When a patient is suffering from constipation or fecal incontinence, his/her doctor will typically recommend lifestyle changes such as a diet that is high in fiber and/or the regular use of laxatives (taken orally or as a suppository). Another treatment option is an enema. The type of enema that most people are familiar with is a retrograde enema; this means the irrigation fluid is administered from the “bottom up” (the fluid is administered into the anus).

For patients with severe constipation or incontinence, dietary changes and retrograde enemas may not be sufficient. These patients may need what is known as an Antegrade Continence Enema (ACE): Antegrade (ante = before), Continence (self-control), Enema (infusion of fluid).

During the ACE, irrigation fluid is administered into the beginning of the large intestine (also known as the large bowel or colon) and allowed to flush from the “top down” (Fig. 1). ACE is typically recommended for patients who have not responded to conservative treatments but are in need of a solution.

A cecostomy tube, or C-Tube, (like the MiniACE®) is a thin tube that is placed into the large bowel through a stoma in the abdomen. The MiniACE® can be placed either directly into the cecum (cecostomy) or through the appendix and into the large intestine (appendicostomy, MACE). Once the stoma site is properly healed, irrigation fluid is delivered into the cecum through the MiniACE®. This process, known as an Antegrade Continence Enema (ACE), helps move stool out of the body through the rectum.

- The MiniACE® is a low profile device. The phrase “low profile” refers to the external portion of the device, often called the bolster, being very flat or flush against the skin.

There are two types of ACE procedures: cecostomy and appendicostomy (Fig. 2).

- **Cecostomy**: A doctor will create a stoma (or opening) in the lower-right section of the abdomen, from the abdominal wall to the first part of the large intestine (known as the cecum). A tube, such as the MiniACE®, will be placed in the stoma. Once the stoma site is properly healed, irrigation fluid is delivered into the cecum through the C-Tube. This process, known as an Antegrade Enema, helps move stool out of the body through the rectum.

- **Appendicostomy (Malone, MACE)**: Instead of creating a stoma in the lower-right section of the abdomen (as is done with the cecostomy procedure, above), the doctor will typically create a stoma opening at the belly button (umbilicus) where it can be well hidden. The doctor will then connect the appendix to the stoma/opening in the belly button. The appendix is a small organ that is located at the beginning portion of the large intestine. By connecting the appendix to the stoma in the belly button, the doctor creates a channel from the outside of the body to the first part of the large intestine, known as the cecum. Once the stoma site is properly healed, irrigation fluid is delivered into the cecum. Typically, MACE patients do not need to keep a tube, such as the MiniACE®, in their stoma. Instead, these patients insert a catheter into the stoma at the time of the flush, and remove it when the flush/enema is complete. However, sometimes the stoma can begin to close (known as stenosis) or sometimes patients do not like the sensation of inserting a catheter every time they want to administer an antegrade enema; in these instances, a device like the MiniACE® can be inserted into the stoma tract.
For patients who are having bowel movements at inopportune times, the goal of the ACE is to allow the patient to be socially continent (no accidents) for 24-48 hours. For patients with severe constipation, the goal of the ACE is to avoid damaging and painful stool buildup in the bowels and colon.

AMT has provided the following information as an educational resource tool. This is not intended as a substitute for professional medical care. Your FIRST source of information should be your healthcare provider.

**Call your doctor if any of the following occur:**

- Fever or vomiting.
- Skin around the stoma site is red, discolored or raw.
- Drainage around the stoma site is white, yellow or green; drainage may have an unpleasant odor.
- Crusting is noted at the stoma site.
- Large amount of tissue build up, such as granulation tissue.
- Swollen skin or tissue at the stoma site.
- Repetitive leakage of stool.
- MiniACE® is no longer fitting properly/flush against the skin and either has a distinct indentation at the stoma site or a distinct gap between the device and skin.
- The MiniACE® falls out and you are unable to replace it easily.
- Pain at the stoma site.
- Bleeding, pus or inflammation at the stoma site.
- Distended stomach, a possible indication for an intestinal blockage.

