

Pocket guide for healthcare professionals

# Understanding evidence and basic intermittent catheterisation techniques





# Understanding evidence and basic intermittent catheterisation (IC) techniques

Pocket guide for healthcare professionals (HCP)


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# Introduction

This pocket guide briefly summarises the clinical evidence supporting the use of intermittent catheterisation (IC) in patients with chronic urinary retention in general and spinal cord injury (SCI) specifically. It provides an overview of information on how to perform the IC technique correctly and gives advice on the best ways to teach patients about IC.



Topics you will need to discuss with your patients include the importance of healthy bladder management; the benefits of IC and the optimal IC regimen. You will also need to understand when IC should be used, how to assess the patient's home; and how to overcome barriers to effective IC practices.



The use of IC is recommended by international guidelines and is considered the gold standard (the ideal option based on clinical evidence and best practice) for managing urinary incontinence in patients with chronic urinary retention.<sup>1</sup>

The aim of IC is to:

- Restore continence
- Prevent urine retention
- Minimise the risk of urinary tract complications

Healthy bladder management is essential to avoid long-term complications and can improve the person's physical health and quality of life (QoL).<sup>2</sup>

You should use this pocket guide in conjunction with other Coloplast® Care Education Programme materials.

# Neurogenic bladder characteristics

The term 'neurogenic bladder' describes impaired function of the bladder and sphincters, caused by damage to nerves that control urination.

- SCI is a common cause of neurogenic bladder
- It is important that your patients with SCI regularly empty their bladders
- In patients who have an SCI above T6 an overfull bladder can trigger a rare, but potentially life-threatening, overactivity of the nervous system (known as autonomic dysreflexia).<sup>3,4</sup> Symptoms include headache, throbbing, sweating, nausea and red patches on the skin

**The main aims of neurogenic bladder management are to:<sup>3</sup>**

Re-establish  
continence

Enhance  
QoL

Allow better  
planning and  
control of  
bladder  
emptying

Prevent  
urine  
retention

Minimise the  
risk of urinary  
tract infections  
(UTIs) and other  
complications

Prevent  
kidney  
damage

# Non-surgical management of chronic urinary retention

Catheterisation is a non-surgical option for managing urinary retention. Techniques include IC, indwelling urethral and suprapubic catheterisation.<sup>2</sup>

Guidelines regard IC as the gold standard for managing chronic urinary retention.<sup>1,5-7</sup>

**Table 1. Indications and contraindications for IC**

## Indications for IC<sup>7</sup>

- Bladder capacity >200 ml
- Capable of adhering to the correct routine for bladder emptying using IC
- Sufficient hand dexterity and cognitive function

## Contraindications<sup>1</sup>

- Urethral abnormalities
- Acute infection of urogenital tract

# Evidence-based benefits of IC

IC is the safest method of bladder management for patients with chronic urinary retention, compared with alternative bladder management options, including indwelling catheterisation and suprapubic catheterisation.<sup>8</sup>

**Table 2. IC minimises urinary tract complications and can improve your patient's QoL<sup>9-27</sup>**

## **Providing relief from lower urinary tract symptoms**

- Urgency, frequency and incontinence
- Urinary retention
- The need to wake up and urinate during the night

## **Promoting independence**

- Allowing the person to take control of their bladder and their life
- Removing the need to wear external appliances, such as indwelling catheters and drainage bags

## **Reducing the risk of complications**

- Urinary tract infections (UTIs)
- Urethral inflammation, trauma and bleeding
- Bladder and kidney stones
- Damage to their bladder and kidney

## **Optimising lifestyle**

- Increasing their ability to take part in social or sporting activities
- Increasing their sense of security, freedom, self-esteem
- Enhancing sexuality and fertility



# Choosing catheters for IC

There are a wide variety of catheters to choose from. If the patient is pleased with their choice of catheter they are more likely to continue using IC to drain the bladder and to do so regularly in accordance with recommendations.

Therefore, it is important to take the time to find the right catheter for the individual patient; sometimes one patient may even need a selection of different catheters in order to fit catheterisation into their daily life.

