AVANOS | MIC* & ENTRAL*
Gastrostomy Tubes

MIC* Gastrostomy tube
MIC* Bolus Gastrostomy tube
ENTRAL* Gastrostomy tube

PATIENT BOOKLET

MIC* G-TUBE, MIC* BOLUS G-TUBE, ENTRAL* G-TUBE PATIENT BOOKLET

CONTENTS

YOUR AVANOS* GASTROSTOMY TUBE INFORMATION

PATIENT NAME OR ID _____

NURSE _____

DIETITIAN _____

GENERAL PRACTITIONER _____

GASTROSTOMY TYPE MIC* G-TUBE O FR SIZE: _____

MIC* BOLUS G-TUBE O

ENTRAL* G-TUBE O

DATE OF INSERTION _____

CM MARKING AT SKIN LEVEL _____ CM

BALLOON FILL VOLUME _____

REPLACEMENT DATE _____

NAME AND TYPE OF TUBE FEED _____

AMOUNT OF FEED _____ ML

START AND STOP TIMES _____

AMOUNT OF EACH FEEDING _____

AMOUNT OF WATER _____ ML

AMOUNT OF WATER FOR FLUSHING _____ ML BEFORE AND AFTER EVERY FEEDING

PUMP SETTING OR FLOW RATE _____

FLUSH WITH _____ ML WATER BEFORE AND AFTER EVERY FEEDING

INTRODUCTION

This booklet aims to provide you with basic information about your AVANOS* Gastrostomy tube and to answer some commonly asked questions.

If you have any further questions after reading the booklet then contact your nurse, dietitian (healthcare professional) or doctor who will be pleased to help you.

There are inherent risks in all medical devices. Please refer to the product labeling for indications, cautions, warnings and contraindications.

Please keep this booklet in a safe place for future reference.

WHAT IS YOUR TUBE FOR?

The MIC* or ENTRAL* Balloon Gastrostomy tube (or G-tube) is a special feeding tube which connects the inside of your stomach to the outside so that you can receive the food and fluids you need.

More information on the placement procedure can be provided by your medical professional.

HOW LONG WILL THE MIC*/ENTRAL* G-TUBE LAST?

The AVANOS* balloon gastrostomy tubes are made from soft medical grade silicone which is compatible with the human body. The exact life time of the tube does vary from patient to patient. The tube is designed to function properly for several months of normal use (see instructions for use). Your healthcare professional (HCP) will help you decide when to replace your G-tube. We recommend you change your tube every 3 months to maintain best results, hygiene and stoma health. Please refer to managing healthcare professional for guidance on tube changes

It's recommended to store a spare replacement tube of the same French size at home in case of early dislodgment of the placed G-tube.

WHAT WILL I RECEIVE THROUGH MY TUBE?

The healthcare professional will prescribe you a feeding regime, the amount of water and/or liquid medicines that to be administered through this tube.

An adequate nutrition consists of the right type and amount of feeding and the right administration schedule.

WHAT TO PUT DOWN YOUR G-TUBE?

- Your tube feed as prescribed by your healthcare professional
- Water
- Medicines, as prescribed by your healthcare professional

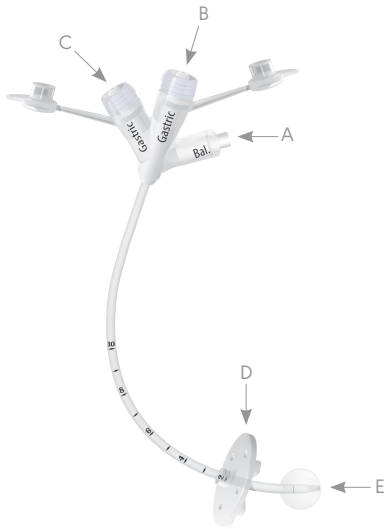
Don't put anything down your tube other than your feed, water or medicines in liquid form, as there is a risk of blocking your tube. If your tube becomes blocked it may need to be replaced.

