

Wada Testing

About the Test

A Wada test examines each side of the brain (separately) to:

- Find the area that controls your speech.
- See which of the two temporal lobes has the better memory function.

The exam is done before epilepsy surgery. The test results often help to:

- Decide if surgery is an option for you.
- Plan the surgery so that problems with speech and memory can be avoided.

The Wada test takes about 2 hours. It is done in the Interventional Radiology (IR) department and includes an:

- EEG (electroencephalogram) with real-time video recording. It looks at the electrical activity of the brain and the body's response during the test.
- Angiogram X-ray test that uses dye (or “contrast”) to show the blood vessels of the head. It also allows for placement of the catheter used during the Wada test.

An overnight hospital stay is not needed.

Before the Test

A few days before the actual test, the Epilepsy nurse will meet with you in the Neurology outpatient clinic, Galter 20-100. We will:

- Test your baseline memory.
- Talk about what will happen during the test.
- Review the similar memory and speech questions used during the Wada test.
- Show you pictures, objects and ask you to read some cards.

*If you have
any questions,
please ask your
doctor or nurse.*

Do not eat or drink after midnight the day before your test. Needed medicines may be taken with sips of water

On the day of the test, plan to arrive 15 minutes before your test time. Be sure to bring:

- Photo ID.
- Insurance card.
- Medicare card (for Medicare patients).
- List of allergies and current medicines.
- Toiletries and other personal items.
- Your doctor's written order for the test.

Please leave all valuables (jewelry, credit cards, money) at home.

Arrival

Please come to the 4th Floor Reception Desk in the Feinberg Pavilion, 251 E. Huron. Parking is available for patients and visitors in the garage at 222 E. Huron, across from the Feinberg and Galter Pavilions. For discounted rates, please bring your parking ticket with you. Tickets can be validated at the Customer Services Desks on the 1st and 2nd floor of the Feinberg and Galter Pavilions, and the 1st floor of Prentice (including the Prentice 24-hour desk near the Superior St. entrance).

When you first arrive at the Registration Desk, your information is checked and updated as needed. You will be directed to the waiting area until called by a staff member.

Getting Ready

Then you will go to the IR department. There you will change into a hospital gown. A nurse reviews your health history and takes your blood pressure and pulse. An IV (into the vein) line is inserted into your arm or hand. The IV is used to give you fluids and needed medicine during the exam.

The IR doctor will discuss the angiogram with you. After the doctor has answered your questions, you will be asked to give your written consent for the test. Before the test is done, the doctor will perform a brief exam and ask you questions about your medical history. Please tell the doctor about any allergies or if you have ever had an unusual reaction to iodine or contrast solution.

You will be asked to remove your watch, glasses, dentures (or bridgework), all jewelry and hairpins. You are asked to empty your bladder just before going into the procedure room. EEG electrodes are placed on your head.

After the Test

You will be brought into a special room. You will be assisted onto an X-ray table that is very firm. Medicine to help you relax is injected into the IV. You may feel drowsy, but you will be awake and comfortable during the test.

The groin area is shaved and cleansed with a special soap that may feel cold. Numbing medicine is injected into the groin area. When it is numb, a puncture will be made and the doctor will insert a thin tube (catheter). Guided by X-ray, this tube is then threaded into the carotid arteries (that supply blood to the brain). You may feel pressure and mild discomfort at the groin site. If needed, more numbing medicine will be given. Once in place, dye (contrast) is injected into the catheter and carried through the blood vessels. You may feel a sudden warm or hot sensation. This will only last a few seconds. Once the contrast solution is injected, X-rays (of one side of your head) will be taken.

Next, a special medicine (methohexital or amobarbital) is injected into the catheter. This will cause one side of your brain to go to sleep (for about 4 to 5 minutes). During this time, the side of your brain that is awake is tested for speech and memory. You will be shown pictures and objects and asked to recall them. You may also be asked to read some cards. After about 10 minutes, when both sides of your brain are awake, you will be asked to recall the items you were shown.

