CLiP

15 minute Worksheet

15 min

Helping the patient with reduced hydration and nutrition

6: Using non-oral routes

Advanced level

Produced by
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Aim of this worksheet

To consider the non-oral routes of hydration and nutrition in advanced disease.

How to use this worksheet

- You can work through this worksheet by yourself, or with a tutor.
- Read the case study below, and then turn to the Work page overleaf.
- Work any way you want. You can start with the exercises on the Work page using your own knowledge. The answers are on the Information page - this is not cheating since you learn as you find the information. Alternatively you may prefer to start by reading the Information page before moving to the exercises on the Work page.
- This CLiP worksheet should take about 15 minutes to complete, but will take longer if you are working with colleagues or in a group. If anything is unclear, discuss it with a colleague.
- If you think any information is wrong or out of date let us know.
- Take this learning into your workplace using the activity on the back page.

Case study

Ben is a 33 year old man who has a moderate learning disability together with hydrocephalus, spastic diplegia, visual impairment and epilepsy. He has been diagnosed as having a carcinoma of the kidney with lung metastases.

Ben is usually well nourished, but in three months he has lost 11kg weight. He can no longer swallow without aspirating fluids.

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Indications for a non-oral route

For mouth and pharynx problems, the advice of a swallowing therapist (usually a speech therapist with a special interest in swallowing) is essential. For oesophageal problems the advice of a gastroenterologist is necessary.

Non-oral feeding should be considered if:

- the mouth to pharynx swallow takes longer than usual. The oropharyngeal transit (OT) time is the time a swallow takes from the first tongue movement to the last movement of the larynx. This can be assessed at the bedside. It is usually less than one second. Long meal times are inevitable when the OT is long;
- swallowing problems are causing the person to become reluctant to eat;
- mealtimes are taking so long that the person is losing interest in food and they are losing weight;
- they are not managing to take enough fluids to keep well hydrated eg. persistent vomiting;
- they need extra feeding in preparation for treatment such as an operation or chemotherapy.

Non-oral feeding is needed if

- investigations show an oesophageal obstruction that cannot be treated;
- the OT time is 10 seconds or more- patients will usually stop eating because the effort is too great;
- more than 10% of swallowed material is aspirated- this can only be assessed with an X-ray test where the swallow is filmed using special dye (videofluoroscopy);
- in someone with swallowing difficulties, repeated chest infections can be an indication that aspiration is becoming a problem.

Insufficient reasons for a non-oral route: convenience; staff shortages; refusing food (reasons for refusal must be assessed first); long mealtimes in the absence of swallowing problems; drooling or messy eating.

Types of non-oral routes

Nasogastric tube

Advantages: alternative when the patient does not want a gastrostomy, easily inserted (fine tube inserted into nasal cavity and down into stomach), safe (inserted under medical supervision), no anaesthetic required for insertion, easily reversed, rapid commencement of enteral feeds, few contraindications to placement.

Disadvantages: does not prevent aspiration, risk of incorrect placement, discomfort on insertion, easily displaced (increased risk of pulmonary aspiration and likelihood of sub-optimal feed delivery), reflux (due to lower oesophageal sphincter being held open), frequent placement is uncomfortable and distressing, altered body image (aesthetically unacceptable), long term problems (nose bleeds, nasopharyngeal erosions, sinus pain, laryngeal injury), does not greatly reduce the sensation of hunger (Stratton 2002, 1999).

Gastrostomy tube

Indications: long term feeding (usually > 2 weeks), prolonged need for increased nutrient intake (eg. cystic fibrosis), inability to tolerate nasogastric tube on 2 occasions, conditions causing severe swallowing problems (eg. advanced dementia, stroke, MND, MS, paralysis, head and neck cancer, oesophageal cancer).

Methods of gastronomy insertion:

Percutaneous Endoscopic Gastrostomy (PEG): an endoscope is passed into the stomach under light sedation. A gastrostomy tube is then inserted through the skin (the 'percutaneous' bit).

Radiologically Inserted Gastrostomy (RIG): a nasogastric tube is inserted into the stomach and used to inflate the stomach with gas. The gastrostomy tube is then inserted under X-ray control. This is used when an endoscope cannot be inserted, eg. because of tumours of the head and neck.

Surgical gastrostomy: the stomach is entered during a small operation under general anaesthetic. The tube is replaced after 6 weeks with a low profile button gastrostomy.

Advantages: less often displaced, less aspiration, often preferred for convenience and cosmetic reasons, more secure long term option, more efficient at delivering feed (because of larger bore), easily removed and replaced.

Disadvantages: can be accidentally or deliberately removed, complications of endoscopy (sedation and aspiration), may need endoscopic removal, tube blockage, exit site infection. Does not greatly reduce hunger.

Gastrostomy compared with nasogastric tube: PEGs have been shown to be a better way of ensuring caloric intake, because gastrostomy tubes are of larger diameter and nasogastric tubes are frequently displaced.

Replacement: this is easily done through the existing tract once this has formed (this takes about 10 days).

Jejunal feeding

Indications: early post-operative feeding since small bowel less affected by postoperative ileus, delayed gastric emptying, increased risk of aspiration, pharynx or oesophagus inaccessible (eg. head and neck tumours).

Access: this can be done through a gastrostomy.

Parenteral route

Subcutaneous: this uses a tiny plastic tube inserted under the skin. It is used in palliative care to give people extra fluids. It is more comfortable and easier to monitor in any setting. It cannot be used for nutrition.

Intravenous (peripheral): uses plastic tube inserted into an arm vein. It is useful for giving fluids short-term or rapidly.

Intravenous (central): this uses a long tube inserted under local anaesthetic into the large veins near the heart. It is used for giving nutrition, but is almost never needed in palliative care.

What to choose for Ben: a gastrostomy may offer the best balance of risks and benefits. However this decision depends on Ben's capacity for this decision. If he has capacity his view is paramount. If not this must be in his best interests- see the CLiP module on *Planning Care in Advance*

WORK PAGE: Using non-oral routes

Non-oral routes mean giving fluids or food through any route other than through the mouth, eg. nasogastric tube, intravenous drip, gastrostomy.

Choose

Ring those situations you think might need a non-oral route of feeding or hydration

Swallowing difficulty without weight loss

Swallowing difficulty with weight loss

Taking 10 seconds to swallow

Insufficient staff to help with feeding

Persistent vomiting

Refusing food

Repeated chest infections

Preparing for surgery

Long mealtimes in absence of swallowing problems

Pros & cons

Write the advantages and disadvantages of the following three non-oral routes:

Route	Advantages	Disadvantages
Nasogastric tube		
Gastrostomy eg. PEG, jejunostomy		
Parenteral (SC or IV)		

Reflect

Think about what route you would choose for Ben and how the decision should be made

FURTHER ACTIVITY: Using non-oral routes

When you next have a patient who is having difficulties with their food or drinks:

- Look up the weight charts and consider the implications of introducing non-oral feeding

FURTHER READING : Using non-oral routes

Journal articles

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Regan J, Sowman R, Walsh I. (2006) Prevalence of dysphagia in acute and community mental health settings**.** *Dysphagia.* **21**(2): 95–101.

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15 minute Worksheet

Current Learning in Palliative care

An accessible learning programme for health care professionals

15 minute worksheets are available on:

- An introduction to palliative care
- Helping the patient with pain
- Helping the patient with symptoms other than pain
- Moving the ill patient
- Psychological and spiritual needs
- Helping patients with reduced hydration and nutrition
- Procedures in palliative care
- Planning care in advance
- Understanding and helping the person with learning disabilities
- The last hours and days
- Bereavement

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