KIMBERLY-CLARK* MIC*, MIC-KEY*
Transgastric-Jejunal
Enteral Feeding Tube

Patient Use & Care Guide

Kimberly-Clark

*Trusted Clinical Solutions**

Care of Patient with a Transgastric-Jejunal Feeding Tube

Some patients may benefit from the use of an enteral feeding tube that provides access to a specific section of the small intestine called the jejunum. A Transgastric-Jejunal feeding tube provides access to the jejunum for feeding, while also providing access to the stomach for medications and decompression.

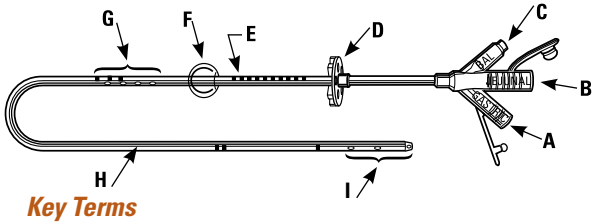
Kimberly-Clark makes two types of Transgastric-Jejunal feeding tubes:

MIC* Transgastric-Jejunal
MIC-KEY* Low-Profile Transgastric-Jejunal

Confirmation of Position

Only your physician can confirm Transgastric-Jejunal tube placement. This confirmation of the tube position is performed at any time by your physician, and should be performed at the time of initial placement and upon any tube replacement.

MIC Transgastric-Jejunal Tube*



Key Terms

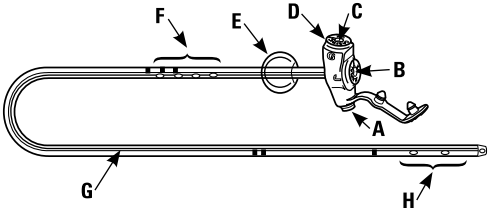
(A) Gastric Decompression Port
(B) Jejunal Feeding Port
(C) Balloon Inflation Port
(D) External Retention Ring
(E) Skin Level Centimeter Markings
(F) Retention Balloon
(G) Gastric Exit Ports
(H) Radiopaque Stripe
(I) Jejunal Exit Ports

Upon initial placement, patient or caretaker should note the skin level centimeter marking on the tube. Prior to each tube feeding or administration of medication or water through a Transgastric-Jejunal tube, the placement of the tube should be checked to ensure that the tube has not migrated.

NOTE: *Do not rotate the external bolster or tube. This may cause the tube to kink and may cause a loss of position in the jejunum.*

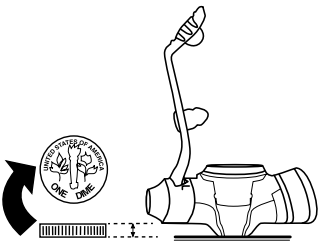
Slight adjustment of the external bolster may be performed to prevent skin pressure/irritation, but care should be taken to prevent dislodgement or rotation of the tube itself. The external bolster should rest 2-3 mm above the skin.

MIC-KEY Low-Profile Transgastric-Jejunal Tube*



Key Terms

(A) Balloon Inflation Port
(B) Jejunal Feeding Port
(C) Gastric Decompression Port
(D) Skin Level Bolster ("Button")
(E) Retention Balloon
(F) Gastric Exit Ports
(G) Radiopaque Stripe
(H) Jejunal Exit Ports



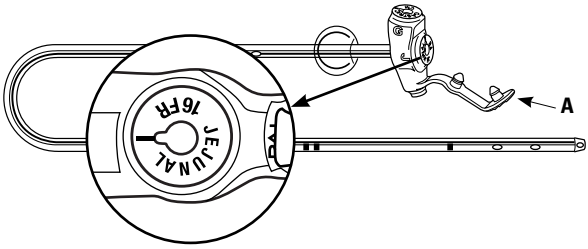
Upon initial placement, a measurement of the stoma will be made and a specific "stoma length" MIC-KEY* tube will be selected by your physician. The skin level "button" should rest comfortably 2-3 mm above the skin. If the button appears to fit too tightly, please contact your healthcare provider.

NOTE: *Do not rotate the external bolster. This may cause the tube to kink and/or may cause a loss of position in the jejunum.*

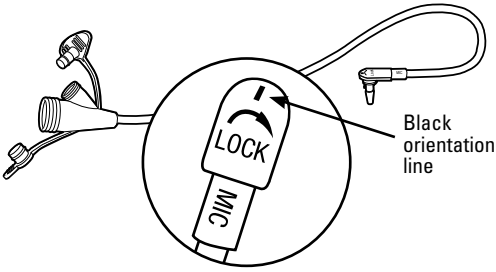
The general orientation of the external bolster against the body should be maintained.

