

## **Trans-anal irrigation (TAI) (at a glance)**

Severe bowel dysfunction can present with faecal incontinence (FI), constipation, or both, and can have neurogenic and non-neurogenic aetiologies (Byrne et al, 2019). The prevalence in the population for patients experiencing at least one episode of FI per month is high, with up to 12.4% affected (Sharma et al, 2016). The prevalence of severe functional constipation is less well documented, but together these patients present a significant health burden to primary and secondary care. Last year the National Institute for Health and Care Excellence (NICE) published medical technology guidelines supporting the use of trans-anal irrigation (TAI) in patients with bowel dysfunction as it can reduce the severity of constipation/incontinence, improve quality of life, and promote dignity and independence (NICE, 2018).

### **The functionality of the bowel**

The bowel is part of the digestive system. It is made up of the small bowel (small intestine) and the large bowel (colon and rectum). The small bowel is longer than the large bowel, but it gets its name from the fact it is much narrower than the large bowel. The digestive system functionality (figure 1) works by pushing food through the intestines which usually takes between 24 to 72 hours. Muscular contractions squeeze (peristalsis) the food through the different sections of the intestine. These different sections are separated by bands of muscles, or sphincters, which act as valves. The passage of food from one area of the intestines to another is coordinated so that food stays in a specific area for long enough for the gut can absorb fluids and nutrients, or process and expel waste.

## **Performing this procedure**

The Peristeen transanal irrigation system is an effective treatment option for people suffering from faecal incontinence or chronic constipation. It can help relieve these conditions and offer improved quality of life. Transanal irrigation (TAI) is a simple and easy procedure designed to clean a portion of the bowel. It allows patients to take a proactive approach to managing their bowels, consequently giving more control over bowel movements and preventing faecal incontinence and constipation.

It is essential to carry out digital rectal examination before the first irrigation to assess for faecal impaction, anal sphincter dysfunction and co-ordination. Faecal impaction must be treated before starting treatment. If a patient has a previous history of anal, colorectal or pelvic surgery an endoscopy should be performed to exclude co morbidity.

A rectal catheter with a balloon, or a cone catheter (without balloon) is inserted into the rectum. The balloon is inflated in the rectum and holds the catheter in place while the water is instilled. This initiates the bowel movements (peristalsis), that moves the stool towards the rectum. When the water is instilled and the catheter is removed, the bowel can be emptied. The procedure is carried out on the toilet. It's important to appreciate that a transanal irrigation procedure should always be carried out with care. Bowel perforation is an extremely rare but serious complication to transanal irrigation and will require immediate admission to hospital, often requiring surgery. Performing this procedure regularly will empty the bowel effectively, and the bowel will remain empty until the next irrigation. This will allow some choice regarding the right time and place to empty bowels. This offers some people a solution to regain control and the

independence to live the life they prefer and without being afraid of having a bowel accident.

Patient education is important to ensure treatment and adjunctive management strategies are sustained. Patients need to adhere to diet, fluid intake and co-prescribed laxative regimes. There is a risk of deterioration or exacerbation of symptoms if patients stop alternative management strategies. Realistic expectations must be discussed and agreed with the patient.

### **Benefits**

Regularly irrigating the bowels with Peristeen can significantly improve bowel routine although this requires adjustment to daily routine. Patients experience with Peristeen is individual, therefore it is appropriate for nurses to provide health education regarding time to find new routines that are comfortable and work for the patient. Regular use of Peristeen has several benefits (table 1)

Reduced symptoms of constipation or faecal incontinence for up to 2 days
Improved quality of life
Reduced daily time spent on bowel management
A predictable pattern for emptying bowels
Freedom to decide where and when to irrigate supporting improved lifestyle

