

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

Demonstrated by Jane Fletcher, Nutrition Nurse Team Leader, Queen Elizabeth Hospital, University Hospitals Birmingham NHS Foundation Trust

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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).

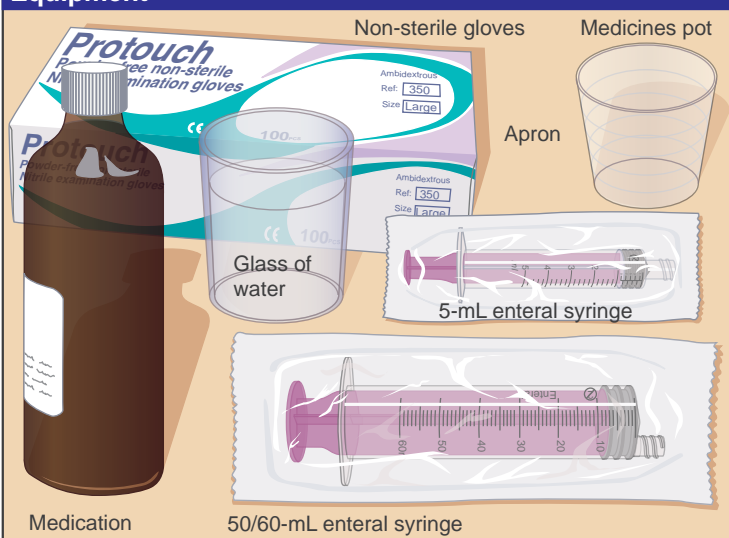
Medicine preparations

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.