MIC-KEY* Extension Set Assembly for Jejunal Feeding

1. Open the feeding port cover (A) located at the top of the MIC-KEY* Transgastric-Jejunal Feeding Tube.



2. Insert the MIC-KEY* Extension Set into the port labeled "Jejunal" by aligning the lock and key connector. Align the black orientation line on the extension set with the corresponding black orientation line on the jejunal feeding port.

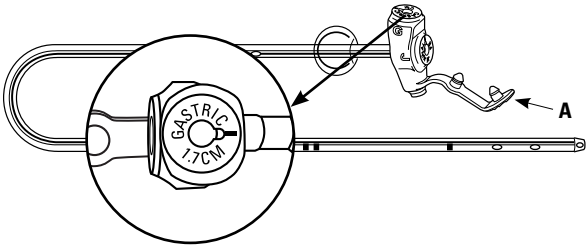


3. Lock the set into the jejunal feeding port by pushing in and rotating the connector clockwise until a slight resistance is felt (approximately 1/4 turn). Do not rotate the connector past the stop point.
4. When feeding is complete, remove the extension set by rotating the connector counter-clockwise until the black line on the set aligns with the black line on the jejunal feeding port.
5. Remove the set and cap the gastric and jejunal ports with the attached port cover.

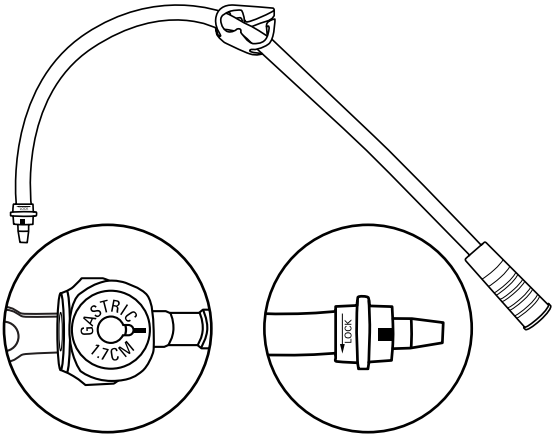
CAUTION: NEVER CONNECT THE JEJUNAL PORT TO SUCTION. DO NOT MEASURE RESIDUALS FROM THE JEJUNAL PORT.

MIC-KEY* Extension Set Assembly for Gastric Decompression

1. Open the feeding port cover (A) located at the top of the MIC-KEY* Transgastric-Jejunal Feeding Tube.



2. Insert the MIC-KEY* Bolus Extension Set into the port labeled "Gastric" by aligning the lock and key connector. Align the black orientation line on the set with the corresponding black orientation line on the gastric port.



3. Lock the set into the gastric decompression port by pushing in and rotating the connector clockwise until a slight resistance is felt (approximately 1/4 turn).

NOTE: *Do not rotate the connector past the stop point.*

4. Remove the extension set by rotating the connector counter-clockwise until the black line on the set aligns with the black line on the gastric port.
5. Remove the set and cap the gastric and jejunal ports with the attached port cover.

CAUTION: DO NOT USE CONTINUOUS OR HIGH INTERMITTENT SUCTION. HIGH SUCTION COULD COLLAPSE THE TUBE OR CAUSE STOMACH INJURY.

MIC* and MIC-KEY*
Tube Clogging

Tube clogging is generally caused by:

- Poor flushing techniques
- Failure to flush after measurement of gastric residuals
- Inappropriate administration of medication
- Pill fragments
- Viscous medications
- Thick formulas, such as concentrated or enriched formulas that are generally thicker and more likely to obstruct tubes
- Formula contamination that leads to coagulation
- Reflux of gastric or intestinal contents up the tube

MIC* and MIC-KEY*
Tips for Avoiding Clogging

Proper tube flushing is the best way to avoid clogging and maintain tube patency.

- Use room temperature water for tube flushing.
- Use a 30 to 60 ml catheter tip syringe. Do not use smaller size syringes as this can increase pressure on the tube and potentially rupture smaller tubes.
- Do not use excessive force to flush the tube. Excessive force can perforate the tube and can cause injury to the gastrointestinal tract.
- The amount of water will depend on the patient's needs, clinical condition, and type of tube, but the average volume ranges from 10 to 50 ml for adults, and 3 to 10 ml for infants. Hydration status also influences the volume used for flushing feeding tubes. Consult your physician for instructions on flushing volumes.
- Flush the feeding tube with water every 4-6 hours during continuous feeding, anytime the feeding is interrupted, before and after every intermittent feeding, or at least every 8 hours if the tube is not being used.
- Administer each medication individually.
- Flush the feeding tube before and after medication administration and between medications to prevent the medication from interacting with formula, which could potentially cause the tube to clog. Never crush enteric-coated medication or mix medication with formula.
- Avoid using acidic irrigants such as cranberry juice and cola beverages to flush feeding tubes. When combined with formula proteins, their acidic quality may actually contribute to tube clogging.
- Flush the feeding tube after checking gastric residuals.

