



Official reprint from UpToDate®

[www.uptodate.com](http://www.uptodate.com) © 2023 UpToDate, Inc. and/or its affiliates. All Rights Reserved.

Wolters Kluwer

# Globus sensation

**AUTHORS:** [Kristen M Robson, MD, MBA, FACP](#), [Anthony J Lembo, MD](#)**SECTION EDITOR:** [Nicholas J Talley, MD, PhD](#)**DEPUTY EDITOR:** [Shilpa Grover, MD, MPH, AGAF](#)

All topics are updated as new evidence becomes available and our [peer review process](#) is complete.

Literature review current through: **Sep 2023**.

This topic last updated: **Sep 05, 2023**.

## INTRODUCTION

Globus sensation is characterized by a sensation of a lump or foreign body in the throat. Globus sensation has also been referred to as globus pharyngeus and the misnomer "globus hystericus." This topic will review the epidemiology, etiology, diagnosis, and management of patients with globus sensation. The evaluation and management of oropharyngeal and esophageal dysphagia are discussed in detail, separately. (See "[Approach to the evaluation of dysphagia in adults](#)" and "[Oropharyngeal dysphagia: Clinical features, diagnosis, and management](#)".)

## DEFINITION

Globus sensation is characterized by a sensation of a lump, food/foreign body, or tightness in the throat [1].

The Rome IV criteria for functional bowel disorders defines globus as the presence of the following symptoms for the past three months with symptom onset at least six months before diagnosis with a frequency of at least once a week. The symptoms must include all of the following [1]:

- Persistent or intermittent, nonpainful, sensation of a lump or foreign body in the throat with no structural lesion identified on physical examination, laryngoscopy, or endoscopy
- Occurrence of the sensation between meals

- Absence of the symptoms of dysphagia or odynophagia
- Absence of a gastric inlet patch in the proximal esophagus on upper endoscopy
- Absence of evidence that gastroesophageal reflux or eosinophilic esophagitis is the cause of the symptom
- Absence of major esophageal motor disorders (achalasia/esophagogastric junction outflow obstruction, distal esophageal spasm, jackhammer esophagus, absent peristalsis)

---

## EPIDEMIOLOGY

A sensation of a lump or foreign body in the throat is common in the general population. In a cross-sectional survey of over 3000 participants, the lifetime prevalence of globus was 22 percent [2]. Globus sensation accounts for 4 percent of visits to otolaryngology clinics [3]. The symptom is equally prevalent in males and females among healthy individuals in the community, but female patients are more likely to seek evaluation [2]. In primary care, one study reported the prevalence amongst consulters to be 6.7 per 100,000 practice encounters [4]. An international internet survey of 54,127 individuals in 26 countries found the prevalence of globus based on the Rome IV criteria was 0.8 percent, with the highest prevalence in individuals aged 40 to 64 years (0.9 percent) and the lowest those over 65 years (0.5 percent) [5].

---

## ETIOLOGY AND PATHOGENESIS

The pathogenesis of globus sensation is unclear. Visceral hypersensitivity, abnormalities of the upper esophageal sphincter (UES), mood disorders, and reflux have all been implicated.

**Visceral hypersensitivity** — Hypersensitivity to balloon distention is a common feature in patients with globus sensation. In one study, nine patients with globus were found to be hypersensitive to balloon distention but not electrical stimulation of the esophagus as compared with healthy controls [6]. In addition, the majority of patients with globus, but none of the healthy controls, referred the sensation that occurred during balloon distention to the suprasternal notch. This suggests that patients with globus may have aberrant central processing of esophageal sensations.

**Upper esophageal sphincter dysfunction** — Studies using high resolution manometry have suggested that abnormal UES function is associated with globus sensation [7-9]. Manometric findings that have been reported in patients with globus sensation include elevated baseline UES pressure, elevated residual UES pressure, and hyperdynamic respiratory-related UES pressure changes.

**Psychologic conditions** — Studies suggest that globus sensation is associated with affective disorders (eg, anxiety, depression) [10-12]. As an example, patients with globus sensation score higher on self-reported measures of anxiety and hypochondriasis than controls. Despite these associations, not all patients with globus sensation have psychologic disorders [13].

