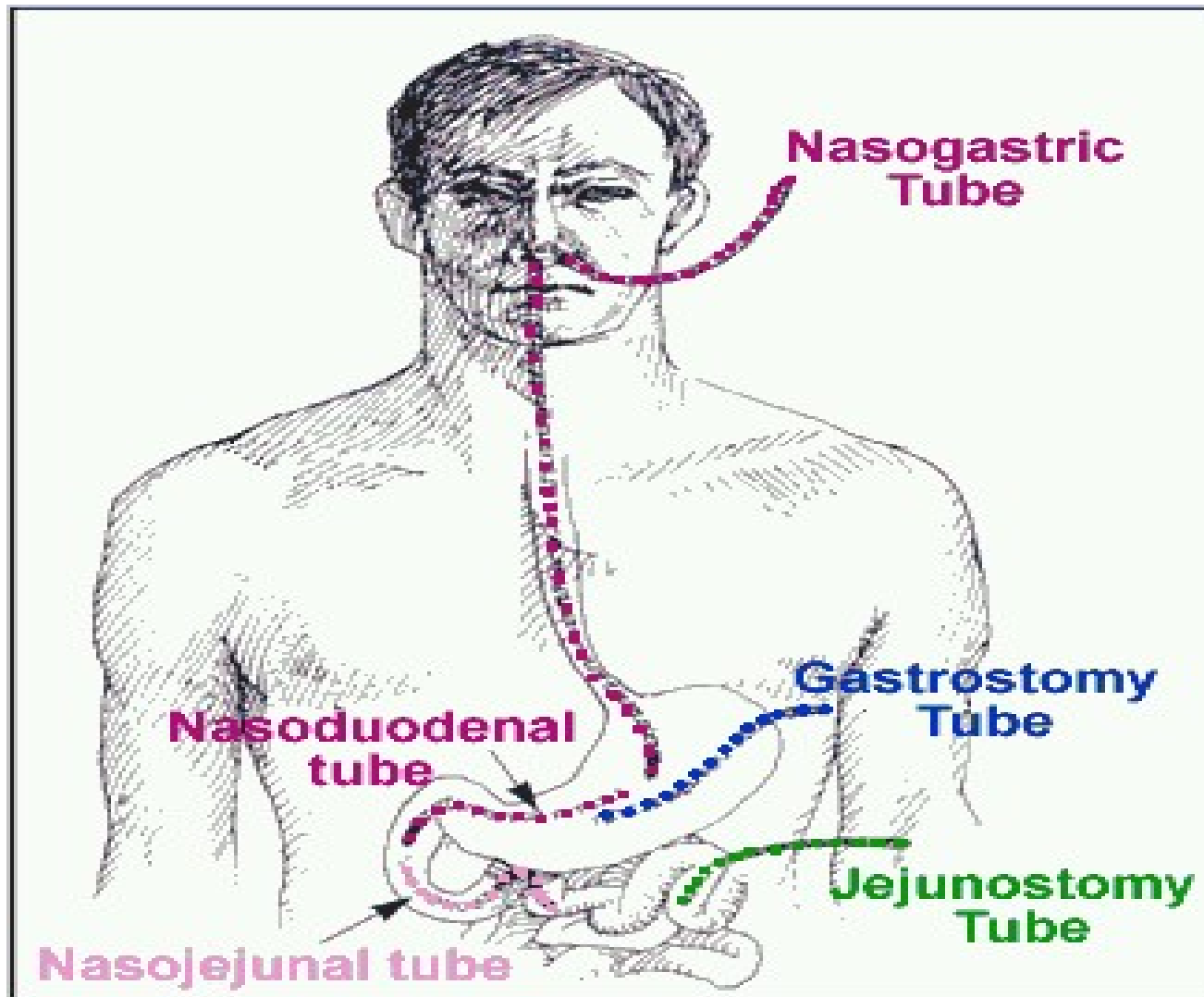


TUBE FEEDING

Overview

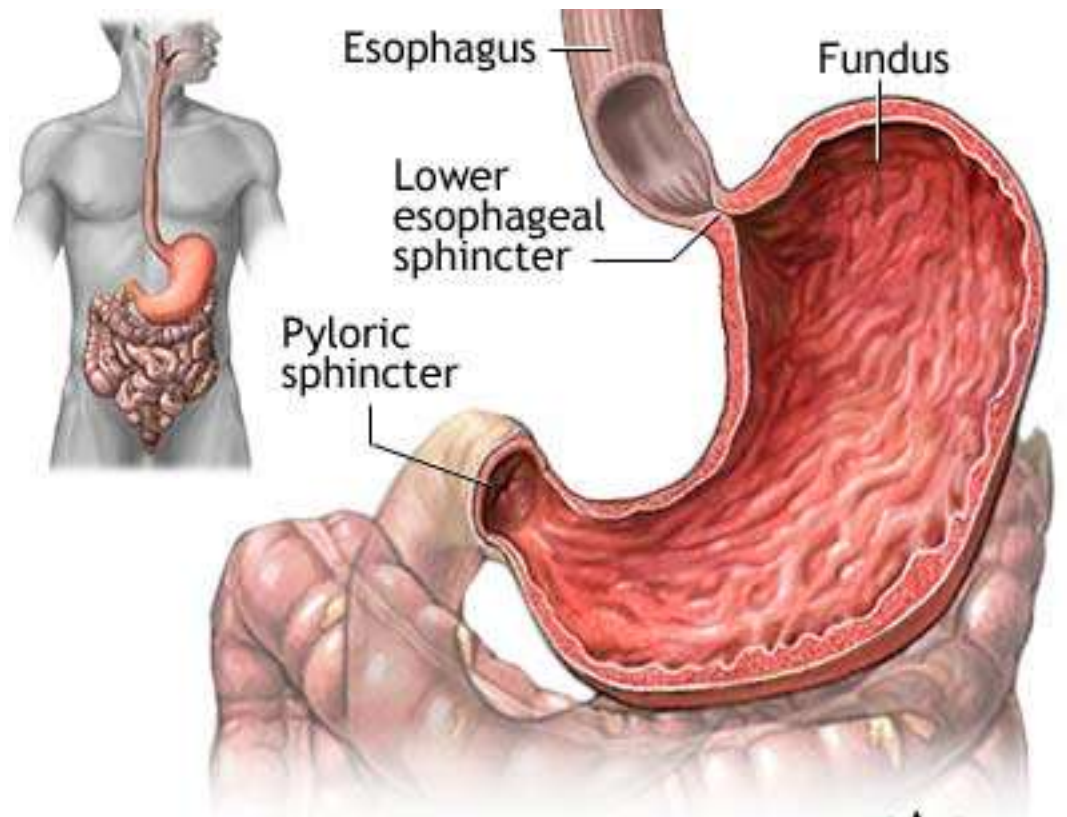
- A tube feeding is a procedure used to provide nutrition to clients for a variety of reasons. The most common is when a client has difficulty swallowing, can't eat at all or if extra nutrition is needed for those who cannot eat enough regular foods to maintain their weight. A tube feed may be used permanently or temporarily. A tube feed also facilitates the administration of medications.
- The various types of used tube feeds for our clients are: gastrostomy; gastro-jejunostomy; jejunostomy and nasogastric (very rare) tube feeds. The type of tube procedure used depends on the clients' needs and also the choice of the physician/ gastric surgeon.



Objectives

At the end of the course, the individuals will have gained knowledge:

- **Of the anatomy of the Gastro-Intestinal Tract**
- **On the abnormal conditions relating to GI Tract**
- **On reasons for opting for tube feedings**
- **In the difference between various types of tube feedings**
- **Assessing the client prior to administering the tube feedings**
- **In the care of the tubes and stoma site**
- **On how to administer a tube feeding safely**
- **On how to change a gastrostomy tube**



TERMINOLOGY

- **Electrolytes:** Chemical compound present in body fluids, such as stomach contents & blood, that play an important role in functioning of the human body. i.e sodium chloride, potassium, calcium, sodium bicarbonate, magnesium.
- **Aspiration:** Entry of food/liquids into the airway/lungs.
- **Bowel sounds:** The noise of air and fluid moving through the gastrointestinal tract.
- **Distension:** Relating to abdomen, is expansion from excessive air, fluid, or intestinal contents from *within*
- **Dysphagia:** *difficulty swallowing*
- **Stoma:** Surgical opening into the body.
- **Stomach residual:** Fluids left in the stomach after feeding
- **Gastric emptying:** Movement of fluids from the stomach to the small bowel.
