

## Definition

Urinary tract infections (UTIs) are the most common bacterial infections. This includes any part of the urinary tract: kidneys, ureters (tubes from the kidneys to bladder), bladder, or urethra (tube that empties urine from the bladder to outside of the body). Usually, UTIs can be simple or complex. UTIs can be defined as recurrent or relapse proven by urine culture. However, UTIs can become chronic or develop into a more serious infection involving the kidneys, known as pyelonephritis. If you develop pyelonephritis, you might need to go into the hospital to have antibiotics given to you through a vein (IV).

## Symptoms You Might Notice

- Burning or pain when passing urine.
- Urgent need to pass urine frequently and the feeling there is still urine in the bladder when finished.
- Bladder pain or pressure with occasional lower back abdominal, or flank pain.
- Cloudy, blood-tinged, and/or foul-smelling urine.
- Low-grade fever, chills, or fatigue.

## Signs Your Healthcare Provider May Find on Examination

- Urine test shows nitrites (which means there are bacteria in the urine).
- Lab tests show bacteria growing from a sample of urine collected in a clean procedure.
- Red or white blood cells seen in the urine under a microscope.
- Low-grade fever.
- Bladder scan showing post-void residual urine

## Possible Reasons for Urinary Tract Infections

- Fecal or urinary incontinence.
- Weakened immune system (such as in people with diabetes, immune disorders, or cancer).
- Pregnancy.
- Gender (females more likely to have UTI).
- Family history.

- Sexual intercourse.
- Enlarged prostate (benign prostatic hyperplasia) or prostate infection in males.
- Incomplete bladder emptying, pelvic prolapse, kidney stones, and catheters.

## Treatment

- Prescribed antibiotics – can be oral, IV or instilled into the bladder. It is important to take all prescribed doses of medication to be sure that all bacteria are dead, even if you begin to feel better. Do not start self-treatment of UTI with left-over antibiotics and urine culture preferred before starting antibiotics.
- Some medications decrease the burning feeling, and may change the color of your urine.
- If you have a catheter and are not symptomatic, you may not need treatment based on provider's assessment.

## Prevention

- Females should wipe from front to back after passing urine, this may be helpful.
- Females should pass urine after sexual intercourse to keep bacteria from spreading into the bladder.
- Drink plenty of water (unless you have been told to limit your fluid intake for other reasons); clear colored beverages, no caffeine, no alcohol.
- Follow your healthcare provider's directions (you may need more urine tests).
- Call your healthcare provider immediately if you are still having symptoms. Some patients may benefit from the use of supplements such as Cranberry tablets, probiotics, vitamins C and D-mannose, vaginal estrogen, and methenamine.

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