

Pediatric Conditions

UTI

The Urinary Tract

Urine is a liquid waste product filtered from the blood by the kidneys. Urine is made up of about 96% water and the rest, waste product. Normal urine is a sterile liquid, containing zero bacteria.

Urine travels down from the kidneys by two tubes, the ureters, and empties into a balloon like pouch, called the bladder.

The bladder empties the urine out of the body through a tube at the bottom of the bladder called the urethra. The opening of the urethra (the meatus) is at the end of the penis in boys and in front of the vagina in girls.

What can cause a urinary tract infection?

- Poor bathroom habits—improper wiping, holding the urine too long in the bladder, and not completely emptying the bladder.
- Abnormal bowel movements—constipation and diarrhea.
- Neurogenic abnormalities
- Abnormal urinary tract conditions

For example:

Vesicoureteral reflux -- Urine backs up abnormally from the bladder into the ureters and often into the kidneys

Urinary obstruction -- A blockage in the urinary flow that can occur anywhere along the urinary tract. The blockage could be caused from a urinary tract anomaly the child is born with (congenital), or can be something that develops after birth, such as urinary stones.

There is several different radiology tests that can help your doctor diagnose the conditions that lead to urinary infections.

- Renal and bladder ultrasound
- Nuclear scans
- CT scan or MRI
- VCUg (voiding cystourethrogram)
- Urodynamics studies

Common symptoms of a urinary tract infection:

- Fever
- Frequent urination
- Burning with urination

- Urinary accident (day and/or night time wetting)
- Blood in the urine
- Abdominal pain
- Loss of appetite
- Loose bowel movements
- Jaundice (infant)
- Smelly urine
- Irritability
- Vomiting

When high fever is present with any of the above symptoms, your child may have a kidney infection and needs immediate medical attention.

If a kidney infection is not treated promptly, the bacteria can spread to the blood stream and cause a life threatening infection. Kidney infections can also cause permanent damage to the kidneys and result in high blood pressure, protein spillage in the urine, and/or loss of kidney function.

How urinary tract infections are treated

Urinary tract infections are mainly treated with antibiotics. If you think your child might have a urinary tract infection, get him/her an appointment with their pediatrician, urologist or take him or her to a urgent care. Once there, the doctor will probably start your child on an antibiotic and send the urine out for analysis. When the results of the urine culture analyses are available (which usually takes 2-3 days), your doctor may continue your child on the same antibiotic or change it to a different one that is more appropriate to the bacteria that is growing in the urine. If the infection does not respond to antibiotics in the first few days, your doctor may order tests to determine if surgery is needed urgently to drain an abscess or obstructed urinary tract.

How to help prevent urinary tract infections in your child

If your child has been found to have a normal urinary tract, then the following habits may be useful to help prevent future infections:

- Empty their bladder frequently and completely
- Avoid constipation
- Increase fluid intake
- Teach proper technique of cleaning themselves after using the restroom
- Add probiotics, such as Lactobacillus GG, to the diet