

Medicines administration via a gastrostomy or percutaneous endoscopic gastrostomy (PEG) tube

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When caring for patients who are not able to take medication orally, it is common practice to administer medicines via a gastrostomy tube, such as a percutaneous endoscopic gastrostomy (PEG) tube. Patients who are fed via a gastrostomy tube often cannot manage any type of oral intake, and this includes medications. There are, however, problems associated with this practice. Those prescribing and/or administering medication in this way should be aware of possible interactions and issues of liability. Always consult a pharmacist for advice on the appropriateness of delivering medication to individual patients via a gastrostomy tube. *The Handbook of Drug Administration via Enteral Feeding Tubes* (White & Bradnam, 2015) is also a useful resource. These pages show the ENFit connector, an internationally agreed standard that aims to reduce misconnections between unrelated delivery systems, such as vascular, respiratory and epidural systems (GEDSA, 2017).

Liability

The product licence of a medication indicates the conditions under which a medicine can be safely administered. Anyone administering a medicine outside of those conditions assumes a degree of liability for any adverse effects (MHRA, 2009). For example, crushing a tablet that was designed to be swallowed whole means that the administration falls outside of that medicine's product licence. Nevertheless, it is generally accepted that, in certain circumstances, the practice of crushing tablets, or giving other oral preparations via enteral feeding tubes, is unavoidable in enabling professionals to act in the patient's best interest. The prescription chart must indicate that the patient is receiving medication via a gastrostomy tube (MHRA, 2009).

Interactions

The timing of medicine administration can interfere with the absorption and effect of the medicine and may be a factor in treatment failure. Therefore, it is important that the person administering medication is aware of any potential interactions and any required time-gap between medication and feed. Never

add medicines to enteral feed containers, because of the risk of unknown interactions and the unpredictability of administration of enteral feeds. Each medicine must be given individually; medicines must not be crushed or mixed together. This is extremely important in preventing unknown interactions. There should be a flush of at least 10–15 mL of water, according to local policy, between each medicine administered, to ensure they do not mix within the feeding tube (BAPEN, 2003).

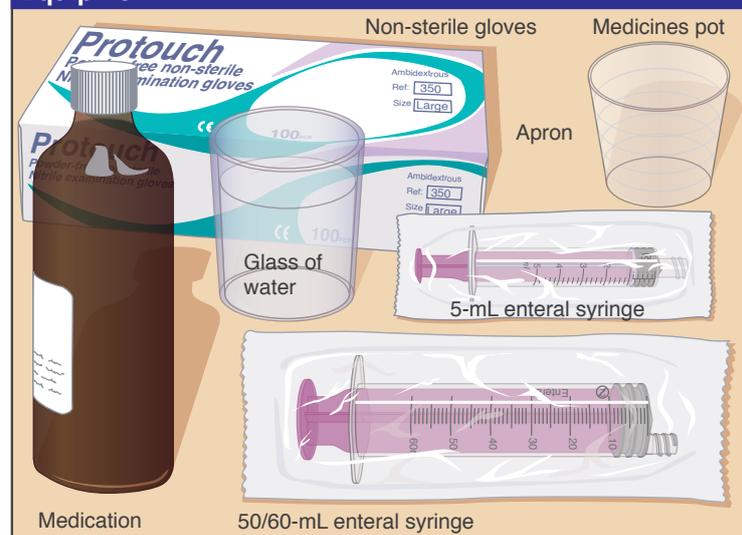
Medicine preparations

A soluble or liquid formulation is preferred when medicines are to be given via a PEG tube. However, some liquid medicines are suspensions which contain small particles that can block tubes. Crushing tablets or opening capsules is a last resort; you should first discuss this option with a pharmacist. Some tablets that are not marketed as dispersible will, in fact, dissolve in water if given enough time, and a pharmacist will be able to advise on this strategy. Tablets that should not be crushed include:

- Enteric-coated (EC): the coating is designed to resist gastric acid, to protect the medicine and/or reduce gastric side-effects.
- Modified/slow-release (MR, SR, LA, XL): tablets or capsules that are designed to release the medicine over an extended period of time; crushing will release all the medicine at once and may cause toxic side-effects.
- Cytotoxic medicines and hormones: these should not be crushed due to the risks to staff from exposure to the powdered medicine.
- Sublingual, buccal, 'melt' and chewable preparations.
- Proton pump inhibitors: these have coatings that are designed to dissolve in the jejunum rather than the stomach (BAPEN, 2003).

