

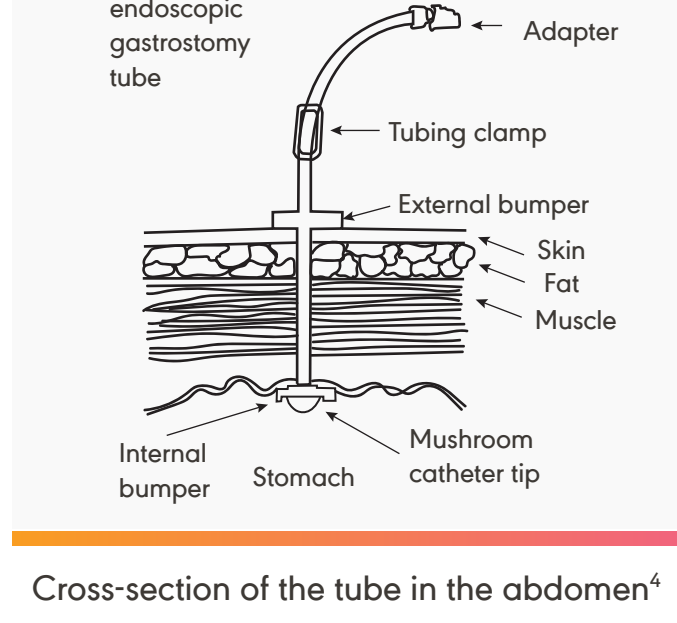
## UNDERSTANDING ENTEROSTOMY TUBE CLASSIFICATION: BY TUBE DESIGN



Gastrostomy feeding tube and devices can be categorized as either externally removable (can be removed by simple traction) or not externally removable (have to be removed by endoscopic dissection of the gastrostomy tract), and can be made from different materials like silicone or polyurethane.<sup>1,2</sup>

Two bumpers stabilize the gastrostomy tubes<sup>3</sup>

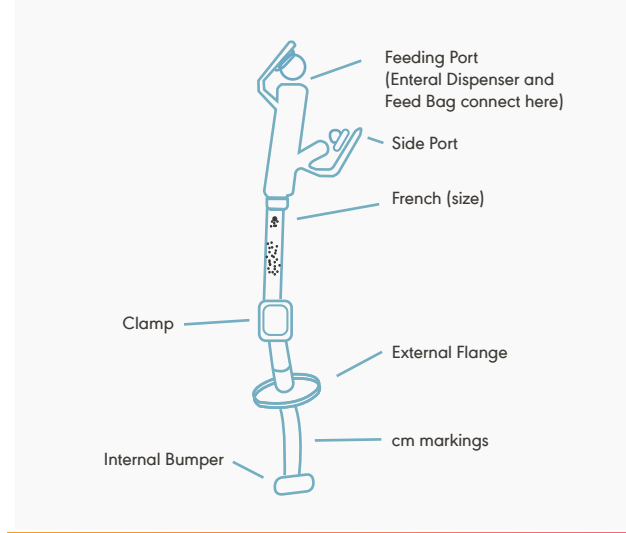
- A bumper on the portion of the tube part which is inside the stomach, that prevents the tube from migrating out of the stomach (called 'internal bumper').<sup>3</sup>
- A flat disk (called 'external bumper') that secures the tube to the abdominal wall and prevents tube migration into the stomach.<sup>3</sup>



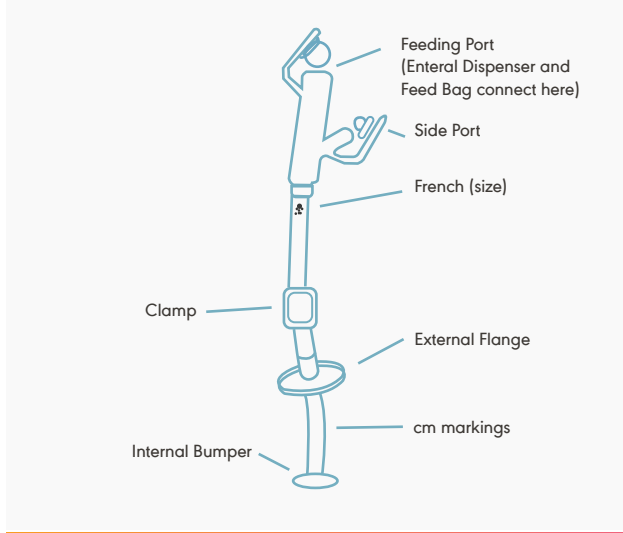
Cross-section of the tube in the abdomen<sup>4</sup>

