

# NIH Clinical Center Patient Education Materials

## Frequently sampled IV glucose/insulin tolerance test

A frequently sampled intravenous (IV) glucose and insulin tolerance test finds out how your body responds to glucose (sugar) and insulin (a hormone made by the body that controls how you process sugar).

### What to know about the test

The doctor or nurse will give you injections of glucose and insulin through an IV (intravenous) catheter (a small tube). The doctor or nurse will also take several small blood samples through a different IV catheter. Sometimes additional blood samples are collected for research purposes. The test takes about 3 hours to complete.

### How to prepare for the test

- Do not eat or drink anything but water for 12 hours before the test, including gum and candy.
- Drink plenty of water the day before the test. Being well-hydrated will make it easier for the nurse to insert the catheters.
- Ask the doctor if you should stop taking any medicines before the test.

### What to expect during the test

- Arrive one hour before the test is scheduled to begin so that the doctor or nurse has time to insert the IV catheters. If you do not know or are not sure what time to arrive, call the doctor's office before the day of the test to ask.
- The doctor or nurse will use a needle to insert two IV catheters into veins in your arms or hands.
  - You may feel some pain when the IV catheters are injected.
  - The IV catheters are used so that you do not have to be stuck with needles throughout the test.
- The doctor or nurse will use one IV catheter to give you injections of insulin or glucose and will use the other catheter to take small samples of your blood.
- The doctor or nurse will start the test by taking a small sample of your blood. Sometimes, the doctor or nurse will lay a heating pad on your arm or hand to help draw blood samples.
- The insulin may cause your blood glucose (sugar) to get low. When your blood glucose is low, you may have these symptoms:
  - Dizziness
  - Fast breathing
  - Fast heartbeat
  - Hunger
  - Headache
  - Pale skin color
  - Irritability
  - Shakiness
  - Trouble thinking clearly
  - Tiredness
  - Sweating
  - Skin irritation around where the IV catheter is inserted (If the IV catheter irritates your skin, the doctor or nurse will take it out.)
- The doctor or nurse will check your glucose levels during the test by drawing a small amount of blood every few minutes. If your blood glucose level drops too low, the doctor or nurse will give you an injection of glucose through the IV catheter or food to raise your blood glucose.
- During the test, the nurse or doctor will also monitor:

- Your blood pressure
- Your temperature
- Your pulse
- How fast you are breathing
- How much oxygen is in your blood
- When the test is done, the doctor or nurse will take out both IV catheters.

### **What to expect after the test**

- The doctor will talk with you about your results after the test.
- You may go home or back to work or school after the test.
- You may eat and drink as usual.
- You may do all of the activities that you would usually do.

If you have any questions about this test, please ask the doctor or nurse.

### **Special Instructions:**

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