The gastrostomy tube must be flushed with at least 30 mL of fresh water before administration of medicine; refer to local policy to see what sort of water is recommended (it could be sterile or tap water) (Thompson, 2017).

Equipment



Use clearly labelled oral or enteral syringes (which are usually purple) for the oral/enteral administration of liquids, to reduce the risk of accidental parenteral administration (NPSA, 2007).

Decontaminate your hands



Put on an apron, decontaminate your hands and put on gloves (Loveday *et al.*, 2014), according to local policy.

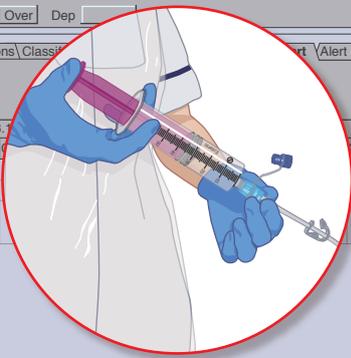
Do not undertake or attempt any procedure unless you are, or have supervision from, a properly trained, experienced and competent person. Always first explain the procedure to the patient and obtain their consent, in line with the policies of your employer or educational institution.

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Prescription

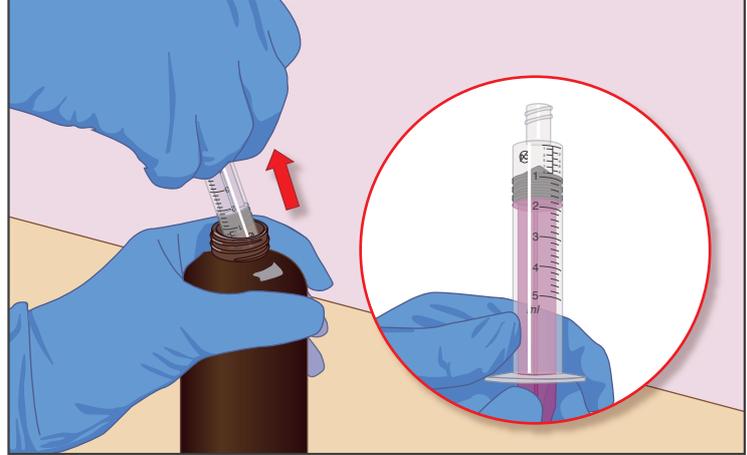
Prescribing Information & Communication System
 System Prescription Action View Patient Print Help
 Reg. No. H402054/A NHS No. 5957276904 Name J.B. PRIESTLY Class
 Cons FRAA Pat No Pat List Pat Srch Bed Hand Over Dep
 /Pat Admin Procedures Requests Flowsheet Observations Classif Alert List
Recent Drugs

	02.12	03.12	04.12	05.12	06.12	07.12	08.12	09.12	10.12	11.12	12.12	13.12	14.12	15.12	16.12	17.12	18.12	19.12	20.12	21.12	22.12	23.12	24.12	25.12	26.12	27.12	28.12	29.12	30.12		
Enoxaparin																															
Paracetamol																															
TEDS compression stockings (GECS)																															



