

# SWALLOWING NEWS

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## *Director's Forum*

**Center For Swallowing Disorders - University of South Florida Medical Center**

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### **Gas In The Digestive Tract**

Though the subject of gas is not one that most of us talk about, the truth is that all of us have gas in our intestinal tract and must get rid of it in some way. Flatus (the passage of gas through the rectum) and belching are normal and necessary functions that allow the body to rid itself of gas.

Most gas that accumulates in healthy persons is swallowed and this occurs in greater volume if the patient is under stress, smokes, or chews gum. Occasionally, gas collects in some portion of the digestive tract, a situation that can lead to pain and bloating. Also some people seem to be more sensitive to normal amounts of gas in their digestive tracts. Though gas is not usually a sign of problems, persistent and troublesome symptoms may mean that something is wrong. If you have any doubts, check with your doctor.

Gas also can occur for any of the following reasons: Some people swallow air frequently because they have postnasal drip or chew gum. Rapid eating or poorly fitting dentures also may cause too much air to be swallowed. In addition, drinking carbonated beverages, such as soda and beer, may increase the amount of gas in the stomach. Also, excess stomach gas and belching can enhance reflux of gastric acid and bile into the esophagus resulting in heartburn and possible esophagitis.

The foods we eat can be a factor in the production of gas. Some foods — like cauliflower, brussel sprouts, dried beans, broccoli, cabbage, and bran — are not completely digested in the small intestine. When the undigested bits of food reach the colon (large bowel), they are fermented by the bacteria that live in the colon. This fermentation often results in gas.

Some people experience upper abdominal pressure and pain after eating. Usually, this can be relieved by belching. Some people deliberately swallow more air to make themselves belch. Such a practice is not recommended, however. It only adds to the amount of gas already in the stomach without reducing the discomfort.

At times gas trapped in the esophagus during a swallow, most often noted after a gulp of a heavily carbonated soft drink, can cause severe chest pain. Usually, the presence of the large gas bubble provokes the esophagus to generate a so-called secondary peristaltic contraction that pushes the air into the stomach within 10 seconds.

Gas can collect anywhere in the colon. When gas accumulates on the right side of the colon, the pain can be similar to that caused by gall bladder disease. Gas in the upper left portion of the colon can result in a condition called the splenic flexure syndrome. The pain associated with this condition can spread to the left side of the chest and be confused with heart disease.

A feeling of distention (flatulence) of the abdomen is also a common complaint. It often increases during the day and is most severe after the largest meal. Distention occurs more often in women who have had one or more pregnancies or individuals who have lost the "tone" of their abdominal rectus muscles due to age or disease. If your abdomen is distended when you sit or stand, but is not when you are lying down, it is likely that the distention is related to muscular weakness rather than excess gas. A support garment or exercise to increase abdominal rectus muscle tone such as situps may relieve symptoms.

A persistent and troublesome increase in the frequency or severity of belching or flatulence should prompt you to seek medical attention. Your doctor may review your diet and eating habits and advise appropriate changes. Nervous tension, which also can contribute to symptoms by increasing air swallowing or by causing changes in dietary habits, might also be assessed. However, since gaseousness, abdominal bloating, crampy pain, or distention could be abnormalities in the upper or lower gastrointestinal tract, your doctor may also recommend appropriate diagnostic tests.

If you have trouble with gas, doctors recommend that you rely on the guidelines outlined below. If these do not provide relief, see your doctor.

## Some Suggestions On How To Reduce Gas In The Digestive Tract

If you are bothered by excessive belching or flatus, and your physician has determined that you have no serious disease, the following suggestions may be helpful:

1. Eat meals slowly and chew your food thoroughly.
2. Check with a dentist to make sure dentures fit properly.
3. Stop all forms of smoking.
4. Avoid chewing gum or sucking on hard candies.
5. Eliminate carbonated beverages and beer from your diet.
6. Avoid milk and milk products if you are lactose (milk sugar) intolerant.
7. Eat fewer gas-producing foods such as cauliflower, brussel sprouts, bran, beans, broccoli and cabbage.
8. Try exercises such as situps to increase tone if abdominal distention is a problem.

If your symptoms persist, go back to your doctor. Though your troublesome symptoms may be relieved by a change in dietary habits or appropriate exercises to increase muscle tone, your doctor may want to perform tests to ensure that your symptoms are not caused by abnormalities in your digestive tract.

### Faculty and Staff

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## Speaking The Same Language

Janet Jones, CGC  
Patient Care Coordinator

In the clinical evaluation of patients with swallowing problems, it is important that the patient and physician have a common understanding of the medical terms used in discussing their symptoms. An example of commonly misused terms is the difference between vomiting, regurgitation and reflux.

### Vomiting:

A forceful projection of stomach contents through the mouth from the stomach. It is typically preceded by nausea.

