



A TRUEinsight™ Guide



# The TRUE Guide to Diabetes Care

Important Questions and Informative  
Answers for People With Diabetes

**NIPRO**  
DIAGNOSTICS™

## A Guide to Diabetes Care

You've been diagnosed with type 1 or type 2 diabetes. Knowledge about diabetes and taking a proactive approach to managing it will help to bring you peace of mind and maintain the healthy lifestyle you enjoy.

This TRUEinsight™ Guide is brought to you by Nipro Diagnostics, Inc., manufacturer of the TRUE portfolio of diabetes monitoring products. This guide can answer some questions you may have about diabetes and give you the information you need to confidently manage your diabetes day by day.

This guide is not intended as a comprehensive resource. For all the information you need, please rely on your team of healthcare professionals.



## What is diabetes, and how serious is it?

Diabetes occurs when your body is unable to use food as an energy source. This occurs when the pancreas fails to produce insulin, or the insulin produced is not properly used by the body. Insulin is a hormone — produced by the pancreas — which is needed to transport sugar (glucose) from the bloodstream into the body cells and muscles to be used as energy. When you have diabetes, sugar in the bloodstream can build up to dangerously high levels, because insulin is not available or does not effectively work to transport the sugar into the body cells.

Diabetes is a lifelong disease that affects nearly 23.6 million Americans. Almost one-quarter of these people are unaware that they have the disease. At present, there is no cure for diabetes, but the good news is that it can be treated.

Diabetes is the seventh leading cause of death in the U.S. People with uncontrolled diabetes have a substantially higher risk of developing life-threatening complications. Individuals with diabetes are four times more likely to go blind or have a stroke, and two to four times more likely to have a heart attack. Diabetes is the leading cause of kidney failure, accounting for 44% of new cases. Your diabetes healthcare team can help you develop a treatment plan to control your blood glucose levels and successfully manage your disease.

*Nearly 23.6 million Americans have diabetes. One-quarter are unaware they have the disease.*

## What is the difference between type 1 and type 2 diabetes?

People with **type 1** diabetes produce little or no insulin. Type 1 diabetes is generally diagnosed before the age of 30 years old, although some older adults may be diagnosed. Once a diagnosis is confirmed, people with type 1 diabetes require insulin injections to live.

*By keeping your blood glucose levels within target range, you can reduce the risk of developing complications by at least 50%.*

**Type 2** diabetes is far more common, affecting 90-95% of those diagnosed with diabetes. People with type 2 diabetes may produce insulin, but it isn't enough, or the body can't use it effectively to lower blood glucose levels. Type 2 diabetes is commonly diagnosed after age 40, although there has been a recent increase in diagnosis of people in their 30s. Many people with type 2 diabetes do not know that they have it until they develop serious symptoms or complications.

## What are the most important aspects of good diabetes management?

You will hear the saying, “stay in control.” This is a key guideline that means keeping your diabetes in check and your management plan on course. It refers to all aspects of controlling your disease, from monitoring your blood glucose levels, to daily self care, to regular doctor appointments. We will talk more about each element as we continue.

Here's a quick overview of key areas of diabetes management:

- Take medication if prescribed
- Identify your diabetes healthcare team
- Set and maintain realistic weight goals
- Stay active
- Create a healthy meal plan
- Regularly monitor your blood glucose levels
- Daily self care

## What medications are used to control diabetes?

People with type 1 diabetes require daily insulin injections to control blood glucose levels and prevent the occurrence of long-term complications.

Some people with type 2 diabetes can control blood glucose levels with healthy meal planning and becoming more active. However, there are a variety of medications available that will improve blood glucose control. Your diabetes healthcare team will advise you on what medication will be most effective in managing your diabetes along with a healthy eating plan and an activity program.



## Who should be a part of my diabetes healthcare team?

There are no exact answers, as you may have access to different healthcare professionals than another person. Here are some key members:

### **Doctor**

This may be your primary care physician or you may be referred to a diabetes specialist, also known as an endocrinologist or diabetologist.

### **Nurse practitioner or physician's assistant**

These are professionals who closely work with physicians and are experienced in helping people understand and manage diabetes care.

### **Registered dietitian**

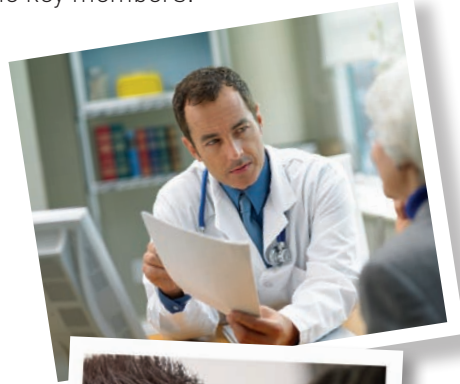
These professionals work with you to develop a meal plan based on your nutritional needs and your overall blood glucose level goals.

