

Procedures/Diagnostic Tests

Calcium infusion test

You are scheduled for a calcium infusion test. The following information will help you understand how the test works.

Gastrin is a hormone that signals the small intestine to make gastric acid. During the calcium infusion test, you will get an I.V. (intravenous) infusion of calcium to stimulate gastrin release into the blood. While calcium is given, blood samples will be taken to measure how much gastrin is in the blood.

In combination with other tests, the calcium infusion test helps diagnose whether you have ZES or another condition with similar symptoms. Compared to people who do not have Zollinger-Ellison Syndrome (ZES), people with ZES have more gastrin in their blood during a calcium infusion.

Preparation

- Do not eat or drink after midnight on the day of the test, until the test is over.
- You will rest in bed during the test.

Procedure

- Your nurse will insert two I.V. (intravenous) lines: one in each arm. One line will be used for a slow infusion of a solution to keep the vein open and to get blood samples; the other will be used to give calcium.
- Your blood pressure will be measured before, during, and after the test.
- After the nurse draws two baseline blood samples, the calcium infusion will be started. The infusion lasts about 3 hours.
- At certain times during the test, the nurse will draw three more blood samples. These samples will be tested for calcium and gastrin content. Less than 2 ounces of blood will be drawn during this test.
- After the last blood drawing, you will get a diuretic through the I.V. as well as 1,000 mL (about 1 quart) of a sugar and salt solution. This solution will help get rid of the excess calcium.

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- Some patients have side effects such as headache, weakness, abdominal cramping, nausea, and vomiting. If you feel any of these symptoms, tell your nurse immediately. An increase in blood pressure may also occur, and your nurse will check this throughout the test. The test will be stopped if any of these side effects occur.
 - The test lasts 6 to 8 hours

After the procedure

- When the calcium has been completely infused and the last blood sample has been taken, you will be served your next regularly scheduled meal.
- Try to drink at least six to eight glasses of water or other fluids during the next 3 hours. This helps replace body fluids lost during the test.

If you have questions about the procedure, please ask. Your nurse and doctor are ready to assist you at all times.

This information is prepared specifically for persons taking part in clinical research at the National Institutes of Health Clinical Center and may not apply to patients elsewhere. If you have questions about the information presented here, talk to a member of your health care team.

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