### Regurgitation:

An effortless backward flow of either stomach or esophageal contents into the pharynx (throat) if either organ is not properly emptying. There is no nausea associated with regurgitation.

### Reflux:

Retrograde or backward flow of material from the stomach into the esophagus. The typical symptom of reflux is heartburn. Regurgitation follows reflux in some people.

The following list of words represents the most commonly used medical terms and definitions to describe symptoms associated with swallowing disorders:

### Dysphagia:

Dys = difficulty, Phagia = eating. Usually expressed as difficulty swallowing. Any delay may be caused by a neuromotor (nerve/muscle) problem, such as a stroke, or mechanical obstruction, such as a stricture or cancer.

### Oropharyngeal Dysphagia:

(Pre-esophageal dysphagia) disorders of the mouth, pharynx, or upper respiratory passages causing difficulty swallowing.

### Esophageal Dysphagia:

Delay in the passage of solids or liquids through the esophagus. (process usually takes 8-10 seconds).

### Odynophagia:

Painful swallowing. This may indicate an ulcer or break in the lining (mucosa) of the esophagus or simply sensitivity of esophageal tissue to acid or bile.

### Sialorrhea:

Excessive salivary (saliva) output. May occur soon after acute obstruction of the esophagus. Often described by the patient as "foamy mucus."

### Xerostomia:

Excessive dryness of the mouth. Decreased flow of saliva. This may be due to a variety of causes, such as previous radiation therapy for mouth or throat cancer and a disorder called Sjogren's syndrome (dry mouth and eyes).

### Pyrosis:

Heartburn; sensation of pain behind the sternum (breastbone) or burning, usually associated with reflux of acid from the stomach into the esophagus.

Common procedures to diagnose and treat swallowing disorders include the following:

**Dynamic Video Esophagram:**

X-ray of the oropharynx (mouth, throat) and esophagus. The patient swallows liquid barium and foods of varying consistencies and the process is recorded on videotape. This method best demonstrates neuromotor (motility) problems.

**Barium Swallow:**

X-ray of the esophagus. The patient swallows liquid barium and is often given a tablet and/or marshmallow to reproduce his/her symptoms. This x-ray best demonstrates mechanical (obstructive) problems. It does not show the stomach.

**Upper G.I.:**

X-ray of the esophagus, stomach and duodenum (first part of small bowel). The patient is given liquid barium and this test best demonstrates lesions (ulcers, growths) of the esophagus, stomach and duodenum.

**Upper G.I. Endoscopy:**

Direct examination of the upper gastrointestinal tract (esophagus, stomach, duodenum) using a small, flexible illuminated tube through which the doctor can see the lining of the hollow organs. This exam does **not** allow thorough inspection of the oropharynx (throat, vocal cords) in all cases.

**Esophageal Dilation:**

Passage by mouth of either rubber, plastic, or metal dilators over a guidewire to stretch the narrowed segment of the esophagus. Several sessions may be required for optimal relief of symptoms. This procedure is done under x-ray (fluoroscopic) control in our clinic for added safety.

**Esophageal Manometry:**

(Motility) a small, flexible tube is passed through the patient's mouth to measure esophageal muscle function which propels food/liquid through the esophagus.

**Acid Perfusion Test (Bernstein):**

(Intra [inside] esophageal acid drip test) the purpose of this test is to reproduce chest discomfort/pain that results from an acid sensitive esophagus. A tube is inserted through the nose or mouth and is positioned in the mid portion of the esophagus. (If the patient is having an esophageal motility study, this test can be performed through the same flexible tube). Alternating solutions of normal saline (salt water) and hydrochloric acid (stomach acid) are slowly dripped through the tube into the esophagus in an effort to reproduce the chest discomfort. Neither the patient nor person doing the test should know which fluid is being used so that interpretation will be correct. Only reproduction of the patient's typical chest pain by acid, with relief by saline, will be reported as a positive test. This test usually is positive with esophagitis but is not diagnostic of esophagitis.

**24-hour pH Study:**

A small, flexible tube is passed through the nose into the esophagus for the purpose of monitoring acid reflux for up to 24 hours. The patient keeps a diary of all meals, activity and symptoms. The results of the acid measurement are recorded on a small data collection device worn on the patient's belt. This data is fed into a computer and correlated with the patient's symptoms and activity.

## *Things To Remember*

1. **OFFICE HOURS:** 8:30 a.m. till 4:30 p.m. Monday through Friday.

Our office is **closed on weekends** so it is important to make sure any medication refills are called to us during our regular office hours.

Also, our emergency telephone number for after hours is (813) 974-2201. Please remember these calls will be responded to by one of our gastroenterology residents who will in turn contact the appropriate attending physician on call.