- **Gastrointestinal:** Relates to stomach and intestine.
- **Granulation tissue:** Fleishy projections on the surface of the stoma that form fibrous scar tissue.
- **Pedialyte:** An electrolyte replacement fluid given normally in case of continual vomiting and/or diarrhea.
- **Reflux:** An abnormal backward movement or return of flow of fluid.
- **Rigidity:** Hardness, and stiffness, in this case, abdominal rigidity.

INDICATIONS for TUBE FEEDING

- **Dysphagia**
- **Recurrent pulmonary complications from aspiration**
- **Moderate to severe feeding problems**
- **Unhappy client-eating is an unpleasant experience**
- **Nutritional requirements not met consistently**
- **Unable to obtain or maintain goal weight or weight loss**
- **Prolonged feeding time**
- **Demoralized, frustrated caregiver**
- **Recurrent hospitalizations**

Continued

- Tube feeds are a source of providing nutrition and administration of medications.
- Complete nutrition supports development, growth, and healing.
- If the ability to eat or swallow is lost, or the client is unable to tolerate food, enteral feeding can sustain life, nourish, and even increase body weight.
- Tube feeding is also used to supplement a deficient food and fluid intake plus administration of medication.
- The feeding procedure can be managed safely and economically at home, away from the hospital setting.
- A tube feeding provides access to the stomach if long term nutritional and medication support is necessary.

PROBLEMS RELATED TO DYSPHAGIA

Gastro-esophageal Reflux Disease (G.E.R.D.)

Is the backflow of acid from the stomach into the esophagus. The esophagus is the tube which carries food from the mouth to the stomach. The acid from the stomach irritates the esophagus. Most people experience occasional reflux, the most common symptom of reflux is “heartburn”. When reflux occurs more frequently, the stomach acid can damage the esophagus and reflux becomes a health issue.

What are the symptoms of gastroesophageal reflux?

