

# Enterogastric reflex

The enterogastric reflex is one of the three extrinsic reflexes of the gastrointestinal tract, the other two being the gastroileal reflex and the gastrocolic reflex.[1] The enterogastric reflex is stimulated by duodenal distension.[2] It can also be stimulated by a pH of 3–4 in the duodenum and by a pH of 1.5 in the stomach. Upon initiation of the reflex, the release of gastrin by G-cells in the antrum of the stomach is shut off. This in turn inhibits gastric motility and the secretion of gastric acid (HCl).[1]

## Emptying inhibitory factors[edit]

The stomach's contents are inhibited from emptying into the small intestine by:

- duodenal distension[3][2]
- duodenal acidic pH[4]
- duodenal hypertonicity[5][6]
- increased osmolarity of gastric chyme[5][6]
- sympathetic stimulation[citation needed]
- intense pain[citation needed]

## Emptying stimulatory factors[edit]

The stomach's contents empty through the pylorus, allowing digestion to proceed, when there is:

- parasympathetic stimulation[citation needed]
- increased volume and fluidity of gastric contents[7]

## References[edit]

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- <sup>3</sup> <sup>a</sup> Holzer, H. H.; Raybould, H. E. (April 1992). "Vagal and splanchnic sensory pathways mediate inhibition of gastric motility induced by duodenal distension". *American Journal of Physiology. Gastrointestinal and Liver Physiology*. 262 (4): G603–G608. doi:10.1152/ajpgi.1992.262.4.G603. PMID 1566842.
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- <sup>7</sup> <sup>a</sup> "Nervous System of the Digestive System - Gastrointestinal Reflex Pathways". Boundless. Retrieved 31 March 2016.

# Enterogastric reflux mimicking gallbladder disease: detection, quantitation and potential significance - PubMed

J Nucl Med Technol. 1999 Sep;27(3):207-14.

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## Abstract

**Objective:** Visualization of enterogastric reflux (EGR) may be present during hepatobiliary imaging. Reflux of bile may damage the gastric mucosa, altering its function, and cause such symptoms as epigastric pain, heartburn, nausea, intermittent vomiting and abdominal fullness. These symptoms also are associated with gallbladder disease. The aim of this study was to quantitate the EGR index (EGRI) and to determine if a difference exists in normal and abnormal responses using standard cholecystokinin (CCK)-augmented hepatobiliary imaging.

**Methods:** This study used 129 patients. LAO dynamic data on a 128 x 128 matrix at a rate of 1 frame/min were obtained. After the gallbladder ejection fraction (GBEF) was determined, the EGRI (%) was calculated by relating the counts in the gastric ROI to the counts in the hepatobiliary ROI at a specified time. The results were compared with the patient's final clinical diagnosis.

Results: Normal responders (GBEF  $\geq$  35%) had a higher EGRI than abnormal responders with a  $P = 0.001$  EGR observed in 75 patients (58.1%). Significant reflux (EGRI  $\geq$  14.2% at 15 min) was observed in 29 additional patients (22.5%). Patients with EGRI  $\geq$  24.5% showed a strong association with the pathophysiologic syndrome of gastritis, alkaline reflux, gastric ulcer and gastro esophageal reflux disease. There was no EGR observed in the remaining 25 patients (19.4%).

Conclusion: This simple addition to the CCK-augmented hepatobiliary imaging may both detect and quantitate abnormal EGR as the cause of the patient's symptoms in the presence of a normal GBEF result, and/or those patients with risk factors for gastritis.

## MeSH terms

- Aniline Compounds
- Bile Reflux / diagnostic imaging\*
- Biliary Tract / diagnostic imaging
- Diagnosis, Differential
- Duodenogastric Reflux / diagnostic imaging\*
- Female
- Gallbladder Diseases / diagnostic imaging\*
- Gastrointestinal Agents
- Glycine
- Humans
- Imino Acids
- Liver / diagnostic imaging
- Male
- Middle Aged
- Organotechnetium Compounds
- Predictive Value of Tests
- Radionuclide Imaging
- Radiopharmaceuticals
- Sensitivity and Specificity
- Sincalide

## Substances

- Aniline Compounds
- Gastrointestinal Agents
- Imino Acids
- Organotechnetium Compounds
- Radiopharmaceuticals
- technetium Tc 99m mebrofenin
- Sincalide
- Glycine

# What is the Gastroenteric reflex and what causes it? – KnowledgeBurrow.com

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## What is the Gastroenteric reflex and what causes it?