### Common types of gastrostomy feeding tubes and devices\*

#### Non-balloon type gastrostomy tube<sup>1</sup>



Non-balloon type gastrostomy tube with collapsible internal bumper



Non-balloon type gastrostomy tube with rigid internal bumper

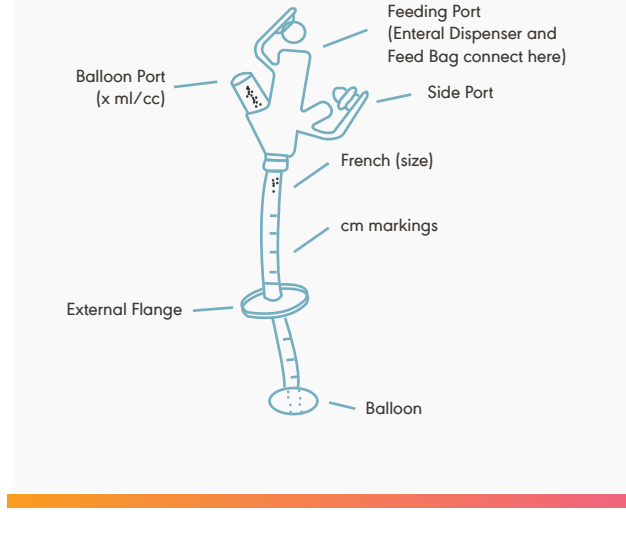
Tubes with a collapsible internal bumper have a unique design for simple traction removability, but still require more force for removal than other PEG tubes, since the bumper is designed to collapse inwards upon tube removal. This leads to fewer accidental tube dislodgements, and helps provide a secure fit. Moreover, such tubes allow safer tube removal without incision.<sup>5,6</sup>

Tubes with rigid internal bumper are usually removed endoscopically.<sup>7</sup>

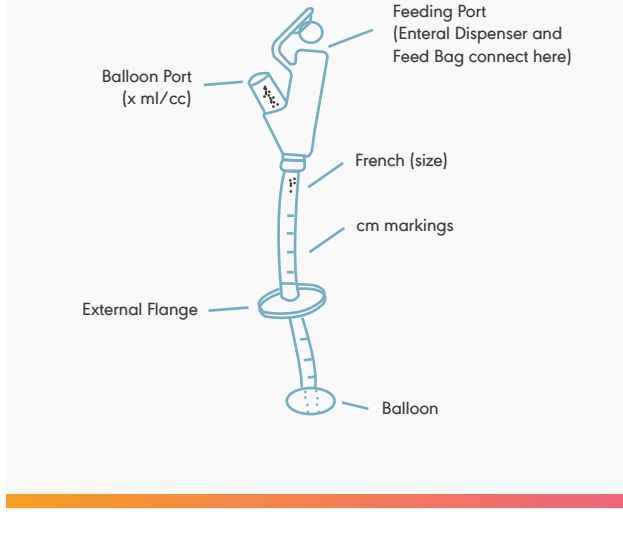
#### Balloon-type gastrostomy tube<sup>1</sup>

These tubes have a balloon (inflated with sterile water) that serves as an internal retention device.<sup>7</sup> As the balloon tip can be inflated after the tube is inserted in the stomach, it can be inserted by nurse or even at home by the patient or caregiver.<sup>8</sup>

However in some cases, there could be a risk of potential tube dislodgement in case of accidental deflation or balloon rupture.<sup>9</sup>



