

Eye Unit

Visual evoked potential and electroretinogram

VEP and ERG

Sometimes it's difficult to find out how much a baby or young infant can see.

The VEP (visual evoked potential) and ERG (electroretinogram) are two tests that tell us how well the pathway from your child's eyes to their brain works.

How the tests work

Electrodes placed on the back of your child's head and on their cheeks can detect an electrical response:

- when a light flashes
- when a pattern moves or suddenly appears

How these tests relate to seeing

We use the tests to find out if part of the pathway from the eye to the brain is not working correctly. The tests can also give an estimate of your child's ability to see changing patterns.

The tests cannot tell us how well your child uses the information reaching their brain.



Patient Information

Why your child needs the tests

The tests are useful for babies, young infants and children who cannot tell us or show us how much they can see.

The tests are also very helpful if your doctor cannot find an obvious reason for why your child has poor eyesight.

Where we do the tests

We carry out the tests in an Outpatient Clinic.

Risks of the tests

There are no known risks to the VEP and ERG tests.

Will the test hurt?

No. Sometimes a child can find the test irritating, but not more irritating than having their hair brushed or wearing a hat.

We'll do our best to distract your child with videos and toys. Your child can eat and drink during the test.

Your support is very important to help us carry out the test quickly.

What happens during the test

Before putting the electrodes on, we wipe small areas of the scalp and cheeks with a cotton wool bud covered with a gel. This improves the electrodes' contact with the skin and helps us to detect good signals.

We place electrodes on the scalp with a cream. We place sticker electrodes on your child's cheeks just under each eye.

We then place a stretchy headband around your child's head to keep everything in place.

Patient Information

At the end of the test, we remove the electrodes.

How long the tests take

The tests usually take about 20 to 30 minutes.

The television test

Young children sit on their parent's lap in front of a television. Older children can sit on their own and you can stay in the room if you wish.

We dim the room lights. A black and white checked pattern is moved from side to side on the television screen.

We test both eyes together, then one at a time.

We ask you to cuddle your child and hold their arms to stop your child from pulling the electrodes off.

We will stay in the room with you throughout the test. We save recorded VEPs and ERGs on a computer.

The flash test

After the television test, we hold a lamp in front of your child's eyes.

The lamp flashes 3 times every second. This rate of flashes won't cause a seizure.

We may only perform this part of the test if your child is asleep or does not co-operate.

Patient Information

Removing the electrodes

We will remove the electrodes and clean the area with warm water and cotton wool.

If there is any cream left over, it'll come off after a hair wash.

Getting the results

Once we've assessed your child, we will send a report to their consultant.

They will then send you an appointment to discuss the results.

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact us on 024 7696 6520 and we will do our best to meet your needs.

The Trust operates a smoke-free policy.

Did we get it right?

We would like you to tell us what you think about our services. This helps us make further improvements and recognise members of staff who provide a good service.

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