Then, the doctor will reposition the catheter. Dye is again injected and X-rays of the other side of your head are taken.

About 30 minutes after the first methohexital (or amobarbital) injection, a 2nd dose is injected so that the other half of your brain can be tested. Once again you will be shown pictures and objects and asked to read some cards. Again, after about 10 minutes, when both sides of your brain are awake, you will be asked to recall the items you were shown.

Once the exam is over, the groin catheter is removed. Firm pressure is applied to the area. A small dressing is placed over the puncture site.

After the Test

You will need to lie flat in bed for at about 2 to 6 hours. During this time, you must use a urinal or bedpan. The nurse will help you as needed.

It is very important to keep your leg straight. The nurse will be in often to check your blood pressure, temperature, and pulse, along with the puncture site. An ice pack may be placed over the site to prevent swelling and relieve discomfort. The pulse in the leg used for the test will be checked and compared to your other leg.

Do not eat any solid foods until okayed by your doctor. You will be asked to drink plenty of fluids. (Let the nurse know if you prefer something special to drink so it can be ordered from the diet department.) Your IV will also provide added fluids. This will help to “flush out” the contrast used during the test.

Notify the nurse right away if you have:

- Swelling at the puncture site.
- Bleeding or bruising at the puncture site.
- Numbness, tingling, pain, or any change in normal sensation in your leg.
- Difficulty moving your fingers, hands, feet or legs.
- Coolness of the hand or foot.
- Changes in vision.
- Trouble speaking or slurred speech.

At Home

Diet

You may resume your regular diet at discharge. You should drink at least 6 glasses of water (8 oz.) over the next 24 hours. Water helps to remove the dye used during the test from your body. (Do not drink any alcohol for 24 hours.)

Activity

On the day of discharge, limit your activities. No physical exercise or heavy lifting (greater than 10 pounds) for the next 3 days is allowed. Consult your own doctor before resuming strenuous physical activity. Do not drive for 24 hours after the test. You may resume all other daily activities 24 hours after the test. This includes normal social activities.

Wound Site/Bleeding

A small bruise may be present. If you notice any bleeding from the puncture wound, lie flat and apply firm pressure just above the puncture site. Hold pressure for 15 minutes. You may use a clean cloth or tissue to apply pressure. If possible, have another person apply the pressure. You should lie flat for about one hour before getting up and walking. Notify your doctor if this occurs.

If bleeding persists for more than 15 minutes, you should be taken to the nearest emergency room.

The following signs could indicate that the puncture of the artery has reopened and that there is active bleeding from the artery.

- Sudden increase in swelling of the area around the puncture site.
- Continuous profuse blood streaming from the site.

If this occurs, apply hard pressure above the wound and call 911 right away.

This would be rare, but it is an emergency needing medical attention.

Notify your doctor if the following occurs:

- Numbness or tingling in the arm or leg.
- Difficulty moving your fingers, toes, feet or legs.
- Discoloration and/or coolness of the hand or foot.
- Swelling at the puncture site.
- Drainage/oozing from the puncture site.
- Increasing area of the bruise with discoloration extending past the initial puncture site.

Your doctor will discuss the results of this test with you. If you have any questions or concerns, please ask your doctor or nurse.

Health Information Resources

For more information, visit one of Northwestern Memorial Hospital's Health Learning Centers. These state-of-the-art health libraries are located on the third floor of the Galter Pavilion and on the first floor of the Prentice Women's Hospital. Health information professionals are available to help you find the information you need and provide you with personalized support at no charge. You may contact the Health Learning Centers by calling 312-926-LINK (5465) or by sending an e-mail to hlc@nmh.org.

For additional information about Northwestern Memorial Hospital, please visit our Web site at www.nmh.org.

Para asistencia en español, por favor llamar a el departamento de representantes para pacientes al 312-926-3112.

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Developed by: Northwestern University Comprehensive Epilepsy Center, Neurological Testing Center, with Neurology Nursing

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For more information about Northwestern Memorial Hospital, please visit www.nmh.org.

1100-07

900859 (05/08)