The British Association of Urological Surgeons

Patients
I think I might have...

Urinary Infection (child)

Quick Links

Pages in this section contain graphic images (including genitalia) that some may find upsetting.

What causes a urinary infection?

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Urinary infection occurs when bacteria enter the the urinary tract via the bladder and multiply to cause an infection. In children, bacteria may move from the bladder to the kidney(s), as a result of ureterovesical reflux

Is a urinary infection important or serious in children?

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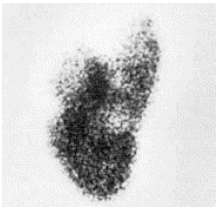
- Urinary infections can make children feel very ill with non-specific symptoms such as vomiting, abdominal pain and a high temperature;
- If infection enters the kidney(s) by reflux, the infection may cause a scar to form in the kidney(s);
- Scarring of the kidney (pictured) due to infection is permanent; this can cause problems with kidney function and may cause high blood pressure in later life;
- Urinary infections in children must be treated without delay to prevent scarring; and
- Urinary infections may be an indicator of problems (abnormalities) within the urinary tract. These abnormalities may be a risk factor for future problems, including further infections.



How will I know if my child has a urinary infection?

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Symptoms of urinary infection may vary considerably with age. Infection may occur without the "fishy" smell and burning pain which adults often experience. In babies and young infants, urinary infection often has very non-specific features. If your child has a temperature without any obvious reason (such as a cold or cough), you should try to collect a urine specimen so that infection can be ruled out.

Symptoms in infancy:

- High temperature (fever),
- Tiredness,
- Irritability,
- Poor feeding,
- Smelly nappies,

- Vomiting, and
- Abdominal pain ("tummy ache").

Symptoms in later childhood:

- High temperature (fever),
- Increased frequency of passing urine,
- Tiredness,
- Vomiting and / or diarrhoea,
- Being "off their food",
- Abdominal pain ("tummy ache"),
- Back pain,
- Bed wetting (when previously dry),
- Smelly or bloody urine, and
- Pain when passing urine.

How will a urinary infection be confirmed?

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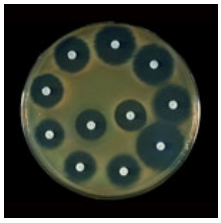
A sample of your child's urine will need to be collected to look for signs of infection & dehydration. How the urine sample is collected will depend on your child's age and how ill he/she is

The following headings describe the common ways in which urine can be collected from a child:

1. The older child who is toilet trained



a. Mid-stream urine (MSU) collection

- the child's genitalia are cleaned with warm, soapy water,
- the child begins to pass urine into the toilet,
- part way through passing urine, a specimen is collected into a sterile container, and
- the last part of the urine is then passed into the toilet again.

2. The non-toilet trained child

a. "Clean catch collection" (preferred because of the low risk of contamination from skin or bowel motions)

- the child's genitalia are cleaned with warm, soapy water, and
- part way through passing urine, the collection is made in a container held under the child, without touching the child's skin

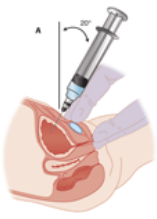
b. Urine collection bag

- the child's genitalia are cleaned with warm, soapy water and dried,
- a special collection bag (pictured) is stuck over the child's urethral opening ("water passage"),
- as soon as urine enters the bag, the bag is promptly removed & the urine transferred into a sterile container, and
- if the collection is contaminated by bowel motions, the whole process must be started again.

3. Very ill children (or those in whom it is difficult to catch a urine sample)

a. Specimen collection from a urinary catheter

- the child's genitalia are cleaned with saline (salt solution),
- a small catheter is inserted into the bladder, through the urethra, by a doctor or nurse,
- a specimen of the drained urine is collected in a sterile container, and
- the catheter is removed.



b. Specimen collection from a suprapubic aspirate

- the skin in the lower part of the child's abdomen ("tummy") is cleaned with an antiseptic solution,
- a fine needle is passed through the skin directly into the child's bladder (pictured), and
- the aspirated urine is placed into a sterile container and the needle is removed.

Collecting a urine sample from a child who is not toilet trained can be difficult and frustrating. Whilst using a collection bag may seem

simple, this specimen is easily contaminated and the results are not as accurate as midstream or clean catch samples. Your Specialist Nurse, GP or Health Visitor can help you learn more about this.

How will my child's urine infection be treated?

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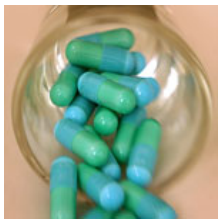

In babies and infants who are unwell, your doctor will not normally wait for the laboratory results to become available (this can take up to 48 hours) but will start treatment immediately with antibiotics. It may be necessary to change the antibiotic if your child is showing no improvement or if the laboratory results show that a different antibiotic would be better.

To clear the infection, it is very important that your child takes all the antibiotic medicine exactly as prescribed.

In most children, the fact that the child has improved is sufficient to say that the infection has cleared. In a few children (especially those with known abnormalities in the urinary tract), it is important that a further urine sample is collected and sent to the laboratory after the antibiotics have finished. This will confirm that the infection has been completely cleared. In these cases, it is best sent three days after the antibiotic course has been completed. If any traces of infection are found, the infection can come back again.

Will my child need further tests?

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In a child over one year of age, additional investigations are not necessary unless the infections keep recurring or the bacteria found are unusual

It is normally recommended that children who have had a urinary infection before their first birthday should have an ultrasound scan of their kidneys, ureters and bladder. This is because a urinary infection can be the first clue to the presence of an underlying physical problem within the urinary tract.

If any abnormality on the ultrasound is found, or if the infecting bacteria are unusual in any way, other tests and investigations may be needed

How can my child & I prevent further urinary infections?

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- Ensure your child drinks plenty of fluids throughout the day so that he/she actually need to pass urine more frequently and the urine is lighter in colour (more dilute). Drinks should be water or water-based (e.g, squash) rather than tea/coffee/fizzy drinks;
- Include a glass of cranberry juice in your child's diet every day;
- Ensure that your child goes to the toilet to empty his/her bladder regularly (e.g. on waking, mid-morning, lunch, mid-afternoon, teatime & before bed);
- Change nappies regularly;
- Teach girls to wipe from front to back after passing urine so that germs from the anus do not enter the urethra;
- Avoid scented soaps, bubble baths and hair washing with shampoo in the bath;
- Encourage your child to wear only cotton underwear;
- Ensure your child has a healthy diet;
- Bio-yogurt may help by increasing "good bacteria";
- Constipation should be avoided. Ensure that your doctors are aware of any problems with constipation so that it can be treated immediately; and
- Follow the advice given to you about antibiotic treatment.

Your doctors may decide that, to help prevent further infection, your child needs "prophylactic" antibiotics. This is a smaller dose than is used to treat an actual infection. It is intended to prevent infection from becoming established. Prophylactic antibiotics are best taken at bedtime.

More resources on Urinary Infection (child)

Some/all of these resources are links to external sites, the content on which BAUS accepts no reponsibility for.

NHS Choices
General information about the causes, symptoms and management of urinary infection in children

NICE Guidelines
NICE-approved guideline document about how to manage urinary tract infection (UTI) in children

Patient UK
Information for the general public about childhood urinary infection

Urology Care Foundation

An American perspective on UTI in children; not all the information here would be approved by British sources