**Gastroesophageal reflux** — Some studies suggest that globus may be an atypical manifestation of gastroesophageal reflux disease (GERD) in a subset of patients [14-16]. It is hypothesized that globus may be related to reflux-induced pharyngeal irritation or UES contraction [17]. Whether globus sensation is linked to higher acid exposure times as measured by pH or pH impedance studies is uncertain because data have been mixed [15,16,18,19]. (See "[Clinical manifestations and diagnosis of gastroesophageal reflux in adults](#)" and "[Esophageal multichannel intraluminal impedance testing](#)".)

---

## CLINICAL MANIFESTATIONS

Patients have a sense of a lump, a retained food bolus, or tightness in the throat. Globus sensation is not painful and is typically worse when swallowing saliva (dry swallow) and less noticeable when swallowing solids or liquids. In approximately 70 percent of patients, globus symptoms are intermittent [20].

---

## DIAGNOSIS

Globus sensation requires an evaluation to exclude other causes of similar symptoms including GERD, eosinophilic esophagitis, esophageal obstruction, and an esophageal motility disorder. The low yield of diagnostic evaluation in patients with globus sensation is the rationale for a stepwise diagnostic approach [21-24].

### Diagnostic approach

- All patients with globus symptoms should initially undergo a history and physical examination that includes examination of the oropharynx and larynx.
- In patients with recurrent symptoms or persistent symptoms that fail to resolve with conservative management or those with alarm features (pain, lateralization of the symptoms, dysphagia, odynophagia, weight loss, a change in voice, presence of a neck or tonsillar mass, and unexplained cervical adenopathy), we pursue additional evaluation to rule out causes. (See '[Definition](#)' above.)

**History and physical examination** — The clinical history should focus on the duration, intensity, and progression of symptoms, and their impact on quality of life. Patients should be evaluated for symptoms of reflux including heartburn and regurgitation. Risk factors for a malignancy including a history of radiation to the head and neck, smoking, and alcohol consumption should be sought. Alarm symptoms that are not associated with globus sensation include pain, lateralization of the symptoms, dysphagia, odynophagia, weight loss, and a change in voice [25]. Physical examination should include examination of the neck and oropharynx, which usually requires a referral to otolaryngology, and palpation of the thyroid gland. The presence of alarm symptoms, a neck/tonsillar mass or unexplained cervical adenopathy requires additional evaluation. (See ['Additional evaluation'](#) below.)

**Additional evaluation** — In patients with recurrent or persistent symptoms despite conservative management or those with alarm features, we pursue additional evaluation. Alarm features include pain, lateralization of the symptoms, dysphagia, odynophagia, weight loss, change in voice, presence of a neck or tonsillar mass, and unexplained cervical adenopathy.

**Nasoendoscopy** — Otolaryngologic examination with transnasal fiberoptic laryngoscopy (FOL) or, if available, transnasal flexible laryngoesophagoscopy (TNE) allows for a detailed examination of the oropharynx, hypopharynx, larynx, and proximal esophagus to rule out a structural lesion.

**Videofluoroscopy** — Videofluoroscopy helps identify functional and structural abnormalities of the pharynx. Videofluoroscopy serves to detect oropharyngeal dysfunction and to assess the degree of dysfunction and severity of aspiration [26].

**Imaging** — A [barium](#) swallow with a solid bolus (eg, a barium tablet) serves to exclude a mechanical problem and to look for an underlying motility disorder [22,27]. In individuals suspected to have thyroid enlargement or nodules on physical examination or symptoms of thyroid dysfunction, we perform a thyroid ultrasound [28]. We reserve the use of neck computed tomography (CT)/magnetic resonance imaging (MRI) for patients with cervical adenopathy or a substernal goiter [27]. (See ["Clinical presentation and evaluation of goiter in adults"](#).)