ABOUT YOUR G-TUBE

There are three different types of gastrostomy tubes available from AVANOS.

MIC*Gastrostomy tube (fig.1)

A: Balloon inflation port
B: ENFit® feeding port
C: ENFit® medication port
D: External retention disc
E: Internal silicone retention balloon



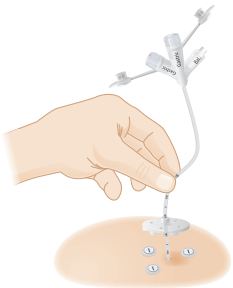
MIC* Bolus Gastrostomy tube (fig.2)

A: Balloon inflation port
B: ENFit® feeding port
C: External retention disk
D: Internal silicone retention balloon

ENTRAL* Gastrostomy tube (fig.3)

A: Balloon inflation port
B: ENFit® feeding port
C: External retention disk
D: Internal silicone retention balloon

- The MIC* and ENTRAL* G-tubes are held in place by an internal retention balloon. Water was injected into the balloon through the balloon inflation port. The maximum fill volume of the balloon is printed on the balloon inflation port. The balloon rests against the inside of your stomach wall.
- The tube is kept in its position from the outside with an external retention disk (C) that rests approx. 2-3mm above your skin. The combination of these two features holds the tube in place.
- The shaft of the G-tube contains centimeter marking, allowing to easily check the correct position of the tube inside the stomach. (see further).
- At the end of the G-tube is an ENFit® port, allowing connection of ENFit® feed adminstration sets or ENFit® syringes. The MIC G-tube has an additional ENFit® port for medication administration (fig.1).
- Initial Placement: first 72 hours care:
  if you have any of the following symptoms, stop using your tube, and seek immediate medical attention:
  - Pain during feeding
  - Fresh bleeding
  - Leaking of gastric contents at stoma site.
- Refer to the local policy for cleaning and desinfecting the stoma site in the initial phase.
- Until the stoma site is fully healed, do not immerse the site in water. Have showers not baths. Your healthcare professional will advise you when you may have a bath again or go swimming.
- In case your G-tube was placed with the AVANOS* Introducer Kit: as long as the 3 white gastropexy bumpers, SAF-T-PEXY* bumpers or surgical sutures are in place, the stoma should be considered as a surgical wound and should be disinfected with a non-colorant disinfectant. Follow the hospital guidelines. Bathing is not allowed as long as the SAF-T-PEXY* bumpers are in place. Usually the gastropexy sutures will be resorbed after 2-3 weeks and the SAF-T-PEXY* bumpers will fall off. From that moment onwards, it will be allowed to wash the skin with water and soap and dry thoroughly.



INITIAL PLACEMENT FIRST 72 HOURS CARE

After the initial insertion of your G-tube, if you have any of the following symptoms, stop using your tube and seek immediate medical attention:

- Pain during feeding
- Fresh bleeding
- Leakage of gastric contents at stoma site.

DAILY CARE

The opening in your adbomen which your tube goes through into your stomach, is called the stoma. You need to clean the skin around the stoma (stoma site) once a day.

For the first two weeks - or until your stoma is formed and any sutures are removed or absorbed.

Clean the stoma daily using gauze and sterile water. Start near the stoma site and move outwards in circular motions.

If there are sutures present, refer to your healthcare professional regarding when these will be removed.

Do not adjust the retention disc on the G-tube.

Until the stoma is fully healed, do not immerse your stoma site in water. Have showers not baths. Your doctor or healthcare professional will advise when you can have a bath or go swimming.

WHEN THE STOMA IS HEALED

- Always wash your hands with soap and water and dry thoroughly before handling the tube.

- Clean the G-tube tube daily. Keep the skin around the tube (stoma) clean and dry using:

  - mild soap and water
  - gauze,
  - a soft, lint-free cloth.

