Urinary Tract Infection

Advice on Prevention

Urinary tract infection (UTI for short) is one of the commonest bacterial diseases in children. It is important that we try to prevent further urinary tract infections as recurrent UTIs may lead to problems in the future.

What is UTI?

In order to prove a UTI is present, a sample of urine is sent to the laboratory. If your child has a UTI, bacteria (germs) are grown from a properly collected sample. A sample of urine is obtained using one of the following procedures:

MSU – Midstream specimen of urine. In older children we ask for a midstream specimen because bacteria which are around the entrance of the urethra (see diagram) can contaminate the beginning of the stream. The child is asked to pass some urine down the toilet. Stop, and then pass the remainder of the urine into a sterile bowl.

CCU – Clean catch urine. This may require some patience. Urine is collected in a sterile bowl provided by the clinic. It is important to keep fingers away from the inside of the bowl. It is important to understand that on occasion urine specimens may be contaminated with bacteria around your child's bottom and in fact your child may not have a urinary tract infection after all.

Signs and symptoms of UTI

Dysuria – Pain, a burning feeling or crying when your child passes urine. There may be a reluctance to go to the toilet.

Frequency and urgency – Your child may feel the need to go to the toilet urgently and may go more often.

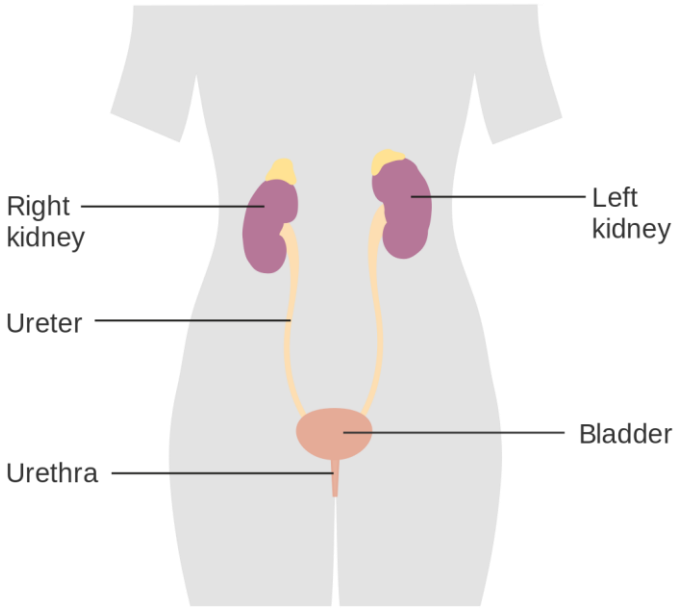
Haematuria – You may notice the urine is pink in colour or that there are small clots of blood.

Incontinence – Wetting accidents may happen due to feelings of urgency.

Your child may also suffer from tummy or back pain. The urine might also be cloudy and smelly.

In a severe infection which may involve the kidneys your child may have a fever, severe tummy or back pains, vomiting and be generally unwell.

How the system works



Kidneys which produce urine

Ureters to carry urine from kidneys to bladder

Bladder – an expandable ‘bag’ with walls of thin muscle

Muscles of the pelvic floor – these help control the outlet of the bladder. By consciously ‘lifting’ and squeezing these muscles, urine can be kept in the bladder until a toilet is found

Urethra – a narrow tube which carries urine to the outside of the body.

How to prevent UTIs

Avoid constipation – often parents do not know that their child is constipated, but if you suspect it ask your nurse or doctor for dietary advice. A healthy, well balanced diet, including high fibre foods such as wholemeal bread and cereals with lots of fresh fruit and vegetables should be encouraged. Children who are constipated may not empty their bladder properly.

Your doctor may prescribe laxatives for your child, but these are not a long-term solution.

- Your child should be encouraged to drink lots of fluids. The best drinks are water or diluting juice.
- Encourage your child to use the toilet every 2 hours. Check that your child is using the toilet at break times during school.
- Avoid irritants, such as highly perfumed bubble bath, soap and baby wipes. Use a mild soap and rinse with plenty of water.
- In boys, the foreskin may be a source of infection and this should be kept clean.

- In girls, urine can irritate the tender skin around the vagina if allowed to stay there. If can cause redness and allow germs to settle and eventually move into the urinary tract.
- Ensure front to back wiping

Will urine infection damage my child's kidneys?

The majority of children with urine infections have no problems and the kidneys remain perfectly healthy. However, it is important to have an ultrasound scan performed to detect any problems.

This scan involves jelly being placed on your child's tummy and back. A probe will be used to see the outline of the kidneys and bladder.

Your child will then be asked to pass urine and a further scan will be done to see if they empty their bladder completely.

Other scans which may be performed (if indicated by the renal ultrasound) are:

- **DMSA (Di Mercapto Succinic Acid Test)** – This scan is performed to see if there is any scarring in the kidneys. It involves the insertion of a tiny plastic tube (cannula) in your child's hand. A very small dose of isotope (this is like a dye which shows up on the scan) will be introduced through this tube into a vein and a scan will be performed approximately 2 hours later.
- **Emla Cream** may be applied to your child's hand, this will numb the area prior to insertion of the cannula.
- **MAG-3 (Mercap to Acetyl Triglycine)** – This scan is performed to observe the kidney blood supply, kidney function and to see if there is any blockage or reflux (backflow from the bladder to kidney). This also involves the insertion of a tiny plastic tube (cannula) and a very small amount of isotope being administered through the vein. A scan will be performed and the child may be asked to pass urine whilst the scan is being performed.
- **MCUG (Micuturating Cystourethrogram)** – This is performed in very young children and involves a small tube (catheter) being passed into the bladder and the injection of a small amount of dye through the tube. X-rays will be taken of your child's bladder to see if there is any blockage or reflux (backflow).

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