**Esophageal manometry** — High resolution manometry provides quantitative evaluation of the pressures and relative timing involved in the pharyngeal contraction and deglutitive upper esophageal sphincter (UES) relaxation and an assessment of esophageal motility to rule out an esophageal motility disorder [29]. (See ["High resolution manometry"](#).)

**Esophageal pH and impedance** — We assess esophageal pH with impedance in patients who do not respond to a trial of acid suppression therapy. Esophageal pH with impedance serves to

detect if there is an increase in exposure times for acid or non-acid reflux [18,30]. Correlating the symptoms of globus with a specific reflux event is limited because globus sensation may span a longer duration than typical reflux symptoms (eg, heartburn) [12].

**Upper endoscopy** — Upper endoscopy serves to rule out heterotopic gastric mucosa (inlet patch), eosinophilic esophagitis, or another mucosal process that can cause similar symptoms.

---

## DIFFERENTIAL DIAGNOSIS

The differential diagnosis of globus sensation includes other causes of sensation of a lump or foreign body in the throat ( [table 1](#)). The two most common causes include gastroesophageal reflux disease and an esophageal motility disorder. Globus sensation can be differentiated from these by performing esophageal manometry and esophageal pH with impedance testing [20]. (See '[Diagnostic approach](#)' above.)

---

## MANAGEMENT

The most effective treatment of globus sensation has not been defined. This is attributable to the lack of convincing evidence from randomized trials, possibly due to different pathophysiologic mechanisms involved in individual patients and the poor correlation of manometric findings with symptoms.

### Initial management

**Conservative therapy** — Patients should be reassured that globus sensation is a benign disorder. In patients with coexisting psychologic or psychiatric conditions, psychiatric consultation may assist patients in coping with the sensation [20].

**Acid suppression** — In patients with persistent symptoms despite conservative management, we suggest a limited trial of acid suppression therapy with a proton pump inhibitor (PPI) (eg, [omeprazole](#) 20 mg twice daily) to treat undiagnosed gastroesophageal reflux disease (GERD) [31]. If symptoms do not start to improve within six to eight weeks of use, we discontinue PPI therapy. Approximately one-third of patients with symptoms suggestive of globus sensation experience partial relief with a PPI and have undiagnosed GERD [32].

**Subsequent management** — For patients who do not respond to initial management, additional evaluation should be performed to detect structural abnormalities, refractory GERD, or an esophageal motility disorder. (See '[Additional evaluation](#)' above.)

**Neuromodulators** — For patients with persistent symptoms that are not relieved by acid suppression, we suggest the use of a neuromodulator (eg, a low-dose tricyclic antidepressant such as [imipramine](#) 25 mg at bedtime) [33] (see "[Tricyclic and tetracyclic drugs: Pharmacology, administration, and side effects](#)"). In a small controlled trial in which 30 patients with globus were assigned to treatment with 25 mg [amitriptyline](#) once daily and 40 mg [pantoprazole](#) once daily, after four weeks, a significantly higher percentage of patients in the amitriptyline group responded to treatment compared with the pantoprazole group (75 versus 36 percent) [34]. For patients with globus sensation, the use of antidepressants has been associated with an improvement in symptoms, sleep quality, and quality of life [34,35].

**Other** — Other therapies have been evaluated in patients with refractory symptoms, but evidence to support their use is limited:

- **Gabapentin** – A retrospective study evaluated the effectiveness of gabapentin in the treatment of 31 patients with globus. Of the 14 patients who had previously failed a trial of PPI therapy, eight had a partial or complete response to gabapentin (57 percent). Of the remaining 12 patients who responded partially to PPI therapy before their gabapentin trial, nine had additional improvement with gabapentin. Four of the five patients who never had PPI therapy improved on gabapentin [36].
- **Relaxation therapy** – In a case series, 10 female patients with globus who were unresponsive to reflux treatment and with normal esophageal/laryngeal imaging underwent a seven-session clinical protocol with hypnotically-assisted relaxation [37]. Following treatment, nine out of the 10 patients reported a reduction in globus symptomatology.
- **Ablation of inlet patch** – For patients with globus in the setting of a gastric inlet patch, endoscopic ablative therapy with argon plasma coagulation (APC) or radiofrequency ablation [38] may provide symptomatic improvement for some patients [39]. In a report of 31 patients with globus who had an inlet patch in the proximal esophagus, symptom scores by visual analog scale improved significantly after APC therapy at a median follow-up interval of 27 months. Overall, 23 of 31 patients (74 percent) indicated that APC therapy provided a benefit.

