

# Oral Glucose Tolerance Test (OGTT) for Patients with Cystic Fibrosis

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## What is cystic fibrosis-related diabetes (CFRD)?

- **Cystic fibrosis-related diabetes (CFRD)** is a type of diabetes and a part of disease progression that affects some people with cystic fibrosis (CF). It is one of the most common complications (medical issues) seen in people with CF.
- **Diabetes** is a disease caused by too much sugar in your blood. A hormone called **insulin**, made in the pancreas, helps manage blood sugar levels by changing sugar, called **glucose**, into energy for your body. People with CF may have trouble making insulin or using the insulin their body makes. This could lead to CFRD.
- If left untreated, high blood sugar from CFRD can lead to weight loss, not being able to gain weight, and problems with lung function. If you have high blood sugar for a long time, it can also cause problems with your nerves, eyes, heart, and kidneys. It is important to get tested for CFRD and manage your blood sugar levels.

## What is an oral glucose tolerance test (OGTT)?

- We use an **oral glucose tolerance test (OGTT)** to test you for CFRD. The blood test measures how well your body removes glucose from the blood.
- The Cystic Fibrosis Foundation recommends that everyone who has CF and who hasn't been diagnosed with CFRD get an OGTT every year after the age of 10 years old.

## How do I get ready for my OGTT?

- You don't need to set up an appointment for an OGTT. Your dietitian will discuss the lab locations and options with you. You can get your OGTT at the time and location that works best for you.
  - If you get your test at an off-site (non-Michigan Medicine) location, you will need a special test order from us to take to the lab.
- Do not eat or exercise for at least 8 hours before your OGTT.
- Do not drink anything except for plain, unflavored water for at least 8 hours before your OGTT.
- You should continue to take your usual morning medications and do your breathing treatments before your OGTT.
  - If you are on a modulator medication (like Trikafta®, Symdeko®, Orkambi®, or Kalydeco®), you can take it with 1 teaspoon of vegetable oil or wait to take it until after you complete your OGTT test.
- Only do an OGTT if you're feeling well. Do not have an OGTT if you have symptoms of an exacerbation (an increase in CF symptoms like coughing, fatigue, etc.), or if you're on treatment for an exacerbation (for example, don't do an OGTT if you're on antibiotics or steroids).

## What happens during the OGTT?

The whole test will take 2-3 hours.

1. First, a lab technician will take a sample of blood from your arm.
2. Next, a lab technician will give you a sugary liquid to drink.
  - During the test, you can also drink water or eat ice, but you cannot eat or drink anything else.
  - After you finish drinking the sugary liquid, we will wait 2 hours before taking another blood sample. You're welcome to leave the lab during this time.

3. After 2 hours, the lab technician will take another blood sample to test your glucose level again. We recommend that you bring something to eat after your test is finished.

### **What do my OGTT results mean?**

- If your glucose levels from your OGTT are equal to or higher than 200 mg/dL, we will refer you to our CF endocrinologist for more testing.
- If your glucose levels are less than 200mg/dL, we will continue to monitor your OGTT every year.

### **What do I do if I'm diagnosed with CFRD?**

- We recommend that people with CFRD be seen by our endocrinology team. We will give you a referral to Endocrinology to set up an appointment, and we will work closely with our endocrinology team to schedule you in a reasonable amount of time. If you are unable to get an endocrinology appointment within 2 months, please contact the CF program coordinator at (734) 998-6067.
- Generally, as a next step in managing CFRD, the endocrinologist will help you with blood glucose monitoring (checking your blood sugar levels) at home.
- We want to reassure you that, while a new diagnosis can be overwhelming and stressful, this is not an emergency medical situation.
  - Signs of a severe case of CFRD include extreme tiredness, increased hunger, feeling extremely thirsty, peeing often, or blurred vision. If you have any of these signs or symptoms, please contact our clinic as soon as possible at (734) 936-5549.

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