Service: Urology

Urodynamics

Exceptional healthcare, personally delivered
The Urodynamics Unit at the Bristol Urological Institute, Southmead Hospital, is an internationally renowned centre for urodynamics and is the largest in the United Kingdom, performing about 1000 urodynamic studies a year. It also takes tertiary referrals from hospitals in Bristol, the South West region of England, Wales, Birmingham and Oxford, as well as from the rest of the United Kingdom and the world. The unit is also one of the most research active centres in urodynamics with a multidisciplinary team including Urologists, Uro-Gynaecologists, Physiotherapists, Clinical Scientists, Nurses and Urodynamic Technicians.

**Urodynamic tests**

The word ‘urodynamics’ covers a range of tests designed to show how well your bladder is working:

- Fluid is run into your bladder and the pressure response to filling and emptying your bladder is measured using a small catheter (tube) – standard urodynamics

- Urodynamic studies are sometimes combined with X-ray screening to look in more detail at the way your bladder expands and contracts (video-urodynamics).

- Urodynamic studies may not always provide an explanation for your urinary symptoms.

- If your symptoms are not reproduced during standard or video urodynamics then ambulatory Urodynamics will be offered.

- The commonest complication is infection in your urine in about 3% of cases.
All the tests are listed here, but your Health Care Team and your appointment letter will say which is the most appropriate test for your care. You will only be referred for Urodynamics if the doctor, or nurse feel that the test is important in deciding how to manage your symptoms. Sometimes, when you attend the test, the Urodynamacist may feel that the test is not actually needed at this stage. In this event, you will be able to use the scheduled test time for a detailed discussion of your bladder problems with the specialist.

You do not have to have the test, but it will help the doctor in diagnosing the cause of your problem and offering you the best treatment for your symptoms. There are currently no alternatives available which will give us the information provided by the test.

Information on how to prepare for your test and what to expect both during and afterwards is given in this leaflet.

**There are three types of Urodynamic studies:**

- Standard Urodynamics
- Video Urodynamics
- Ambulatory Urodynamics
Standard Urodynamics

You should allow one and quarter hours for the test. Please also let us know if you have any allergies, especially to latex or if you have any problems with your mobility.

What the urodynamics test involves

Before the Test

IMPORTANT: If you feel you may have a urine infection, you should inform the hospital when you receive your appointment so that the necessary arrangements can be made. If you are prone to urinary tract infections please ensure you get your urine checked by your GP surgery five working days before the appointment so that it can be treated prior to the study. We are unable to perform Urodynamics if you have a symptomatic urinary tract infection because we could make your symptoms much worse.

Please let us know if you are currently taking any tablets for your bladder (e.g. Vesicare/Solifenacin, Regurin/Trospium Chloride, Detrusitol/Tolterodine, Oxybutynin, Betmiga/Mirabegron) as you may be asked to stop these a week before your appointment as these can affect your test results.

No special preparations are needed for the test. You can eat and drink as normal, but we would like you to come with your bladder comfortably full. Please complete the Frequency/Volume Chart (ICIQ-bladder diary) and the quality of life questionnaire (ICIQ-LUTS) sent with your appointment letter. It is important that you bring both of them with you to the clinic.

After you arrive, the doctor/nurse performing the test will explain the procedure to you and ask some questions about the symptoms that you have been experiencing. Some questions
may be intimate and you may have answered them before, but they are important questions in making a diagnosis of your condition. If you feel that you do not wish to answer some of the questions then please let your doctor/nurse know. You will be asked to sign a Consent Form to ensure that you understand the procedure and any potential side effects.

You will be asked to change and remove all your clothing including underwear/pants (women can keep their brasserie on) and will be given a hospital gown. This will be done in privacy behind closed curtains. This is done to avoid any of your clothing getting wet during the test as the test would involve filling you with saline (salt water) and also avoid urine running onto your socks. If you feel cold during the test then please let the nurse or doctor know and they will provide you with blankets.

The doctor/nurse will then leave you alone to pass urine into a special toilet (flowmeter). This measures how fast the urine flows from you. After you have done this, the doctor/nurse/urodynamicist may examine you. This will include an internal examination, with a chaperone present, of the rectum and vagina (in women). It may also include inserting a vaginal speculum in women (sometimes this may be cold and the person doing it will warn you before inserting it).

