

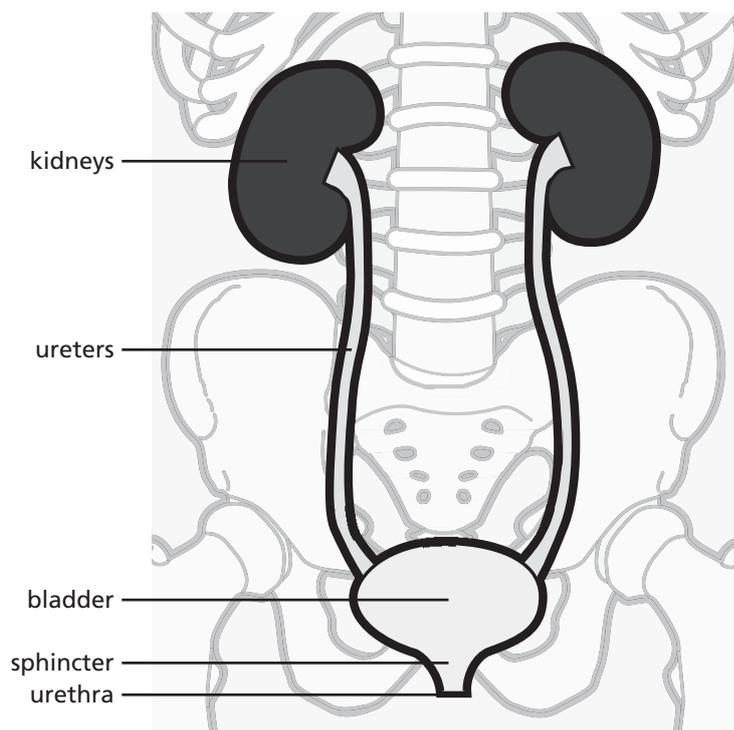


Urinary retention

This information sheet from Great Ormond Street Hospital (GOSH) explains the causes, symptoms and treatment of urinary retention and where to get help.

How does the urinary system work?

The urinary system consists of the kidneys, ureters, the bladder and urethra. The kidneys filter the blood to remove waste products and produce urine. The urine flows from the kidneys down through the ureters to the bladder. A ring of muscle (sphincter) squeezes shut to keep urine in the bladder and relaxes when we need to wee. The urine passes through another tube called the urethra to the outside when urinating (weeing).



What is urinary retention?

Urinary retention occurs when someone cannot empty their bladder completely. Instead of all the urine being passed out through the urethra, some remains in the bladder. Urinary retention can be a short-term or long-term problem and can occur suddenly (acute) or get worse over a period of time (chronic). Retaining urine in the bladder can lead to urinary incontinence (leaking urine in between wees) and urinary tract infections. In severe cases, urine can start to 'back up' the ureters to the kidneys, causing long-term damage.

What causes urinary retention?

There are many potential causes of urinary retention, including:

- Structural problems with the urethra, such as narrowing (stricture) or blockage
- Structural problems with the bladder neck, sometimes following treatment for a congenital (present at birth) condition, such as posterior urethral valves or bladder exstrophy
- Weak bladder and pelvic floor muscles
- Problems with nerve messages travelling between the bladder and brain
- As a side effect of some medications, including anaesthesia
- Following surgery to the urinary system
- Constipation when the bowel is full of faeces and presses on the bladder and urethra



What are the symptoms of urinary retention?

Acute urinary retention is extremely painful and causes abdominal bloating.

There may not be any noticeable symptoms with chronic urinary retention. If present, symptoms can include urinary incontinence and urinary tract infections. There can be an increased urge to wee more frequently, difficulty getting started and producing a weak or interrupted stream of urine when weeing. There may also be mild abdominal discomfort.

How is urinary retention diagnosed?

The first stage in diagnosis is where the doctor records a clinic history of when the problem started and how often it happens. They will usually carry out a physical examination to see if the bladder feels hard because it is full of urine or if there are any signs of constipation. They may also carry out an ultrasound scan of the bladder and kidneys.

Bladder function assessment may also be helpful – this is a combination of tests that are used to examine your child's urinary system and how it is working in close detail.

