



## 胃排空掃描

### 如何做準備

本手冊解釋如何為胃排空掃描做準備、此項掃描的工作原理、此項掃描如何進行、在掃描過程中你會有什麼感覺，以及如何獲取你的掃描結果。

### 什麼是胃排空掃描？

胃排空掃描 (GES) 是一項核子醫學檢查，它使用一種放射性物質並將其注射入食物中讓你服用。你將在掃描前在放射科裏服用這種食物。放射性物質可讓醫生看到你的胃排空的情況。

此項掃描用於幫助診斷稱為動力障礙的疾病。這些疾病可改變胃部收縮和將食物移動進腸道的方式。GES 是放射學的一種形式，因為它是使用放射線來拍攝人體的照片。

### 此項掃描的工作原理？

當含有放射性物質的食物通過你的胃部時，放射師用一台伽瑪攝影機拍攝胃部的照片。攝影機可以探測出從食物中放射出來的伽瑪射線。然後放射師用整理製造出你胃部的圖片和測量結果。

### 如何為此項掃描做準備？

- 掃描之前，你需要進行 6 個小時的禁食。
- 如果你吸煙，在做檢查的當天上午以及在掃描進行期間不得吸煙。
- 如果你是婦女並且仍有月經，最好在你的月經周期的第一個 10 天內做此項掃描。



當含有放射性物質的食物通過胃部時，伽瑪攝影機將拍攝照片。

- 切勿在檢查前的至少 2 天裏服用以下藥物，除非醫生另有醫囑：
  - 稱為胃腸蠕動促進劑 (**prokinetic agents**) 的藥物，這類藥物會加速胃腸道的蠕動。這類藥物有 metoclopramide (Reglan)、erythromycin、tegaserod (Zelnorm) 以及 domperidone (Motilium) 等。
  - 稱為抗膽鹼和抗胃腸痙攣的藥物，這類藥物會減慢胃腸道的蠕動。這類藥物有 Bentyl、Donnatal、Levsin、Robinul 以及 Hyosyne 等。
  - 稱為鴉片止痛劑的止痛藥。這類藥物有 codeine、demerol、Percocet (Oxycodone)、Tylenol #3、Tylox、Oxycontin、Percodan、Fentanyl patch、morphine、Methadone、Vicodin (Hydrocodone) 以及 Ultram (Tramadol) 等。
  - 大麻。
- 切勿在檢查前一天或在檢查過程中的任何時間服用任何瀉藥。

**注意：**可以服用鬆弛性藥物（稱為 *benzodiazepines*），例如 Ativan、Valium、Librium、Xanax 以及其他此類藥物。也可以服用抗噁心藥物（稱為 *phenothiazines*），例如 Thorazine、Compazine、Phenergan 以及其他此類藥物。這些藥物不會影響腸胃的排空。

- 如果你對某些藥是否會影響這次檢查有任何問題，請致電核子醫學部，電話 206-598-4240。
- 檢查當天，你可以服用所有其他藥物，並且可以喝小口的水來送藥。你必須在檢查開始前至少 2 小時服用這些藥物。
- 如果你在檢查當天有嚴重的噁心，我們會給你藥物來減輕你的噁心。

## 如果你有糖尿病

在檢查當天：

- 你的空腹血糖必須低於 275 mg/dL。在檢查開始之前，將有一位技師檢查你的血糖。
- 請帶上你的胰島素或其他糖尿病藥物。你也許需要在吃你的胃排空餐時一起服用你的糖尿病藥物。

## 此項掃描如何進行？

- 放射師將給你 2 個小的三文治，一個夾有果醬，另一個夾有 4 片煮熟的蛋白，蛋白裏已被注射入小劑量的放射性物質。放射師將要求你在 10 分鐘內吃完這兩個三文治和喝完給你的水。雞蛋的味道就像普通的雞蛋。如果你對雞蛋或小麥過敏，請告訴為你安排約診時間的職員。我們將會給你吃另一種餐。

- 吃完餐後，放射師將要求你平躺下來，並用一部伽瑪攝影機拍攝你胃部的照片。在攝影機拍攝照片時，你必須躺著不動。如果你移動，照片將會模糊，可能需要重新拍攝。

## 在掃描過程中你會有什麼感覺？

- 對於某些病人，躺在檢查床上不動可能是困難的。放射師將會幫助讓你感到舒服。

## 此項掃描需要多長時間？

- 胃排空掃描從開始到完成需要大約 4 個小時。此項檢查分 4 個部分進行：
  - 第一個半小時：吃餐，然後用伽瑪攝影機拍攝照片（拍攝照片需要 5 分鐘）
  - 餐後 1 小時：拍攝照片（5 分鐘）
  - 餐後 2 小時：拍攝照片（5 分鐘）
  - 餐後 4 小時：拍攝照片（5 分鐘）
- 吃完餐後：
  - 你可以在幾次拍攝照片之間的時間裏離開核子醫學部。
  - 在最後一套照片拍攝完成之前，切勿進食或做運動。