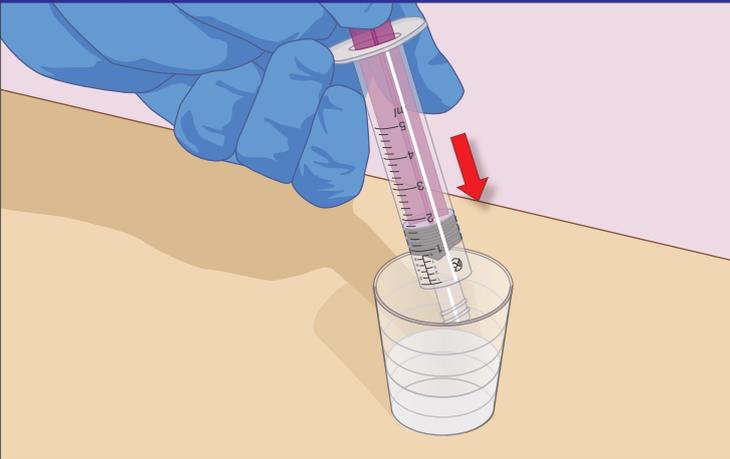
Always check the patient's identity and their current prescription before giving a medicine. The prescription must show the correct route of administration, e.g., gastrostomy. Before administering medicines via a gastrostomy tube, you must flush it with 30 mL of fresh water (see inset). Always refer to local policy and guidelines.

Measure liquid medicines with a syringe



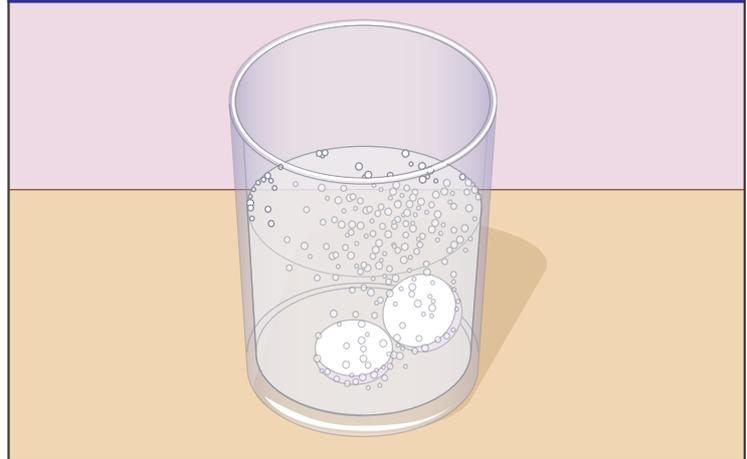
Shake liquid medicines well. Use a small enteral syringe to accurately measure small doses of liquid medicines. If available, use a bottle bung in the medication bottle and attach the syringe to it; this will make drawing up the medication easier and reduce the risk of spillages. Alternatively, a medication straw may be used to withdraw the medicine from the bottle.

Preparing the medicine: (a) Liquids



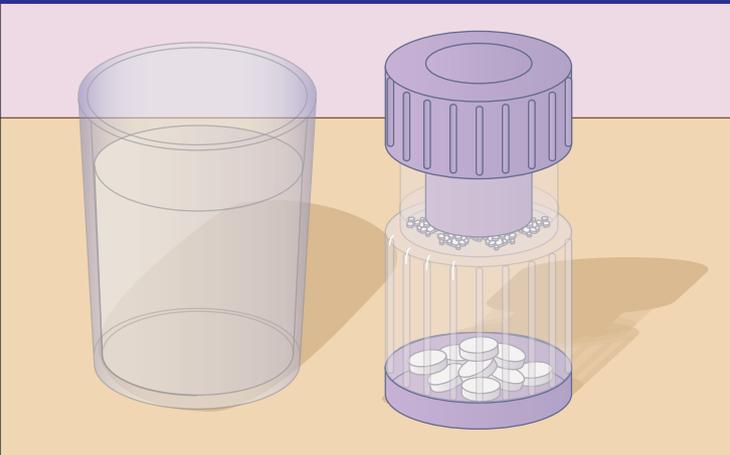
Place small doses of liquid medicines into a medicines pot and dilute with 10–15 mL of fresh water, according to local policy. Dilute thick liquids with an equal amount of water.

