WADA TEST

The ability to talk, think, and remember come from different areas of the brain. Your doctor must find out where these areas are located so that seizure surgery will not change them. To do this, we use a special test called “Wada,” named after Dr. Juhn Wada who developed it.

The Wada Test combines three types of testing: Neuroimaging (taking special x-rays), the EEG, and Neuropsychological testing (explained below). This information helps us decide the best type of surgery and how much brain tissue we can safely remove.

HOW DOES THE WADA TEST WORK?

The brain is divided into the right side and the left side. Each side controls the opposite side of the body (the right side of our brain controls the left side of the body …the left side of the brain controls the right side).

During the Wada test, a special sleeping medicine is only given to one side of the brain. This medicine causes that side of the brain to go to sleep for several minutes. The other side remains awake. You are not able to move your arms or legs on the sleeping side until the medicine clears. If that side of the brain also controls speech, you will not be able to talk during this time.

WHAT SHOULD I DO?

First you meet with a neuropsychologist for speech, thinking, and memory tests. This is called your baseline study. Your doctor tells you all about the Wada Test and describes each step. You must be old enough to follow simple directions and instructions. It is important that you know what is happening, so please tell us if there’s anything you do not understand.

During this visit, we ask questions about allergies. We need to know allergies:

1. To any local anesthetics or barbiturates such as Phenobarbital or Mysoline (primidone), Amytal (Amobarbital), Mebaral, Nembutal, Seconal, or Tuinal.
2. To foods.
3. To x-ray dyes that contain iodine.
4. Any related allergic conditions such as eczema, asthma or hay fever.

Next, your doctor decides if this is an inpatient or outpatient study. This decision depends on your general medical condition. If you are scheduled as an outpatient, please bring someone with you who can drive and take you home. You cannot drive home after the test. Usually the test begins in the morning. You should be ready to return home by mid to late afternoon. You may bring a book or a radio with earphones to help pass the time.

Please remember, although the Wada Test has been proven safe and complications are rare, certain risks are present. Your doctor will explain these risks. They are also stated on the “Permit for Treatment” form.
DAY OF THE WADA TEST: Angiography

A member of the Wada team meets with you and answers any last minute questions. You put on a hospital gown and enter a dimly lit X-ray room. You lie down on a firm bed.

Your doctor uses a small shot of numbing medicine on the top part of your leg (groin). You may feel slight pressure and a sting, but it only lasts a few seconds. When your groin is numb, the doctor makes a small cut and places a tiny, flexible tube (catheter) into the artery. All you feel is some pressure on your skin. It does not hurt.

The doctor guides the catheter into the vessels to be examined. During this time the doctor watches a television-like screen called fluoroscopy. The screen shows us where the catheter is going.

When the catheter is in place, we give the first medicine. This medicine goes into your catheter and flows into your blood vessels. It allows the doctor to see the blood vessels on the fluoroscopy screen. You may have a warm feeling for about 10 to 20 seconds. At the same time, you may also hear a loud clicking sound. This noise is the x-ray machine taking pictures of the medicine as it passes through the blood vessels. It is very important to lie very still at this time.

HOW LONG DOES THE WADA TEST TAKE?

You can expect to stay on the X-ray table for 1 to 2 hours. Although the length of the picture-taking process can be as brief as 15 minutes, the actual time depends on the number of blood vessels that need to be examined.

THE WADA TEST

The doctor next places that special brain-sleeping medicine into the catheter. Remember, the medicine only goes to one side of your brain and makes it fall asleep. This causes the opposite side of your body to also fall asleep. This weakness is temporary, usually lasting only 5 to 15 minutes. During this time, when your arm and leg are asleep, we ask you simple questions.

To test your speech, we ask you to read words and/or identify objects, pictures, shapes and colors. You then answer simple questions about the objects (is it round, do you eat this, etc.). You must also remember what you see. Later in the test, we repeat the same questions. A tape recorder and video camera tape all of your answers.

Sometimes only one side of your brain is tested. Sometimes it's necessary to test one side, wait a few minutes for your arm and leg to wake up, and then test the other side. Your hand or arm strength shows us how much asleep the side of your body has become.
WHAT HAPPENS AFTER THE WADA TEST?

At the end of the test, the catheter is removed. A member of the x-ray team presses on the site for 10 to 15 minutes and then places a small bandage on it. No stitches are necessary.

**Inpatient**
You return to your hospital room by stretcher. For the next few hours, a nurse checks your blood pressure and pulse and frequently examines the bandage. It is very important to *lie flat during this time and keep your leg straight with no bending.* This prevents bleeding at the catheter site. You may eat and drink.

**Outpatient**
You stay in the recovery area of the Radiology Department for approximately 4 to 5 hours. During this time, a nurse checks your blood pressure and pulse and frequently examines the bandage. It is very important to *lie flat during this time and keep your leg straight with no bending.* This prevents bleeding at the catheter site. You may eat and drink.

If you continue to do well you will be dismissed. Remember, you CANNOT drive yourself home. A nurse explains what to do at home and gives you written instructions for home care.

- After the test, the catheter site may be tender and bruised. You may apply ice packs and elevate your leg with a pillow to ease any pain.
- Always tell the nurse or doctor immediately of any pain or unusual feelings or concerns.

TEST RESULTS

It usually takes several days to review all the test results and send a report to your doctor. Please check with your doctor for a time to discuss the results.

My Notes:

These instructions are only general guidelines. Your doctors may give you specific instructions. If you have any questions or concerns, please call your doctor.