

Malone Antegrade Continent Enema (MACE)

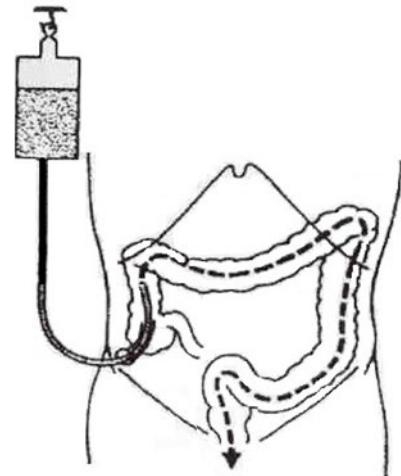
What is a Malone Antegrade Continent Enema (MACE)?

The Malone Antegrade Continent Enema (MACE) is an old method used in children and adults who have difficulty either passing a bowel movement or those who have chronic leakage of stool (bowel accidents or incontinence). Most of these patients have a neurogenic bowel due to spina bifida or another neurological condition.

How does the MACE work?

The MACE works by emptying the large intestine (colon or large bowel) of stool using water (similar to an enema) which is infused through a catheter (tube) in the colon, rather than from the rectum below.

During the surgery, a piece of intestine is rolled up into a tube that connects the large intestine to the outside of the belly (abdomen) with a continent stoma. A continent stoma means that the stoma does not leak.



To empty the bowel the patient places a catheter into stoma and flushes the bowel with warm tap water to empty it. This is typically performed once daily.

How will I get ready for surgery?

Most patients will require a bowel prep.

What is a bowel prep?

A bowel prep or “clean out” is taking a medicine that stimulates bowel movements to clean out the colon before surgery in case a piece of bowel is needed to create the channel.

Usually, the patient starts a clear liquid diet 24 hours before surgery. In addition, some patients require a laxative the day before surgery. Your doctor or nurse will review your child’s plan with you prior to surgery.

What is a clear liquid diet?

A clear liquid diet means not eating food and only drinking liquids that you could see through. Examples are water, juice, Gatorade, pop, popsicles, Jell-O or clear broth.

What is the postoperative care process?

When the surgery is complete you may have some or all of these tubes in place:

- **MACE tube:** There will be a tube coming from your MACE stoma that will stay in place for 2-3 weeks until you come to the clinic and have it removed. The tube will remain capped when it is not in use.
- **Foley catheter:** A drain tube coming from the urethra to drain your urine. This will usually be removed prior to discharge from the hospital.
- **Nasogastric tube (NG tube):** This tube is inserted through your nose into your stomach and will drain the contents of your stomach to help you from becoming nauseated or from vomiting. If you have an NG tube, it only needs to stay in place for 2-3 days after surgery.
- **JP or Penrose drain:** A device for removing fluid from your abdomen or wound/surgical site. It acts as a wick and allows fluid to be released from a confined area. In most cases, the drain tube will be removed before discharge from the hospital.

How do I clean my MACE tube?

Clean your MACE tube site with soap and water. If the site looks red and irritated, we will have you apply an antibiotic ointment around the tube site.

Do I need to do anything on my surgical site/incision?

Your incision site will have sticky strips covering it and these should fall off on their own within two weeks. If not, you can manually remove them. There is no need to apply antibiotic ointment to your incision unless we have asked you to do this.

When can I bathe and shower?

You cannot take a tub bath for one week, but you can shower. It is okay if the adhesive strips and incision site become wet while showering. Gently pat dry your incision after it becomes wet.

What are MACE irrigations (washouts)?

During your hospital stay, either a nurse or a resident doctor from our Pediatric Urology Department will teach you how to do the first bowel irrigation.

Follow these instructions to perform your MACE irrigation:

1. Bowel irrigation procedures: Put _____ mL warm tap water into your irrigation/enema bag. The volume you use varies for many patients and you and your doctor or nurse will determine what volume you should use for your irrigations.
2. Prime the tubing attached to the enema bag by opening the clamp and allowing the water to flow until it reaches the end of the tubing, and then re-clamp the tubing.
3. Hang the bag high enough to allow the fluid from the bag to flow easily.
4. Make sure you are sitting on your toilet before you start the flow of water.

5. Uncap your MACE catheter/tube and connect the end of your enema bag tubing to the end of your MACE catheter.
6. Open the clamp to the enema bag and let the water flow into your MACE catheter.

What are some tips for the washout?

- It is normal for water or stool to start coming out of your rectum before all the water has drained from your enema bag. If this happens, please continue with your flushing and finish all the water in your bag.
- It is normal to have some abdominal cramping or mild discomfort while you are doing the washout.
- If you start to cramp, you can stop the flow of water for a few minutes until the cramping passes, and then you can restart the flow of water until it finishes.
- The whole process can take up to 45 minutes. This time can be different for each patient.
- To make sure all of your stool has come out, you should sit on the toilet an extra 10-15 minutes after all the water in your enema bag has finished flowing in.

When should I call my doctor?

Call your Pediatric Urology doctor/nurse if you have any of the following:

- incision becomes red or swollen
- drainage from your incision or your incision opens
- skin irritation around the stoma site that does not improve with the use of soap and water
- severe pain that is not relieved by pain medication.
- fever (of 101.5 or higher), nausea, or vomiting
- Inability or increasing difficulty to insert a catheter into your MACE
- inability to irrigate your MACE

What is the number to call?

- During business hours, weekdays between 8-5 pm call the Urology Call Center (734) 936-7030 or (866) URO-MICH (876-6424)
- After hours and on weekends and holidays call (734) 936-6267 (UMHS Operator) and ask for the Urology resident on call

Disclaimer: This document contains information and/or instructional materials developed by Michigan Medicine for the typical patient with your condition. It may include links to online content that was not created by Michigan Medicine and for which Michigan Medicine does not assume responsibility. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your health care provider if you have any questions about this document, your condition or your treatment plan.

Author: Julian Wan, MD

Patient Education by [Michigan Medicine](#) is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Public License](#). Last Revised 10/2019