These tests are usually carried out over a period of up to five hours, involving using a special 'uroflow' toilet, which takes lots of measurements as your child is weeing. Next, they will do an ultrasound scan of your child's bladder to see if it is empty or not.

These two tests – uroflow and bladder ultrasound – are repeated two to three times to get a full picture of your child's weeing.

Some children may benefit from having a micturating cystourethrogram (MCUG), which is a scan that shows how well your child's bladder works. It is used to diagnose why your child may have urinary tract infections. It is also used to show up any abnormalities with your child's urinary system.

Another test that the doctor might suggest is a cystoscopy. This is a test that allows the doctor to look inside and around your child's bladder using a cystoscope (a tube containing a small camera and a light).

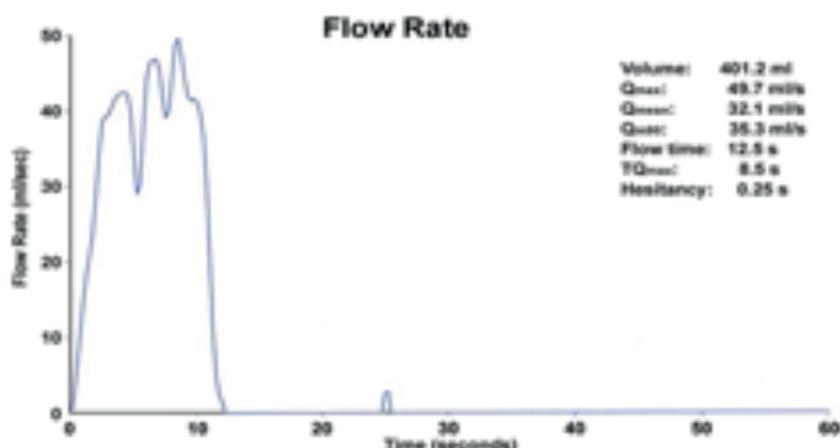
Further information about all these tests is available on our website at www.gosh.nhs.uk/medical-information-0/procedures-and-treatments

How is urinary retention treated?

Acute urinary retention needs emergency treatment to relieve pressure on the bladder and abdomen. Treatment usually involves inserting a catheter into the urethra and passing it through the sphincter into the bladder so that urine can be drained into a collection bag. If the urethra is blocked so the catheter cannot pass through it, the catheter may be inserted through the skin into the bladder and drained that way. Once the bladder has been drained, doctors will carry out various tests as described above to find out why the urinary retention occurred.

Chronic urinary retention does not usually need emergency treatment but should be fully evaluated to reduce the risk of infection and damage to the kidneys. Bladder re-training and biofeedback training can help your child to understand the messages travelling between the bladder and brain and strengthen the muscles so weeing is easier.

If the doctor suspects that a particular medicine is causing the urinary retention, they might change to another type or reduce





the dose. They may also prescribe other medications that relax the bladder and pelvic floor muscles to make weeing easier.

If there is a structural problem causing urinary retention, surgery may be needed to correct it. For instance, if there is a urethral stricture, the urethra may be stretched or dilated, and may need a stent (plastic tube) inserted to keep the urethra open. If the urethra is blocked, removal of the blockage during an operation will be needed.

Some children may find it easier and more acceptable to empty their bladder using a catheter. This can be passed into the urethra and either connected to a collecting bag or emptied directly into a toilet. An alternative is to use a Mitrofanoff channel created between the bladder and skin (often using the appendix) to insert a catheter at regular intervals during the day.

What happens next?

Once the underlying cause of urinary retention has been identified and treated, many people will not suffer another episode again. If urinary retention is a long-term problem, catheterisation may be a more comfortable way of emptying the bladder.

Further information and support

If you have any questions about urinary incontinence, please call the Urodynamics Unit on 020 7405 9200 ext 5916 or 5917.

ERIC – the children's continence charity – produces lots of helpful booklets on all aspects of managing bladder and bowels. Call their helpline on 0845 370 8008 or visit their website at www.eric.org.uk

The Bladder and Bowel Foundation can also offer information and support. Call their helpline on 0845 345 0165 or visit their website at www.bladderandbowelfoundation.org