(b) Soluble tablets



If administering tablets that are soluble, dissolve these in 10–15 mL of water.

(c) Tablets



If there are no alternative preparations available, crush uncoated and sugar-coated tablets using a suitable tablet-crushing device or pestle and mortar, and mix the powder with 10–15 mL of water.

(d) Capsules



If there are no alternative preparations available, and if advised to do so by a pharmacist, open capsules, tip the powder into the medicines pot and mix it with 10–15 mL of water.

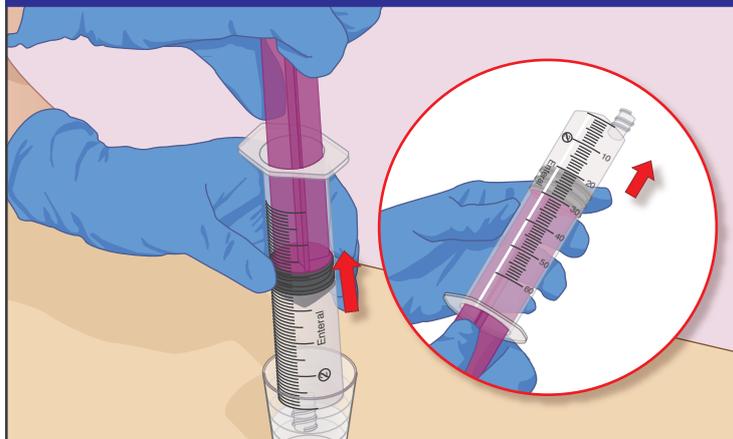
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Measure the water for diluting



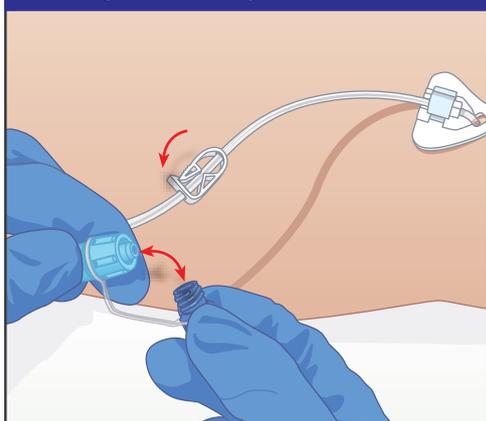
Using a 50/60-mL purple enteral syringe, measure the amount of water to be used for diluting the medicine and add to the medicines pot. Be aware that water used for administration of medication forms part of the patient's fluid intake. Care should be taken in patients whose fluid intake is restricted.

Mix the medicine



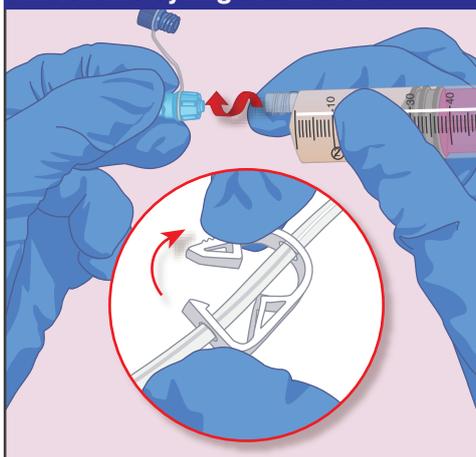
Make sure you mix the medicine and water together well. Do not allow the mixture to stand as the medication may thicken on standing. Immediately draw all of the medication and measured water up in the 50/60-mL enteral syringe. Before administering medication, stop any feed that is going through a pump and flush the tube (Best & Wilson, 2011).

