Appendix 1 - Fasting guideline

1. Purpose

The purpose of this appendix is to guide the safe management of cessation of oral intake in patients of all ages undergoing anaesthesia, referred to as 'fasting'.

It is intended to include general anaesthesia, major regional anaesthesia[(i)], or any level of sedation exceeding minimal[(ii)].

2. Scope

This fasting guideline is intended to apply to anaesthesia providers. It should also serve as guidance to non-anaesthetists who manage sedation.

It is not intended to apply to the management of minimal sedation as defined in *PG09(G) Guideline on procedural sedation*.

3. Background

The aim of restricting solids and liquids prior to a procedure under general anaesthesia or greater than minimal sedation, is to minimise the risk of aspiration from the upper gastro-intestinal tract, when airway protective reflexes are known to be reduced or obtunded.

The duration of fasting should be sufficient to minimise gastric volume and reduce the potential for significant regurgitation and aspiration.

However, prolonged deprivation of clear liquids for more than 2 hours in adults and more than 1 hour in children may have deleterious metabolic effects as well as impact on a patient's sense of well-being including an increased risk of post-operative nausea and vomiting and metabolic disturbances [(8,12)].

Continued consumption of **clear** liquids, especially those containing carbohydrates, may improve gastric emptying.

Fasting instructions should therefore consider the expected timing of anaesthesia.

'Clear liquids' include water, carbohydrate-rich clear liquids, pulp-free clear fruit juice, clear cordial, green tea, black tea and black coffee. The carbohydrates may be simple or complex.

It excludes fluids containing milk, particulate matter, soluble fibre or jelly.

4. Recommendations

4.1 For persons older than 16 years of age:

4.1.1 **Solid food** - of a low calorific nature (light meal) may be allowed up to 6 hours prior to anaesthesia.

4.1.2 **Clear liquids** - For elective and selected emergency procedures, clear liquids should be encouraged up to 2 hours prior to anaesthesia [(1)]. In this context, a rate of drinking clear

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[(i)] Refer to *PG03(A) Guideline for the management of major regional analgesia 2014*
[(ii)] Refer to *PG09(G) Guideline on procedural sedation 2023*

liquids which may be considered in adult elective and selected emergency situations (non-gastrointestinal, non-trauma and see also section 4.1.4) has been recommended to be up to 170mL/h [15] or 400mL at 2 hours prior to anaesthesia [1, 33].

4.1.3 **"SipTilSend"** or allowing clear liquids (typically water) until the patient is sent for, is an emerging practice gaining increasing acceptance, and has been shown to reduce fasting duration [8,18, 19, 30]. It may be of particular value in preventing prolonged fasting in patients waiting for emergency surgery where there may be frequent delays due to theatre access [16, 17, 32]. To date, strategies involving liberal clear liquids have not shown significant evidence for increased aspiration risk in comparison with traditional more conservative fasting guidance [12, 13, 31, 32].

4.1.4 Patient, procedural and pharmacological factors contributing to delayed gastric emptying in individual situations should guide the optimal time for cessation of intake of solids and liquids, as well as selection of anaesthesia technique. Although clear liquids have a rapid gastric transit time, there are conditions that require special consideration, caution or variation. These include (but not limited to) emergency abdominal surgery, patients with restricted input for therapeutic purposes, prior bariatric surgery (involving altering the volume or shape of the stomach), previous lower oesophageal surgery, achalasia, taking medications used for diabetes management and weight loss which slow absorption of gastric contents (eg glucagon-like peptide-1 receptor agonists[iii]) and recent intake of high dose opioids.

4.1.5 **Carbohydrate-containing clear liquids** are becoming increasingly available for enhanced recovery after surgery pathways. Although there are more benefits than harm reported, they may not be recommended in all situations.

4.1.6 **Sips of liquid and medication administration** - Prescribed medications may be taken, with a sip (30ml for an adult) of water prior to anaesthesia. The 30ml includes the volume required for any other liquid medications such as sodium citrate.

4.1.7 **Enteral feeds** should generally be continued in intubated intensive care patients until procedural transfer unless airway, thoracic or abdominal procedures are to be performed in which case they should be ceased for 6 hours [29].

4.1.8 **Medications that decrease gastric secretion and/or acidity,** and/or those that increase gastric emptying, should be considered for patients with an increased risk of gastric regurgitation.

4.1.9 **Local practices** (education, audit, quality improvement, communication protocols) are best developed to encourage these times to be followed, to avoid prolonged deprivation of oral liquids, even if intravenous fluids have been commenced. Currently this includes multi-centre initiatives where small volumes of water are permitted to be sipped until as late as possible (such as SipTilSend) in an attempt to comply with and implement the goal of decreasing the 'no oral liquid' period.

4.2 For children up to 16 years of age:

4.2.1 Prolonged fasting times should be avoided, and healthy children encouraged to drink clear liquids (water, pulp free juice, carbohydrate drinks) of $3ml.Kg^{-1}.hr^{-1}$ up to 1 hour before anaesthesia.

Solid food is allowed up to 6 hours prior to anaesthesia but this should be a low calorific, i.e. "light" meal.

4.2.2 Other than clear liquids,

4.2.2.1 For infants up to 12 months of age:

- breast milk feeding should be encouraged until 3 hours
- formula and non-human milk may be encouraged until 4 hours *

[iii] Refer to Clinical practice recommendation on periprocedural use Of GLP-1/GIP receptor agonists

4.2.2.2 For children older than 12 months of age:
- breast milk feeding should be encouraged until 3 hours
- formula and non-human milk should be regarded as similar to solids with a fasting time of 6 hours

* 200ml or 20ml/kg for formula and cow's milk, whichever is smaller

This fasting guideline may not apply to individual patients deemed at increased risk of perioperative regurgitation or vomiting (see 4.1.4). Patients taking medications that delay gastric emptying need particular consideration [(iv)] .

Where reducing risks for individual patients requires deviating from these recommendations, doctors should exercise their discretion over fasting times versus the risk of dehydration / metabolic effects or of regurgitation. Similarly, adjustment of anaesthesia and airway management techniques may need to be considered to further mitigate the risk of regurgitation.

Chewing gum and boiled sweets should be discarded prior to inducing anaesthesia to avoid them being inhaled as a foreign body but do not constitute an indication for delaying any procedure unless they have been ingested.

Gastric ultrasound, where suitable skills and imaging quality is obtained, may be considered as a tool to ascertain volume and consistency of gastric contents, to guide further management [(1, 24, 25, 26)].

References

Note: Reference numbers are as listed in the PG07BP *Background Paper Appendix 1 Bibliography* where further references are also to be found.

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[(iv.)] Refer to PG07 Background Paper for discussions around patient, procedural, pathological and pharmacological factors suggesting actual and potential variations, cautions and exclusions.

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