## 誰負責解釋檢查結果，以及我怎樣獲取結果？

檢查完成後，核子醫學部的醫生將審閱你的圖像、寫檢查報告，並將檢查結果告訴你的醫生。你的醫生將和你討論你的檢查結果以及你的治療方案。

### 有任何問題嗎？

你的問題非常重要。如果你有任何問題或憂慮，請致電你的醫生或醫療提供機構。

UWMC 核子醫學/  
造影服務部：  
206-598-6200

Harborview 造影服務部：  
206-774-3105

## Gastric Emptying Scan

### *How to prepare*

*This handout explains how to prepare for a gastric emptying scan, how it works, how it is done, what you may feel during the scan, and how you will get your results.*

### **What is a gastric emptying scan?**

A *gastric emptying scan* (GES) is a nuclear medicine exam that uses a radioactive material that you will eat in a meal. You will eat this meal in the Radiology department before your scan. The radioactive material allows doctors to see how your stomach empties.

This scan is used to help diagnose conditions called *motility disorders*. These are conditions that change the way the stomach contracts and moves food into your intestines. A GES is a form of radiology, because radiation is used to take pictures of your body.

### **How does the scan work?**

A *gamma camera* takes pictures as the radioactive food moves through your stomach. The camera detects the gamma rays emitted from the food. A computer then produces pictures and measurements of your stomach.

### **How should I prepare for the scan?**

- You will need to fast for 6 hours before the scan.
- If you smoke, do not smoke the morning of the test and during the hours of the scan.
- If you are a woman and you are still menstruating, it is best to have your scan done in the first 10 days of your menstrual cycle.



*A gamma camera will take pictures as the radioactive food moves through your stomach.*

- **Do not** take these drugs for at least 2 days before your test, unless your doctor tells you otherwise:
  - **Drugs called prokinetic agents that speed up the motility of your GI tract.** Some of these are metoclopramide (Reglan), erythromycin, tegaserod (Zelnorm), and domperidone (Motilium).
  - **Drugs called anticholinergic antispasmodic agents that slow down the motility of your GI tract.** Some of these are Bentyl, Donnatal, Levsin, Robinul, and Hyosyne.
  - **Pain medicines called opiate analgesics.** Some of these are codeine, demerol, Percocet (Oxycodone), Tylenol #3, Tylox, Oxycontin, Percodan, Fentanyl patch, morphine, Methadone, Vicodin (Hydrocodone), and Ultram (Tramadol).
  - **Marijuana.**
- Do **not** take any laxatives the day before or any time during the test.

**Note:** It is OK to take relaxants (called *benzodiazepines*) such as Ativan, Valium, Librium, Xanax, and others. It is also OK to take anti-nausea medicines (called *phenothiazines*) such as Thorazine, Compazine, Phenergan, and others. These drugs do not affect gastric emptying.

- Please call the Nuclear Medicine department at 206-598-4240 if you have any questions about how certain drugs will affect this test.
- You may take all other medicines the day of your test with small sips of water. Take these at least 2 hours before your test begins.
- If you have severe nausea on the day of your test, we may give you medicine to reduce your nausea.

### **If You Have Diabetes**

On the day of the test:

- Your fasting blood glucose should be less than 275 mg/dL. A technologist will check your blood glucose before your test starts.
- Please bring your insulin or other diabetes medicine with you. You may need to take it with your gastric emptying meal.

### **How is the scan done?**

- You will be given 2 small sandwiches, one filled with jam and one filled with 4 cooked egg whites that have been injected with a small dose of radioactive material. You will be asked to eat the sandwiches and drink water within 10 minutes. The egg will taste just like a regular egg. If you are allergic to eggs or wheat, please tell the person you schedule your appointment with. A different meal will be used.

- After eating, you will be asked to lie flat on your back while the gamma camera take a picture of your stomach. You must lie still when the camera is taking pictures. If you move, the pictures will be blurry and may have to be taken again.

## What will I feel during the scan?

- Lying still on the exam table may be hard for some patients. The technologist will help make you comfortable.

## How long will the scan take?

- From start to finish, your gastric emptying scan will take about 4 hours. There are 4 parts to the test:
  - *First half hour:* Eat meal, then take pictures with gamma camera (pictures take 5 minutes)
  - *1 hour after meal:* Take pictures (5 minutes)
  - *2 hours after meal:* Take pictures (5 minutes)
  - *4 hours after meal:* Take pictures (5 minutes)
- After eating the meal:
  - You may leave the Nuclear Medicine department between the times you have the pictures taken.
  - **Do not eat or exercise** until after the last set of pictures has been taken.

## Who interprets the results and how do I get them?

When the test is over, the nuclear medicine doctor will review your images, write up a report, and talk with your doctor about the results. Your doctor will talk with you about the results and your treatment options.

### Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns.

UWMC Nuclear  
Medicine/Imaging  
Services: 206-598-6200

Harborview Imaging  
Services: 206-774-3105