### **Certified diabetes educator**

These professionals can be registered nurses or dietitians who have received advanced training and certification in teaching people with diabetes how to live with their disease.

### **Pharmacist**

Many pharmacists are highly knowledgeable about diabetes and especially the medications used to treat the disease. They can also help you to select a blood glucose meter that is accurate, easy to use and affordable.



## Are maintaining realistic weight goals important?

Extreme obesity or being overweight is the number one risk factor for developing type 2 diabetes. In fact, the majority of people with type 2 diabetes are overweight. Excess body fat alters your body's response to insulin. As overweight people lose weight, their body cells respond more effectively to insulin, allowing it to transport the sugar from the bloodstream into the body cells to be used as energy. This results in lowering your blood glucose levels. Your diabetes healthcare team can work with you to determine realistic weight-loss goals and a healthy meal plan that meets your nutritional needs.



## How important is staying active?

Regular activity and exercise are key elements in managing diabetes and improving blood glucose levels. During exercise, your muscles use sugar for energy. This sugar comes from the bloodstream, resulting in lowering blood glucose levels. Exercise also causes your cells to become more sensitive to insulin, which allows insulin to work more efficiently in transporting sugar into the cells. Regular exercise along with healthy meal planning can reduce a person's need for diabetes medications. In fact, many people with type 2 diabetes can manage their blood glucose levels by meal planning and exercise, alone. There are also other health benefits of exercise that include reducing your risk of cardiovascular disease, decreasing or maintaining your weight, lowering your blood pressure, and improving your overall muscle strength and physical fitness. Before you start an exercise plan, check with your diabetes healthcare team. Discuss your activity plan and set realistic goals for yourself.



*Regular exercise and healthy meal planning can reduce the need for blood glucose lowering medications.*

## What does a healthy meal plan mean for people with diabetes?

Work with your diabetes healthcare team to formulate the best plan for you. Meal planning is important in regulating blood glucose levels. The basics of meal planning include selecting the right foods, the right portions and the right times to eat. It is important for you to choose foods that you like, that are good for you and that will fit into your meal planning goals. If your goal is to lose weight, then you will need to make low calorie food choices and monitor your portion sizes. If you have other health conditions, then your meal planning may have to include foods that are low in salt and/or low in cholesterol. When making meal plan choices it is important to eat a variety of foods from all the food groups so that you get the right amounts of vitamins and nutrients. The more conscientious and proactive you are and the closer you keep to your target ranges, the lower your risk of developing complications.



# How can I avoid complications?

The most important goal for managing your diabetes is keeping blood glucose levels in tight control. Research has repeatedly proven that people with diabetes can avoid or delay the onset of complications by controlling blood glucose levels. Your diabetes healthcare team will work with you to develop a management plan that will include a target range for your blood glucose levels. Frequent monitoring of blood glucose levels will help you determine if your management plan is working and your blood glucose levels are within your target range. By keeping blood glucose levels within your target range, you can reduce the risk of developing complications.

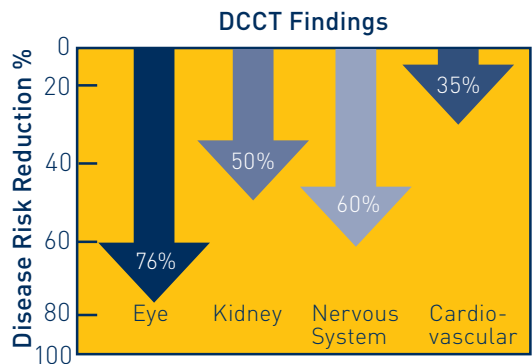
# How does tightly controlling my blood glucose levels benefit me?

Most importantly, maintaining your blood glucose levels as close to normal as possible can delay or prevent the occurrence of major complications of diabetes and can add years to your life.

A landmark study (the DCCT – Diabetes Control and Complications Trial) tested two control groups of people with diabetes. One group received intensive therapy to achieve tight control – taking more frequent insulin injections, testing blood glucose levels four to seven times per day, adjusting insulin dosages based on test results, regulating eating habits, and exercising. The second group underwent conventional treatment with no specific program to achieve tight control.

The results of the study demonstrated that the group that achieved tight control reduced the risk of developing complications of the nervous system, kidneys and eyes by as much as 76% and reduced the risk of developing cardiovascular complications by 35%.

There have been more studies that have also proven the benefits of tight control in reducing the risk of complications.



**Bottom line:** maintaining tighter control of your blood glucose levels is directly related to significant, life enhancing (even extending) benefits. The more conscientious and proactive you are and the closer you keep to your target ranges, the lower your risk of developing complications.

## Why and how should I monitor my diabetes?

First, it is important to monitor your blood glucose levels to see if your treatment plan is working and your blood glucose levels are in your target range. If your blood glucose levels are not in your range, then you will need to meet with a member of your diabetes healthcare team to determine what may be causing your blood glucose levels to be out of your target range. Some people are worried that testing will “take over” their lives, but thanks to the improvements made in current blood glucose monitoring systems, this is no longer the case.