  Keep the ENFit® feeding port clean by using a swab, soft cloth or an interdental brush.
- Before cleaning, check carefully for any signs of the following: leakage, swelling, irritation, redness, skin breakdown, soreness or excessive (more than 10mm) movement of the tube in or out of your stomach. If you notice any of these things, inform your healthcare professional, who will be able to advise you. **You should not experience any pain while feeding.**
- Clean the stoma site daily. Keep the skin around the tube clean and dry using mild soap and warm water. You should start next to the stoma site and work outwards, using circular movements. The tube can be rotated. The external retention disc is flexible allowing you to reach all areas around the tube.
- When you have finished, gently dry the whole area thoroughly.
- Monitor the position of the G-tube as indicated by your healthcare professional. One of the following methods can be used.

  Follow the methods recommended by your healthcare professional.
  These may include:

  - Checking the external length of your G-tube
  - A gastric aspirate with pH check.

If you have any concerns that your G-tube is not in the correct position, contact your healthcare professional.

Monitor the pH of the gastric contents or check the introduced length of the G-tube each time that:

- a new pack of tube feeds is connected,
- a bolus feed is administered,
- medication is administered and
- at least once during every nurse shift.

Follow the pH measurement technique as described on the instructions for use (see page 9).

When one of the two techniques indicates that the tube has moved, stop immediately any administration of feed or medication and contact the medical doctor.

- Oral Hygiene is especially important, if you receive all of your food via your G-tube, as dental plaque can build up very quickly.

  Clean your teeth at least daily. Artificial saliva or a mouth wash may help if your mouth is dry.

WEEKLY ROUTINE

- When the stoma is completely healed, ususally two to four weeks after initial placement, the water filled balloon can be checked and the tube can be rotated.

  It is essential to check the water in the balloon regularly to ensure the balloon is inflated, as this keeps the tube in position in your stomach.

Work as follows:

- Discontinue feeding.
- Slide the external fixation device upwards and clean the skin and the tube using soap and water (fig 4a). Clean and dry the skin. Read the centimeter marking at the skin level (fig 4b).

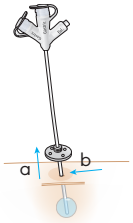


fig.4

- Push the tube 1 to 1,5 cm into the stoma (fig.5).
- Draw up water with prescribed amount into a Luer tip syringe
- Hold tube in place at all time during procedure

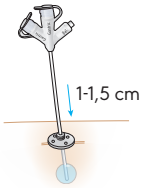


fig.5

- Attach a Luer slip syringe to the balloon inflation port (fig.6a) and gently pull on the plunger (the end of the syringe) to withdraw all the water from the balloon (fig.6b), while leaving the tube in place. Hold the tube in place or tape to the skin to stop it coming out while the balloon is deflated.

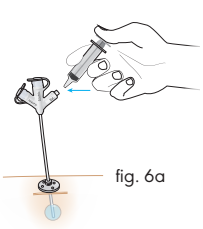


fig. 6a

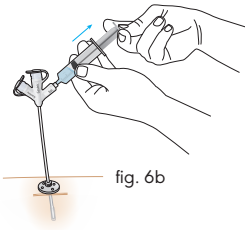


fig. 6b

Read the content of the syringe (fig.6c), while keeping the syringe connected. If there is less fluid than the amount originally prescribed (see in the beginning of this booklet), either reinject the liquid and further top up the balloon with sterile, distilled or cooled-boiled water to reach the prescribed amount or discard the water removed and refill the syringe with sterile, distilled or cooled-boiled water to the prescribed volume for the balloon and inject into the balloon through the balloon inflation port.

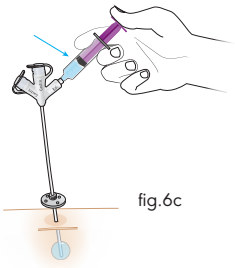


fig.6c

Never fill the balloon with air, saline or glycerin!

