




## Ministry of Health

<b>Document Title</b>	Gastrostomy Provision Guidelines
<b>Document Type</b>	Guidelines
<b>Directorate/Institution</b>	Directorate General of Specialized Medical Care
<b>Targeted Group</b>	All healthcare professionals who are involved in provision of Gastrostomy
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<b>Designation</b>	Gastrostomy Taskforce
<b>Release Date</b>	December 2022
<b>Review Frequency</b>	Three years

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Date	December 2022	Date	December 2022

## **Acknowledgment**

An Acknowledgement goes to the following members of the Gastrostomy Guidelines taskforce for their relentless support in having established this guideline

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**Acronyms:**

ASPEN	American Society for Parenteral and Enteral Nutrition
CBC	Complete Blood Count
ESPEN	European Society for Parenteral and Enteral Nutrition
INR	International Normalized Ratio
PEG	Percutaneous Endoscopic Gastrostomy
PSG	Percutaneous Surgical Gastrostomy
RIG	Radiologically Inserted Gastrostomy

## **1. Introduction:**

Most nutritional guidelines that discuss nutritional support such as ESPEN and ASPEN recommend the initiation of gastrostomy to patients who require enteral nutritional support for more than four weeks or those require lifetime nutritional support. The importance of provision of this method and its continuous monitoring and evaluation cannot be stressed enough. The main reason behind establishing this guideline is that, despite provision of gastrostomy to suitable candidates, it is not up to international standards. Moreover, there is no unified pathway or system in providing this mode of feeding as this service is disproportionately provided across the Sultanate.

Henceforth, the main objective of this guideline is to address the aforementioned issues emphasizing on criteria, contraindications, and detailed procedure.

## **2. Scope**

This guideline is applicable to all healthcare professionals who are involved in provision of Gastrostomy and those who are involved in monitoring and supporting patients at home

## **3. Purpose**

The purpose of this guideline is to establish a framework for the provision of gastrostomy and monitoring its implementation and all aspects concerned.

## **4. Definitions**

**4.1 Gastrostomy (PG)** is the establishment of enteral access into the stomach through the abdominal wall which can be performed surgically (percutaneous surgical gastrostomy [PSG]), endoscopically (percutaneous endoscopic gastrostomy [PEG]) or with radiological (ultrasound or fluoroscopic) guidance (radiologically inserted gastrostomy [RIG] (European Society of Gastrointestinal Endoscopy, 2021).

It allows nutrition, fluids and/or medications to be introduced directly into the stomach, bypassing the mouth and esophagus and offers superior access to the GI tract over surgical methods

## **5. Guideline**

### **5.1 Benefits of Gastrostomy Feeding:**

- 5.1.1** Reduce risk of aspiration
- 5.1.2** No need for general anesthesia in most cases
- 5.1.3** Effective way of feeding

- 5.1.4 Safe
- 5.1.5 Well tolerated by patients
- 5.1.6 Improve quality of life
- 5.1.7 is associated with fewer treatment failures, higher feeding delivery, and improved serum albumin concentration levels

## **5.2 Criteria for use**

- Long term enteral nutrition with reversible options

### **5.2.1 Main indications (Please see appendix 2)**

**5.2.1.1** The indication for EN needs to be assessed on a case-by-case basis, since each condition has a different baseline prognosis, irrespective of enteral support (European Society of Gastrointestinal Endoscopy, 2021).

**5.2.1.2** Enteral feeding, stomach decompression, and medication introduction are some of the main indications for gastrostomy placement

**5.2.1.3** Enteral nutritional support is indicated for patients with poor volitional intake, permanent neurological impairment, oropharyngeal dysfunction, short gut syndrome, and major trauma and burns. Generally, patients who meet one or more of these criteria for more than 30 days are candidates for gastrostomy placement

## **5.3 Gastrostomy Complications:**

### **5.3.1 Procedure related complications:**

- Colon Perforation
- Hemorrhage
- Aspiration
- Risks of hypoxia and hypotension due to sedation agents
- Mortality