## Uncoated and coated

Catheters for IC can be broadly grouped into two main types:

1. Uncoated catheters requiring gel lubricant prior to use
2. Hydrophilic-coated catheters which can be divided into those that:
  - Require an external water source to 'activate' the surface lubrication
  - Are pre-packaged in saline solution, so are ready to use anywhere

- A hydrophilic coating binds and absorbs water to form a smooth, slippery surface that helps insertion of the catheter
- Hydrophilic-coated catheters for IC are associated with fewer UTIs, compared with conventional uncoated catheters<sup>28-30</sup>
- Hydrophilic-coated catheters are patients' preferred option for IC<sup>20,30-34</sup>





# IC best practice regimen

- Emphasis should be placed on motivating patients to establish and maintain a healthy bladder management regimen
- Establishing relationships with community HCPs can help your patients to maintain healthy bladder management when they are living at home

**Table 3. A healthy IC regimen**

Component	Reason
Clean technique <sup>10,35,36</sup>	<ul style="list-style-type: none"><li>• Minimise risk of contamination and infection<sup>36</sup></li></ul>
Single-use hydrophilic-coated catheters <sup>28</sup>	<ul style="list-style-type: none"><li>• Indwelling catheters are associated with UTIs and long-term complications<sup>37</sup></li></ul>
Repeat catheterisation 4–6 times a day <sup>5,38</sup> to maintain collected volumes of <400 ml <sup>10,36</sup>	<ul style="list-style-type: none"><li>• Less frequent catheterisation can lead to an overfull bladder and a build-up of pressure affecting the kidneys<sup>11,39</sup></li><li>• More frequent catheterisations increase cross-infection risk<sup>5,38</sup></li></ul>
Use antibiotics sparingly to treat symptomatic UTIs <sup>36</sup>	<ul style="list-style-type: none"><li>• Asymptomatic bacteriuria is common in patients performing IC and does not justify the use of antibiotics<sup>36</sup></li><li>• Patients experiencing recurrent UTIs should use a sterile technique</li></ul>
Patient education and follow-up <sup>36</sup>	<ul style="list-style-type: none"><li>• To monitor progress with IC over the long-term and identify potential factors that may predict non-adherence<sup>36</sup></li></ul>

For further information see the Coloplast Care Education Programme training guide

# Applying best practice in IC

You should tell your patients about the benefits of IC. Restoring continence with this technique allows them to take control of their bladder management, provides them with a greater freedom to do what they want and helps to improve their overall QoL.

Help your patients to make IC part of their daily routine. They could catheterise on waking up, at lunch time, at dinner time and at bedtime.

**Table 4. The three steps to explaining healthy bladder management**

## **1. Why has my bladder changed?**

- Explain how their bladder worked before
- Explain what's different with their bladder now
- Reassure your patient that there is a solution to their problem

## **2. Why IC?**

- Explain the evidence supporting IC as the technique of choice
- Remember to use the Coloplast Care Education Programme materials, if you need more information

## **3. Optimal IC regimen**

- Explain the benefits of good technique
- Tell them about the benefits of using IC
- Teach them how to perform IC correctly
- Help your patients to stay motivated as long as is required



# How to perform IC

During hospitalisation, guidelines recommend that you use a sterile IC technique on your patients. However, clean IC has been shown to be an effective and safe technique when patients perform IC themselves.<sup>11,35,40</sup>

The following section shows you how to perform sterile IC. It also contains notes to discuss with your patient regarding the differences between sterile and clean IC.