**Table 1:** Benefits of TAI (Coloplast, 2022)

**1 Mouth**  
Food and liquid enter the body through the mouth. Chewing breaks down the food.

**2 Oesophagus**  
Carries the food and liquid to the stomach for digestion.

**3 Stomach**  
Stores and breaks down the food into a liquid mixture before slowly releasing it into the small bowel.

**4 Liver**  
Produces bile, which helps the body absorb fat from food.

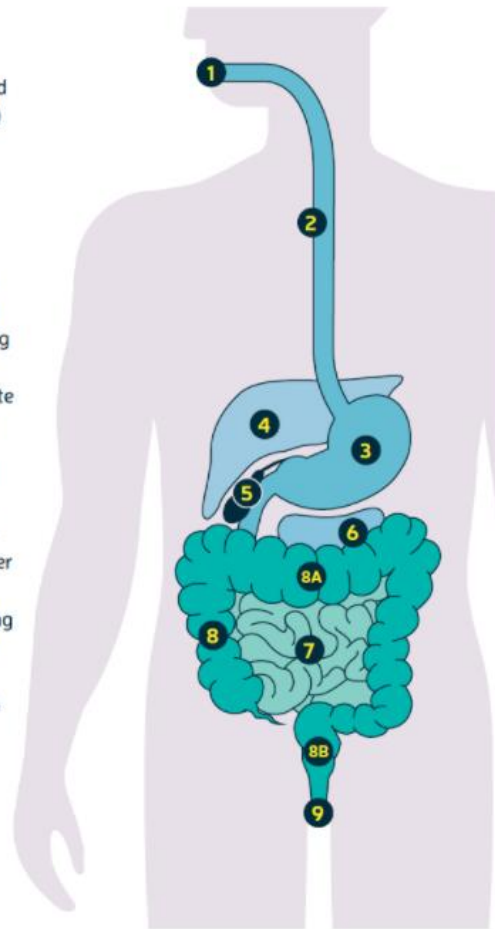
**5 Gallbladder**  
Stores bile until the body needs it.

**6 Pancreas**  
Produces enzymes (substances that speed up chemical reactions) that help the body digest fat, protein and carbohydrates (starchy foods).

**7 Small bowel**  
Breaks the food down even further, absorbing the nutrients into the body. Undigested waste moves into the colon.

**8 Large bowel**  
Made up of the colon (8A) and rectum (8B). The body absorbs water from the undigested waste as it moves along the colon towards the rectum. Waste (poo) is stored in the rectum until it passes out of the body.

**9 Anus**  
Poo passes through the anus as it leaves the body.



**Figure 1:** Functionality of the digestive system and bowel (Bowel Cancer UK, 2022)

\*Permission applied for and approved.

## Contraindications

A consensus review of best practice TAI in adults identified the following contraindications to irrigation:

- Anal or rectal stenosis
- Active inflammatory bowel disease
- Acute diverticulitis
- Colorectal cancer (within 3 months of rectal surgery)
- Within 4 weeks of endoscopic polypectomy ischaemic colitis

(Emmanuel et al., 2013)

Relative contraindications include

- Severe diverticulitis, previous diverticulitis or diverticular abscess
- Long-term steroid medication
- Previous rectal surgery
- Radiotherapy to pelvis or surrounding area
- Faecal impaction
- Any bowel conditions that cause pain or discomfort
- Pregnancy (current or planned)
- Anticoagulant therapy
- Severe autonomic dysreflexia

(Emmanuel et al., 2013)

It is also important to consider patient factors that may cause barriers to use as it can take several weeks for patients to become comfortable with using Peristeen and some people may choose to stop using it. The patient's ability to self-administer could be an issue and acceptability of using an invasive device. Nurses should take into consideration any history of sexual abuse, patient vulnerability, capacity to consent, and risk or history of self-harm. It may be necessary to risk assess the patient's environment before initiation of treatment.

Patient preference should be a consideration some patients might prefer surgery, most often this is a colostomy, ileostomy or a procedure to allow treatment with antegrade continence enemas (NICE, 2018).

## **Complications**

Bowel perforation is a serious adverse event that has been potentially linked to Peristeen. It is a rare complication with one in two million irrigations resulting in perforation (Christensen et al., 2016). Perforation can be caused by three mechanisms: direct impaling trauma, over inflation of the balloon, or exaggerated hydrostatic pressure during water instillation.

Other less adverse side effects include abdominal pain, rectal bleeding, nausea and autonomic dysreflexia. Autonomic dysreflexia, is a syndrome in which there is a sudden onset of excessive high blood pressure. It is characterised by hypertension, sweating, spasms and erythema (most likely in the upper extremities), headaches and blurred vision. See table 1.2 for managing these symptoms during TIA. It is important to note that Peristeen is self-administered so there are limitations in the research on patient-reported outcome measures.