In order to test your blood glucose levels you will need to purchase a blood glucose meter at your local pharmacy or through a mail-order company. You will also need the appropriate test strips, a lancing device, and lancets.

A lancing device is a pen-like product that holds the lancet. The lancet is the small needle that pricks a finger to obtain a drop of blood.

With most systems, you will prick your finger to obtain a drop of blood, place the blood on the test strip target area, and the blood glucose reading is displayed on the meter.

## How often should I test my blood glucose levels?

Testing frequency is determined by you and your diabetes healthcare team. Individuals with type 1 diabetes may test up to four to six times per day, and those with type 2 may test one or two times per day. It is recommended to test at different times per day so you get a better picture of your overall glucose control.

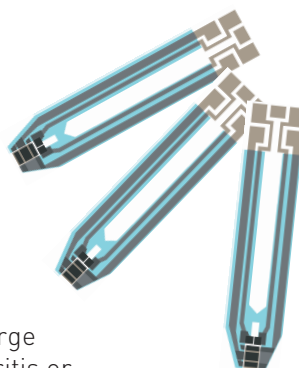


*Thanks to recent blood glucose monitoring improvements, people no longer have to worry about testing "taking over" their lives.*



## How do I select a blood glucose monitoring system?

Consult with your pharmacist to select a system that is accurate, easy to use and affordable. Accuracy is important in selecting a meter. Proper testing technique can affect the accuracy of your blood glucose results. Make sure you select a meter that is easy for you to use.



For ease of use, consider selecting a system with a large display that is easy to read. For people who have arthritis or limited dexterity, a comfortably-sized meter with conveniently sized test strips may be easier to handle. If you are on the go and frequently test, then you may choose a smaller, more convenient meter that offers a fast test time. Other things to consider when selecting a meter are ease of test strip coding, memory features, and data downloading features.

It is important that you can afford your testing supplies. Some test strips cost up to \$40.00 for a box of 50 test strips. If you are frequently testing, then this cost can become significant. There are systems available that are more cost-effective. Choose the one that will best meet your needs and fit into your budget.

*Accuracy, ease of use and affordability are important when selecting a blood glucose monitoring system.*

## Who pays for blood glucose monitoring products?

This depends on what type of medical insurance you have. Most insurance companies pay for blood glucose monitoring products. They may or may not require you to use a specific brand. If you do not have medical coverage for blood glucose monitoring products, then your pharmacist can help you choose a system that is accurate, easy to use, and affordable.

## What else can I do for myself?

Diabetes is a lifelong illness. The majority of the care will be self care, in terms of the decisions and choices you will make every day. Guidelines for good diabetes self care are listed below.



**Get a yearly physical exam** – your doctor can perform yearly blood tests



**Have an annual eye exam** – diabetes is the leading cause of blindness; get your eyes checked before any damage occurs



**Regularly visit your dentist** – high blood glucose levels can affect the ability of your immune system to fight oral bacteria and viruses



**Keep up-to-date on vaccinations** – diabetes can weaken your immune system; check with your doctor about being vaccinated against influenza and/or pneumonia



**Take care of your feet** – diabetes can damage nerves in your feet and reduce blood flow; talk to your doctor about how to examine your feet



**Don't smoke** – smokers with diabetes are three times more likely than non-smokers with diabetes to die of heart disease or stroke



**Monitor your blood pressure** – between 35-75% of all complications associated with diabetes can be attributed to high blood pressure



**Effectively manage stress** – stress can lead to being rushed and not taking the time to effectively manage your diabetes



**Carry a MedicAlert® Card and identification** – this will alert others that you have diabetes in case of an emergency



**Check before taking over-the-counter medications** – ask your pharmacist about the right medications to take; sugar-free and alcohol-free medications are available for people with diabetes



**Utilize all the resources at your disposal** – along with your diabetes healthcare team, there are many resources available to learn about diabetes management



**For more information  
about diabetes visit  
[www.niprodiagnostics.com](http://www.niprodiagnostics.com)**

Contact your insurance company or local diabetes association to find out if you qualify to receive diabetes self-management education. Remember, the more you learn about diabetes the better you will be able to understand and manage your daily self-care program.

*Below are some references for additional information about diabetes.*



**American Association of  
Diabetes Educators**

1-800-TEAM-UP-4  
[www.aadenet.org](http://www.aadenet.org)

**American Diabetes  
Association**

1-800-342-2383  
[www.diabetes.org](http://www.diabetes.org)

**National Institute of  
Diabetes and  
Digestive and Kidney  
Diseases, National  
Diabetes Information  
Clearinghouse**

1-800-860-8747  
[www.niddk.nih.gov](http://www.niddk.nih.gov)

**Juvenile Diabetes Research  
Foundation International**

1-800-533-2873  
[www.jdrf.org](http://www.jdrf.org)

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