

Endocrinology & Metabolism Institute

# Diabetes Center



Care and Learning for Life

# You've just been diagnosed with diabetes...



Take your first step toward living a long and healthy life with diabetes by visiting the Diabetes Center established by the Cleveland Clinic Endocrinology & Metabolism Institute. In our beautifully designed freestanding facility, you will see endocrinologists and certified diabetes educators, nurse practitioners and registered dietitians with special expertise in diabetes care, teaching and research. With our dedicated staff, you won't have to wait for an appointment. And you will appreciate our easy-access parking.

# what next?

## You are not alone

Diabetes, a chronic disorder of glucose (blood sugar) metabolism, is a growing problem. Each year in this country, 1.6 million people aged 20 and above are diagnosed with the condition. Ninety to 95 percent are diagnosed with type 2 diabetes; 5 to 10 percent are diagnosed with type 1 diabetes.

In both types of diabetes, insulin — a hormone normally secreted by the pancreas, a large abdominal gland — is not doing its job. Insulin is supposed to convert the starches and sugars we eat into glucose that our bodies either use immediately or store as fuel for the cells.

- In type 2 diabetes, the pancreas produces too little insulin; additionally, the body responds poorly to the insulin that is made. Type 2 diabetes is usually diagnosed in adulthood or in overweight adolescents. It is more common among the elderly, and among African Americans, Native Americans, and those of Hispanic or Asian descent.
- In type 1 diabetes, the pancreas makes almost no insulin at all. Type 1 diabetes is most commonly diagnosed in children, adolescents and young adults.

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## Start with expert guidance

Once you learn that you will be living with diabetes, an endocrinologist is well-equipped to start you off on the right foot. Endocrinologists specialize in disorders that affect hormone production and action, like diabetes. They know how best to get blood glucose levels under control.

The importance of early, expert intervention has become crystal clear. Studies now show that establishing good blood glucose control is most effective in newly diagnosed diabetes patients. Controlling high blood pressure and controlling high cholesterol are equally important — as are paying attention to diet and getting regular exercise. Endocrinologists can be of great service to you in this regard.

Consulting an endocrinologist at the start of diabetes to prevent devastating complications down the road is similar to seeing a cardiologist promptly to treat coronary artery disease and reduce risks of future heart attack. Yet many diabetic patients wait five, 10 or even 15 years after their diagnosis to see an endocrinologist. At that point, they may have developed complications that early blood glucose control could have helped to prevent.

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## Endocrinologists partner with primary doctors

If you have type 2 diabetes, it makes sense to see an endocrinologist for a relatively brief period of time to establish solid blood glucose control — and to return for annual “tune-ups” of diabetes medications and insulin. But if your blood glucose is very high or if you have other diabetes-related health issues, you will need more frequent checkups.

Endocrinologists partner with primary care physicians to ensure that type 2 diabetes remains well-controlled between visits. Your primary care doctor will take care of your general health needs and check that you stay on track with your blood glucose goals. Your doctor and the Diabetes Center will monitor you for potential signs of diabetes-related complications, such as protein in the kidney, high blood pressure or increased cholesterol.

If you have type 1 diabetes, you are more likely to need regular visits with an endocrinologist. Your endocrinologist will advise you about your insulin regimen to help you achieve good blood glucose control with minimum risk of low blood sugar (hypoglycemia).





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## What our Diabetes Center offers

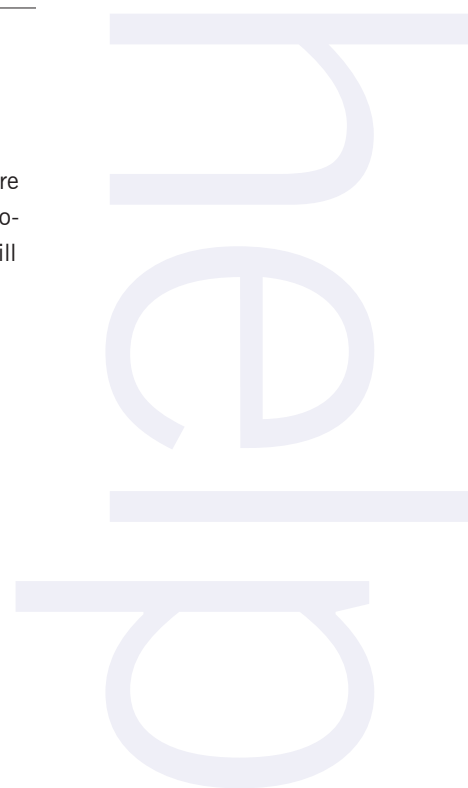
The endocrinologists and diabetes educators in our center will arm you with the latest information about the many treatment options you have, and they will be available to manage your care.

