

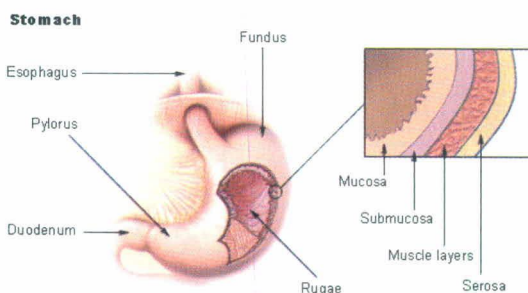


SAIFEE HOSPITAL

under the auspices of Saifee Hospital Trust Reg. No. E-5448 (Bom)

DEPARTMENT OF NUCLEAR MEDICINE

Gastric Emptying Imaging Patient Information



Using nuclear medicine to look for gastric emptying abnormalities

A gastric emptying scan (GES) is a nuclear medicine exam using a radioactive material in a meal that allows doctors to identify abnormalities related to emptying of the stomach. Diseases that involve changes in the way the stomach contracts (motility disorders) are best diagnosed by this test.

What is a gastric emptying scan?

The study is used most frequently to evaluate patients who have symptoms suggestive of decreased, delayed, or rapid gastric emptying, and no visible abnormality to explain their symptoms.

Symptoms pointing to a delay in gastric emptying are non-specific, and may be due to a number of causes, such as ulcers, diabetes, tumors, and others. These symptoms include nausea, upper abdominal bloating, and at times vomiting. Another significant symptom is called "early satiety," which means feeling full after eating only a small amount of food. In some patients, weight loss is also present. In addition to symptoms, the finding of a large amount of material in the stomach after an overnight fast suggests abnormal emptying, but does not distinguish between an actual blockage or an irregularity in gastric contractions. It is therefore essential to find out what is causing material to remain in the stomach.

Since many diseases can produce the above symptoms, structural lesions (such as tumors or regions of narrowing or scar tissue) need to be ruled out first. This is usually done by upper gastrointestinal series test or by endoscopy (examination of the inside of an organ, in this instance the stomach, with an instrument that has a light at the end of it and an optical system for examination of the organ). Once it is clear that a mechanical or physical lesion is not the cause of symptoms, attempts to document an abnormality in the nervous or muscular function of the stomach is then begun. GES is usually the first step in that evaluation.

Who is it for?

How do you prepare?

- The only preparation involved is to fast 8 hours before the test.
- If you are diabetic, drink a 5-ounce glass of orange juice about 2 hours before your exam.
- The exam should not be performed on pregnant women, but is otherwise quite safe.
- Since eggs are usually used to hold the radioactive material, patients should notify their doctor if they are allergic to eggs.
- If needed, other foods can be used.

How is it done?

Gastric emptying scans have undergone several changes since the initial studies in the late 1970s. During the study, patients are asked to ingest an egg sandwich containing a radioactive substance (for example, technetium) that can be followed by imaging under a special camera. The emptying of the material from the stomach is then followed and displayed both in the form of an image, as well as the percentage over several hours (generally two and four hours). Studies are in progress using substances that are not radioactive, but this procedure is not available to the patient as of yet.

1. You will be given a fried egg sandwich that has been injected with a small dose of radioactive material. You will be asked to eat the egg sandwich and drink water within 5 minutes. The egg will not taste any different than a non-radioactive egg.
2. After eating this meal, pictures of your stomach will be taken. The imaging involves lying flat on your back while the camera takes pictures of your stomach for 90 minutes. The technologist will help make you comfortable. You must not move during the time the camera is taking pictures. If you move, the pictures will be blurry and may have to be repeated.
3. The radioactive meal emits gamma rays. The gamma camera detects the rays. A computer will then produce pictures of the stomach based on the detected gamma rays.
4. Patients on a vegetarian diet can take butter sandwich mixed with small amount of radioactive material or a plate of poha/upma mixed with radioactive material we usually ask the patient to bring this .

After the test

Once the study is complete, it will be evaluated for quality. If there was too much motion, the study may need to be repeated. If there was no motion, you will be free to leave and resume normal activity.

Once inside your body, the tracers don't remain active for long. The radioactivity disappears within one to three days. You should feel no side effects after the procedure, and no aftercare is necessary. If you're breast-feeding, your doctor might ask you to stop for 24 hours after the tracer injection.