Do not inflate the balloon with more than the volume printed on the balloon inflation port.

- Rotate the tube 360° (fig.7) and pull it gently back out of the stoma, until you feel resistance of the internal balloon against the stomach wall. Normally the same centimeter marking should sit at the skin level as before comencing the procedure.

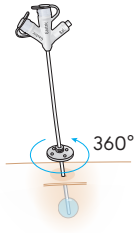


fig. 7

- Check the centimetre marking at the skin is the same as at the start of the procedure.
- Dry the skin and tube thoroughly.
- Slide the external retention disc back so it sits comfortably on the skin. There should be normally 2-3 mm distance between the skin and the external retention disk (fig.8).

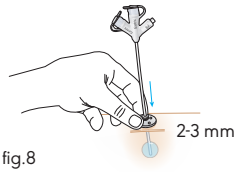


fig.8

BEFORE FEEDING BEGINS

CHECK FOR PROPER TUBE POSITION

Follow methods recommended by your healthcare professional.

These may include:

- Checking the inserted tube length
- A gastric aspirate with pH check.

INSERTED TUBE LENGTH:

- Read the centimeter marking on the G-tube at the level of the skin.
- Compare this length with the length mentioned in the beginning of this booklet. Both numbers should be equal.
  If not, stop immediately the administration of enteral feeding and contact your healthcare professional.

pH MEASUREMENT:

- Attach an ENFit® syringe to the feeding port and pull back the end of the syringe (plunger) to aspirate stomach content (stomach contents should appear as formula or clear or yellow liquid).
- Disconnect the syringe from the G-tube and measure the pH of the aspirate with pH indicator paper. The pH should be lower or equal to 5,5.
- Reinject the aspirate back into the stomach, flush the tube with 10-20ml water and begin feeding. (A lower amount of water may be needed for premature/low birth weight babies, or volume sensitive patients. Consult your healthcare professional.)
- In case the pH is higher than 5,5: stop immediately the tube feeds administration and contact your healthcare professional.

  If you have any concerns regarding the position of your G-tube, stop feeding and seek medical advice.

  If you have tried both methods listed above and if you're not sure of the tube placement, DO NOT FEED using the tube. Your healthcare professional can use fluoroscopy to determine tube placement.

ADMINISTRATION OF TUBE FEEDS

There are two ways your feed can be given through your G-tube:

- with a pump
- as a bolus with a syringe

ALWAYS FOLLOW ANY SPECIFIC INSTRUCTIONS WHICH HAVE BEEN GIVEN TO YOU BY THE HEALTH-CARE PROFESSIONAL WHO ARE LOOKING AFTER YOU AND REMEMBER THESE TWO POINTS:

Don't lie flat during your feed or for about an hour after you have finished your feed.

Never vary the type or amount of feed that has been prescribed for you without first speaking to your healthcare professional for advice.

ADMINISTRATION OF MEDICATION

- Medication should be in liquid form when possible. If the liquid is thick, thin it with water so it doesn't clog the tube. Check with pharmacist to ensure proper dilution.
- If your medication is only available in a pill or capsule, ask your medical professional or pharmacist if it is one you can crush and mix with water. Not all pills and tablets can be taken this way.
- If crushing is an option for your medication, crush it into a fine powder and make sure it is well dispersed in the water. Most medications mix well with warm water but some do not.
- Contact your physician prior to administering any new medication through your tube.
- Always remember to flush your tube with water before, between and after medication administration. The amount that you flush will be determined by your healthcare professional.

FLUSHING YOUR TUBE

Flush your G-tube after each feeding or administration of medication. Regular flushing of your G-tube (every eight hours) will reduce the likelihood of blockage.

TO FLUSH YOUR TUBE:

- Using an ENFit® syringe, draw up 20ml of water (or a smaller volume, see notes in front of this booklet).
- Switch off the enteral feeding pump and close the roller clamp of the feeding set. Open the cap of the medication port (if not available, use the feeding port) and connect the syringe containing the water. Press the end of the syringe (plunger) down gently and slowly until the syringe is empty.