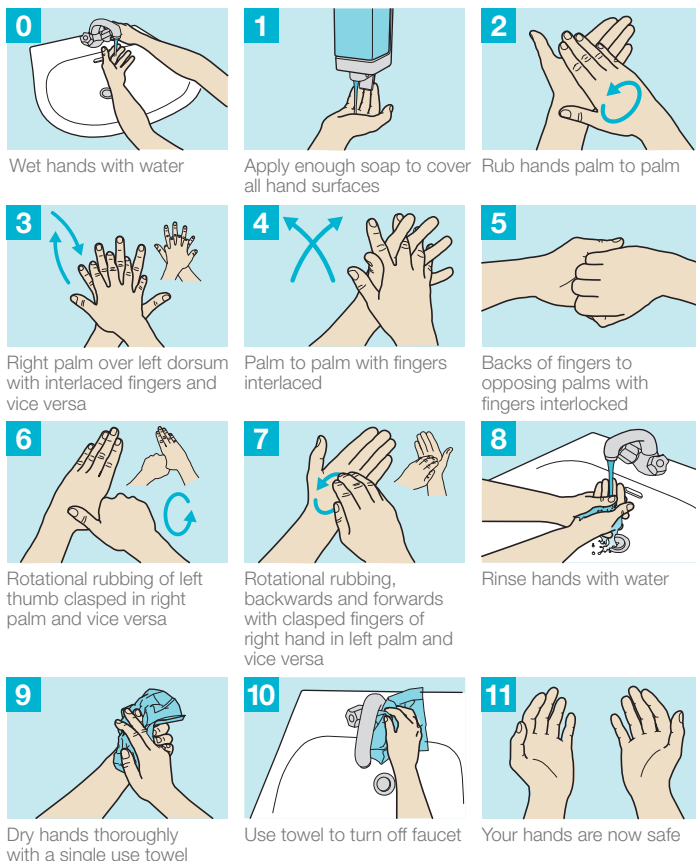
## Hand hygiene

Good hand hygiene is essential in IC to limit the risk of getting a UTI.

The hand hygiene technique can be applied when washing your hands with soap and water, as well as when using a bactericidal alcohol scrub. The directions for hand hygiene when washing with soap and water are shown in Figure 1.

Demonstrating this hand hygiene technique to your patients is important to minimise the risk of infection when they perform IC themselves.

**Figure 1. The WHO hand hygiene technique with soap and water<sup>41</sup>**



<sup>41</sup>Based on the 'How to Handwash', URL: [http://www.who.int/gpsc/5may/How\\_To\\_HandWash\\_Poster.pdf](http://www.who.int/gpsc/5may/How_To_HandWash_Poster.pdf)  
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## Quick guide to IC



1. Obtain informed patient consent.
2. Catheterisation can be carried out with the patient sitting on the toilet or in their wheelchair (if they are a wheelchair user) or lying on their back. Make sure that the patient is comfortable. Your patient's clothes and underwear should be lowered.

### Clean IC:

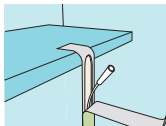
**Women** – When learning to catheterise themselves women will normally lie down. Female patients might find it helpful to attach a mirror to their thigh to help them see what they are doing.

**Men** – When performing IC themselves, men do not need to lie down. If sitting, they can use a pantler to hold their clothes in place during IC.



3. Make sure you have everything you need. Clean your hands thoroughly and follow the WHO hand hygiene technique (Figure 1). Place the wipes in the disinfectant.

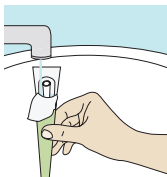
**Clean IC:** Patients do not need to use disinfectant, soap and water is fine.



4. Prepare the catheter and urine bag if needed. This step will differ depending on the type of catheter you use, either coated or uncoated.



**Clean IC:** When teaching your patients to catheterise, you should discuss the different sizes and lengths of catheter available.



- For a ready-to-use hydrophilic-coated catheter, place the catheter vertically within easy reach of the patient's bedside. Only peel the pouch open until you see all of the funnel connector
- For a hydrophilic-coated catheter, open the package and fill it with water. Place the catheter within easy reach of the patient's bedside. Wait the recommended amount of time to lubricate the catheter
- If required open the packaging of the urine bag
- Put on sterile non-latex gloves.<sup>42</sup> For an uncoated catheter, lubricate the tip of the catheter using a suitable lubricant jelly (Vaseline® or mineral oils damage the catheter)

**Clean IC:** When the patient performs clean IC themselves they will not need to use a pair of sterile gloves after washing their hands. You should remind your patients they should make sure their catheter is properly lubricated before they use it.