---

## PROGNOSIS

Clinical experience and limited published data suggest that patients with globus sensation usually have a benign course and good long-term prognosis. In one prospective study of 80

patients with globus sensation, during a mean follow-up of 27 months, symptoms improved or resolved in 25 and 35 percent of patients, respectively [40].

---

## SOCIETY GUIDELINE LINKS

Links to society and government-sponsored guidelines from selected countries and regions around the world are provided separately. (See "[Society guideline links: Esophageal manometry and pH testing](#)".)

---

## SUMMARY AND RECOMMENDATIONS

- Globus sensation is characterized by a sensation of a lump, retained food bolus, or tightness in the throat. Globus sensation is most often a functional disorder, though a definitive diagnosis requires an evaluation to exclude other causes of similar symptoms ( [table 1](#)). (See '[Diagnosis](#)' above and '[Differential diagnosis](#)' above.)
- The pathogenesis of globus is unclear, but visceral hypersensitivity, abnormalities of the upper esophageal sphincter (UES), mood disorders, and reflux have all been implicated. (See '[Etiology and pathogenesis](#)' above.)
- Patients have a sense of a lump, a retained food bolus, or tightness in the throat. Globus sensation is not painful and is typically worse when swallowing saliva (dry swallow) and less noticeable when swallowing solids or liquids. In approximately 70 percent of patients, globus symptoms are intermittent. (See '[Clinical manifestations](#)' above.)
- All patients with globus symptoms should initially undergo a history and physical examination that includes examination of the oropharynx and larynx. In patients with recurrent symptoms or persistent symptoms that do not resolve with initial management or those with alarm features (pain, lateralization of the symptoms, dysphagia, odynophagia, weight loss, a change in voice, presence of a neck or tonsillar mass, and unexplained cervical adenopathy), we pursue additional evaluation to rule out other causes and to establish a definitive diagnosis of globus sensation starting with a [barium swallow](#) with a solid bolus. (See '[Additional evaluation](#)' above.)
- Initial management of globus sensation is conservative, and patients should be reassured that globus sensation is a benign disorder. In patients with coexisting psychologic or psychiatric conditions, psychiatric consultation may assist patients in coping with the sensation. If globus symptoms persist, we suggest empiric trials of acid suppression

therapy (**Grade 2C**). We limit the use of pharmacologic therapy with tricyclic antidepressants (eg, low-dose [imipramine](#)) to patients with persistent symptoms that are not relieved by acid suppression. We reserve the use of [gabapentin](#) and relaxation therapy in patients with refractory symptoms. (See '[Management](#)' above.)

Use of UpToDate is subject to the [Terms of Use](#).