There are 4 main symptoms of reflux:

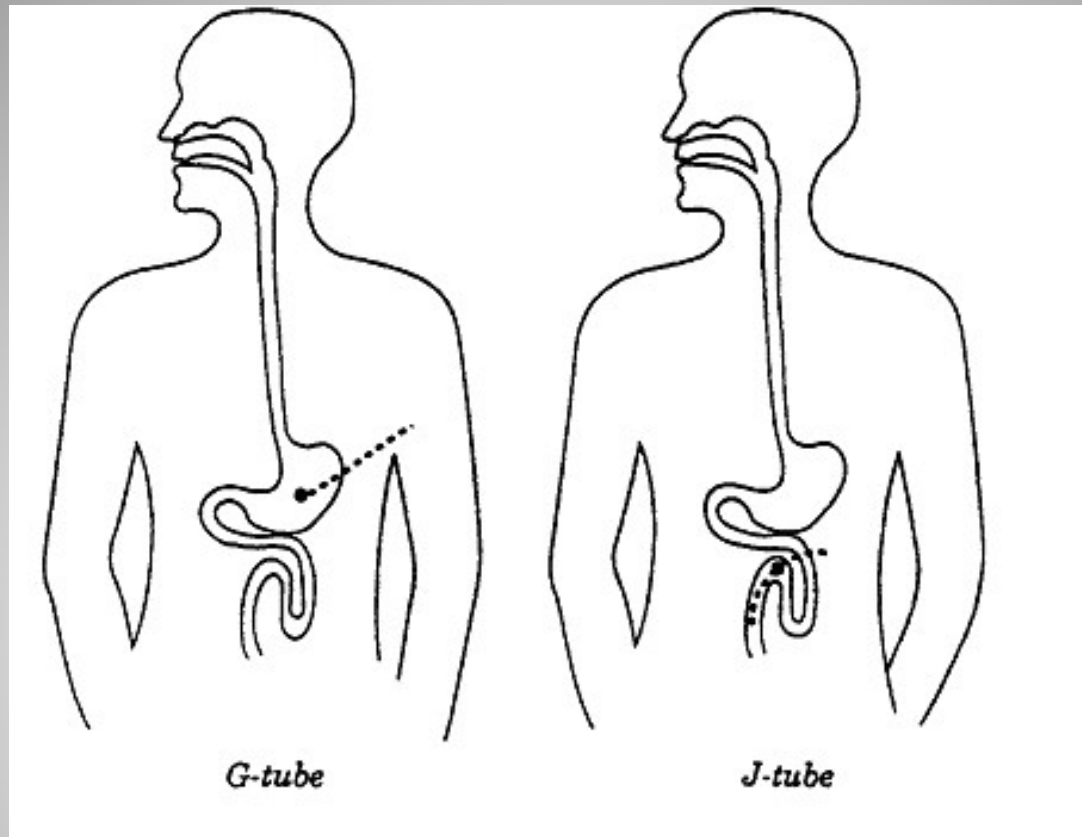
- *Heartburn: The burning sensations behind the breast bone. Can be accompanied by a feeling of uncomfortable rising of stomach contents.*
- *Regurgitation of sour contents (stomach acid) into mouth, may include gagging and vomiting.*
- *Difficulty or painful swallowing.*
- *Chest pain.*

Aspiration

Aspiration is when food/liquids enter the airway which can affect one's overall health and lead to severe respiratory consequences.

SURGICAL PROCEDURES:

- **GASTROSTOMY**--the surgical creation of an opening (stoma) through the abdominal wall and into the stomach in which a tube is inserted for feeding purposes.
- **JEJUNOSTOMY**-- the surgical procedure in which an opening is created from stomach into the jejunal part of the small intestine, or directly into the jejunum.
- (Sometimes the tube is inserted through the stomach into the jejunum, known as gastro-jejunostomy tube; treatment and interventions are the same).
- These tubes are made of soft, flexible material
- The tube enters the body through a special hole in the abdomen called a stoma
- The tip of the G-tube is resting in the stomach
- The tip of the J-tube is placed into a part of the small bowel called the jejunum.

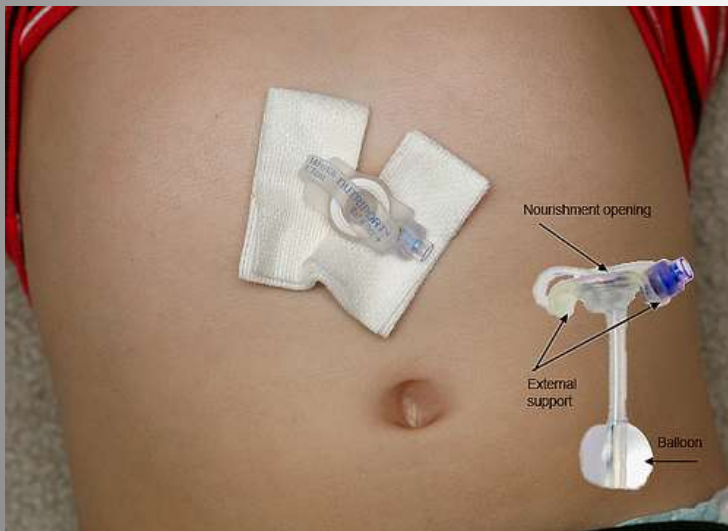


- Foley
- Mic
- Mickey

These are the most common types of g-tubes

The various types of used tube feeds for our clients are:

Gastrostomy; gastro-jejunostomy; jejunostomy and nasogastric (very rare) tube feeds. The type of tube procedure used depends on the clients' needs and also the choice of the physician/gastric surgeon.



G-TUBES

GASTROSTOMY

Purpose: to provide nutrition when eating orally is no longer considered safe to do or for other medical reasons.

Feeding:

Feeding schedule may be via:

- a) Bolus
- b) Intermittent (small amount of formula given frequently); OR
- c) Continuously (over a number of hours per day).

Feeding schedule chosen depends on clients' tolerance to the tube feed.

Amounts and rate are determined by the nutritionist.

Gastric residuals:

Always check gastric residuals prior to starting a feed or prior to giving medications.

Feeding tube:

The type of tube chosen is dependent on the gastric surgeon's choice. The tube is kept in place by a balloon that is inflated once the tube is inserted into the stomach. The feeding tube is replaced on a regular basis by caregivers.

Bowel sounds:

Checked prior to each feed and giving medications.

Water Flushes: before and after each feed and medications.