5. If needed, connect a urine bag to the funnel connector of the catheter and place the urine bag in a secure position.

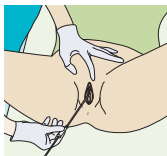


## Women



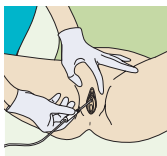
6. With your non-dominant hand separate the labia and locate the opening of the urethra. Use forceps or your gloved hand to take the wipes from the disinfectant. Drain any excess disinfectant and clean the labia with a single downward stroke. Use each wipe once.

**Clean IC:** Patients can use soapy water or water alone to clean the labia and then clean the urethral opening with a single downward stroke.



7. Still keeping the labia apart take the catheter in your dominant hand and slowly insert the catheter into the opening of the urethra, 2–3 cm at a time until the urine starts to flow. Then insert the catheter a further 1–2 cm. Any non-sterile contact with the catheter means that the catheter should be exchanged for a new one.

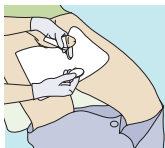
**Clean IC:** Remind your patients of the need to be careful and gentle when they perform clean IC. You will need to tell them how to insert and remove the catheter.



8. When the flow of urine stops, you can withdraw the catheter by 1 cm. If you are using a catheter with a straight tip rotate it before it is withdrawn further. This helps ensure complete emptying of the bladder. Continue to step 9.

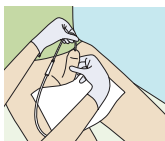


## Men

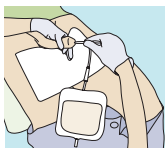


6. Place a sterile drape under the penis. Hold and lift the penis using sterile gauze in your non-dominant hand and retract the foreskin (if present). Use forceps or your gloved hand to take the wipes from the disinfectant. Drain any excess disinfectant and clean the head and shaft of the penis. Clean the opening of the urethra with a downward stroke away from the urethra. Use each wipe once.

**Clean IC:** Patients can use warm soapy water to clean the penis and then clean the urethral opening with a single outward stroke. They should remember to only use each wipe once.



7. Take the catheter in your dominant hand. Holding the penis at a 45° angle from the stomach, slowly insert the catheter into the opening of the urethra. Insert about 2–3 cm at a time until the urine starts to flow. Continue to carefully insert the catheter for a further 2–3 cm. You might meet some resistance when the catheter reaches the urethral sphincter and prostate. Any non-sterile contact with the catheter means that the catheter should be exchanged for a new one.



8. When the flow of urine stops, you can withdraw the catheter in small cm-by-cm steps. If you are using a catheter with a straight tip rotate it before it is withdrawn further. This helps ensure complete emptying of the bladder. Continue to step 9.







9. Once the catheter has been removed you can dispose of it in the clinical waste.
- Clean the area around the opening of the urethra as previously described
  - Wash your hands using the WHO hand hygiene technique (Figure 1)<sup>41</sup>

**Clean IC:** Because patients do not wear gloves when performing clean IC, it is very important to remind them of the importance of good hygiene during the procedure.



Instructions adapted from  
EAUN guidelines<sup>1</sup>

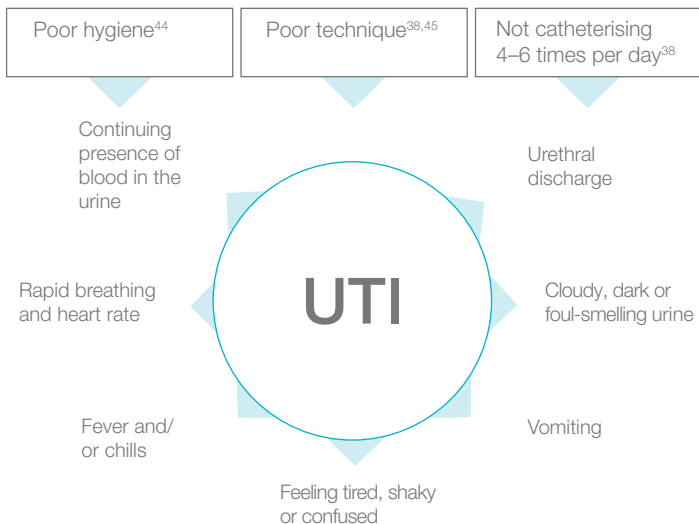
10. Record the following information where relevant:
- Date and time
  - Urine volume
  - Catheter type, length and size
  - Patient challenges (if they had any)
  - HCP challenges (if you had any)

# Risk of UTI

Make sure your patients know how to reduce their risk of getting a UTI.

