

Patient leaflets from the BMJ Group

Urinary tract infections in children

Urinary tract infections are easy to treat, but they can be hard to spot. Your child might seem to be ill for no obvious reason. A urinary tract infection can damage your child's kidneys, so it's important to see a doctor if you're worried.

What are urinary tract infections in children?

A urinary tract infection is caused by germs (bacteria) growing in the parts of your child's body that carry urine. It can affect your child's bladder, kidneys, or the tubes that carry urine. Kidney infections are more serious than bladder infections.

What are the symptoms?

It's often hard to tell if your child has got a urinary tract infection. Symptoms can include a temperature, vomiting and diarrhoea. Your child may not feel like eating. Some children get cloudy or strange-smelling urine, and either have difficulty urinating or need to urinate a lot. Your child may also say they have pain in their abdomen or pain when they urinate.

Your doctor can try to find out whether your child has a urinary tract infection by testing a sample of their urine.

What treatments work?

Most children with a urinary tract infection can be treated easily with antibiotics. Occasionally, surgery is used to treat children who get lots of urinary tract infections because there's an abnormality in their urinary tract.

Antibiotics

Antibiotics can help your child recover from their infection and reduce the risk of kidney damage. Some commonly used antibiotics include trimethoprim, co-amoxiclav (Augmentin) and cefalexin (Ceporex or Keflex). Your child will probably need to take antibiotics for five to seven days.

Younger children can swallow liquid antibiotics. Older children can take tablets. If your child is seriously ill, they might have to go to hospital and have antibiotics as a drip (also called an IV or an intravenous infusion). However, there's some research to show that tablets work just as well as a drip.

Some urinary tract infections are caused by an abnormality in a child's urinary tract. For example, in some children, urine can flow backwards towards their kidneys rather than forwards towards their bladder. This is called reflux. It might put your child at risk of getting more urinary tract infections. But research shows that taking a low dose of antibiotics every day for several months can reduce your child's risk of getting more infections.

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Your doctor might prescribe a daily dose of trimethoprim or nitrofurantoin. One good study found that nitrofurantoin worked better than trimethoprim. But more children who took nitrofurantoin stopped treatment because of side effects, such as nausea, vomiting and stomach aches.

Side effects of all antibiotics are usually mild. But your child might get an upset stomach, diarrhoea or a rash. Different antibiotics have different side effects.

Surgery

If your child has an abnormality in their urinary tract, such as reflux, their doctor might recommend surgery. The surgeon will change how the tubes from your child's kidneys (ureters) attach to the bladder. This should stop urine flowing back up towards the kidneys.

However, good research has shown that antibiotics work just as well as surgery. If your child's problem isn't serious, it is unlikely that they'll get kidney scarring anyway, so they probably won't need surgery. Also, reflux often gets better on its own. Up to 4 in 10 children grow out of it without surgery. So doctors only tend to recommend surgery for children with severe reflux. Your doctor might also think about surgery if antibiotics don't stop your child getting infections.

The operation can have side effects. About 7 in 100 children get a blockage in their urinary tract after the operation. A blockage can lead to kidney scarring in about 8 in 10 children.

Keyhole surgery (also called laparoscopic surgery) can correct reflux without making a surgical cut. The surgeon passes a tube into your child's bladder through the tube that carries urine out of their body (their urethra). The surgeon then injects a gel into the wall of the bladder near the ureters. The gel creates a small bulge that stops the urine flowing backwards. One study found that that keyhole surgery worked just as well as antibiotics. The success rate with this operation isn't as good as with standard surgery, but your child will probably recover faster and be able to go home the same day.

What will happen to my child?

Your child should start to feel better after a day or two of taking antibiotics. It's important to make sure your child takes the antibiotics for as long as the doctor recommends. Otherwise, there is a risk that your child will get ill again.

It's possible for a urinary tract infection to damage a child's kidneys. Between 1 in 20 and 3 in 20 children get kidney scarring within one or two years of their first infection. Kidney damage can increase people's risk of getting high blood pressure when they're older. So it's important for a doctor to check on your child after a urinary tract infection, especially if it involved their kidneys.

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