JEJUNOSTOMY — a surgical procedure done into the small portion of the intestine called the jejunum.

Purpose:

It is an alternative to a gastrostomy when severe reflux occurs. On some occasion it may be the first choice for a specialist, based on the medical history of the client.

Feeding:

Jejunostomy feeds must be administered continuously over a certain number of hours. Again the formula, amounts, times and pump rate are determined by the nutritionist. ***While the feed is running, water flushes are given & bowel sounds checked every 4 hour.

Gastric Residuals:

Are NEVER done with a jejunostomy because of its location into the small intestine and the potential for damage to the lining.

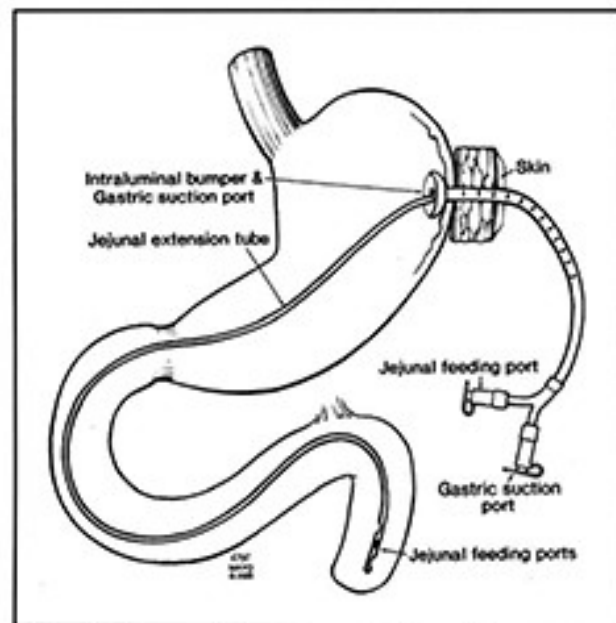
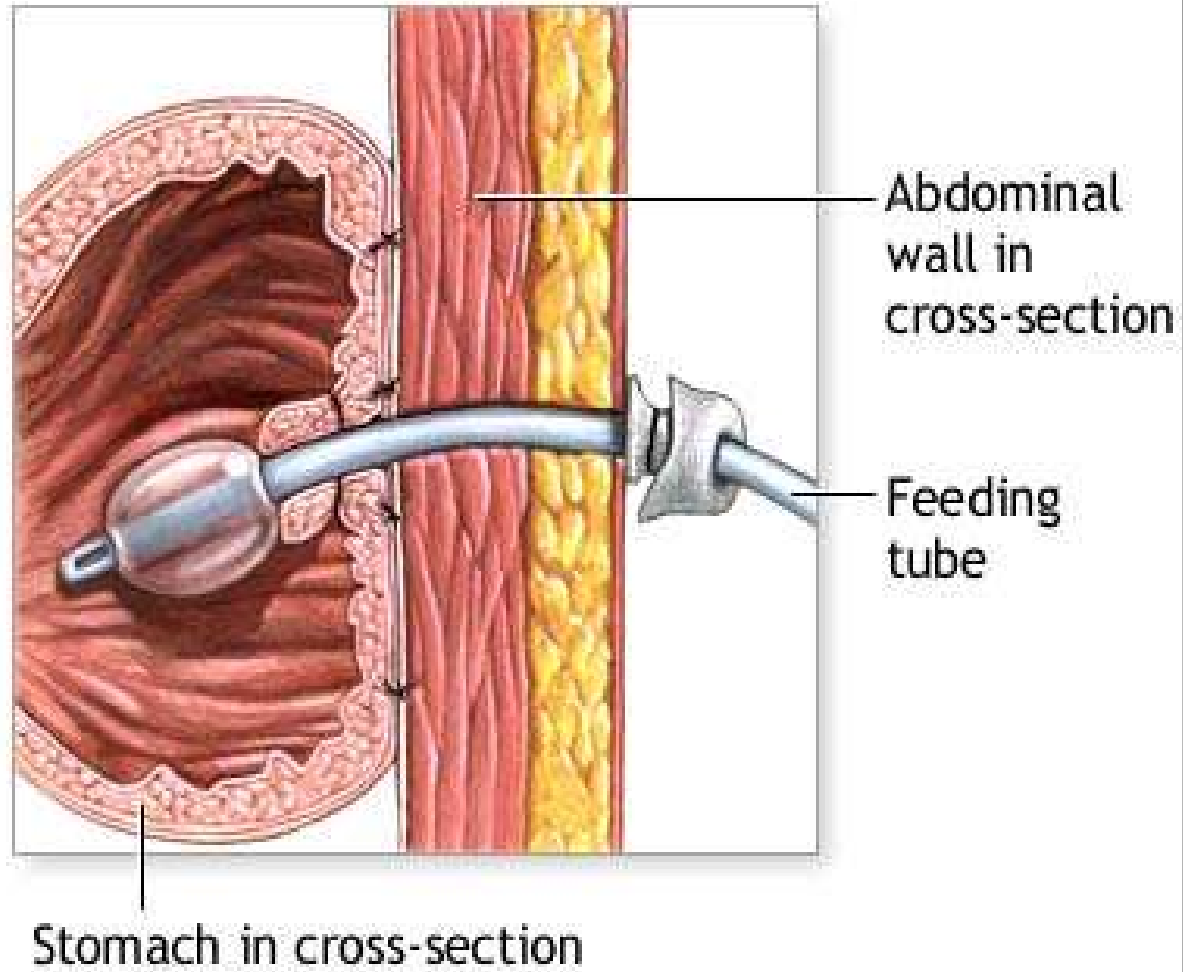


Figure 2. A gastro-jejunostomy tube allows drainage or venting from the stomach, and feeding into the intestine.
©2000, Mayo.



