

Interventional Neuro-Radiology Service **WADA Test**

Information for patients



Leeds
Radiology

Your doctor has recommended for you to have a WADA test. This leaflet will explain what the procedure involves, the outcomes and the possible risks.

What is a WADA test?

A WADA test is performed prior to epilepsy surgery to discover which side of your brain controls speech and memory functions. The findings of the WADA test allow physicians to plan which treatment is the safest and most effective for your seizures whilst preserving your speech and memory.

How is WADA performed?

Consent

The operating neuro-interventional radiologist will explain this operation to you in more detail and answer any of your questions to your satisfaction before you provide your permission and sign your consent form.

Anaesthetic

This procedure is performed under local anaesthesia, but the anaesthetist will be present for support.

Operation

You will be attached to some observations including a blood pressure cuff, oximeter and electroencephalogram (EEG). An EEG allows your brain activity to be recorded in detail. This involves a number of sensors attached to your scalp which pick up electrical signals from the brain.

In order to reach the correct area in your brain, the Neuro radiologist will perform an angiogram through a vessel in your groin. This is a series of x-rays and the use of x-ray dye to better visualise your vessels.

You will be draped with sterile towels, allowing the scrub nurse to clean your groin appropriately. The radiologist will inject local anaesthetic to ensure the area is numb ready for insertion of the catheter (long plastic tube). This allows the radiologist to inject x-ray dye into your vessels and reach the area of interest.

When the x-ray dye is injected, you may experience symptoms such as hot flushes or the urge to suddenly wee. This is normal and will pass quickly. Once the catheter has reached the correct area, the Neuro Radiologist will inject medication which will sedate one side of your brain. You will feel weakness/loss of strength on the opposite side of your body as well as facial drop or tingling, this is normal.

Now the testing team can assess your speech and memory functions with a series of questions and activities such as reading, identifying numbers, objects and pictures. You will be asked to remember these answers and recall them later in the procedure to assess your memory.

Once your sedation has worn off and strength has returned you will be asked to recall what happened during the test to see if your speech and memory was impaired. If both sides of the brain need to be tested, the entire process will be repeated after a further 15-20 minutes.

Once complete, the Radiologist will remove the catheter from your groin and apply pressure for 10 minutes or use a closure device to ensure there is no bleeding or bruising. Your WADA test may be recorded with your consent to aid in your treatment and future research. The neuropsychiatrist will share the results of the test after the procedure.

Staff Involved

Interventional Radiology (IR) procedures are performed by a multidisciplinary team. The team includes the following key Staff:

- **Interventional Radiologist (Consultant/Fellow):** A doctor specially trained in minimally invasive, image-guided techniques who performs the procedure.
- **Radiology Nurses:** Highly trained nurses who care for the patient before, during, and after the procedure. They assist with sedation, monitor vital signs (heart rate, breathing, oxygen levels), and may "scrub in" to assist the radiologist directly.
- **Radiographers:** Experts in imaging equipment who operate the machines to provide real-time guidance for the doctor.
- **Senior Clinical Support Workers (SCSWs):** Assist with the setup of the room, patient positioning, and maintenance of sterile conditions.

What are the risks?

This is overall a safe procedure, although with any procedures, this carries the following risks:

- Infection risk at site of puncture. Symptoms of this include this area becoming red, hot, swollen or painful. This may be treated with antibiotics.
- Bleeding at the site of the puncture is another risk post procedure. This can be prevented by applying pressure at the site of closure, lying flat (try not to lift your head as this puts strain on your groin and can also cause bleeding), you will be observed for 4-6 hours post procedure.
- Allergic reaction to contrast dye (mild symptoms like nausea, itchiness and rashes occur in 3%; moderate to severe symptoms such as severe vomiting, bronchospasm occur in less than 1%; risk of death is rare, estimated at 1:170,000)
- X-rays will be used to make images of your body and guide your doctor during the procedure. X-rays are a type of radiation. We are all exposed to low levels of natural radiation as part of our everyday lives and medical x-rays give an extra dose of radiation. Radiation can increase your chances of developing cancer many years or decades after the exposure. The chances of this happening to you as a result of this procedure are considered to be very low.
- In some very rare situations, you might experience some hair loss or some reddening of the skin in the area that was imaged. If this happens, you should contact your clinical team who will be able to give some advice on the simple steps you can take to look after your skin.
- It is important to remember that your doctor thinks that the benefits of this procedure outweigh any risks from the radiation. We will make sure that the amount of radiation used in your procedure is as low as possible.

What else to expect from this operation?

Admission

The day of your procedure you will be escorted down to the Radiology theatres department and admitted into our recovery area. You will be asked a series of health questions including any allergies, heart conditions, breathing problems such as asthma etc. It is important to provide as much detail to any underlying issues you may have.

Pre-operative preparation

You will be seen by radiology theatre staff who will check information such as what medications you are taking, if you have any allergies and any relevant past medical history. They will also check your blood pressure and insert a cannula into the vein in your hand or arm. You will then be seen by the radiologist responsible for doing your procedure who will explain step by step what will happen including any risks involved, you will then be given the opportunity to ask any questions. If you are happy to proceed you will be asked to sign a consent form. You will be asked to change into a gown and remove all underwear prior to going into the procedure room.

Recovery

The electrodes will be removed from your head, this can sometimes leave behind a sticky residue, you may wish to wash your hair when you are able to mobilise. The catheter will be removed from your groin in theatre and a closure device or manual pressure will be applied to stop any bleeding. It is important to lie flat for a number of hours post procedure to reduce this risk of bleeding (if you need to use the toilet during this period, a bed pan can be used on request). You can eat and drink as normal (usually after one hour of lying flat) unless told otherwise by radiology theatre staff.

Aftercare

- Before you are discharged home you will be given a letter with instructions on what to do when you get home this will be explained by the Nurse looking after you in the recovery area. You must have someone with you for the first 24 hours.

Care at home

- **Exercise:** It is advisable that you rest for the first 24 – 48 hours after your procedure and avoid going up and down stairs too frequently and do not carry put any heavy lifting, you should not do any strenuous exercise during this time.
- **Work:** You can resume normal activities such as work after 24 hours.
- **Driving/travel:** You will not be allowed to drive yourself home after your procedure, therefore please make arrangements. It is also advised to have someone with you for the first 24 hours at home in case any symptoms occur.
- **Medicines:** The radiologist will advise you when to restart any medication that was stopped for the procedure.
- It can be common to see bruising at the puncture site, however if this area feels raised or painful, please call the department or attend your nearest A&E if you feel unwell, dizzy or any bleeding occurs.
- **Follow-up:** No follow-up required.

Contact information

We hope some of your questions have been answered by this leaflet. If there are any questions you would like to ask before you come for your procedure, please get in touch.

Via telephone:

Interventional Radiology LGI: 0113 392 3311

(Monday - Friday from 9am until 5pm, except Bank Holidays)

Ward 24 LGI: 0113 392 7424 (Out-of-hours)

Ward 25 LGI: 0113 392 7425 (Out-of hours)

Neuro Nurse Specialists: 0113 392 5666 or 0113 392 3148

(Monday - Friday from 9am-4pm, except Bank Holidays)

Your GP or NHS direct on 111 (routine) | 999 (emergency)

Or via email: leedsth-tr.radiologytheatresenquiries@nhs.net

How to get to our department

We are located in the **Jubilee Wing of LGI, Ground Floor.**

Check this link to see how to get to us:



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www.accessable.co.uk/leeds-teaching-hospitals-nhs-trust/leeds-general-infirmary/access-guides/jubilee-wing

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