

Article 1481

Overview

The stomach acid stimulation test is used to evaluate the ability of the stomach to secrete acid. Stomach acid helps break down food so the body can use it. A healthy stomach has about one million times more acid than water. This amount of acid is needed to digest food properly. There are some conditions that can cause the stomach to make too little or too much acid.

Who is a candidate for the test?

This test is mainly used to evaluate:

- » the cause of ulcers, such as peptic ulcers
- » the response of ulcers to treatment
- » the cause of a high level of gastrin, an enzyme in the blood

How is the test performed?

A small tube is inserted through the nose and into the stomach. A special medication is then given by injection. This medication normally causes the stomach to make acid. After the medication has taken effect, a small sample of stomach fluid is removed. This fluid is sent to the lab for analysis. The amount of acid made by the stomach in response to the medication can be measured.

What is involved in preparation for the test?

A person is instructed not to eat or drink for 4 to 6 hours before the test.

What do the test results mean?

The test results show how much acid is made by the stomach in response to the medication. There is a range of acid levels that is considered normal. Some people fall outside of this range for no special reason. However, if the stomach makes less acid than normal, it may be due to:

- » pernicious anemia, a condition in which the immune system destroys the acid-secreting cells of the stomach. This condition also causes low red blood cell counts, or anemia.
- » successful treatment of high stomach acid with medications. For example, if someone has severe ulcers, they may take a medication to stop the stomach from making acid. The stomach acid test can then be done to make sure the medication is working.

If the stomach makes more acid than normal, it may be due to:

- » a type of tumor called a gastrinoma, which secretes high levels of a hormone called gastrin. High levels of gastrin cause the stomach to make too much acid.
- » ineffective treatment of high stomach acid with medications