PRECAUTION for a jejunostomy: If the tube should get dislocated or plugged up, replacement needs to be done at the hospital by a radiologist to assure the proper placement of the tube. If the j-tube should fall out, insert a Foley tube through the stoma site immediately to keep the stoma site opened (the stoma can close up within an hour). ****DO NOT INFLATE THE BALLOON** - Secure the Foley tube by taping it to the skin. An appointment to the hospital will be arranged as soon as possible.

**To better understand the difference:

GASTROSTOMY

Bolus or intermittent,
or continuous feed.

Check gastric residuals.

Caregivers change tube.

Inflate balloon with tube change.

Bowel sounds checked prior to feeds/ meds.

Water flushes before and after feed and
after giving medications

JEJUNOSTOMY

Only continuous feed.

NEVER check gastric residuals.

Tube changed at hospital by
radiologist.

Never inflate balloon if tube in
place to keep stoma site opened.

Bowel sounds checked prior to
starting feed and every 4 hours
while feed is running.

Water flushes every 4 hours
while feed is running and before
and after giving medications.

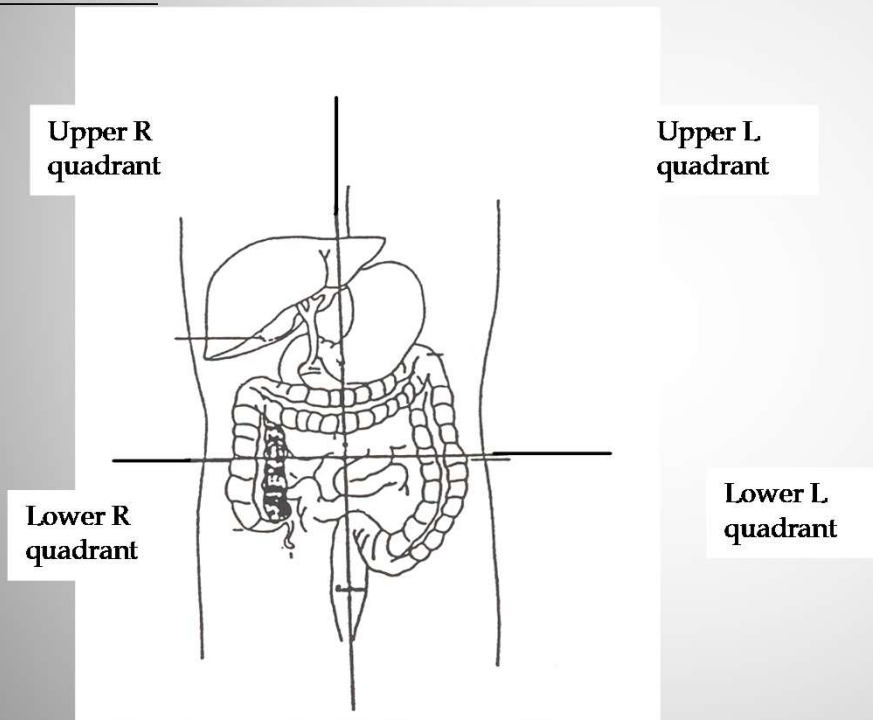
ASSESSING THE ABDOMEN FOR BOWEL FUNCTION:

There are three considerations in assessing the abdomen for bowel function. These are:

- A. Bowel sounds
- B. Distension
- C. Tenderness & Rigidity

A. BOWEL SOUNDS

BOWEL SOUNDS:



BOWEL SOUNDS (continued)

The digestive stage affects bowel and sound characteristics. You will need a stethoscope. Listen to each quadrant when you assess bowel sounds.

Normal bowel sounds:

High-pitched and gurgling sounds occur about 5 to 34 times each minute.

Abnormal bowel sounds:

a) Increased or hyperactive sounds

- More frequent, loud, high-pitched sounds
- Indicates increased motility often from laxative use
- May stem from gastroenteritis (usually nausea, vomiting, fever is present; if that is the case, check temperature, notify Nurse Clinician).
- It is otherwise okay to proceed with feed.

b) Absent

- Indicates lack of mobility
- Probable cause is severe constipation, bowel obstruction.
- Listen to each quadrant at least 3-5 minutes before assuming absent bowel sounds. Ask other caregiver to check as well.
- DO NOT FEED
- Report condition to Nurse Clinician.

“Venting “ the tube

“Venting” the tube.

Method: For venting the tube: remove the plug. During this process, some stomach content may be expelled with the air. Keep tube above stomach level to prevent loss of stomach fluids.

Distension, rigidity and tenderness may lead to:

- **Discomfort**
- **Nausea, vomiting**
- **Risk of aspiration**

A. DISTENSION

The abdomen will look round or bloated.

B. TENDERNESS, RIGIDITY:

Abdomen will be hard and tender to touch.

Causes:

- a) Excessive air in the stomach and/or intestines, caused by either air swallowing or too much air being allowed in during tube feeding.
- b) Excessive fluid (fluid build-up) in the stomach (residuals)
- c) Constipation
- d) Bowel Obstruction

Action/intervention:

1. Check bowel sounds
2. Check bowel record
3. Check last void
4. Check residuals
5. Vent tube.**
6. Never carry out a feed
7. Notify the Nurse Clinician

PRE-FEED ASSESSMENT

Prior to feeds, precautionary measures must be taken:

- A. Assess the abdomen for bowel sounds. (refer to bowel sound section))
- B. Checking and assessing condition of residual stomach contents.
- C. Assess amount to administer for tube feed.