  Disconnect the syringe and close the cap of the medication port.

REPLACEMENT AND ACCIDENTAL REMOVAL

REPLACEMENT OF THE G-TUBE:

- The AVANOS® G-tubes are designed to stay in place for a long time (1-8 months) and under normal circumstances will not come out. The life span of the balloon of the G-tube varies according to several factors. These factors may include medications, volume of water used to inflate the balloon, gastric pH fluctuations, and tube care.

  Replacement and removal of the G-tubes depends upon the viability of the product and/ or should be performed under medical instruction.

  Find the replacement date for your tube in the beginning of this booklet or ask your healthcare professional.

ACCIDENTAL REMOVAL OF THE G-TUBE:

- If the G -tube is pulled out accidentally you must inform your healthcare professional immediately to replace the tube or your stoma may close.
- Use your replacement G-tube to prevent the stoma tract from closing but do not inflate the balloon. Tape tube securely to the skin and do not use the tube until position has been confirmed by the healthcare professional.
- Correct placement into the stomach should always be confirmed before using the tube for delivering feed, water or medications.

Contact your healthcare professional immediately for further advice in case of accidental removal.

PROBLEM SOLVING

STOMACH CONTENTS ARE LEAKING AROUND THE STOMA SITE

- First, check for proper tube placement (see earlier)
- Mesure residual stomach contents (see earlier). The stomach may be too full or contain gas. If the stomach contains too much residual (more than a few times), you may be getting too much formula at one time. If you are using the bolus feed, consider switching to continuous. If using a continuous feed, try decreasing the flow rate.
- Check the content of the balloon (see earlier) and compare the obtained balloon volume with the initial amount. If necessary, reinject the obtained amount and further tap it up until the volume prescribed in the beginning of this booklet.

  If the balloon is completely empty or contains a totally different type of liquid (feeding, medication, ...), it is advised to insufflate the balloon completely with the prescribed volume of sterile water and to check the contents after about 5 minutes.
  If after 5 minutes the contents of the balloon is less than the volume of water that was injected, the balloon may be compromised.
  A replacement of the tube will be necessary. Contact your healthcare professional.

THE FEEDING TUBE BECOMES BLOCKED

- Attach an ENFit® syringe, filled with 10-20ml warm water, to the clogged port of the G-tube.
- Gently pull back on, then depress the plunger to dislodge the clog.
- If the clog remains, repeat the previous step. Gentle suction alternating with syringe pressure will relieve most obstructions. If this fails, consult your healthcare professional.
- If your healthcare professional has given you different instructions for this procedure, such as the use of CLOG ZAPPER*, follow their instructions.
- To prevent blockages, flush your feeding tube:
  - before and after each feeding
  - before, after and in-between medications
  - after checking for gastric residuals
- Do not mix medication with tube feeds unless directed by a physician or pharmacist.

STOMA AND/OR SKIN PROBLEMS

- For stoma problems, immediately call your medical professional if:
  - the stoma is bleeding,
  - you notice blood mixed with stomach content,
  - the stoma is persistently red and sore, and/or the red area is larger than 2.5 cm in diameter,
  - the stoma emits an odor,
  - the skin surrounding the stoma is swollen,
  - there is pus around the stoma,
  - you have a fever,
  - you have consistent pain.
- Be sure to gently rotate the G-tube 360° during daily tube care to ensure proper air circulation (see "Weekly routine" page 7).
  Redness or soreness around the skin and stoma may be the result of an incorrectly sized tube (for example, if you have gained/lost weight) or gastric leakage. Clean and dry the area frequently.
- Skin problems such as granulation tissue may also occur. Granulation tissue is the result of the body's effort to repair the surgical incision. The tissue area may enlarge and require treatment. If it bleeds or a large amount of tissue builds up, contact your medical professional.