The gastrocolic reflex is a physiological reflex that controls the motility of the lower gastrointestinal tract following a meal. As a result of the gastrocolic reflex, the colon has increased motility in response to the stretch of the stomach with the ingestion of food.

## What triggers the Gastroenteric reflex?

The enterogastric reflex is stimulated by duodenal distension. It can also be stimulated by a pH of 3-4 in the duodenum and by a pH of 1.5 in the stomach. Upon initiation of the reflex, the release of gastrin by G-cells in the antrum of the stomach is shut off.

### **What do the Gastroenteric reflex and the gastroileal reflex?**

What do the gastroenteric reflex and the gastroileal reflex have in common? They both respond to signals associated with the distension of the stomach wall. They both respond to signals associated with the distension of the stomach wall.

What is the gastrointestinal reflex?

Gastrointestinal reflexes are those reflexes that are involved in regulating the functions of the esophagus, stomach, small intestine, large intestine, intestinal sphincters, pancreas and biliary system.

How do you calm a gastrocolic reflex?

While there's no cure for IBS, treatments to help relieve symptoms may include the following lifestyle changes:

1. exercising more.
2. limiting caffeine.
3. eating smaller meals.
4. avoiding deep-fried or spicy foods.
5. minimizing stress.
6. taking probiotics.
7. drinking plenty of fluids.
8. getting enough sleep.

### **What is the Duodenocolic reflex?**

Duodenocolic reflex is triggered by a high tension in the duodenal wall. Signal spreads through the myenteric plexus to the colon and increases the frequency of action potentials in the smooth muscle cells. That increases speed of the propulsion movements.

### **How do you calm a Gastrocolic reflex?**

#### **What does the Gastroileal reflex do?**

The gastroileal reflex is a third type of gastrointestinal reflex. It works with the gastrocolic reflex to stimulate the urge to defecate. This urge is stimulated by the opening of the ileocecal valve and the movement of the digested contents from the ileum of the small intestine into the colon for compaction.

What is the purpose of gastroileal reflex?

Why do I have to go to the bathroom as soon as I eat?

The most likely cause of needing to poop right after eating is the gastrocolic reflex. This reflex is a normal involuntary reaction to food entering the stomach. However, the intensity of the gastrocolic reflex can vary among individuals.

### **What are the three extrinsic reflexes of the gastrointestinal tract?**

The gastroileal reflex is one of the three extrinsic reflexes of the gastrointestinal tract, the other two being the gastrocolic reflex and the enterogastric reflex.

### **When does the enterogastric reflex travel to the stomach?**

Enterogastric Reflex: When food enters duodenum, a reflex is initiated from the duodenal wall in response to proteins and fats. A reflex is initiated that slows down or even stops stomach emptying. This reflex that is initiated in duodenum and travels to stomach is called enterogastric reflex.

### **What causes the gastroileal reflex to take place?**

The gastroileal reflex is stimulated by the presence of food in the stomach and gastric peristalsis. Initiation of the reflex causes peristalsis in the ileum and the opening of the ileocecal valve (which allows the emptying of the ileal contents into the large intestine, or colon).

How are reflexes transmitted from the stomach to the colon?

These type of reflexes are helpful for transmitting reflexes to far areas of the gut such as reflex from stomach to ileum or from stomach or duodenum to colon etc. Here is the list of short reflexes: Ileogastric Reflex. Enterogastric Reflex. Gastrocolic Reflex. Colonileal reflex.

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# enterogastric reflex

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## Quick Reference

A nervous reflex whereby stretching of the wall of the duodenum results in inhibition of gastric motility and reduced rate of emptying of the stomach. It is a feedback mechanism to regulate the rate at which partially digested food (chyme) leaves the stomach and enters the small intestine. Receptors in the duodenal wall detect distension of the duodenum caused by the presence of chyme and also raised acidity (i.e. low pH) of the duodenal contents due to excess gastric acid. They send signals via the parasympathetic nervous system, causing reflex inhibition of stomach-wall muscles responsible for the stomach emptying.

**Reference entries**