GASTRIC RESIDUALS

B. CHECKING FOR GASTRIC RESIDUALS

This must be done in order to determine if/ or how much to replace or discard contents.

Gastric residual are done:

- a) Prior to starting a tube feed
- b) Prior to administering medications
- c) Every 4 hours if on continuous tube feeds

Gastric residuals (continued)

CHECKING AND ASSESSING CONDITION OF STOMACH CONTENTS (gastric residuals):

This must be done in order to determine if/or how much to replace or discard contents.

Gastric residual are done:

- Prior to starting a tube feed
- Prior to administering medications
- Every 4 hours if on continuous tube feeds

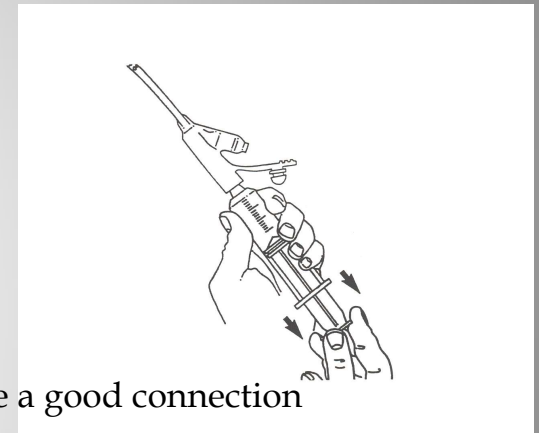
Procedure for aspirating stomach contents - (checking for gastric residuals):

You will need the following:

- A large barrel syringe (10cc-60cc)
- A clean cup or container

Method used:

- Insert the syringe into the feeding port of the catheter always making sure you have a good connection
- Draw the plunger back slowly
- Note: Never aspirate the stomach contents forcibly. If the tube is against the stomach lining, you may cause tissue erosion.
- Continue drawing back until you have established that the stomach is empty if substantial amount empty contents into empty cup.



Assessing the Condition and Appearance of Residual Contents

Identifying Normal Residual:

- Clear or water, colorless, tinted white or possible light yellow/ green from bile and may have mucous consistency
- Formula, sometimes thick or curdled.

Possible Causes for Normal residual but large amounts

- Improper positioning
- Constipation
- More rarely, this could also signify that the formula being used could be too “heavy” or calorically dense. This would be considered after ruling out the above possible causes and if the condition persists. At this stage a nutritionist is notified.

Abnormal residual

- Would appear greenish and cloudy and sour smelling as well.
- Old blood this can be recognized by a dark brownish coloring or flecks of brown, possible coffee ground appearance.
- Fresh blood which is recognized by bright red color.

Causes for Abnormal residuals:

- Backflow (reverse peristalsis) from small intestines caused by positioning
- Bowel obstruction (from constipation or adhesions)
- Gastritis.

Contents that have old/fresh blood

Possible causes:

- Tube irritation, i.e. has tube been changed recently, rubbed or pulled?
- Blood swallowed from nosebleed or bitten tongue, lip, i.e. during a seizure.
- Ulcerations i.e. in stoma or esophagus which is of a more serious nature.

*****Large amounts of fresh blood** need to be reported to Nurse Clinician immediately.

Watch for signs of shock, i.e. pallor, sweaty, rapid breathing, cold and clammy skin.

- Large amounts of residuals that are ongoing need to be brought to Nurse Clinician's attention.
- It is important to document all gastric residuals on Intake and Output record and daily notes.

C. ASSESSING THE AMOUNT TO FEED:

Measure the amount of stomach contents in order to decide:

- The amount to feed or
- Whether you should withhold the feed or
- When stomach contents need to be discarded and replacement with Pedialyte.

G-Tube Residual Check

CHECKING RESIDUALS OF A GASTROSTOMY TUBE FEED

Guidelines for bolus or pump feeds – amounts are based on both the formula and water. The following is an example:

i.e. Jevity 250mls + 100mls water = 350mls total volume:

< 50% = up to 175mls >50% = 175%)

(*Always deduct from water first, not formula)

Guidelines for continuous tube feeds - residuals should not exceed more than 20% plus the pump rate. EXAMPLE: flow rate is 100mls per hour. Gastric residuals should not exceed more than 120mls (20% of 100=20ml hence 100mls (pump rate) + 20ml = 120mls). Follow the same guidelines for >50% of residuals if amount is over 20%

Continued

Under 50%	Over 50%
<p><u>Normal Contents:</u></p> <ol style="list-style-type: none"> 1) Return contents to stomach 2) Deduct residual amount from volume to be received (always deduct from water first) and feed balance 	<p><u>Normal Contents:</u></p> <p>DO NOT FEED</p> <p><u>NOTIFY ON CALL NURSE CONSULTANT</u></p>
<p><u>Abnormal Contents:</u></p> <ol style="list-style-type: none"> 1) Discard contents 2) Replace same volume with Pedialyte 3) Deduct residual volume from amount to be given and administer that amount 	<p><u>Abnormal Contents:</u></p> <p>DO NOT FEED</p> <p><u>NOTIFY ON CALL NURSE CONSULTANT</u></p>

POSITIONING FOR FEEDING

Proper positioning:

- Facilitates good gastric emptying using gravity to assist
- Helps prevent or reduce reflux
- Helps prevent aspiration
- These facts are important to remember when working with individuals who may already have anatomical problems contributing to poor gastric emptying and/or reflux.

Therefore Always Position Correctly!!