**During the test**

You will be lying on a couch and one or two small tubes (not measuring more than 3mm in diameter) will be passed into your bladder and another small tube will be placed into your rectum (back passage). If you do not have a rectum because you have had surgery and have a colostomy or stoma then that can be used, or the vagina (in women) can also be used as an
alternative to measuring abdominal pressure. These tubes allow us to take pressure measurements both inside and outside the bladder. You will then be asked to sit up or stand and your bladder will be slowly filled with saline (salt water) through the tube until you feel full. If you are unable to sit or stand then you will be allowed to lie down on the couch. You will be asked to cough or strain several times during the test to check the tubes are working. You will also be asked a series of questions such as your first desire to pass urine or whether you experience any urgency. Your bottom half will be covered during the test to conserve your dignity.

If you experience any unusual symptoms during the test then you would need to tell the doctor and/or nurse immediately, especially some young men can get a vaso-vagal response from filling the bladder (this means they feel faint). We would lie you down and offer you water and stop the test until you feel better.

Once your bladder is comfortably full, one of the bladder tubes will be removed. The tube in your rectum and the very tiny tube in your urethra, will be left in. The nurse and doctor will leave the room, and you will be asked to pass urine. The doctor, nurse or technician performing the test will answer any questions you may have and will tell you the results of the test at the end of the procedure, once you are dressed and comfortable. We will provide you with wet wipes and dry wipes in order that you can make yourself comfortable and will give you privacy in which to do this.

A report will be done by the clinical person performing the test and a copy will be sent to your GP, your referring doctor and yourself.

After the test you may experience symptoms of discomfort in
the bladder and urethra for a short time, but these should settle down. We suggest that you drink half to one litre of extra fluid to ensure prompt voiding again to relieve the urethral irritation.

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**Risks associated with the test:**

- **Urinary Tract Infection (UTI):** No matter how careful we are when inserting the tubes, there is a small risk of introducing a UTI anywhere in the urinary tract including the urethra, bladder, testis (in men) and/or kidneys. The risk is about 3% – 4% i.e. 3-4 people in every 100 may get an infection, based on regular auditing of our infection rates every five years. We always advise you to drink plenty of water following the test to help flush the urinary system and reduce the risk of infection. If you think you have developed an infection you will need to contact your GP and tell them you have had this test and they will give you antibiotics. If your urodynamics doctor or nurse believe that you are at a higher risk of getting urinary tract infections e.g. if you are immunosuppressed or immunocompromised, then they may give you antibiotics at the start of the test and/or to go home with

- **Bleeding:** There is a small chance of bleeding from one of the small blood vessels in the bladder, urethra, rectum or vagina (in women). This is nothing to worry about and will stop within a couple of days. If it does not stop then you would need to contact the urodynamics team and ask them for advice.
Video Urodynamics

This is similar to standard urodynamics, however instead of using saline (salt water) to fill your bladder, we use an iodine-based solution/fluid and take pictures with an X-ray machine. X-ray pictures give us anatomical detail about your bladder and urethra. We will always inform you when we are about to take an X-ray.

You should inform us if there is any possibility that you are pregnant (if you are female) as we would be unable to perform the test if you were. We may also perform a pregnancy test. We also need to know if you are allergic to iodine as the fluid we fill you with is iodine-based. We will be performing the test in a latex-free room with all latex-free equipment, but would still like to know if you have a latex allergy.

Some patients may have suprapubic or urethral catheters in situ. The test can still be conducted in these patients, however some patients may have to have one of these catheters inserted in order to perform the test. Suprapubic catheters can be inserted either under local or general anaesthetic. Urethral catheters are inserted with local anaesthetic gel only. You will, of course, be notified if either of these are necessary.

Unlike Standard Urodynamics, because we need to X-ray your bladder and upper urinary tract (kidneys) when you pass urine, we have to remain in the room throughout the test including when you pass urine. We are, however, as discreet as possible and stay behind the curtains when we can.
Ambulatory Studies

You should allow three to six hours for this test.

