



# Meet BodyBuddy™

So you want to know more about diabetes? Here's someone you should meet.

This is BODYBUDDY.™ He's here to show you some of the hows and whys of diabetes.

Just to be clear, BODYBUDDY is not a doctor or a medical expert. So he can't tell you anything about your specific situation. But spend a little time with him, and I think you'll get a better sense of what diabetes is all about.

## Section 1: The Blood Glucose Balancing Act

Before we tackle the subject of diabetes, let's look at what happens in the body of someone who DOESN'T have diabetes.

For many of us, eating is one of the great pleasures of life. But from a practical standpoint, we eat because our bodies need that food for fuel.

When we eat something – whether it's a bagel, a burger or a banana, that food enters the digestive system and goes into the small intestine.

There, it's broken down into all kinds of nutrients, including glucose.

This glucose – an important source of energy for almost all of the body's cells – is absorbed into the blood stream and then dispersed throughout the body.

When this happens, the pancreas senses the rising glucose level and automatically releases the perfect amount of insulin to match the precise amount of glucose that's in the blood.

Then something else remarkable happens. The insulin works almost like a key that unlocks the body's cells, so glucose can be used for fuel.

This process happened so efficiently and instantaneously, that the body's blood glucose levels almost always remain stable. Even in situations that can cause our blood glucose levels to shift, like when we exercise or when we're under stress or even when we're sick. As quickly as our blood glucose levels start to change, the body responds.

The fact is, no matter how we're feeling or what we're doing, the body works like a finely tuned machine to balance our blood glucose levels automatically – 24 hours a day, 365 days a year. We never even need to think about it!

But for people with diabetes, it's not quite so simple. Let's see what happens in the body when things aren't working the way they should.

## Section 2: A Simple Look at Diabetes

There are two main types of diabetes – Type 1 and Type 2. They share the same name. And they both lead to high blood glucose levels that need to be managed or treated.

Beyond that, the two types are really quite different.

Type 1 is the least common kind of diabetes. Out of the 250 million people in the world who have diabetes, less than 10% of them have Type 1. That's just one out of 10.

In Type 1 diabetes, the body's immune system attacks and destroys the cells in the pancreas that produce insulin. So while the pancreas is active in other ways, it produces no insulin at all.

And without insulin, glucose can't be used for energy, and it builds up in the bloodstream – which isn't good. In fact, too much glucose can be toxic.

As a result, people with Type 1 need to take insulin several times a day for the rest of their lives – to replace what their body isn't providing. They also need to pay close attention to what they're eating and how their physical activity is affecting their blood glucose levels.

You may have heard Type 1 called juvenile diabetes, because it's most often diagnosed in children. Today it's simply called Type 1 because people can develop it at any point in their lives.

The other main type of diabetes is Type 2. About 9 out of 10 people who have diabetes have this kind – so it's far more common.

If you have Type 2 diabetes, you need more insulin than the average person because your body is resistant to its effect. And your pancreas can't produce enough insulin to make up for this – so the blood glucose builds up in the bloodstream – which isn't good. In fact, too much blood glucose can be toxic.

Some people are more likely to develop Type 2 than others. It can depend on your ethnic background and your family history. Type 2 diabetes is more common in people who are overweight. And those who live a less active lifestyle.

Even though Type 2 is typically diagnosed in people over 30, you can develop it at any age. Did you know that today, the fastest growing population of people being diagnosed with Type 2 diabetes is overweight teenagers and kids?

No matter what the type, all diabetes is serious and needs your attention.

The good news is, if you take care of yourself — and work closely with your healthcare team to stay on top of your condition — you'll be better able to keep your blood glucose levels closer to the ideal range, which is the key to staying healthy.

So what does it take to manage diabetes? Let's look at each type and find out.

### Section 3: A Closer Look at Type 1

With Type 1 diabetes, the body no longer produces insulin. So the body's automatic process for converting food into fuel doesn't work. And that's a problem.

Let's take a closer look.

When a person with Type 1 diabetes eats something — whether it's a muffin, meatloaf or mango — the food begins its normal journey into the digestive system. When it reaches the small intestine, it's broken down into all kinds of nutrients, including glucose, which are absorbed into the blood stream.

Now normally at this point the pancreas would start releasing insulin. But in people with Type 1 diabetes, this doesn't happen. The body's immune system has destroyed the cells in the pancreas that produce insulin.