To Unclog A Tube

1. Make sure that the feeding tube is not kinked or clamped off.
2. If the clog is visible above the skin surface, gently massage or "milk" the tube between fingers to break up the clog.
3. Place a catheter tip syringe filled with warm water into the appropriate adapter or lumen of the tube and gently pull back on then depress the plunger to dislodge the clog.
4. If the clog remains, repeat step #3. Gentle suction alternating with syringe pressure will relieve most obstructions.
5. Do not use cranberry juice, cola drinks, meat tenderizer or chymotrypsin, as they can actually cause clogs or create adverse reactions in some patients.
6. If this fails, consult with the physician.
7. If the clog is stubborn and cannot be removed, the tube may require replacement. Consult your physician.

NOTE: *To avoid damaging the tube, do not insert foreign objects into the tube.*

Medication Administration

1. Use liquid medications intended for enteral use whenever possible.
2. Consult the pharmacist to determine if it is safe to crush solid medication and mix with water. If safe, pulverize the solid medication into a fine powder form and dissolve the powder in water before administering through the feeding tube. Never crush enteric-coated medication or mix medication with formula.
3. Use a catheter tip syringe to flush the tube with the prescribed amount of water after each medication. Refer to previous instruction on tips to avoid clogging.

NOTE: *Certain medications such as lansoprazole delayed-release orally-disintegrating tablets can potentially block feeding tubes and syringes. Even if the tablets do disintegrate, they can later form clumps.*

4. Do not insert medication into the balloon.

Balloon Maintenance

Check the water volume in the balloon once a week.

1. While holding the tube in place, insert a luer slip syringe into the balloon inflation port and withdraw the water (A luer lock syringe may make this more difficult. A luer slip syringe is recommended).
2. If the amount is less than recommended or prescribed, refill the balloon with the recommended and prescribed amount of water.
3. Over-inflation can obstruct the lumen or decrease balloon life and under-inflation will not secure the tube properly, so be sure to use the recommended amount of water. Refer to Instructions For Use for more detail.

NOTE: *Refill the balloon using sterile or distilled water, not air or saline. Saline can crystallize and clog the balloon valve or lumen and air may seep out and cause the balloon to collapse.*

4. Be aware as you deflate the balloon there may be some gastric contents that can leak from around the tube.
5. If the balloon is ruptured, it will need to be replaced. Secure the tube into position using tape, then contact the physician for instructions.

DAILY CARE & MAINTENANCE CHECKLIST

Cleanse the site with normal saline three times daily to remove the small amount of mucus that normally accumulates around the stoma.

Clean the Stoma Site (skin area surrounding feeding tube)

- After the stoma heals, a thorough cleansing with mild soap and water is best.
- Use a circular motion moving from the tube outwards.
- Clean sutures, external bolsters and any stabilizing devices using a cotton-tipped applicator.
- Rinse thoroughly and dry well.

Clean the External Portion of the Feeding Tube

- Use warm water and mild soap being careful not to pull or manipulate the tube excessively.
- Cleanse the site with normal saline three times daily to remove any mucus.
- Rinse thoroughly, dry well.
- Do not rotate the external bolster This may cause the tube to kink and possibly lose position.

Clean the Jejunal, Gastric and Balloon Ports

- Use a cotton-tipped applicator or soft cloth to remove all residual formula and medication.

Verify Placement of the External Bolster

- Verify that the external bolster rests 2-3 mm above the skin, or for a MIC-KEY* tube, that the device rests comfortably 2-3 mm above the skin.
- Confirm that centimeter markings at skin level remain consistent.

Consult a Physician if:

The stoma site is uncharacteristically sore or painful, or if abdominal pain, discomfort, tenderness or distension occur.

The appearance of the stoma site suggests signs of infection or if the stoma site is tender or distended.

Abdominal pain, abdominal discomfort, abdominal tenderness, abdominal distension, dizziness or fainting, unexplained fever, unusual amount of bleeding through or around the tube.

The stoma site appears to be leaking, oozing, bleeding or otherwise appears abnormal.

The tube appears in any way damaged, broken or otherwise adulterated.

Any damage to the tube or ports is evident or if leakage appears at the site of any of the ports.

The centimeter markings on the MIC* Transgastric-Jejunal tube at skin level suggest that a significant change (>1 cm) has occurred to the device positioning. Or if you have MIC-KEY* "button," if it fits too tightly, irritating or indenting into skin.

If you have any additional questions about your device, consult your medical professional, or call Kimberly-Clark* Customer Care at 1-800-KCHELPS (1-800-524-3577) in the United States or visit our websites:

Feeding Tube User & Caregiver Support

www.Mic-Key.com

Medical Professional Support

www.KCDigestiveHealth.com

The Kimberly-Clark Advantage*

Knowledge Network* Accredited Education
Ongoing Customer Support
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Infection prevention website:

www.HAIwatch.com

For more information, please visit our web site at
www.kchealthcare.com

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