What the test involves

Ambulatory urodynamics has many similarities to standard urodynamics. You will still have a tube inserted into your rectum and one into your bladder via the urethra. The differences include:

1. You will wear a belt around your waist with the tubes attached to this

2. Instead of remaining in the room for the whole test, you will be allowed to leave the department once the test has started so you can walk around, or exercise, to help you reproduce your symptoms.

3. You will be allowed to go outside the hospital building, but we do ask that you remain within the confines of the hospital.

Before the Test

No special preparations are needed. You can eat and drink as normal, but we would like you to come with your bladder comfortably full. Please complete the Frequency / Volume Chart (bladder diary) and the Questionnaire sent with your appointment letter. It is important that you bring them with you to the clinic.

After you arrive, the doctor/nurse performing the test will explain the test to you and ask some questions about the symptoms that you have been experiencing. They will ask you to sign a consent form.
It is best to wear loose fitting separate clothes. Ladies may wish to wear a skirt or trousers, and a top. You may want to bring a change of clothes in the event of accidents. Please bring a book or paper to read whilst the test is taking place.

**During the Test**

On arrival we will once again explain the test to you.

The test involves passing a small tube into your bladder and another small tube is placed in your rectum (back passage). These tubes allow us to take continuous pressure measurements whilst your bladder is filling naturally. These tubes are connected to a small recording device, which is worn discreetly on a belt around your waist for the duration of the test. Your bladder function will be monitored whilst you are walking, exercising and relaxing. You can drink normally during the test. You will be asked to keep a diary of how your bladder feels and how much fluid you have drunk.

During the test a doctor, nurse, or technician will be available to you. They will answer your questions. When you need to pass urine there will be a specially assigned toilet for you to use, but you will need to let the nurse know when you need to empty your bladder. The portable
recording device that you wear will be checked before and after you pass urine.

You will be free to walk around the hospital and the hospital grounds, but we request you to return to the department every hour in order to get the equipment checked. You are free to return at any time should you have any questions or concerns. There is the risk of tubes falling out, especially when you are being very active. Some people do experience some discomfort, but this should settle down. If not, and you are too uncomfortable, then we will remove the tubes and stop the test.

Once you, and the person performing the test, feel that your symptoms have been reproduced the tubes will be removed and you will be able to get redressed and comfortable. You will be given the results of your test. A report will be written and sent to your Consultant, your GP and to you.

**After the test**

This is the same as that written above for standard Urodynamics. However, if you do have any concerns that have not been covered by us then you can contact your GP or The Urodynamic Department.
Flow chart of urodynamic patient pathway

Initial referral
- Electronic referral form or clinic letter.
- Triaged by a senior clinical member of the urodynamic team.

Partial booking system
- Letter sent to patient inviting them to call in and arrange an appointment date and time which is convenient for them.
- Bladder diary and symptom questionnaire sent.

Appointment
- Urodynamic test performed (1 1/4hr for standard or video and 3-6 hr for ambulatory)
- Report sent to GP, patient and referrer.

Follow up
- Follow up care/patient plan may include: multi-disciplinary team meeting referral, intermittent self-catheterisation training, physiotherapy, outpatient appointment, medication suggestions etc.
Patient information

In carrying out our day to day activities, including research, we process and store personal information relating to our service users and we are therefore required to adhere to the requirements of the Data Protection Act 1998 and the General Data Protection Regulation (GDPR), which will apply in the UK from 25 May 2018.

We take our responsibilities under these acts very seriously. We ensure the personal information we obtain is held, used, transferred and otherwise processed in accordance with applicable data protection laws and regulations.

References and sources of additional information


International Continence Society http://www.icsoffice.org/


Royal College of Radiologists (RCR) 2010. Information for patients having an intravenous pyelogram (IVP) or an intravenous urogram (IVU). “http://www.rcr.ac.uk” www.rcr.ac.uk


United Kingdom Continence Society http://www.ukcs.uk.net/
The following web sites are useful patient resources for additional information, help and advice:

Bladder and Bowel Foundation
http://www.bladderandbowelfoundation.org/

Bristol Urological Institute
http://www.bui.ac.uk

Continence Foundation
http://www.continence-foundation.org.uk/

References and Further Information
NHS Choices www.nhs.uk
If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.