The correct IC technique and frequency will minimise this risk. However, it is also important to tell your patients about the warning signs of a UTI (Figure 2).<sup>43</sup> If your patients understand the signs of an infection, it can be treated earlier. This reduces the risk of more serious complications.

**Figure 2. Risk factors (grey rectangles) and symptoms (blue squares) of UTIs in patients using IC**



# Overcoming barriers to IC

## Patient-related concerns

Some patients will have concerns about starting IC. You can help reduce their anxiety by answering their questions clearly and giving them the relevant information which will in turn give them confidence.

**Table 5. Overcoming patient-related concerns**

The challenge	The solution
Patient worries about having insufficient help and support to overcome the problems they face <sup>46</sup>	<ul style="list-style-type: none"><li>· Empower and encourage your patients at every step by giving them the right information when they need it</li><li>· Let them know they are not alone and that they can always ask you or other medical staff questions</li><li>· Let them know about the patient materials available as part of the Coloplast Care Education Programme</li><li>· Tell the patient about local and national spinal injury support groups</li><li>· Help and support patients who may be experiencing technical difficulties with IC</li></ul>
Patients fear of feeling pain or discomfort and the possibility of causing damage when they insert the catheter <sup>46</sup>	<ul style="list-style-type: none"><li>· Evidence shows us that the majority of patients find IC causes them no or minimal pain<sup>19</sup> and discomfort<sup>34</sup></li></ul>
Patients worry about loss of body image <sup>46</sup>	<ul style="list-style-type: none"><li>· IC can improve the person's self-esteem compared with other bladder management options<sup>19</sup></li></ul>
Patients do not understand the benefits of IC	<ul style="list-style-type: none"><li>· Use the information in this booklet to show them the benefits of IC</li><li>· IC is the best option for long-term health</li></ul>
Patients who are embarrassed by having a nurse of the opposite sex catheterise and train them	<ul style="list-style-type: none"><li>· Reassure patients that the highest professional standards will be maintained and, if they prefer, arrange for a same sex nurse to carry out IC or train the patient</li><li>· Promote self-IC</li></ul>



# Helping patients in wheelchairs to catheterise after discharge from hospital

The homes of wheelchair users will often need to be adapted to make sure they are safe, comfortable and practical for them to live in.

Each patient will have different needs and the changes must fit with how they want to live their lives. You will need to discuss these general changes with each individual.

A checklist to help you and your patient think about some of the likely changes that may need to be made to their home and any issues they should consider is included in the Coloplast Care Education Programme training guide.

## Questions to discuss with your patient include:

- Where are they most likely to perform IC at home?
- Where will they keep their catheters at home?
- Where will they keep their catheters when they are not at home?
- Have they thought about where they will carry out IC when they are not at home? This will depend on how much privacy the patient feels they need
- Where will they dispose of their catheters when they are not at home or will they bring them home to dispose of?
- Have they thought about hygiene when they are not at home?
- Where will they get their supply of catheters from?
- Do they need someone to help them?
- Does their carer and/or family understand how to carry out IC?





# Summary

The use of IC is recommended by international guidelines and is considered the gold standard approach for managing chronic urinary retention.

The benefits of IC are supported by clinical evidence. Adhering to the correct IC technique and frequency of catheterisations helps ensure that your patients can successfully maintain healthy long-term bladder management. It is important that you educate and motivate your patients to maintain healthy bladder management.

You have a crucial role to play in helping your patients with chronic urinary retention to:

- Gain a better understanding of their condition
- Understand how to best manage their condition to minimise the risk of urinary tract complications
- Know how they can maintain a healthy bladder over time
- Understand the rationale for maintaining a healthy bladder management regimen

To ensure you provide the right level of information to each patient and at the right time, it is important to assess factors such as your patient's standard of education and knowledge; cognitive function; emotional and functional status; personal and social environment; and personal priorities.



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