**1. Expertise with the latest medications.** Fifteen years ago, only two classes of diabetes drugs were available to treat diabetes. Today, there are 10 classes, including synthetic insulin. Our endocrinologists are knowledgeable about all of these options and can help you select the medications that will best control your blood glucose. New medications attack diabetes from multiple directions, by:

- stimulating insulin production
- reducing the amount of glucose released by the liver
- lowering blood glucose by blocking the breakdown of starch or other compounds
- helping insulin to work better
- decreasing the urge to overeat

Our endocrinologists are also pleased to offer qualifying patients access to multicenter trials of diabetes drugs that are now in development.

**2. Honing of insulin regimens.** At our Diabetes Center, you will receive expert guidance from our endocrinologists, nurse practitioners and diabetes educators, who have vast experience initiating and fine-tuning insulin regimens. Every patient has different needs. Some patients with diabetes may never require insulin at all. Others may need long-acting insulin once a day, rapid-acting insulin several times a day, or something in between.



The Diabetes Center will work with you to arrive at the treatment plan that is best for you. If you do need insulin, our diabetes educators will teach you how to inject it under the skin using very fine needles. Insulin must be injected because if swallowed as a pill, insulin would be digested before it had a chance to do its job.

**3. Teaching about insulin pumps.** If you have type 1 diabetes, getting insulin delivered continuously through a subcutaneous infusion pump is a good option; this type of treatment most closely mimics the way a normal pancreas controls glucose. Occasionally, insulin pump treatment is appropriate for type 2 diabetes as well. Our educators will show you the variety of insulin pumps and infusion systems available to help you make an informed choice about the right pump for you.

**4. Continuous glucose monitoring by patients.** We offer access to advanced technology, such as continuous glucose monitors that we will teach you to use to synchronize your glucose response to meals whenever they are eaten. After wearing the monitor for up to five days, your data can be downloaded to graph your blood glucose trends and adjust your insulin dose or insulin pump settings.

**5. Diabetes education (personal consultations and classes).** Uncontrolled diabetes can lead to severe health consequences, including loss of vision, kidney failure, heart attack, stroke and loss of limbs. Yet in our Diabetes Center, you will learn that a diagnosis of diabetes is nothing to fear.

Knowledge is power, and that is what our diabetes educators — registered dietitians, clinical nurse practitioners and registered nurses, who are all registered by the American Diabetes Association — offer. Research shows that patients involved in managing their own diabetes have the best long-term control. Our diabetes educators will teach you to make the right choices about diet and exercise. They will show you how to monitor glucose levels, read food labels and plan meals so that your glucose remains stable. They will teach you to be vigilant for early signs of complications.

**Our Comprehensive Diabetes Classes (three sessions offered every month) cover:**

- blood glucose monitoring
- healthy eating
- staying active
- taking medications
- reducing risks of complications
- healthy coping skills

**Our Insulin Pump Classes (offered once a month) provide hands-on learning and cover:**

- benefits and limitations of insulin pumps
- types of insulin pumps available
- types of infusion sets offered

A recent Cleveland Clinic study found that patients showed significant improvement in blood glucose levels three months and six months after attending diabetes education classes in our Endocrinology & Metabolism Institute, compared with patients referred for education who did not attend.

**6. Retinal screening.** Fundus photography is used to screen patients for eye disorders such as diabetic retinopathy. This simple office exam produces high-resolution images that make early diagnosis and intervention possible to preserve vision. Medications and dilation of the pupils are not required.

**7. Management of diabetes during pregnancy.** Whether you have diabetes and become pregnant or you develop gestational diabetes, our endocrinologists specializing in diabetes and pregnancy can guide you safely through this important time of life. Our diabetes educators and dietitians are also here to help.



