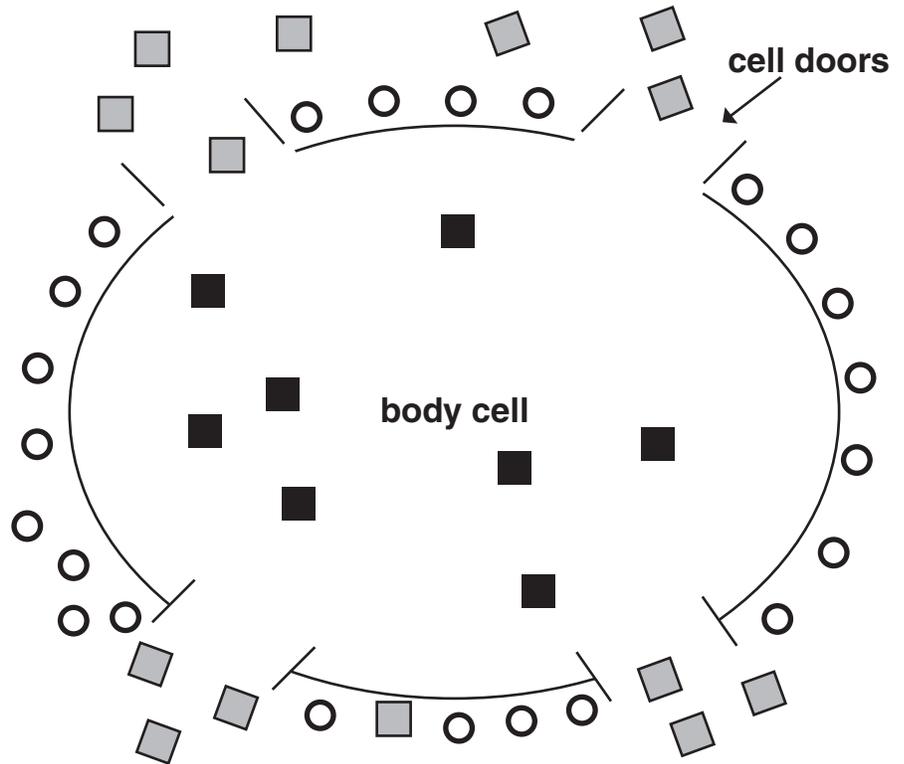
Normal Body Cell

Cell doors are open to allow insulin to bring glucose into the cells to use for energy.

○ insulin in the blood

◻ glucose in the blood

■ glucose in the body cell



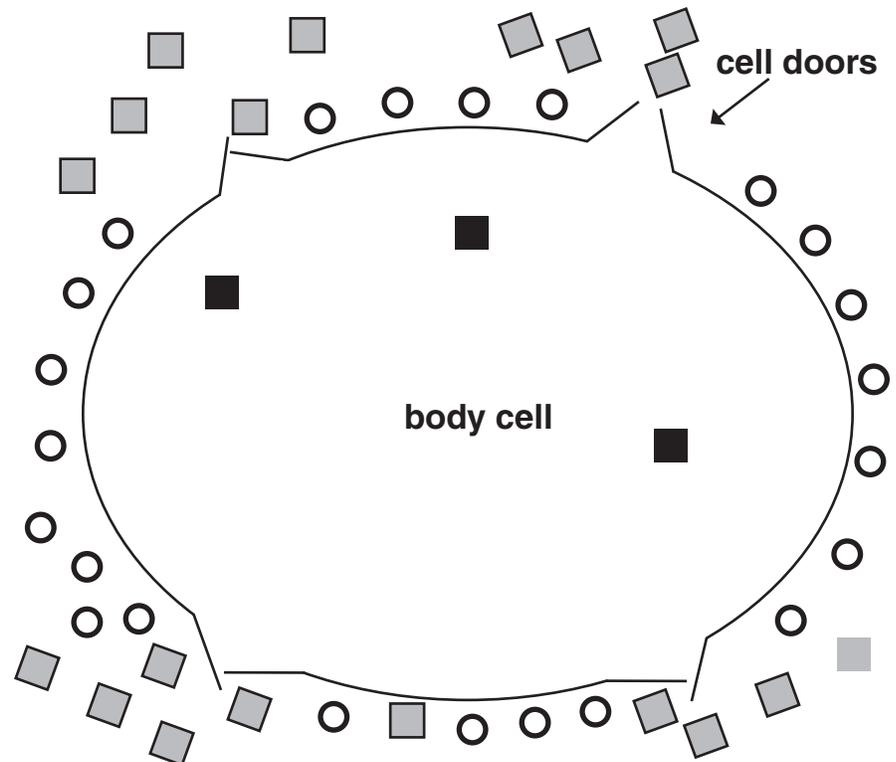
Insulin Resistant Body Cell

Cell doors are shut. The glucose cannot get into the cells so they stay in the bloodstream.

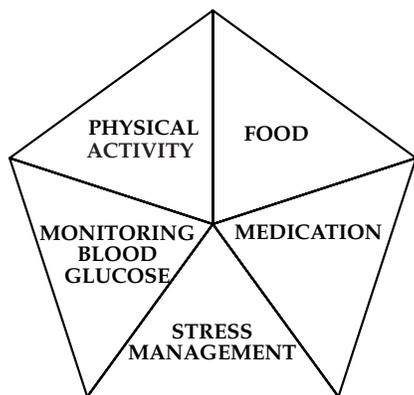
○ insulin in the blood

◻ glucose in the blood

■ glucose in the body cell



Tools for Managing Diabetes



Food, physical activity, stress management, medicine and monitoring blood glucose can help manage your diabetes.

Food

Your body needs food to make glucose that is used for energy. Eating the right foods during the day will help keep your blood glucose in control. Remember that food makes blood glucose go up, so controlling how much, what kind and when you eat can make a difference.

Here are some tips:

- Eat 3 well-balanced meals a day.
- If meals are more than 4 to 5 hours apart, eat a small snack.
- Eat a bedtime snack so your body has enough energy while you sleep.
- Do not skip meals or snacks. Your body will make up for the lack of glucose by “asking” the liver to produce extra glucose. This can make controlling your blood glucose even harder.
- Ask for help if you have questions or need advice about your food choices.

Physical activity

Physical activity is important for everyone, especially if you have diabetes. Being more physically active will help your body use insulin more efficiently.

Check with your health care provider before starting an exercise program.

- Start slowly to avoid injury.
- Choose activities you will enjoy.
- Be physically active every day.

Important

Controlling blood glucose is how you avoid the problems that go along with diabetes. Make sure you and your health care team use the tools in this book to help you.

Stress management

Stress increases blood glucose and can cause problems with your blood glucose control.

- Think about what causes stress for you.
- Try healthy ways to help you cope with stress.
- Ask for help if you need it.

Medicines

There are many medicines that help control blood glucose. Your health care provider will choose the best medicines for you if you need them. It is common for your medicine needs to change.

Monitoring blood glucose

Regular testing will tell you how your food, physical activity and medicines are working. You can use the diabetes management plan in this book for following your blood glucose testing schedule, and recording your medicine, food and exercise recommendations.

Making Changes

You may be excited to make changes in your life. You may also feel upset or have other emotions. It's important to start slowly.

Tip

Your diabetes educator can help you make a plan.

Changing habits can be hard. The changes you make will need to be small and realistic to help you be successful. Asking for support from others may help you change your habits.