### **Trouble- shooting**

Bleeding	<ul style="list-style-type: none"> <li>• A small amount of bleeding can be expected. If the patient experiences copious or regular bleeding this needs to be investigated further.</li> <li>• Any haemorrhage with or without pain indicates a probable perforation and should be treated as a medical emergency</li> </ul>
Pain	<ul style="list-style-type: none"> <li>• If the patient experiences cramps, discomfort, or pain while instilling</li> </ul>

	<p>the irrigation the procedure should be paused for a few moments. Continue slowly once this has subsided, ensure that the irrigant is at body temperature. If the patient experiences severe/persistent stop irrigating as this could indicate a medical emergency.</p>
<p>Autonomic dysreflexia and autonomic symptoms during irrigation i.e., sweating, palpitations and dizziness</p>	<ul style="list-style-type: none"> <li>• It is important to instil the irrigant slowly.</li> <li>• If the symptoms are problematic make sure that the patient is not alone when irrigating until the symptoms are reduced/absent.</li> <li>• Limit the patients time on the toilet depending on tolerance.</li> <li>• If the patient is at risk of autonomic dysreflexia ensure that medication is available in the home setting. These should be in immediate release form, bite and swallow, not sublingual administration.</li> </ul>

	<ul style="list-style-type: none"> <li>• If autonomic dysreflexia occurs, stop irrigation immediately.</li> <li>• Refer the patient for further assessment before continuing with TAI.</li> </ul>
Leakage of water around the catheter/cone	<ul style="list-style-type: none"> <li>• Ensure that the catheter is properly located</li> <li>• Check water temperature (temperature of water should be lukewarm/body temperature). If the water is cold this can cause abdominal cramps.</li> <li>• Ensure that the rectum is empty of stool</li> <li>• Inflate the balloon more slowly.</li> </ul>
Difficulties in inserting the catheter/cone or instilling irrigant	<ul style="list-style-type: none"> <li>• Carry out a digital rectal examination and remove any stool present.</li> <li>• Increase frequency and/or volume of transanal irrigation to ensure evacuation is adequate</li> </ul>
Irrigant not expelled	<ul style="list-style-type: none"> <li>• It may be necessary to repeat irrigation if the irrigant is not expelled</li> </ul>



	<ul style="list-style-type: none"> <li>• Make sure that the patient is hydrated</li> <li>• Assess for constipation and treat if appropriate</li> </ul>
No stool evacuated after the procedure	<ul style="list-style-type: none"> <li>• It may be necessary to repeat the irrigation or split into two consecutive episodes waiting 10-15 minutes between each and only using half the irrigant at a time.</li> <li>• Consider using laxatives</li> <li>• Ask the patient the result of the last irrigation. It may be that this was a good outcome and the procedure needs to be carried out less frequently.</li> <li>• If there is no stool for several days it could be caused by constipation or faecal impaction</li> </ul>
Faecal incontinence between procedures	<ul style="list-style-type: none"> <li>• Increase the volume of water by small increments approx. 100ml each time until a satisfactory evacuation is achieved and results in no faecal incontinence</li> </ul>

	<ul style="list-style-type: none"> <li>• Increase frequency of irrigation</li> <li>• Consider laxatives</li> </ul>
Leakage of water between irrigations	<ul style="list-style-type: none"> <li>• Ensure that the patient has allowed adequate time on the toilet following the procedure</li> <li>• Consider the use of adjunctive measures to encourage emptying</li> <li>• Decrease the amount of water instilled</li> <li>• Suggest that the patient uses an anal plug if symptoms persist.</li> </ul>

**Table 2: troubleshooting adapted from Emmanuel et al., 2013**

## **Conclusion**

Peristeen trans anal irrigation is an effective treatment option if for people suffering from faecal incontinence or chronic constipation. It can help to relieve conditions and improve quality of life. This is a relatively simple self-administration procedure for patient's allowing a proactive approach to managing their bowels, more control over bowel movements and reducing/preventing faecal incontinence and constipation.

## Reference List

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