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### Access to expertise across Cleveland Clinic

Cleveland Clinic is continually ranked among the top 10 hospitals nationwide in Diabetes & Endocrinology by *U.S. News & World Report*. Our ranking in the annual “Best Hospitals” *U.S. News* survey is the best in Ohio.

Our endocrinologists work closely with your primary care physician as well as with specialists in Cleveland Clinic’s nationally ranked programs in Heart & Heart Surgery, Kidney Disorders, Neurology & Neurosurgery, Ophthalmology, Orthopaedics and Urology — all specialties involved in diabetes care.

For example, if cracks or sores are discovered on your feet or legs, our endocrinologists will make sure that an appointment is scheduled for you with a podiatrist at the Foot Clinic of the renowned Orthopaedic & Rheumatologic Institute on our main campus. This is critical to avoid complications of diabetic neuropathy (nerve damage, commonly affecting the lower limbs).

You can feel confident that if you need to see a specialist in one of Cleveland Clinic’s other institutes, our Diabetes Center will make that happen. We will schedule any appointments you may need across the Cleveland Clinic system.

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### Benefits of an electronic medical record

What makes it easy is Cleveland Clinic’s leadership in adopting the electronic medical record. Wherever you are referred within our system, your medical record and test or scan results will be there waiting for you so that other specialists you see will have them at their fingertips.

Our electronic medical record system also makes it possible for your own primary care doctor to sign up for online reports of your treatment progress at Cleveland Clinic through a service called **DrConnect**.

› Conveniently, we offer screening retinal eye exams in our Diabetes Center. Images are interpreted by Cole Eye Institute ophthalmologists. If early signs of diabetic retinopathy (vision-threatening blood vessel damage) are found, you will be referred promptly to a retinal specialist.

## Diabetes Q & A

### **Why should I see an endocrinologist right away?**

Diabetes is a disease that naturally progresses over time as cells in the pancreas gradually stop secreting insulin. Establishing early, “tight” control of blood sugar (glucose) levels will help you avoid potentially devastating long-term complications of diabetes. High levels of glucose can lead to blood vessel and nerve damage that may lead to vision loss, kidney failure, loss of limb, heart disease or stroke.

### **Why do I have to monitor glucose?**

Monitoring your blood glucose is helpful in preventing the complications of diabetes, especially if you are being treated with insulin. Monitoring blood glucose is essential if you are on insulin treatment to help you achieve good control while reducing your risk of low blood sugar (hypoglycemia). If you are not being treated with insulin, monitoring blood glucose is still helpful, although the frequency of monitoring may be less intense.

### **How can a diabetes educator help?**

Diabetes educators are specially trained to help you reach the blood glucose goals that you and your endocrinologist have agreed on. They will teach you how to check glucose levels throughout the day and how to adjust your insulin dose when levels are too high or too low.

Diabetes educators can explain how exercise and diet impact your blood glucose levels and your risks of developing complications. They will teach you to be alert for early warning signs of any problems, and if you need insulin, they can show you how to manage insulin injections or an insulin pump.

### **Do I have to follow a strict diet?**

You can eat the same diet that many health-conscious individuals without diabetes now follow, as long as your diabetes remains well-controlled. Your diet should emphasize vegetables, fruit, whole grains, lean meats, vegetable oils and low-fat dairy products. It is best to avoid saturated fats because they further increase your risk of heart disease.





### Can I still eat sweets?

You can eat carbohydrates, including sugar, as long as you're careful about portion sizes. Most doctors recommend 45 to 60 grams of carbohydrate per meal, depending on your calorie needs. A registered dietitian/diabetes educator can teach you how to calculate the "carbs" in every meal and to plan meals so that you spread the carbs you eat throughout the day. Doing this helps to keep your blood glucose levels stable.



### Will I have to take insulin?

If you have type 1 diabetes, insulin treatment is absolutely necessary. If you are newly diagnosed with type 2 diabetes and your blood glucose levels are very high, an endocrinologist may prescribe insulin to quickly lower your glucose levels before switching to other medications.