Without insulin, the body can't use the glucose for fuel. So glucose starts building up in the bloodstream. And the body's blood glucose levels quickly start to rise.

Without this fuel, the body can't function. People with high blood glucose tend to feel very tired, and maybe even disoriented or sick to their stomach. In fact, most people who have Type 1 diabetes begin to realize something's wrong when they start noticing some obvious symptoms.

Beyond feeling tired, you may be extremely thirsty — no matter how much you drink — and need to go to the bathroom all the time. A very sudden drop in weight is also a tell-tale sign.

If you have these symptoms, you should check with a doctor immediately. A simple test can tell you whether you have Type 1.

So what happens if you do have Type 1 diabetes? Well, for starters, you need to do, on your own, what your brain and pancreas used to do automatically. Since your pancreas isn't producing its own insulin, you'll need to play that role by injecting insulin into your body a few times a day.

Don't worry, the shots aren't as big and scary as you might imagine. These days, insulin needles are tiny and go just under the skin. Instead of shots, some people get their insulin through a small wearable pump. It's just another way of getting your body the insulin it needs.

Keeping those blood glucose levels in balance is really important, for both your daily well-being and your long-term health.

Beyond taking insulin, living with Type 1 has other considerations. You need to think about what you eat, and keep track of the carbohydrate value of the foods you're consuming. Every carbohydrate you eat is broken down into glucose. So by knowing carb values, you'll know which foods raise your blood glucose levels the most.

Your diabetes educator is also a great resource for meal planning.

You also need to be aware of your physical activity. Being active is good, but it typically affects your blood sugar levels, so you need to pay extra attention — and be ready to respond.

You'll also need to test your blood glucose levels frequently to be sure you're staying in a healthy range. By testing, you can see how different foods and activities affect your blood glucose levels. And you'll be able to make the appropriate adjustments to get back into balance.

Living with Type 1 diabetes isn't easy. In fact, a lot of times it's really tough.

But with the right information and support and by working closely with your healthcare team, you'll feel a lot more confident. And hopefully more equipped to live a happy, healthy life.

And that's what HEALTHSIMPLE™ is all about.

## Section 4: A Closer Look at Type 2

Type 2 diabetes is by far the most common type of diabetes.

In most people, there are two factors involved in the development of Type 2 diabetes. First, the body becomes resistant to the effects of insulin. So the pancreas has to secrete more and more insulin to keep blood glucose levels normal. Over time, the pancreas can no longer keep up, and you develop diabetes.

Let's take a closer look.

When a person with Type 2 diabetes eats something — whether it's a salad, a soda or a sandwich — the food begins its normal journey into the digestive system. When it reaches the small intestine, it's broken down into all kinds of nutrients, including glucose, which are absorbed into the blood stream.

Now at this point, things get a little tricky. The pancreas does actually do its job and produces insulin. But the insulin isn't working well enough to allow the glucose out of the bloodstream and into the body's cells, where it can be used as fuel. And as a result, the unused glucose builds up in the bloodstream and the blood glucose levels in the body start to rise.

Having high blood glucose levels can make you feel weak and tired. Sometimes you might notice that your vision gets blurry. But many people don't notice any symptoms at all.

In fact, Type 2 diabetes is often diagnosed during a routine check-up.

If you've been diagnosed with Type 2 diabetes, it's time to take action.

Since your body's insulin isn't able to do its job, you need to help it out. To figure out exactly what you should be doing, talk to your healthcare provider. While you're there, you may want to ask whether there are opportunities to meet with a diabetes educator — either as part of a group or one-on-one.

Your recommended treatment plan will probably include getting more exercise and trying to lose some weight. And your healthcare team might also have you try things like changing your eating habits and counting the carbohydrate values of the foods you eat.

Your doctor might prescribe medication that can help lower your blood glucose levels. Some you take by mouth. Other medications are injected just under the skin. Most people with Type 2 diabetes take more than one blood glucose lowering medication — especially if your blood glucose has been high for many years.

Your team might also have you test your blood glucose levels so you can see how you're doing. Tracking your numbers helps you notice trends — so you can make appropriate adjustments to your treatment plan.

Living with Type 2 diabetes does mean making some lifestyle changes. But they may not be as difficult as you think. Find the people who can advise, encourage and support you.

And remember, HEALTHSIMPLE™ is here to help.