## REFERENCES

1. Aziz Q, Fass R, Gyawali CP, et al. Functional Esophageal Disorders. *Gastroenterology* 2016; 150:1368.
2. Tang B, Cai HD, Xie HL, et al. Epidemiology of globus symptoms and associated psychological factors in China. *J Dig Dis* 2016; 17:319.
3. Moloy PJ, Charter R. The globus symptom. Incidence, therapeutic response, and age and sex relationships. *Arch Otolaryngol* 1982; 108:740.
4. Pollack A, Charles J, Harrison C, Britt H. Globus hystericus. *Aust Fam Physician* 2013; 42:683.
5. Sperber AD, Bangdiwala SI, Drossman DA, et al. Worldwide Prevalence and Burden of Functional Gastrointestinal Disorders, Results of Rome Foundation Global Study. *Gastroenterology* 2021; 160:99.
6. Chen CL, Szczesniak MM, Cook IJ. Evidence for oesophageal visceral hypersensitivity and aberrant symptom referral in patients with globus. *Neurogastroenterol Motil* 2009; 21:1142.
7. Kwiatek MA, Mirza F, Kahrilas PJ, Pandolfino JE. Hyperdynamic upper esophageal sphincter pressure: a manometric observation in patients reporting globus sensation. *Am J Gastroenterol* 2009; 104:289.
8. Peng L, Patel A, Kushnir V, Gyawali CP. Assessment of upper esophageal sphincter function on high-resolution manometry: identification of predictors of globus symptoms. *J Clin Gastroenterol* 2015; 49:95.
9. Ding H, Duan Z, Yang D, et al. High-resolution manometry in patients with and without globus pharyngeus and/or symptoms of laryngopharyngeal reflux. *BMC Gastroenterol* 2017; 17:109.
10. Bouchoucha M, Girault-Lidvan N, Hejnar M, et al. Clinical and psychological characteristics of patients with globus. *Clin Res Hepatol Gastroenterol* 2019; 43:614.
11. Lan QL, Lin XX, Wang Y, et al. The Relationship Between Upper Esophageal Sphincter Pressure and Psychological Status in Patients with Globus Sensation. *Int J Gen Med* 2021;



14:8805.

12. Zerbib F, Rommel N, Pandolfino J, Gyawali CP. ESNM/ANMS Review. Diagnosis and management of globus sensation: A clinical challenge. *Neurogastroenterol Motil* 2020; 32:e13850.
13. Khan MR, Saha M, Mamun MA, et al. Upper GIT Endoscopic Evaluation and Psychological State Assessment of Patients with Globus Sensation. *Mymensingh Med J* 2019; 28:405.
14. Tokashiki R, Yamaguchi H, Nakamura K, Suzuki M. Globus sensation caused by gastroesophageal reflux disease. *Auris Nasus Larynx* 2002; 29:347.
15. Selleslagh M, van Oudenhove L, Pauwels A, et al. The complexity of globus: a multidisciplinary perspective. *Nat Rev Gastroenterol Hepatol* 2014; 11:220.
16. Van Daele DJ. Esophageal Manometry, pH Testing, Endoscopy, and Videofluoroscopy in Patients With Globus Sensation. *Laryngoscope* 2020; 130:2120.
17. Vakil NB, Kahrilas PJ, Dodds WJ, Vanagunas A. Absence of an upper esophageal sphincter response to acid reflux. *Am J Gastroenterol* 1989; 84:606.
18. Anandasabapathy S, Jaffin BW. Multichannel intraluminal impedance in the evaluation of patients with persistent globus on proton pump inhibitor therapy. *Ann Otol Rhinol Laryngol* 2006; 115:563.
19. Mazur MT, Shultz JJ, Myers JL. Granular cell tumor. Immunohistochemical analysis of 21 benign tumors and one malignant tumor. *Arch Pathol Lab Med* 1990; 114:692.
20. Moser G, Wenzel-Abatzi TA, Stelzeneder M, et al. Globus sensation: pharyngoesophageal function, psychometric and psychiatric findings, and follow-up in 88 patients. *Arch Intern Med* 1998; 158:1365.
21. Takwoingi YM, Kale US, Morgan DW. Rigid endoscopy in globus pharyngeus: how valuable is it? *J Laryngol Otol* 2006; 120:42.
22. Hajioff D, Lowe D. The diagnostic value of barium swallow in globus syndrome. *Int J Clin Pract* 2004; 58:86.
23. Harar RP, Kumar S, Saeed MA, Gatland DJ. Management of globus pharyngeus: review of 699 cases. *J Laryngol Otol* 2004; 118:522.
24. Caylakli F, Yavuz H, Erkan AN, et al. Evaluation of patients with globus pharyngeus with barium swallow pharyngoesophagography. *Laryngoscope* 2006; 116:37.
25. Järvenpää P, Laatikainen A, Roine RP, et al. Symptom relief and health-related quality of life in globus patients: a prospective study. *Logoped Phoniatr Vocol* 2019; 44:67.
26. Ortiz AS, Lawton A, Rives E, et al. Correlating videofluoroscopic swallow study findings with subjective globus location. *Laryngoscope* 2019; 129:335.