In type 2 diabetes, adopting a healthy diet and exercise regimen early on may allow your pancreas to function well enough to let you come off diabetes medications. However, after 15 or 20 years, many people with type 2 diabetes can no longer make enough insulin and will benefit from insulin injections. Fortunately, the needles are so small and thin that injections are virtually painless. In fact, most insulins are now available in handy "pen" devices that make injection simple.

### Does insulin make you gain weight?

Insulin itself will not cause weight gain. However, some weight gain is likely when very high blood glucose levels are reduced to near-normal over a period of weeks or months. That's because your body stops losing so much glucose in the urine. Also, if insulin treatment makes your blood glucose drop below a certain level (about 70 mg/dL), it triggers a desire to eat that may cause weight gain.

Many medications now available for type 2 diabetes avoid this problem, and some may actually help with weight loss. If you require insulin, you can work closely with your doctor and diabetes educator to increase your activity level — and to stay within your calorie and carbohydrate limits — to avoid gaining weight.

### Are insulin pumps for everyone?

Insulin pumps are most appropriate for patients with type 1 diabetes because they continuously infuse insulin. People with type 1 diabetes make no insulin at all and cannot wait for injected insulin to take effect.

For people with type 2 diabetes who require insulin, injecting it once, twice or up to four times a day is usually sufficient to control blood glucose levels.

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## Locations

### Where you can see a Cleveland Clinic endocrinologist

Because patients with diabetes need access to high-quality care that is convenient to their homes, endocrinologists from Cleveland Clinic's Endocrinology & Metabolism Institute offer care across Greater Cleveland:

**Diabetes Center, Endocrinology & Metabolic Institute**  
10685 Carnegie Ave.  
Cleveland, Ohio 44106  
216.444.6568 or 800.223.2273,  
ext. 46568

**Department of Endocrinology, Diabetes & Metabolism**  
Cleveland Clinic/Desk F20  
9500 Euclid Ave.  
Cleveland, Ohio 44195  
216.444.6568 or 800.223.2273,  
ext. 46568