IMPORTANT: if you notice that your tube fit is uncomfortable, please contact a medical professional.

CHILDREN'S SPECIAL CONCERNS

CHILDREN HAVE SMALL STOMACHS

- As infants grow, they develop the capacity to hold larger amounts of tube feeds. Feedings usually begin with frequent small amounts of formula. Bolus feedings take on average 20–40 minutes. A gravity flow system or a pump regulates a slow steady flow and leaves you free to do other things. Be patient, and gradually increase the amount of formula given during the feeding.
- If your child's stomach is full, formula may leak around the stoma. Your child may also act colicky and vomit or burp up formula. If this happens, ask your medical professional if decompression or venting is appropriate.

CHILDREN ARE GROWING

- Keep in mind that children with gastrostomies have the same basic growth and developmental needs as other children. That means their nutritional needs will be growing and checking their stoma length may be required for optimal fit.

CHILDREN NEED TO GET ENOUGH WATER

- Because enteral feeding tube users are no different from the rest of us, hydration is important. If the weather is warm or your child has a fever, additional water may prevent dehydration. Ask your medical professional for guidelines.

TERMS YOU'LL NEED TO KNOW

BOLUS FEEDING: Large amounts of formula delivered in a short period of time through a feeding set or syringe.

CONTINUOUS FEEDING: Small amounts of formula administered constantly throughout the day (or night) without interruption (often during 20-24 hours).

ENTERAL FEEDING: Liquid nourishment delivered by a tube inserted into the stomach or intestine.

FEEDING SET (GIVING OR PUMP SET): Tubing that connects the feeding container or pump to the feeding tube.

FEEDING TUBE: Tube through which formula flows into the stomach or the intestine.

FISTULA: The shaft that makes the connection between the stomach and the outside (the skin).

FRENCH SIZE: Indication of the tube's outer diameter equal to Charrière.

GASTROINTESTINAL DECOMPRESSION: The removal of gas or fluid from the stomach (also called "venting").

GASTROSTOMY: An opening (stoma) through the skin into the stomach.

GRANULATION TISSUE: Extra tissue formed on or around the surface of the stoma that will later form fibrous scar tissue.

GRAVITY DRIP: Formula or tube feeds flows into the stomach by gravity without the use of a feeding pump.

INTERMITTENT FEEDING: Feeding smaller amounts of formula frequently during the day or night

STOMA: Opening through which a feeding tube can enter the body.

SOME G-TUBE DO'S AND DON'TS

DO

- ✔ Check the site every day. Tell your healthcare professional at once if you notice any swelling, leakage, redness, soreness, pain or excessive movement of the tube in or out of your stomach.
- ✔ Clean and dry the stoma and surrounding tissue carefully each day.
- ✔ Flush the tube before and after medications, feeding and at least every 8 hours.
- ✔ Once the stoma tract is healed:
  Check weekly the balloon content and turn the tube on its axis as described in this booklet or instructed by your healthcare professional.

DON'T

- ✘ Don't put solids down your tube.
- ✘ Don't re-position the tube yourself, unless your healthcare professional has shown you how to.
- ✘ Don't have a bath or swim until your healthcare professional lets you know it is okay to do so.
- ✘ Don't remove the external fixation device from the G-tube. If the external fixation device is uncomfortable, tell your healthcare professional who will adjust it for you.

The enclosed guidelines are only recommendations for appropriate care of the AVANOS® G-tubes. These should only be followed when no instructions are available from the medical professional or healthcare professional. The Avanos guidelines can under no circumstances overrule the local medical or nursing guidelines. The end responsibility for the treatment should remain with the placing doctor.

There are inherent risks in all medical devices. Please refer to the product labeling for Indications, Cautions, Warnings and Contraindications.

AVANOS

For more information, please send an email to customerservice.uk.ie@avanos.com