Screening for Cystic Fibrosis Related Diabetes (CFRD) using the Oral Glucose Tolerance Test

What is cystic fibrosis related diabetes (CFRD)?
CFRD occurs when people with cystic fibrosis (CF) have a unique type of diabetes. CFRD is not the same as diabetes found in people who do not have CF. CFRD is a mix of resisting insulin and not having enough of it in the body. Therefore, the finding and treating of CFRD is not quite like that of other types of diabetes.

What are the common symptoms of CFRD?
- Weight loss or trouble maintaining weight
- Unexplained decrease in lung function
- Excess fatigue
- Frequent urination
- Frequent drinking

How common is CFRD?
CFRD is common in people with CF, even more so as they get older. It occurs in about 20% of adolescents and 40-50% of adults.

How is CFRD diagnosed?
First, a blood glucose level will be drawn. This is a blood test that is done without paying attention to the time of day or to when a meal was last eaten. If this level is less than 126 mg/dl, it is not likely that a person has diabetes. The CF clinical care guidelines suggest this level should be checked yearly.

Second, an oral glucose tolerance test (OGTT) will be performed every year starting at the age of 10 years. The test should be performed during a stable period of health, at least 6 weeks from a recent respiratory infection. The OGTT may also be performed on people younger than 10 years if the health care provider suspects CFRD. A person must have nothing to eat or drink for at least 8 hours before this test is done. Water is permitted.

To do an OGTT, blood is drawn to measure the “baseline” glucose level. Then the person will be asked to drink a 10 ounce flavored drink (Glucola) over 5-10 minutes. The blood sugar will be measured again two hours later. Any person who has a blood sugar level greater than 200mg/dL at two hours or a blood sugar drawn at baseline greater than 126 mg/dL, has a positive test and will require a repeat test at least six weeks apart from the first. If both of these tests are positive, a diagnosis of CFRD is made. Insulin treatment should be prescribed.

When and where should screening be done for CFRD?
Screening for CFRD should occur every year starting at the age of 10 years. This test may be performed as part of your routine clinic visit at your CF Center, or if you prefer, the test may be performed closer to your home.

If you have any questions or concerns, call the CF Center at 608-263-6420.

The toll free number is 1-800-323-8942. Ask for the CF Center.