### **5.3.2 Major complications:**

- Aspiration
- Hemorrhage
- Peritonitis
- Necrotizing fasciitis
- Tumor implantation

### 5.3.3 Minor Complications :

- Ileus
- Peristomal infection
- Stomal leakage
- Buried bumper
- Gastric ulcer
- Fistulous tracts
- Inadvertent removal

### 5.4 Contraindications

<b>Absolute Contraindications</b>	<b>Relative Contraindications</b>
Hemodynamic instability	Serious coagulation disorders (INR above 1.5, PTT over 505, Platelets less than 50,000 /mm <sup>3</sup> )
Peritonitis	Sepsis
marked peritoneal carcinomatosis	Severe ascites
	Abdominal wall infection at the selected site of placement
Interposed organs e.g. liver, colon (Can be done surgically)	recent GI bleeding due to peptic ulcer disease with high risk of rebleeding, as well as hemodynamic and respiratory instability
History of total gastrectomy	patients with advanced cirrhosis
gastric outlet obstruction (if being used for feeding)	

### 5.5 Procedure (Day care procedure – to leave within 6 hours)

#### 5.5.1 Peri- procedural management

##### 5.5.1.1 Pre-procedure assessment and management:

- Consent should be obtained **and** Patient's privacy should be maintained
- IV access should be secured
- Initial vital assessment should be obtained
- Prior procedure, conduct patient to the cardiac monitor

- infection control measures should be maintained
- The pre-procedure assessment should incorporate laboratory investigations including a full blood count including urea, electrolytes, CBC (with particular attention to the platelet count) and coagulation tests; the recommended thresholds are a platelet count of  $> 50\ 000/\mu\text{L}$  and an INR  $< 1.5$ .
- Management of anticoagulant or antiplatelet therapy depends on the individual patient's thrombotic risk.
- In the case of low thrombotic risk, P2Y12 receptor antagonists (e. g. clopidogrel) should be discontinued for 5 days before the procedure
- In patients on dual antiplatelet therapy, aspirin therapy may be continued. Anticoagulants should be discontinued 5 days before the procedure (according to type) and the INR should be below 1.5 (Excluding patients on warfarin)
- In the case of treatment with direct anticoagulant therapies, these should be stopped from 48 to 72 hours before the procedure, according to the specific type of medication and the individual patient's underlying renal function.
- Patients with a high thrombotic risk, aspirin should be continued and a cardiologist should be consulted about the risk/benefit of discontinuing P2Y12 receptor antagonists (e. g. clopidogrel) – on double agent to be admitted for anticoagulant optimization before procedure
- In the context of a high thrombotic risk, oral anticoagulants should be discontinued but these should be substituted with low molecular weight heparin according to local guidelines of antiplatelet/anticoagulation and in consultation with a cardiologist
- Antiplatelet/anticoagulant therapy should be resumed up to 48 hours after the procedure depending on the perceived individual bleeding/thrombotic risks, respectively.



- Adherence to specific guidelines regarding antiplatelet and anticoagulant use, in order to maintain the low hemorrhagic risk (European Society of Gastrointestinal Endoscopy, 2021).

## **6. Responsibilities**

### **6.1 Bedside nurse:**

- Assess patient's vital signs
- Place patient in comfortable position and reassure the patient
- Provide health education in regard to procedure and post-procedure care
- Monitor patient for complication
- Communicate with the discharge planner nurse to communicate with community nurse prior patient's discharge

### **6.2 Community health nurses:**

- Obtain patient's vital signs (Pulse, HR, Blood pressure and oxygen saturation level)
- Check patient intake and output
- Measure patient's weight
- Perform physical examination
- Assess the stoma site and the tube status
- Perform wound dressing if needed
- Comply with infection control measures
- Provide health education to the patient and the caregiver
- ensure that the patient/career are competent with all aspects, of tube care, feed preparation, correct positioning for feed and drug administration.
- Ensure medications are appropriate for PEG, to avoid complications and interactions, and given correctly.
- Assess for wound status (signs of infection)
- Assess patient for complications and refer the patient to the treating doctor in the assigned healthcare institution if required
- Check Infection prevention measures followed at home- hand hygiene practices, clean environment for food preparation and for feed administration the syringes are cleaned and dried and stored appropriately.