27. Alhilali L, Seo SH, Branstetter BF 4th, Fakhran S. Yield of neck CT and barium esophagram in patients with globus sensation. *AJNR Am J Neuroradiol* 2014; 35:386.
28. Marshall JN, McGann G, Cook JA, Taub N. A prospective controlled study of high-resolution thyroid ultrasound in patients with globus pharyngeus. *Clin Otolaryngol Allied Sci* 1996; 21:228.
29. Yadlapati R, Kahrilas PJ, Fox MR, et al. Esophageal motility disorders on high-resolution manometry: Chicago classification version 4.0©. *Neurogastroenterol Motil* 2021; 33:e14058.
30. Hori K, Kim Y, Sakurai J, et al. Non-erosive reflux disease rather than cervical inlet patch involves globus. *J Gastroenterol* 2010; 45:1138.
31. Järvenpää P, Arkkila P, Aaltonen LM. Globus pharyngeus: a review of etiology, diagnostics, and treatment. *Eur Arch Otorhinolaryngol* 2018; 275:1945.
32. Sinn DH, Kim JH, Kim S, et al. Response rate and predictors of response in a short-term empirical trial of high-dose rabeprazole in patients with globus. *Aliment Pharmacol Ther* 2008; 27:1275.
33. Weijenborg PW, de Schepper HS, Smout AJ, Bredenoord AJ. Effects of antidepressants in patients with functional esophageal disorders or gastroesophageal reflux disease: a systematic review. *Clin Gastroenterol Hepatol* 2015; 13:251.
34. You LQ, Liu J, Jia L, et al. Effect of low-dose amitriptyline on globus pharyngeus and its side effects. *World J Gastroenterol* 2013; 19:7455.
35. Zhou WC, Jia L, Chen DY, et al. The effects of paroxetine and amitriptyline on the upper esophageal sphincter (UES) pressure and its natural history in globus pharyngeus. *Dig Liver Dis* 2017; 49:757.
36. Kirch S, Gegg R, Johns MM, Rubin AD. Globus pharyngeus: effectiveness of treatment with proton pump inhibitors and gabapentin. *Ann Otol Rhinol Laryngol* 2013; 122:492.
37. Kiebles JL, Kwiatek MA, Pandolfino JE, et al. Do patients with globus sensation respond to hypnotically assisted relaxation therapy? A case series report. *Dis Esophagus* 2010; 23:545.
38. Kristo I, Rieder E, Paireder M, et al. Radiofrequency ablation in patients with large cervical heterotopic gastric mucosa and globus sensation: Closing the treatment gap. *Dig Endosc* 2018; 30:212.
39. Klare P, Meining A, von Delius S, et al. Argon plasma coagulation of gastric inlet patches for the treatment of globus sensation: it is an effective therapy in the long term. *Digestion* 2013; 88:165.

40. Timon C, O'Dwyer T, Cagney D, Walsh M. Globus pharyngeus: long-term follow-up and prognostic factors. *Ann Otol Rhinol Laryngol* 1991; 100:351.

Topic 2240 Version 21.0

## GRAPHICS

### Differential diagnosis of globus sensation

|  |
|--|
| <b>Motility disorder</b>   |
| <ul style="list-style-type: none"> <li>▪ Achalasia</li> </ul>                                |
| <ul style="list-style-type: none"> <li>▪ Distal esophageal spasm</li> </ul>                  |
| <ul style="list-style-type: none"> <li>▪ Hypercontractile esophagus</li> </ul>               |
| <ul style="list-style-type: none"> <li>▪ Hypertensive upper esophageal sphincter</li> </ul>  |
| <b>Mucosal lesion</b>  |
| <ul style="list-style-type: none"> <li>▪ Heterotopic gastric mucosa (inlet patch)</li> </ul> |
| <ul style="list-style-type: none"> <li>▪ Eosinophilic esophagitis</li> </ul>                 |
| <ul style="list-style-type: none"> <li>▪ Postcricoid web</li> </ul>                          |
| <b>Structural/mass lesion</b>  |
| <ul style="list-style-type: none"> <li>▪ Hyperplastic tonsils</li> </ul>                     |
| <ul style="list-style-type: none"> <li>▪ Carcinoma of the base of the tongue</li> </ul>      |
| <ul style="list-style-type: none"> <li>▪ Enlarged cervical lymph nodes</li> </ul>            |
| <ul style="list-style-type: none"> <li>▪ Enlarged thyroid gland (goiter)</li> </ul>          |
| <ul style="list-style-type: none"> <li>▪ Paraesophageal masses</li> </ul>                    |