**Stoma Site General Care**

- **Cleaning:** The stoma site should be kept clean and dry at all times. It is important to clean the stoma site every day. Use a cotton swab or terry cloth to clean the skin around the C-Tube with mild soap and water, or follow what your provider has advised you to do.
- **Circulation:** Turn/Rotate the MiniACE® every day, stopping at a different position each time. Rotating the external bolster of the MiniACE® promotes a healthy stoma by allowing air to get to the skin.
- **Bath Time:** Patients fitted with a C-Tube are allowed to bathe and swim. Be sure to close the safety plug before submerging the device in water. Bath time is a good opportunity for regular cleaning of the C-Tube and stoma site.
- **After Cleaning:** Always allow the stoma site to air dry after cleaning.
- **Always check the stoma site for redness, pain/soreness, swelling, or any drainage. If you notice any of these signs or symptoms, contact your healthcare provider.**
- **It is not necessary to use gauze or pads at the stoma site. If there is leaking, the MiniACE® may be too loose or too tight.**

**Device Related Concerns**

**Leakage Around the Device:**

- Make sure the balloon is filled to the prescribed volume. Resistance should be felt when gently pulling on the tube.
- Check that the MiniACE® currently in use matches the prescribed French (F) size and stoma length (cm). If an incorrect device is in place, call your doctor.
- For new placements, it may take time for the stoma tract to naturally heal, firm up around the tube, and conform to the balloon. If leaking persists contact your healthcare provider. You may need to have the stoma length re-measured.

**Causes for Leakage:**

- Incorrectly sized device.
- Weight change (increase or decrease).
- Incorrect volume of water in balloon (too high or too low).
- Persistent tension at the stoma site (from connecting/disconnecting the irrigation set).
- Intestinal blockage or fecal impaction.
Balloon Failure

- A balloon may leak or burst over time due to medications, balloon inflation volume, intestinal pH, trauma to the device, or natural wear. Always keep an extra MiniACE® on hand in case of an incident.

- Prior to any device change, consult your doctor first. Do NOT remove the MiniACE® until a replacement device is available in order to prevent the stoma from closing.

Balloon Will Not Deflate:

- Clean the balloon port with a cotton swab to remove any residue that may interfere with its proper function.

- Insert a slip tip syringe, push and twist one-quarter turn, and pull back on the plunger.

- If the problem persists call your doctor.

Intestinal Contents Leak Around the Tube:

- The patient may have an intestinal blockage or fecal impaction. Consult with your health care team to determine if the irrigation fluid should be adjusted.

- The MiniACE® may be too loose or too tight, call your doctor to have the stoma re-measured.

Preventing Tube Blockage:

- Flush the MiniACE® with 5-10 ml of warm water before and after performing the ACE. Do NOT place foreign objects down the center of the MiniACE®; inserting foreign objects into the irrigation port could damage the C-Tube and negatively impact device performance.

MiniACE® is Too Tight Against the Patient’s Skin:

- The MiniACE® should be able to turn easily without resistance from the patient’s skin.

- If the MiniACE® feels too loose or too tight, one option is to adjust the volume of water in the balloon (always consult a healthcare professional before adjusting the volume of water in the balloon). Table 1 shows the minimum, recommended, and maximum volume of water for each French size of the MiniACE®.

- If the MiniACE® does not properly fit, even though you increased or decreased the volume of water in the balloon, the stoma may need to be re-measured for a longer or shorter device. Call your doctor.

MiniACE® is Pulled Out of the Patient:

- Although the internal balloon is designed to decrease the number of pull-outs, the MiniACE® can accidentally become dislodged.

- If this happens, replace the device immediately or call your doctor.

- STOMA SITES MAY BEGIN TO CLOSE WITHIN THE FIRST HOUR AFTER A DEVICE IS REMOVED.

- Refer to the device Directions for Use and always be sure to have a replacement MiniACE® (or stoma stopper/plug) on hand for immediate replacement.

Table 1: Balloon Fill Volume, MiniACE®

<table>
<thead>
<tr>
<th>French Size</th>
<th>Min</th>
<th>Rec.</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>10F</td>
<td>1 ml</td>
<td>1.5 ml</td>
<td>2 ml</td>
</tr>
<tr>
<td>12F</td>
<td>2 ml</td>
<td>2.5 ml</td>
<td>3 ml</td>
</tr>
<tr>
<td>14F</td>
<td>3 ml</td>
<td>4 ml</td>
<td>5 ml</td>
</tr>
</tbody>
</table>

Recommended water fill volume is clearly printed on the balloon fill valve of each MiniACE® Button. Consult your healthcare provider before adjusting fill volumes.