

SCI Neurogenic Bladder: Urinary Tract Infections (UTIs)

Urinary tract infections (UTIs) are common in people with spinal cord injury.

- It is not unusual for a person with SCI neurogenic bladder to have two to three UTIs per year.
- Bacteria frequently enter the urinary tract from a catheter (either indwelling or intermittent).
- Bacteria can multiply in the urine when the bladder does not completely empty or when urine remains in the bladder for a long period.

Bacteria in the urine is common and expected in people who use catheters. These bacteria do not always cause symptoms and may even offer some protection against infection. This type of “colonization” by bacteria that are not causing disease should NOT be treated with antibiotics unless UTI symptoms are present, or before certain urologic or other surgical procedures. Overuse of antibiotics may also create antibiotic-resistant bacteria.

UTI symptoms

You may need treatment if you have these:

- **Fever or chills**
- **Autonomic dysreflexia (AD)**
- **Increased spasticity**
- **Flank pain**
- **Bloody urine**
- **Malaise (feeling sick)**
- **Leakage (incontinence) of urine**

Treatment and follow-up:

- Always get a urine culture before beginning antibiotic treatment. The type of antibiotic treatment you get should be based on culture results.
 - If you use intermittent catheterization, use a new sterile catheter to obtain a specimen.
Step-by-step guide: http://sci.washington.edu/info/pamphlets/uti_1.asp
 - If you use indwelling catheters, always collect a specimen from a newly inserted sterile catheter. Never collect a specimen from a drainage bag.
Step-by-step guide: http://sci.washington.edu/info/pamphlets/uti_2.asp
- Take all of the antibiotic medication prescribed. UTIs in people with SCI are considered complicated and should be treated with antibiotics for 7-14 days.
- Consider taking a probiotic supplement during antibiotic treatment and for a week or two after this, to prevent treatment-related complications such as diarrhea. Do not use this if you are immunosuppressed.
- If you use an indwelling catheter, change it midway through antibiotic treatment. This is important because antibiotics can kill bacteria in your body and in your urine and not on the catheter itself.
- If you re-use intermittent catheters, switch to new catheters midway through treatment.
- It is not necessary to get a follow-up urine culture after treatment unless symptoms have not improved.

Prevention:

- Make sure you are drinking the right amount of fluids to keep your urine dilute (very pale yellow in color) but without over-filling your bladder. Keep indwelling catheter flowing by changing the catheter monthly (or more often, if needed) to prevent clogging. Empty your bladder regularly using scheduled intermittent catheterization. Your health care provider may recommend instilling a safe acidic solution to keep sediment from clogging your catheter.
- Empty your bladder regularly using intermittent catheterization.
- Some individuals are able to prevent UTIs using methenamine hippurate, cranberry, d-mannose, vitamin C or other natural treatments. Although research has not shown these treatments to be effective, you can talk to your health care provider about trying them if you are interested.
- Avoid using antibiotics to prevent UTIs. This can lead to antibiotic resistance.

Resources

For patients:

- SCI Forum Video on Urinary Problems after SCI: retrieved from:
http://sci.washington.edu/info/forums/reports/urinary_problems.asp

For health care providers:

University of Alabama at Birmingham (UAB), Department of Physical Medicine and Rehabilitation, et al. (n.d.). *Urinary Tract Infections-PCP Information*. Retrieved from <http://www.uab.edu/medicine/pcp-sci/urinary/5-healthcare-topics/healthcare-topics/114-urinary-tract-infection-uti>

Authors:

Cathy Warms PhD, RN, CRRN
Rosemary Buchmeier, RN, CRRN
UW Medicine SCI Core Group

Maria Regina Reyes, MD- Editor/Project Director

Disclaimer: This information is not meant to replace the advice from a medical professional. You should consult your health care provider regarding specific medical concerns or treatment.

The SCI Empowerment Project is funded by a grant from the **Craig H. Neilsen Foundation** to the Department of Rehabilitation Medicine, University of Washington, Seattle, WA.