Balloon-type gastrostomy tube with side port

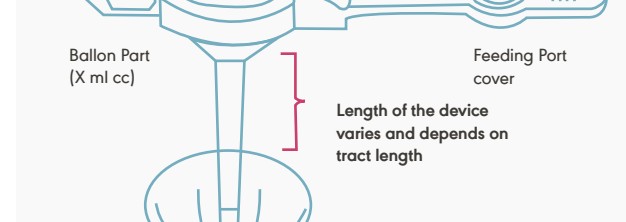


Balloon-type gastrostomy tube without side port

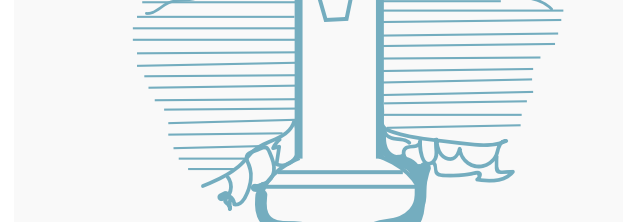
Balloon-type gastrostomy tubes with side port allow for medication administration through the side port.<sup>10</sup>

#### Low-profile (skin-level) gastrostomy devices<sup>1</sup>

Low-profile gastrostomy tubes lie almost flat against the skin, and are unobtrusive, easy to conceal and allow ease of care, enabling better quality of life of patients. They come with extension tubes.<sup>2,8</sup>



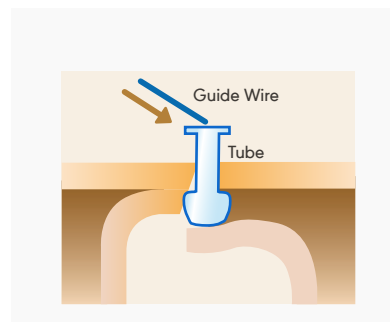
Balloon-type low profile gastrostomy tube



Bumper-type (non-balloon) low-profile gastrostomy tube

Bumper-type (non-balloon) low profile gastrostomy tubes have an enlarged tip (that serves as an internal stabilizer), that must be obturated or stretched with a special introducer and thus can be inserted only by a doctor or a trained nurse.<sup>8</sup>

Bumper-type (non-balloon) tubes have a thick tip and may require more force for insertion, increasing the chances of the tube not being able to follow the guidewire, resulting in a potential risk of tube misplacement in the stomach (as shown in the figure)<sup>11</sup>



### DID YOU KNOW ?

Selection of the most appropriate G-tube or device to insert involves consideration of patient and device characteristics<sup>1</sup>

Patient factors	Tube/device characteristics
Patient/carer preference	Size/diameter of tube/device
Patient/carer abilities and support available post insertion	Low profile device or longer tube
Patient age	Balloon retention for ease of change or non-balloon/internal bumper device
Anesthetic risk	Availability of tube/device and feeding adaptors
Risk of patient pulling tube/device out	Familiarity with tube/device types
Patient mobility and need for tube or device concealment	
Access to services for tube/device replacement	
Insertion site (anatomical)	

Similar to gastrostomy tubes, jejunostomy tubes and gastrojejunostomy feeding tubes are available as balloon-type, non-balloon type and low profile devices.

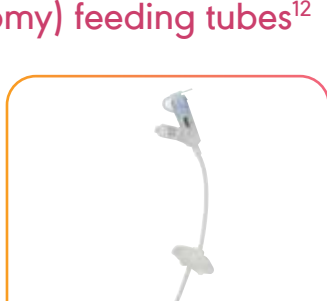
### OUR SOLUTION

The AVANOS MIC\* and MIC-KEY\* brand of enteral feeding tubes is well recognized and accepted for intermediate and long-term feeding applications.<sup>12</sup>

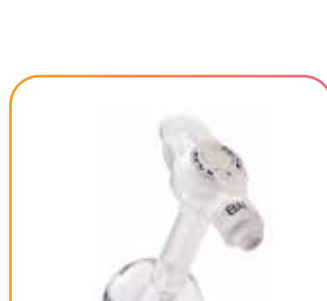
#### Gastric access (gastrostomy) feeding tubes<sup>12</sup>



MIC\*PEG tube<sup>12</sup>  
SECUR-LOK\* external retention ring  
Traction removable

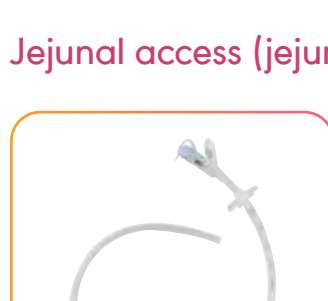


MIC\*G tube<sup>12</sup>  
Inflatable silicone internal retention balloon  
SECUR-LOK\* External retention ring