**Ashtabula County Medical Center**  
2420 Lake Ave.  
Ashtabula, Ohio 44004  
440.997.6910

**Huron Hospital**  
13951 Terrace Road  
East Cleveland, Ohio 44112  
216.761.3300

**Independence Family Health Center**  
5001 Rockside Road  
Crown Center II  
Independence, Ohio 44131  
216.986.4000

**Lakewood Hospital**  
Professional Building  
14601 Detroit Road  
Lakewood, Ohio 44107  
216.529.5300

**Medina Endocrinology Office**  
4087 Medina Road, Suite 400  
Medina, Ohio 44256  
330.725.3713

**Solon Family Health Center**  
29800 Bainbridge Road  
Solon, Ohio 44139  
440.519.6800

**South Pointe Charles Miner Medical Building**  
20600 Harvard Road  
Warrensville Heights, Ohio 44122  
216.295.1010

**Strongsville Family Health & Surgery Center**  
16761 SouthPark Center  
Strongsville, Ohio 44136  
440.878.2500

**Twinsburg Medical Offices**  
2365 Edison Blvd.  
Twinsburg, Ohio 44087  
330.888.4000

**Willoughby Hills Family Health Center**  
2570 SOM Center Road  
Willoughby Hills, Ohio 44094  
440.943.2500

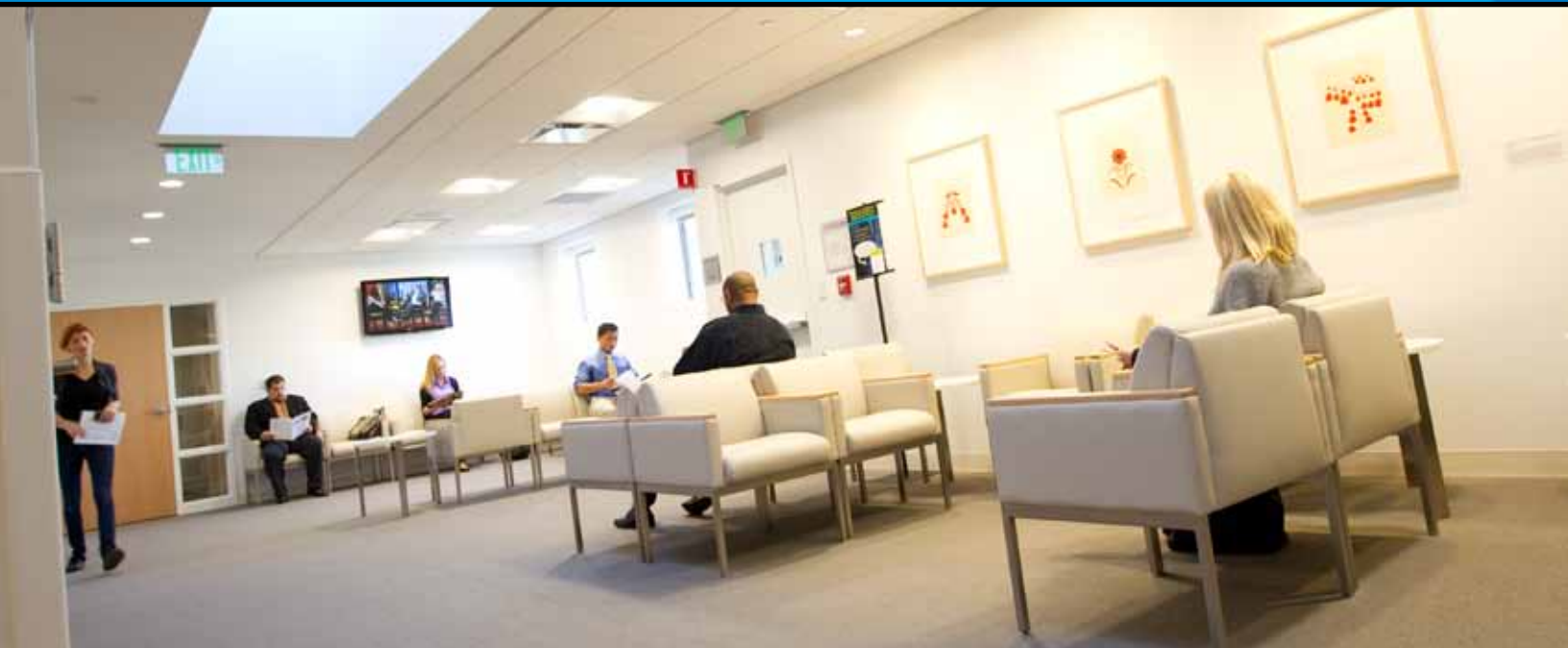
**Wooster Family Health Center**  
721 East Milltown Road  
Wooster, Ohio 44691  
330.287.4690

**Cleveland Clinic Florida**  
2950 Cleveland Clinic Blvd.  
Weston, Fla. 33331  
877.463.2010

To schedule a class or make an appointment with an endocrinologist or diabetes educator in our Diabetes Center, please call **216.444.6568** or **800.223.2273**, ext. **46568**, or visit [clevelandclinic.org/endocrinology](https://clevelandclinic.org/endocrinology).

# Diabetes Center

With its soothing white walls and skylights, our Diabetes Center is an ideal place to come for visits with an endocrinologist or diabetes educator or to attend a class.



## Convenient Parking and Access to Shuttle Transport

Ample surface parking is available directly outside of the Diabetes Center. If you have multiple appointments on the Cleveland Clinic main campus, shuttle transport is available to and from the Diabetes Center. The “White Line” shuttle makes frequent trips. Call 216.444.8484 (or ext. 48484 from a house phone) for service.



9500 Euclid Avenue, Cleveland, OH 44195

The Endocrinology & Metabolism Institute, one of more than 20 institutes at Cleveland Clinic, offers specialized centers of care for diabetes, and thyroid, pituitary and weight disorders. Our surgeons perform the most endocrine surgeries in the region, and the bariatrics program is designated a Bariatric Surgery Center of Excellence by the American Society for Metabolic and Bariatric Surgery. Cleveland Clinic is a nonprofit, multispecialty academic medical center, consistently ranked among the top hospitals in America by *U.S. News & World Report*. Founded in 1921, it is dedicated to providing quality specialized care and includes an outpatient clinic, a hospital with more than 1,300 staffed beds, an education institute and a research institute.

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