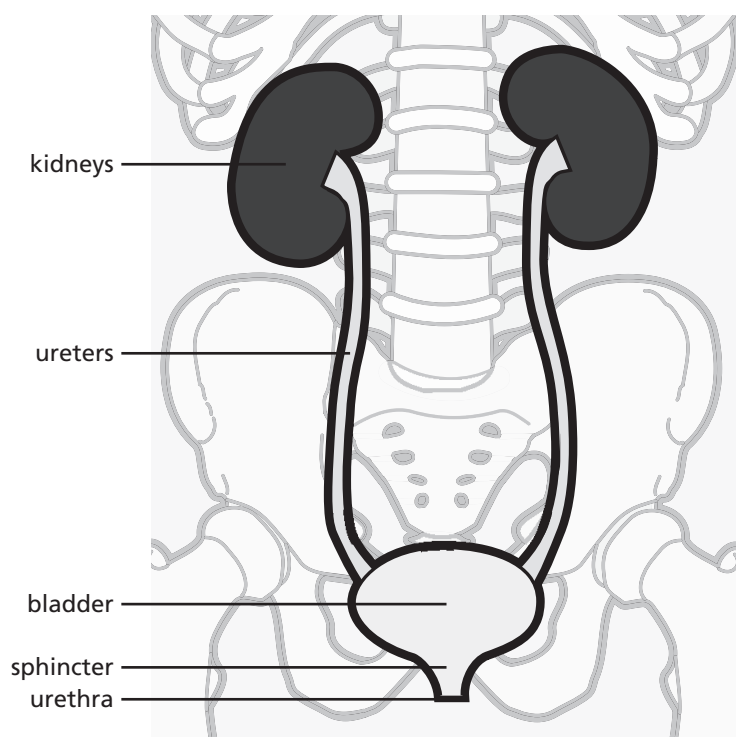


Urinary incontinence

This information sheet from Great Ormond Street Hospital (GOSH) explains the causes, symptoms and treatment options for urinary incontinence – also referred to as enuresis if it occurs at night-time – 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 incontinence?

Urinary incontinence is the uncontrolled leakage of urine from the bladder. The amount of urine leakage varies from child to child, as does the time of day when it occurs. Accidents are very common while toilet training but if leaks are still occurring when the child is five years old or so, they may warrant further investigation.

There are different types of urinary incontinence:

- **Urge incontinence** – This is when there is a sudden urge to use the toilet but there might not be time to get to a toilet before leakage occurs.
- **Overflow incontinence** – This occurs when the bladder is never fully emptied so gradually gets fuller and fuller until leakage occurs.
- **Mixed incontinence** – This is when there are different types of incontinence occurring in the same person.
- **Stress incontinence** – This is the most common type in adults, when leakage occurs when sneezing, coughing or exercising.

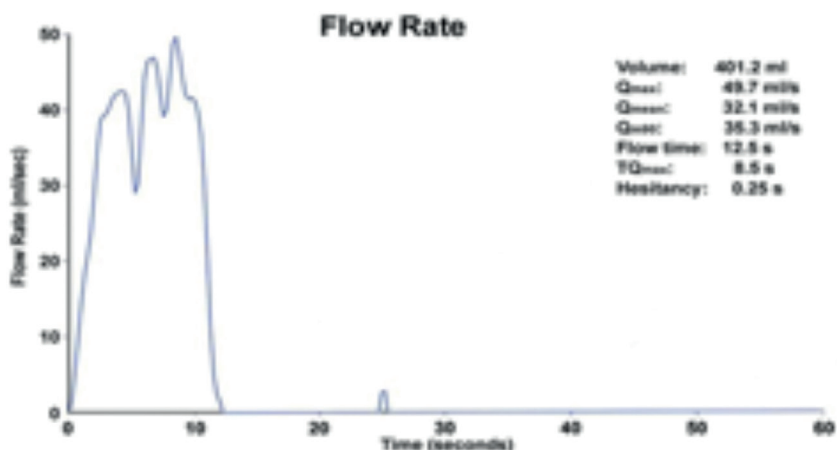
Urinary incontinence affects many people in the UK of all ages. Although it may seem a normal part of childhood, it is often worth requesting a check-up if problems are occurring after starting school.



What causes urinary incontinence?