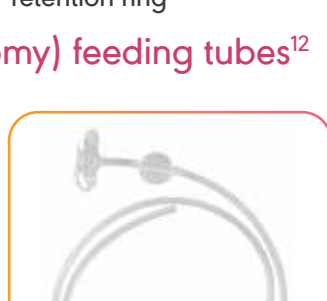


MIC-KEY\* G tube<sup>12</sup>  
Low-profile design  
Inflatable silicone internal retention balloon

#### Jejunal access (jejunostomy) feeding tubes<sup>12</sup>



MIC\*J tube<sup>12</sup>  
Inflatable silicone internal retention balloon  
SECUR-LOK\* External retention ring

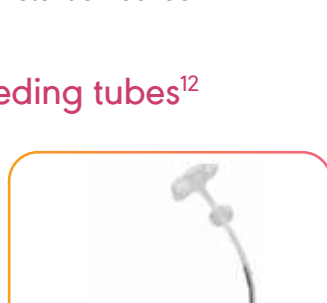


MIC-KEY\* J tube<sup>12</sup>  
Low-profile design  
Inflatable silicone internal retention balloon

#### Gastric-jejunal access feeding tubes<sup>12</sup>



MIC\*GJ tube<sup>12</sup>  
Inflatable silicone internal retention balloon  
SECUR-LOK\* External retention ring



MIC-KEY\*GJ tube<sup>12</sup>  
Low-profile design  
Inflatable silicone internal retention balloon

\*Each of the tube properties apply equally to both ENFit® and non-ENFit® connector tubes

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1. ACI NSW Agency for clinical innovation. A Clinician's Guide: Caring for people with gastrostomy tubes and devices: From pre-insertion to ongoing care and removal [Internet]. [2015 Mar; cited 2020 Jul 21]. Available from: [https://www.aci.health.nsw.gov.au/\\_data/assets/pdf\\_file/0017/251063/gastrostomy\\_guide-web.pdf](https://www.aci.health.nsw.gov.au/_data/assets/pdf_file/0017/251063/gastrostomy_guide-web.pdf). 2. Tong S. Percutaneous Endoscopic Gastrostomy Tube Replacement. Video Journal and Encyclopedia of GI Endoscopy. 2014; 2(2): 70-73. 3. Overstreet, Maria RN, MSN How does a PEG tube stay in? Nursing2004; June 2004 - Volume 34 - Issue 6-p21. 4. Cleveland clinic.Percutaneous endoscopic gastrostomy[Internet]. [updated 2020. cited 2020 Oct 14]. Available from: <https://my.clevelandclinic.org/health/treatments/4911-percutaneousendoscopic-gastrostomy-pe>. 5. Product data sheet, Avanos MIC\*PEG standard and safety kits for push and pull method DH70EC14317 [Data on file. GL-DSR00143 / 1 - Retention Values for Competitor PEG Tubes Report] 6. Benatta MA. The Buried Bumper Syndrome: External Bumper Extraction after Radial Mini Incisions and Replacement through an Adjacent Tract. Case Rep Med. 2016;2016:5379291. 7. Ojo O. Balloon gastrostomy tubes for long-term feeding in the community. Br J Nurs. 2011; 20(1):34-8. 8. Fallner N, Lawrence KG. Comparing low-profile gastrostomy tubes. Nursing. 1993; 23(12):46-8. 9. Funaki B, Peirce R, Lorenz J, Menocci PB, Rosenblum JD, Straus C, Ha TV, Leef JA, Zaleski GX. Comparison of balloon- and mushroom-retained large-bore gastrostomy catheters. AJR Am J Roentgenol. 2001;177(2):359-62. 10. Gallegos M. Nursing considerations for enteral tubes [Internet]. [last updated 2012 Sep 10; cited 2021 Feb 02]. Available from: [https://coc.unm.edu/common/training/aspiration\\_mgmt/mary\\_gallegos.nursing%20considerations%20for%20enteral%20tubes.pdf](https://coc.unm.edu/common/training/aspiration_mgmt/mary_gallegos.nursing%20considerations%20for%20enteral%20tubes.pdf). 11. Knowledge Communication 2015 [Vol.3]. Digestive Health Avanos Japan [19DMKT46-1]. 12. Product data sheet, MIC\* and MIC-KEY\* enteral feeding product catalogue 2020.

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