Graphic 59444 Version 3.0

## Contributor Disclosures

**Kristen M Robson, MD, MBA, FACG** No relevant financial relationship(s) with ineligible companies to disclose. **Anthony J Lembo, MD** Equity Ownership/Stock Options: Allurion [medical device for obesity]; Bristol Myers Squibb [Pharmaceuticals]; Johnson & Johnson [Pharmaceuticals]. Consultant/Advisory Boards: Aeon [Gastroparesis]; Allakos [EoE]; Ardelyx [IBS-C]; Arena [IBS]; Atmo [medical device for intestinal transit]; BioAmerica [IBS, IgG antibody food test]; Evoke [gastroparesis]; Gemelli Biotech [SIBO, IBS]; Ironwood [IBS-C, CIC, IBS-c]; orphoMed [IBS]; Pfizer [pharma]; Takeda [IBS-C, CIC]; Vibrant [CIC]. Other Financial Interest: Cin-Dome [clinical trial gastroparesis]; Vibrant - Phase III clinical trial [gastroparesis]. All of the relevant financial relationships listed have been mitigated. **Nicholas J Talley, MD, PhD** Patent Holder: Australian Provisional Patent [Diagnostic marker for functional gastrointestinal disorders]; Biomarkers of irritable bowel syndrome [Irritable bowel syndrome]; Mayo Clinic [Dysphagia questionnaire]; Mayo Clinic [Bowel Disease questionnaire]; Nepean Dyspepsia Index [Dyspepsia]; Nestec [Irritable bowel syndrome]; Singapore Provisional Patent [BDNF Tissue Repair Pathway]. Grant/Research/Clinical Trial Support: Alimetry [Gastric mapping device research collaboration]; Allakos [Gastric eosinophilic disease]; AstraZeneca [Eosinophilic gastritis, eosinophilic gastroenteritis]; Intrinsic Medicine [Bowel syndrome with constipation]; NHMRC Centre for Research Excellence in Digestive Health [NHMRC Investigator grant]. Consultant/Advisory Boards: Adelphi Values [Functional dyspepsia]; Allakos [Gastric eosinophilic disease, AK002]; AstraZeneca [Eosinophilic gastritis, eosinophilic gastroenteritis]; AusEE [Eosinophilic gut diseases]; Bayer [Inflammatory bowel syndrome]; BluMaiden [Microbiome Ad Board]; Comvita Mānuka Honey [Digestive health]; Dr Falk Pharma [Eosinophilia]; GlaxoSmithKline Australia [Educational speaker eosinophilic gut disease]; Glutagen [Celiac disease]; International Foundation for Functional Gastrointestinal Disorders [Advisory board, functional GI disorders]; Intrinsic Medicine [Human milk oligosaccharide]; IsoThrive [Esophageal microbiome]; Planet Innovation [Gas capsule, inflammatory bowel syndrome]; Progenity Inc [Intestinal capsule]; Rose Pharma [IBS]; Viscera Labs [Inflammatory bowel syndrome, diarrhea]. Other Financial Interest: Elsevier textbook royalties [Medical education]. All of the relevant financial relationships listed have been mitigated. **Shilpa Grover, MD, MPH, AGAF** No relevant financial relationship(s) with ineligible companies to disclose.

Contributor disclosures are reviewed for conflicts of interest by the editorial group. When found, these are addressed by vetting through a multi-level review process, and through requirements for references to be provided to support the content. Appropriately referenced content is required of all authors and must conform to UpToDate standards of evidence.

### [Conflict of interest policy](#)

→