

Epilepsy and the WADA test

Paul Ruggieri, MD

Hello. My name is Dr. Ruggieri. I am a neuroradiologist in the Cleveland Clinic Neurologic Institute who works closely with the Epilepsy Institute. I would like to review the WADA test so you will know exactly what to expect when you have this test shortly. This test is designed to help doctors locate the areas in your brain responsible for controlling your speech and memory so we can plan your surgery more safely for you.

When we get closer to the procedure, someone from our service will again run through the details of this test with you and your family, explain the risks, benefits, alternatives, and personnel involved with the procedure, and give you the opportunity to ask us questions before proceeding.



Before the test, the physicians from the Epilepsy Institute will also familiarize you with the type of neurologic testing conducted during the WADA test by giving you similar neurologic tests ahead of time.

On the day of the procedure itself, you will report to or be transported to the interventional area in the Imaging Institute. We will get you changed into a gown and bring you into the angiography suite where we will lay you on a table and clean and shave your groin regions. During the procedure, you will lie on your back on a machine like this with your head to the left and your feet down here. You will be covered with sterile drapes throughout the procedure with only your head poking out throughout much of the procedure. During the neurologic testing, we will also uncover your arms and shoulders.

One of my colleagues or I and all other personnel will put on sterile gowns, a mask and gloves and begin the procedure. We will first numb up the skin in your groin region with

the same kind of medication that you receive at the dentist's office. As you know, this will mean a pin prick and then you will experience some localized burning in the area which lasts for a few seconds.

Once the area is numb, we will place a needle into the blood vessel in your leg and exchange that needle for a catheter which is a long skinny tube. During this time, you will feel some pressure in your groin from our fingers but you should not experience any pain. Once we get the catheter in place, we will advance that catheter into one of the arteries in your neck. You will feel nothing until we inject something into the catheter. At first, you may feel a cool sensation over half of your face or you may recognize a salty taste in your mouth. Then, you may feel a mild warm sensation in the same area and/or experience a metallic taste in your mouth which also lasts only for a few seconds.

We will then set up to take our first pictures. We will inject a bit more of that second medication to look at the blood vessels supplying blood to one half of your brain. During the few seconds required for this contrast injection, it is important to remain perfectly still. You may feel some warmth over half of your face, you may feel mild pressure behind your eye, and you may even see stars for a couple of seconds. This will quickly disappear and everything should be back to normal.

We will then pull our cameras away from you and invite our Epilepsy colleagues into the angiography suite. We will inject some medication into the same blood vessel that we injected the contrast. This medication will briefly put half of your brain to sleep. You will become suddenly weak on one side of your body and may have difficulty speaking or understanding us. The Epilepsy physicians will perform neurologic testing to see what portions of speech and memory are temporarily lost. You will quickly regain normal function but we will let you rest a few minutes to be sure the effects of the medicine have completely disappeared. Depending on these results, we may then repeat the same thing on the other side of your brain.

After the procedure is complete, we will pull the catheter out of your groin and apply some pressure to your groin to prevent you from bleeding. In most cases, we will be able to place a small plug in the hole in your vessel wall to further prevent any bleeding and we will apply pressure to your groin area for a few minutes. If we place this plug in the vessel wall, we will limit your bed rest to two hours after the procedure. This two hour period will give us enough time to keep an eye on you to be sure everything is OK before discharge. We ask that a friend or family member be available to drive you home. We will also ask you to avoid strenuous lifting or exercise for the next 24-48 hours. After this, you can return to normal activities.