Proper feeding positions are:

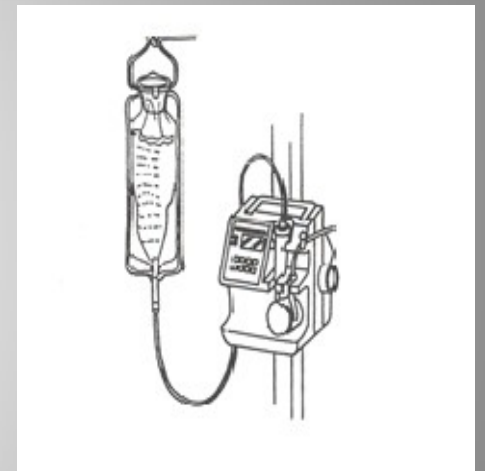
- Sitting upright such as in a wheelchair
- Lying on the Right side with head and upper body elevated at 30-45 degree angle
- Note: Allow at least 30-60 minutes after feed is completed before changing position.
- Reason: to prevent reflux which may lead to aspiration, leading to chest congestion and/or aspiration pneumonia.

Tube Feed Administration

Feeding equipment:

- Feeding bag and tubing
- Formula
- Syringe
- Pump
- Desired amount of water to flush
- Stethoscope

**for the ready to use formula, you will need the Spike-Right Plus Tubing



Procedures:

Procedures

- Wash hands well and gather equipment.
- Fill feeding bag with required amount of formula (should not exceed 4 hours' worth of formula) and flush air from tubing. Avoid filling drip chamber more than half full. Close clamp on tubing.
- To set up the bag in pump follow manufacturer's instructions. Pump can sit on table or in a backpack.
- Position client in sitting position or in chair or wheelchair or if in bed on right side with head of bed elevated 45 degrees. Assess bowel function and do residual check, dealing with drawback appropriately.
- Turn pump on by pressing the ON switch. Set desired rate of flow for client as instructed.
- Attach tubing from bag to gastrostomy tube and begin feeding by pressing the START/HOLD switch.
- Monitor client frequently during feed watching for vomiting, gagging etc.
- When feed is complete, press the OFF switch on the pump. Remove bag from pump and hold tubing up to allow formula remaining in tubing to flow in by gravity until it reaches gastrostomy tube (this does not apply to ready-to-hang system).
- Disconnect feeding bag. Flush gastrostomy tube with water (amount as per dietitian's instructions). Clamp gastrostomy tube until next feed. If extension tube is used, always REMOVE it.
- Wash feeding bag and tubing as per written procedures. **Ready-to-hang bag can be left on IV pole until ready to discard.

continued

Directives for the Spike Right Plus, ready to use formulas:

1. Use by expiry date on bag and at room temperature.
2. Wash hands and shake bag before use.
3. Using clean technique, hold bag at base of Spike Right Plus port, remove port cap and insert tip of threaded enteral spike set.
4. Turn spike set clockwise until tightly fastened. Hang bag and flush air from tubing. Connect to feeding tube.

Follow nutritional guidelines as directed by Nutritionist.

WHEN TO DISCONTINUE A TUBE FEED:

When your client vomits

When your client coughs

When your client seizures

When your client is showing signs of discomfort and agitation

If tube falls out.

CARE OF FORMULA

Proper handling of formula is important to minimize the risk of illness/food poisoning. Formula comes in cans, tetrapaks, or closed/ready-to-hang system.

- **Procedures**

- Store tube-feeding formulas in a dry place at room temperature 6 inches above the floor. Wide fluctuations in temperature should be avoided.
- All pre-packaged formulas remain sterile until opened.
- Any damaged containers should not be used.

- **Canned or tetrapaks**

- Unused formula shall be refrigerated in a clean plastic or glass container with a tight fitting lid, with the date opened marked on it. Do not use if not labeled.
- Once a formula is either opened or prepared, it should be discarded after 24 hours.
- Formula should not be hanging and running in feeding bag longer than 4 hours and/or 2 hours in super hot weather, unless an icepack is used to keep formula cool.

- **Closed/ready-to-hang system:**

- Formula in closed/ready-to-hang system is good for 48 hours once opening is initiated.
- Date and time opened should be noted on the bag once 'spiked' and discarded after the 48 hour period.
- Warm weather does not affect the condition of the formula; hence, there is no need to use icepack.

CLEANING & CARE of TUBE FEEDING EQUIPMENT

- Feeding tube equipment will be cleaned and replaced on a regular schedule.
- Feeding tube equipment refers to: Gastrostomy, jejunostomy and/or nasogastric tubes.
- **Objective** To prevent cross contamination and disease.
- **Procedures**
 - Each client will have their own individual feeding tubes, syringes, and feeding bags labelled with their name.
 - Always wash your hands well before preparing formula.
 - Maintain regular schedule for cleaning and replacing gastrostomy bags, tubes, and syringes.
 - The feeding bag and feeding equipment is provided non sterile and sterilization is unnecessary. **Exception is the 'Spike Right Plus ready to use' formula which is sterile.
 - The feeding bag, tubing, syringes and extension adapter tubing is flushed with water after every feed to prevent formula from blocking the tube. Store bag in the refrigerator between feeds (to decrease bacterial growth).
 - Once a day, wash all feeding tube equipment well with warm soapy water and rinse thoroughly with tap water. Rinse well and hang to dry.
 - Feeding bags, extension tubes and syringes are replaced once a week. Note the due date for replacement on the equipment.
 - When cleaning the feeding bag, the end of the tubing attached to the feeding bag should not be left sitting in the sink at any time for hygienic reasons.