2. **BILLING:** Individuals who may have any problems with their accounts should contact the Patient Relations Department of the University of South Florida Medical Clinics at (813) 974-3573 between the hours of 10:00 a.m. till 4:00 p.m. Monday through Friday. For those patients who are from out-of-town, a new toll-free number has been added for you to call with billing questions. The number is 1-800-933-8672. This number is for calls originating in Florida and is **only for billing questions**.

3. **DILATIONS:** For our patients who receive periodic esophageal dilations: Please try to anticipate and contact our office at least 2 to 3 weeks in advance of your need for dilation if at all possible. We have been having to schedule routine cases 2 to 3 and sometimes 4 weeks in advance due to our heavy patient load. We do not want any of you to suffer unnecessarily, so please help us with your appointment needs.

### ***"Please Bear With Us"***

If your telephone call to the Center for an appointment is not immediately returned, "please bear with us" as we have not forgotten you. Our mornings are usually consumed by procedure visits and our Patient Care Coordinator may not be able to return your call until later in the day and sometimes the next. We do, however, need to know if you are having an emergency so proper intervention can be accomplished.

### **"To Our Patients"**

The intent of our newsletter is to bring you and our medical colleagues information about the Center (services offered) and literature which may help you understand better some of the types of swallowing problems we encounter, inclusive of symptoms and treatment. We would, however, like to have your input on articles or information you would like to have included in our newsletter. We feel your input will enhance the newsletter as well as provide information which may be more useful to you and our other patients. If you have a topic of interest or some information you would like us to share, please mail it to our address listed on the back side of the newsletter.

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## *Continuing Medical Education*

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During the past year, members of the Center for Swallowing Disorders staff have continued their active participation in undergraduate and graduate medical education at regional, national, and international meetings. These presentations on topics related to swallowing disorders require considerable research and time to prepare teaching slides and videotapes. Contributions to the medical literature in journals and textbooks also have been significant.

### **Lecture Presentations by CSD Staff**

1. May 13-16, 1990: Poster Presentation, Digestive Disease Week, San Antonio, Texas. Effects of Temperature on Opossum LES In Vitro. (Davis).
2. May 17, 1990: ASGE Postgraduate Course, San Antonio, Texas. Therapy/Pitfalls: Benign Strictures. (Boyce).
3. June 11-12, 1990: ASCP Course, Baltimore, Maryland. Clinical Gastrointestinal Endoscopy. (Boyce).
4. June 19-23, 1990: Third International Congress O.E.S.O., Paris, France. 1) Achalasia. 2) Diffuse Esophageal Spasms. 3) Primary Esophageal Motility Disorders. (Boyce).
5. August 26-31, 1990: World Congress of Gastroenterology, Sydney, Australia. Non-Operative Imaging of Esophageal and Gastric Malignancies. (Boyce).
6. December 11-13, 1990: Workshop on Therapeutic Endoscopy, Hong Kong. 1) Esophageal Therapy, 2) Endoscopic Haemostasis - Dilation, 3) Laparoscopy. (Boyce).
7. January 10-11, 1991: Scripps Clinic Visit, La Jolla, California. Endosonography: An Update on Clinical Applications. (Boyce).
8. January 11-15, 1991: Valley Presbyterian Hospital, Los Angeles, California. Dysphagia: Managing Complex and Complicated Cases. (Boyce).
9. February 7-8, 1991: Training Directors Workshop, San Diego California. Credentialing of Trainees. (Boyce).
10. February 8-10, 1991: American Society for Gastrointestinal Endoscopy Midwinter Course, San Diego, California. 1) Laparoscopy is Underutilized in Gastroenterology, 2) Esophageal Dilation Should Be Done Under Fluoroscopic Observation. (Boyce).
11. March 5, 1991: Health Science Center/College of Medicine, Jacksonville, Florida. Laparoscopy. (Boyce).
12. March 13, 1991: Charlotte Gut Club, Charlotte, North Carolina. Dysphagia and Difficult Strictures. (Boyce).
13. March 22-24, 1991: Advanced Therapeutic Endoscopy Post Graduate Course, Miami, Florida. 1) Complex Esophageal Strictures and Achalasia, 2) Endosonography: Applications, 3) Laparoscopy State-of-the-Art Lecture. (Boyce).
14. May 20, 1991: American Gastroenterological Association Clinical Seminar, Digestive Disease Week, New Orleans, Louisiana. Endosonography Technique and Diagnosis of Submucosal Tumors. (Boyce).
15. May 21, 1991: Meet-the-Professor Workshop, American Gastroenterological Association, Digestive Disease Week, New Orleans, Louisiana. Esophageal Strictures and Peroral Esophageal Prosthesis. (Boyce).
16. May 23, 1991: American Society for Gastrointestinal Endoscopy Postgraduate Course, Digestive Disease Week, New Orleans, Louisiana. Best Technique for Managing Benign Esophageal Strictures. (Boyce).

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SWALLOWING DISORDERS**  
  
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