

# Childhood Urinary Tract Infections

# UTI





## What is a UTI?

- **Urinary tract infection (UTI)** is one of the most common infections in childhood. It can cause distress to the child, concerns to the parents, and may result in permanent kidney damage (scarring). Kidney scarring can potentially lead to high blood pressure, complications during pregnancy, and kidney failure.
- UTIs affect about 3 percent of children in the United States each year. Girls have a higher likelihood of having UTIs than boys.
- A UTI may involve the bladder (cystitis) or the kidney(s) (pyelonephritis), or both.
- Recognizing and treating a UTI early is very important. Untreated or improperly treated UTIs can lead to serious kidney problems; approximately 1 out of 8 children with a UTI develops permanent kidney damage.

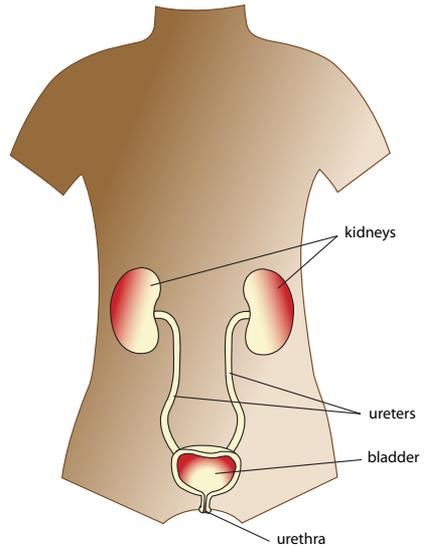
## What are the symptoms?

- The symptoms of a UTI are not always obvious because young children may not be able describe how they feel. Fever may be the only symptom of a UTI.
- **In infants and young children**
  - Fever
  - Irritability
  - Foul smelling urine
  - Vomiting
- **In older children**
  - Fever
  - Pain, burning, or stinging while urinating
  - Frequent urination
  - Abdominal or back pain
  - Running to the bathroom to urinate (urgency)
  - Wetting problems even though child is toilet trained
  - Cloudy, bloody, or foul smelling urine



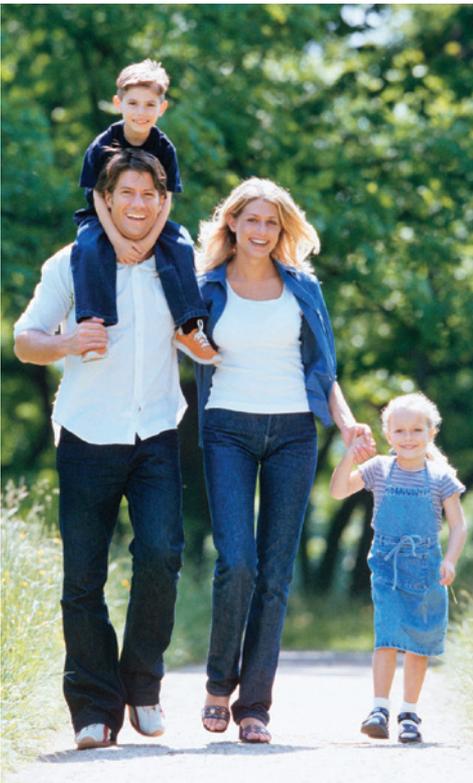
## How does the urinary tract become infected?

- Bacteria (germs) from the skin around the rectum travel up the urethra to the bladder. The bacteria then can cause a bladder infection (cystitis), or if bacteria travel up further, a kidney infection (pyelonephritis) develops.



## What increases the risk of UTIs?

- Abnormal urinary tract, allowing backward flow of urine toward the kidneys, a condition called vesicoureteral reflux (VUR)
- Bladder and bowel dysfunction, which involves holding on to urine and/or constipation
- Family history of UTI



## How is a urine sample collected for a culture?

- The way urine is collected depends on your child's age. If your child is not toilet trained, the only method is by inserting a thin tube (catheter) through the urethra into the bladder. An older child will be asked to urinate into a container after cleaning the area with special wipes. The urine will be sent for culture, and results may take up to 2 days.

## What imaging studies may be needed following a UTI?

- A kidney ultrasound detects obstruction of the urinary tract and the overall shape and size of the kidneys. It does not assess how the kidney works.
- A voiding cystourethrogram (VCUG) is a video x-ray of the bladder which looks at how urine flows. If urine flows back toward the kidney, VUR is present; this happens in 1 out of every 3 children with UTI.
- A DMSA kidney scan is a nuclear medicine test that shows if the infection was in the kidneys and whether there are any kidney scars. In other words, it shows how the kidney is working.



## What is the treatment for UTI?

- Antibiotics will be prescribed by your doctor or provider. Your child should start to feel better in 2 to 3 days.
- If your child has VUR or has had multiple UTIs, he or she may be prescribed a low dose antibiotic each day.

## What comfort measures are available?

- Sitting in a tub of warm water for 20 minutes may help if your child complains of voiding discomfort.
- Treat any diaper rashes with appropriate creams or ointments. Change diapers frequently.
- Maintain good hygiene, wipe front to back after going to the bathroom.
- Avoid bubble baths and strongly scented soaps.
- Increase consumption of fluids.
- Wear cotton underwear.

## What follow up care is recommended?

- Children who had a UTI are at risk for having more UTIs, so take your child to your doctor's office when she or he has a fever or any symptoms related to the urinary tract.
- Symptoms of UTI include
  - Fever
  - Chills
  - Irritability
  - Frequent urination
  - Foul smelling urine
  - Blood or discolored urine
  - Lower back or abdominal pain

## **For more information**

Contact the UTI Center at  
Children's Hospital of Pittsburgh of UPMC

**412-692-UTIS (8847)**

**[www.chp.edu/utis](http://www.chp.edu/utis)**



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