There are many factors that can lead to urinary incontinence:

- **Structural problems with the bladder** – for instance, following correction of congenital (present at birth) conditions, such as bladder exstrophy or if the ureters connect to the bladder in the wrong place.
- **As a feature of other conditions** – such as spina bifida, there is a problem with the nerve supply to the bladder (and bowel) which may cause problems in recognising the need to wee.
- **Overactive bladder** – This is when the bladder signals the need to wee even when it is only partially full.



- **Urinary tract infections** – These can also increase the need to wee and could also make weeing more uncomfortable.
- **Constipation** – This can also affect urinary incontinence as the bowel expands with poo it can press on the bladder leading to incontinence.
- **Some drinks can irritate the bladder** – such as caffeine-containing drinks such as colas or acidic drinks such as fruit juice. These can make urine more acidic so uncomfortable to pass.
- **Reluctance to use the toilet** – Many children are uncomfortable using public toilets, such as toilets at school. If you

suspect your child is having accidents because they are not using the toilet at school, find out what is concerning them and if necessary, talk to the school.

- **Problems with the muscles supporting the bladder** – for instance, the pelvic floor muscles form a sling around the bladder so if these are weakened, either through lack of exercise or in adults, following childbirth, they can lead to leakage.

In many cases, there is more than one cause of urinary incontinence, and in some children, the cause may never be confirmed. This does not affect the success of treatment.

What are the symptoms of urinary incontinence?

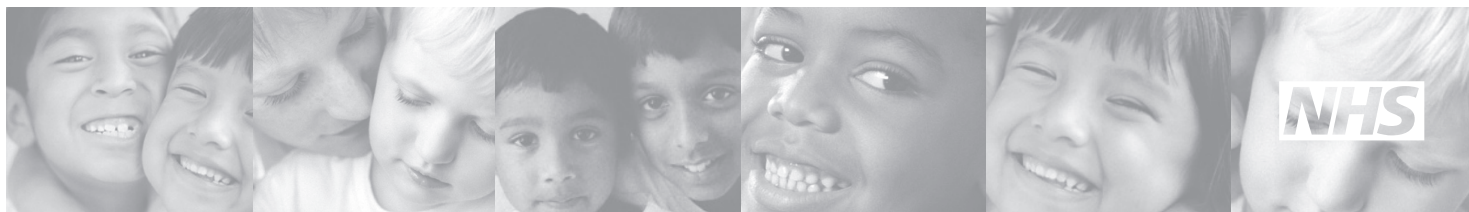
The main symptom of urinary incontinence is the leakage of urine. There may also be increased urgency to wee, leading to increased frequency of weeing. Urinary tract infections may also develop more often and be hard to shift. Children may be reluctant to drink fluids in case they have an accident – this can lead to dehydration and often makes any constipation worse as well.

How is urinary incontinence diagnosed?

The first stage in diagnosis is where the doctor records a clinic history of when the leakage 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.

You may find it helpful to keep a bladder diary for a few days – there are lots of examples online but the basic information you should record is the volume of fluids drunk, the volume of wee passed as well as details of any accidents and what your child was doing at the time.

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 incontinence treated?

There are number of options for treating urinary incontinence, some of which may be used in combination.

If constipation is thought to be causing the urinary incontinence, the doctors may suggest reviewing what foods your child is eating and their toileting habits. They may also suggest managing your child's fluid intake for a while to see if this improves the incontinence.

Medicines can be prescribed to reduce the sensitivity of the bladder (if this is a problem) or reduce the amount of urine produced by the body. Some medicines are best only given in short bursts to cover a special occasion as they can have side effects.

There are a number of behavioural interventions to help with urinary incontinence. These include bladder retraining, pelvic floor exercises and biofeedback training. Further information on these is available on our website.

A fairly new form of treatment for urinary incontinence is tibial nerve stimulation, which involves passing a low electrical charge through a nerve in the ankle, which then relaxes the nerves controlling the muscles around the bladder.

In rare circumstances, surgery might be suggested to improve urinary incontinence. This could include injections into the sphincter to strengthen or relax it. Major surgery, for instance, if a child's bladder capacity (the amount of urine it can hold) is too small, an operation called a bladder augmentation might be suggested.

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?

The vast majority of children and young people achieve dryness with a combination of the treatments outlined above. It is important to remember that urinary incontinence is a very common problem affecting a great many children and there is no shame in seeking help.



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

Compiled by the Urodynamics Unit in collaboration with the Child and Family Information Group.
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