



Bowel & Bladder Investigations and Procedures



Urine Tests (also called urinalysis)

Urine Culture and Sensitivity (laboratory testing) – This is where a sample of urine is taken to see if there are any harmful bacteria (germs) growing in it. The same sample can be used to find out what antibiotics will kill the bacteria (sensitivity).

Blood Tests

Blood consists of plasma in which the blood cells are suspended. The most numerous cells are the red blood cells which help carry oxygen around your body. About a hundredth of the cells are white cells: their main job is to fight infection. Blood is taken for the following tests:

Full Blood Count (FBC)

This measures your haemoglobin (found in your red blood cells) levels to make sure you are not anaemic; the number size and shape of red cells, to make sure they work properly, and the number of your white cells. If there are more white cells than normal, it may be a sign of infection somewhere.

C-Reactive Protein

The level in the blood rises if there is an infection, and drops again when the infection passes. CRP can be high for other reasons, such as just after an operation.

Erythrocyte Sedimentation Rate (ESR)

This is another test that can be used to look for infection. It measures the rate at which red cells settle out of suspension in blood plasma. If they settle more quickly than "normal", infection may be present, though as with CRP it can be raised for other reasons.

Urea and Electrolytes (U and E)

Urea is the main end product of protein breakdown and is excreted by the kidneys. Urea rises if renal function is impaired. Electrolytes are a common name for the body's salt, such as sodium. If you are dehydrated, the sodium and urea may be raised.



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Imaging Tests

Urodynamics

Urodynamics means the study of the pressure and flow of urine in the lower renal tract, (the bladder, and the tube through which you pass urine, called the urethra). A Urodynamics study helps to determine if current treatment is working, or if changes need to be made. The objective of a Urodynamics study is to reproduce complaints or symptoms. Video Urodynamics may provide additional information that helps to further understand the problem. Urodynamics is used to answer three questions:

- At what pressure does the bladder store urine?
- Are there any abnormal dynamics such as over-activity or poor bladder compliance which can damage the kidneys?
- How does the bladder empty?

Urodynamics are classified in two different categories: non-invasive and invasive, and the procedure often varies among hospitals.

Prior to starting Urodynamics, a detailed interview must be done by the healthcare team. The interview is important because it gives vital information about medical history, home and school and the child's willingness to understand and cooperate with treatments.

Non-invasive or simple Urodynamics

This test is done to evaluate urine flow and usually with a full bladder. The child will be asked to pass urine into a machine that looks like a toilet which can measure the rate at which the urine flows and the amount passed. At least two free voids (wees) are necessary to understand the flow pattern. Also, some hospitals stick patches on the outer thighs and buttocks to measure muscle contractions while urination takes place.

Afterwards an ultrasound image of the bladder will be performed. An ultrasound is a diagnostic test that uses sound waves to get an image of the bladder. It is used to measure the amount of urine remaining in the bladder. An ultrasound is done by gently moving an instrument (which looks like a microphone) over the lower tummy, which will be coated with a cool gel.

This appointment usually takes about half an hour, and when children are undergoing the procedure, parents usually stay in the room. No catheters are required for this procedure. Based on the results of the non-invasive study, the urologist will either be able to identify the treatment you require, or will need to perform invasive Urodynamics in order to get additional information that is only available from more detailed assessment.

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Invasive Urodynamics

This test requires the insertion of a catheter (into the bladder), in the urethra or if urethral sensation is present the suprapubic region. A suprapubic catheter is normally inserted under anaesthesia 24 hours before the Urodynamics study is done. The catheter is used to fill and empty the bladder, and also to measure pressure in the bladder and urethra. Another catheter is passed into your rectum (back passage); this measures abdominal pressure. When the test is finished the catheters are removed. The whole test takes between 1 hour and 1½ hour.

Since invasive Urodynamics can cause anxiety, it is important to have a qualified and cohesive team of professionals. They will show you the testing environment before the assessment is done, answer any questions, and give detailed information about the test and what you can expect.

Bladder Scan

This measures the bladder volume, and can indicate whether the bladder is large or small. It is a non-invasive procedure which uses ultrasound waves. Gel is put on to your tummy and a small smooth instrument is pressed over the skin.

Cystogram

This is an x-ray examination where dye is put in the bladder through a catheter. This can be done to detect reflux (backward flow) of urine from the bladder up the ureters to the kidneys and urethral outline.

Special Considerations

Some signs may help adults learn children's potential for bladder control. Those with the best chance for bladder control produce a good urine stream, are dry between urinating and have an urge to void. The chance for bladder control is much lower for those that leak urine constantly, never have a good urine stream or do not have an urge to void. There is no harm in toilet training any child as long as parents remain upbeat and realistic.

Toilet training for the bladder is the same as "normal" training except for intensity and age. Putting children on the toilet first thing in the morning and then every two hours during the day may increase dryness. Also, practicing "pottying" is helpful. This includes removing clothes, sitting on the seat, getting dressed, flushing and washing hands. Rewards can help with cooperation, voiding in the toilet and having accident-free days.



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Clean Intermittent Catheterisation (CIC)

If timed toileting does not lead to dryness, CIC and drugs are needed. CIC involves inserting a small plastic tube into the bladder to drain urine. It is usually done every three to four hours. If a child is not dry between drainings, drugs may help with dryness. CIC and drugs do not lessen a child's given ability for bladder control. Rather, CIC empties the bladder at intervals while drugs relax the bladder and/or increase the tightness of the sphincter. If using CIC with drugs does not result in dryness, surgery may be needed when the child is physically and emotionally ready.

For further information and support contact your SBHI Family Support Worker who can put you in touch with SBHI's Continence Advisor if necessary.