CARE OF THE G-TUBE

- **Basic care:**
- Foley Catheter tube changed once a month. Mic and Mickey every 6 months
- Always irrigate or “flush” the tube before and after a feed, before and after administration of medications and Q4H if on continuous feed.
- Always ensure the tube is in place before you start the feed.
- If a Mic/Mickey tube is accidentally pulled out,(funding for tubes are limited) wash and rinse, check the balloon is intact and reinsert it. If balloon not intact replace with a foley.

CHANGING A G-TUBE

Equipment:

- Clean catheter, appropriate brand and size
- Lubricant gel (water soluble only)
- Sterile water
- 5-10cc syringe x2
- plug or clamp

Precautions:

- Always make sure you wash your hands prior to starting your procedure.
- Do not do a routine tube change immediately after a tube feed.

Before removing the tube:

- Deflate balloon.
- Always make sure the site is clean
- Wash or soak away any “crusting” which may be adhering to the tube and stoma site, thus preventing any open lesions and cut down risk of infection.

**Clients who have no replacement tube available or who tend to pull out tubes on a regular basis, tube can be washed & rinsed and reinserted back into the stomach.

(Continued)

Removing the tube:

- Using a 5-10cc syringe, deflate the balloon by withdrawing contents from the balloon.
- Gently pull the tube out
- Remove the plug from the tube before discarding the tube.
- Inserting the Catheter
- Check that the catheter and balloon are intact. The balloon can be checked by injecting 2 mls. of air, then deflating it again.
- Apply a water-soluble lubricant such as KY gel (water can be used if no gel available) to the end of tube - Never use Vaseline. Insert the new tube approximately 2 inches into stoma
- Inflate the balloon using sterile water. Refer to package to determine how many cc's to use.
- Gently pull the catheter until you meet the slightest resistance to ensure it is sitting against the wall of the stomach.
- Plug or clamp the tube
- Secure the tube safely so that it will not be pulled accidentally.
- Make an entry into daily notes that you have changed the tube.
- If difficulty re-inserting the tube it may be necessary to go to a smaller tube.

CARE OF THE STOMA SITE

STOMA CARE

- The stoma site should look clean and healthy. Skin should be a “normal” healthy color with no inflammation or “raw” areas. To ensure a healthy gastrostomy site daily care is:
- Keep the skin clean and dry.
- Wash the area with soap and water, including the tube.
- Dry the skin surface well.
- If possible avoid dressings & tape, these restrict air flow and may cause skin breakdown which can result in infection.

Occasionally, however, stoma sites can become irritated or infected. Some causes:

- Irritation from pulling the tube
- Irritation from changing the tube
- Stomach contents oozing out around the tube and burning healthy tissue
- Irritation from clothing rubbing against the stoma.

Care of stoma (continued)

If it is irritation skin will look:

- Red
- Discharge will appear watery/clear
- Area will be tender

Treatment for irritation is:

- Clean with saline
- Dry well.

If infected skin will look:

- Red, hot, swollen
- Raw open areas often caused by burns from stomach contents (acid) that are oozing. Bleeding may be present.
- Discharge is thick, cloudy, white or yellowish green.
- Area will be very tender
- Bad odor
- Fever may be present.

Treatment for infected site is:

- Wash and dry as above, pat dry with clean gauze
- Warm normal saline washes, dry the area with gauze
- Apply antibiotic ointment, e.g. Bactroban to help fight inflammation (nurse consultant to be notified to initiate treatment)
- Apply clean dressing

If gastric contents oozing around the tube occurs

- Clean with saline
- Dry well
- Apply antacid ointment or Maalox to protect the skin
- Or Pro-Shield
- Apply dressing
- It is sometimes necessary to change the tube to larger size
- Always notify on-call Nurse if this occurs.

Exposure to air is helpful to the healing process. The stoma site should be cleaned well and left to “air” prior to applying ointments if possible. A good time to do this is when your client is having a rest in bed.

The use of oxygen via the tubing over a 5-10 minute period is another means of intervention.

TUBE PROBLEMS

Tube Migration:

- --If the balloon slips from the inside stomach wall, it could cause an intestinal obstruction.
- -- Pressure may build inside the stomach, causing leaking from the stoma, nausea and/or vomiting.
- --Measure the length of the tube from stoma site outward.

Tube Obstructions:

- --Adherence of residue to the inside the tube causes obstructions. The residue consists of hardened stomach contents, medication, and/or formula.
- --Avoid this by flushing the tube with water before and after each feeding. Separate medication from the formula.
- --To unclog an obstructed tube: a) fill a catheter tip syringe with warm water and inject the water gently into the tube. Repeat until the blockage clears.
- --if this does not work Cotazyme tablet with soda bicarbonate tablet—follow procedure.
- *Caution:* Do not use force to unclog any tube. This may cause discomfort to your client and may also rupture the tube itself. If the obstruction will not clear, it will be necessary to replace the tube.

Granulation Tissue:

- This occurs as a response of the body to a foreign object i.e. the tube. Excess scar tissue forms around the stoma site and can sometimes bleed. A large amount of granulation may allow gastric contents to leak. Treatment consists of prescribing silver nitrate to burn off extra tissue. A doctor's order is required and only a nurse can perform the procedure.

ORAL CARE

Tube feeding deprives the mouth of stimulation provided by normal eating. Dental plaque accumulates faster than usual: plaque harbors bacteria that causes tooth decay and gum infection. To reduce bacterial growth and increase circulation to the gums, it is important the teeth are brushed twice a day (morning and evening). During the day at least every 2-4 hours provide mouth care using toothettes /dental sponges.

****Toothettes/dental sponges are to be used for clients deemed safe for usage at Nurses' discretion.**

- If toothettes cannot be used, dip soft toothbrush in mouthwash to rinse the mouth. The condition of the formula will be conserved.**