Close the clamp and open the cap on the gastrostomy tube



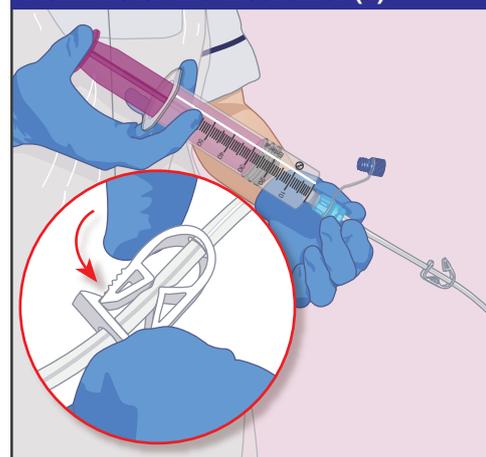
Close the clamp on the gastrostomy tube. Open the cap on the end of the gastrostomy tube.

Attach the syringe to the tube



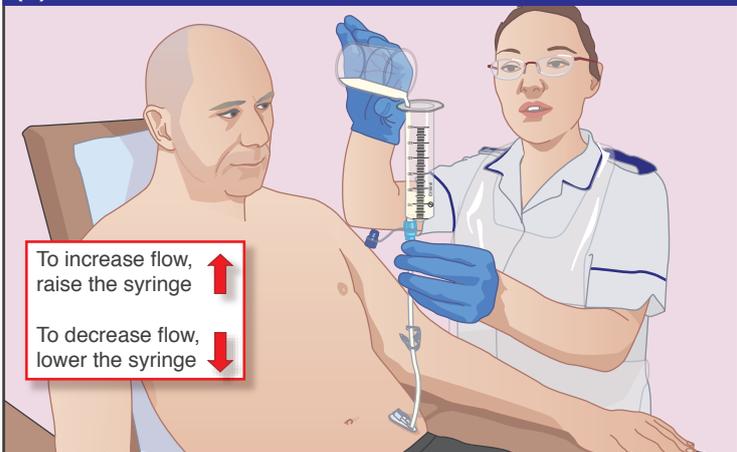
Attach the syringe containing the medicine. Open the clamp again (inset).

Administer the medicine: (a)



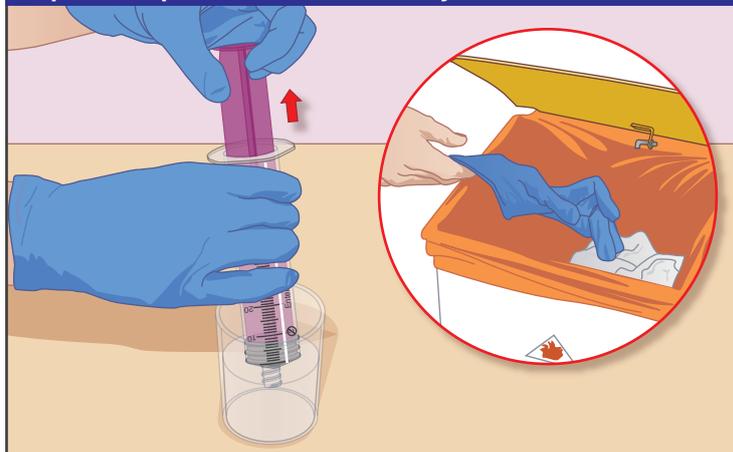
Slowly press the plunger down to administer the medicine. Close the clamp (inset) before removing the syringe and closing the cap. Flush the gastrostomy tube with 10–15 mL of water.

(b)



Some medicines can be given using a gravity method where the plunger is removed from the syringe, and the medicine is poured into the barrel and allowed to flow by gravity into the tube. Always refer to local policy for the desired method.

Repeat the procedure if necessary



If a further medicine is to be given, then repeat the process. Administer each medicine separately, with a flush of 10–15 mL of water between each medicine to prevent tube blockage. When finished, use a final flush of approximately 30 mL of water. Dispose of equipment according to local policy, record administration of the medicine and document care.

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