- Initiate process of tube replacement when necessary, by communicating with local Health Center or Extended Health Center or Hospital and the doctor.
- Contact dietician with any concerns.
- Contact PHC doctor with any concerns.
- Documentation should be maintained

**6.3 Dietitian:**

- Conduct and assessment and initiate and communicate a proper medical nutrition therapy plan
- Monitor and follow up biannually and when nutritional goals are not being met.

## 7. Document History and Version Control

Version	Description	Review Date
1	Initial Release	December 2025

## 8. Related Documents:

There is no related document for this guidelines.

## 9. References

**Percutaneous endoscopic gastrostomy: An update on its indications, management, complications, and care** Alfredo J. Lucendo and Ana Belén Friginal-Ruiz *Rev Esp Enferm Dig (Madrid Vol. 106, N.º 8, pp. 529-539, 2014*

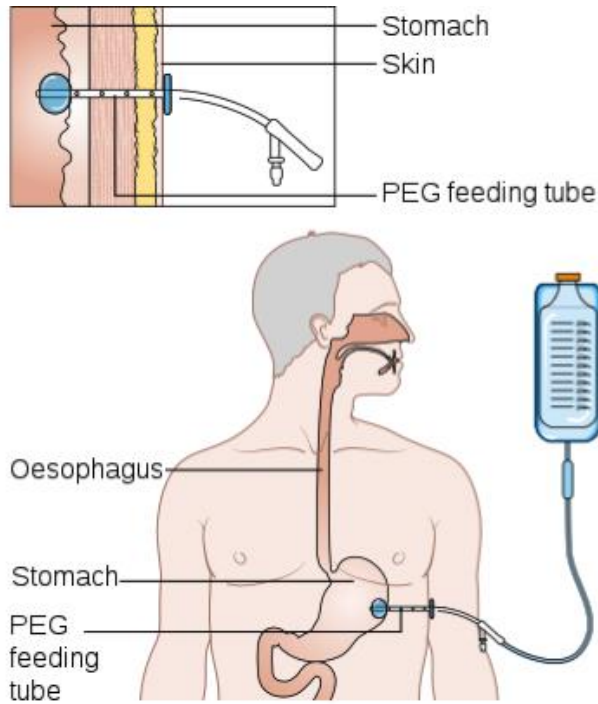
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**Percutaneous endoscopic gastrostomy: A secondary care hospital experience** Muhammer Ergenç,<sup>1</sup> Serhat Tolga Derici,<sup>1</sup> Tevfik Kılılcım Uprak<sup>2</sup> *Laparosc Endosc Surg Sci 2021;28(4):210-214*

**Percutaneous Endoscopic Gastrostomy: A Prospective Study** Doraiswami Babu Vinish, Gautham Krishnamurthy, Arulprakash Sarangapani, Kayalvizhi Rajini, Balakrishnan Siddartha Ramakrishna *2021 Gastroenterology, Hepatology and Endoscopy Practice*

**10. Annexes**

**Appendix (1): Different percutaneous endoscopic access for enteral feeding tubes**



**Appendix 2: Main Indications:**

clinical conditions that make oral intake impossible (neurological conditions, obstructive causes)	acute and/or chronic diseases that result in a catabolic state where oral intake becomes insufficient	chronic small-bowel obstruction requiring a decompression gastrostomy
Neurological indications include diseases characterized by neurologically derived dysphagia such as stroke ,motor neuron diseases parkinsonism  cerebral palsy head trauma in selected cases, early dementia Obstructive causes include: oropharyngeal cancer, head and neck cancer , esophageal cancer, and benign esophageal strictures	general critical illness, severe burns , severe acute pancreatitis , oncological conditions and chronic lung and/or cardiovascular disease  Conditions with reduced oral nutrition without concomitant organic disease, such as anorexia nervosa	bowel obstruction malignant bowel obstruction chronic intestinal pseudo-obstruction and gastroparesis with advanced symptoms