

## Urinary Tract Infections (UTI's) and Treatment

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### Why are people with spinal cord injury at greater risk of a UTI?

- Complicated UTIs occur in people with anatomical or functional abnormalities such as neurogenic bladder, stones or Diabetes.
- Increased risk due to altered bladder function and use of catheters.

### What are the common signs and symptoms?

The common signs and symptoms are:

- Cloudy urine with increased odour, mucous or sediment
- Urinary incontinence (leaking or bypassing)
- Fever and Rigors (chills and shaking)
- Increased urgency (increased feeling to void)
- Increased sediment or blocking catheters
- Increased spasticity
- Lethargy
- Poor Appetite
- Pain or discomfort over the kidneys/bladder
- Painful urination
- Haematuria (blood in the urine)
- Autonomic Dysreflexia (<http://www.health.qld.gov.au/qscis/html/dysreflexia.asp>)

### Testing for an Infection

#### Urine dipsticks

- Can be used in the home environment as well as the health care setting
- Must be positive for both nitrates and leucocytes (white cell count) to reflect UTI

#### Culture/ Mid-Stream Urine (MSU)

- Identify micro-organisms with a urine culture (MSU) to ensure the most appropriate antibiotic is prescribed.
- Culture results are often unreliable unless taken through a newly inserted (sterile) catheter
- One third of UTIs for people with spinal cord injury have been polymicrobial (more than one type of bacteria in the urine)

### What to do if a UTI is suspected?

- Increase fluids (water) to 2-3 litres daily
- Review hygiene in relation to:
  - insertion of catheters
  - emptying the urine bag
  - where the catheter is inserted
- Review the bowel routine as this may impact on developing a UTI
- Support the immune system through a healthy diet, managing stress and a good sleeping pattern
- Take antibiotics as prescribed and always complete the course. Avoid taking medications and/or vitamins which may interfere with the effectiveness of antibiotics during the treatment course (e.g. Hiprex)

### Therapeutic Guidelines on Diagnosis and Treatment of UTI's

- E. coli is the most common pathogen (20% to 50% of cases) but a wider range of bacteria can also cause infection.



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- There is no clinical evidence to support routine use of prophylactic antibiotics at the time of catheter placement
- All symptomatic cases should be investigated with a urine sample.
- The recommended duration of antimicrobial therapy is 7 days.
- In cases with catheter-associated urinary tract infection (CAUTI) who have a delayed response to treatment, 10 to 14 days of therapy may be required.
- Do not screen for or treat asymptomatic bacteriuria in people who are catheterised.
- Change the catheter if it has been in for longer than 2 weeks when antimicrobial therapy is started.
- Speak with a pharmacist for further advice.

**Other Recommendations for Preventing Infections**

- Maintain a closed drainage system
- Use soap and water or prepared wipes on the skin prior to inserting a catheter. Other solutions can dry and damage the sensitive skin around the genital area - alcohol rubs are only suitable for the hands.
- Clip the hair around the supra-pubic catheter site
- Change and wash clothes every day
- Insert the catheter using aseptic technique
- Ensure that the flow of urine is unobstructed
- Suprapubic catheters are preferred for long-term use

**Other References:**

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2. Hsieh J, Ethans K, Benton B, Burns A, Welk B, Loh E, McIntyre A, Teasall R. (2020) Bladder Management Following Spinal Cord Injury  
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3. Australian and New Zealand Urological Nurses Society Catheterization Guidelines Version 2. Date of production April 2013 [www.anzuns.org](http://www.anzuns.org)

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