

## What is a VEP?

A VEP (visual evoked potential) is a test that records the electrical signals of your child's brain while he/she is watching either a flashing light or a black-and-white checkerboard television screen. A VEP shows if the brain is receiving information about what your child's eyes see.

## How Can I Help My Child Prepare for the Test?

It is important for your child to be wide awake for this test. Please make sure that he/she has a good sleep the night before and a nap before the test if this is part of his/her normal routine.

If your child is also having an EEG during this appointment, please do not follow the sleep deprivation instructions.

Make sure your child's hair is washed and dried the day before your appointment.

If your child wears glasses or contact lenses, he/she should wear them for the test.

Plan to get to the hospital at least 20 minutes before your appointment time. It can be hard to find parking.

Please come directly to the EEG Department in Room 1B10. If you did not receive a call from the hospital's Admitting Department to register your child in advance, you will need to do this when you arrive at the hospital. After you arrive at the EEG Department, we will decide when it is best for you to return to Admitting.

## What Will Happen at the Test?

The appointment will take approximately 1–1½ hours.

The technologist will ask you for information about your child's medical history. You will be asked about his/her:

- birth history
- development (walking, talking)
- schooling
- family medical history
- names and dosages of any prescription or non-prescription medication(s)

If you cannot come to the appointment with your child, please make sure that this information is available to the technologist.

If you require the services of an interpreter, please make sure that you notify the EEG department at least two days prior to your appointment.

There are two different types of VEPs that a doctor can request:

- a flash VEP
- a pattern VEP

Each is set up differently and will be described separately below. You may not know which of the two your doctor has requested. The technologist will let you and your child know before starting to set up.

## Flash VEP:

There are 26 electrodes that will be attached to your child's head.

The technologist will measure your child's head and mark the scalp with a red crayon. Then all the marks are rubbed with a Q-tip dipped in a special cleaning gel. Most of the electrodes are applied using a special "hair glue" that is dried with a small hairdryer. This is painless



but "smelly". In some instances, we do not use the glue. Instead, the electrodes are applied with a special paste that has no smell and does not need to be dried with the hairdryer. This method only works with patients who are able to lie very still. The technologist will determine which method will give the best test results for your child.

Some of the electrodes are applied on the face with special "paper" tape.

It takes approximately 15-20 minutes to apply the electrodes.

## Pattern VEP:

There are 6 electrodes that will be attached to your child's head in the same way as for a flash VEP.

It takes approximately 5-10 minutes to apply the electrodes.

## During the Test:

### FLASH VEP:

- Your child will need to watch a strobe light that flashes a white light about once every second. A computer registers the electrical signals from the brain during this time.

- Older children will be asked to lie on the bed and to be very still. They will need to keep their eyes open during the test.

- Younger children (toddlers and infants) often manage the test better if they are sitting on a parent's lap. The technologist will decide whether lying on the bed or sitting on your lap will produce the best results.

- In some instances, we like to record the brain's response from each eye separately. To do this, we will place a patch over one eye and then over the other.

#### PATTERN VEP

- For this test, your child will sit in a chair in front of a television which has a black-and-white checkerboard on the screen.

- We will record the brain's responses from each eye separately. To do this, we will place a patch over one eye and then over the other.

- This test can only be done on children who are old enough and cooperative enough to sit still and focus on the screen.



#### What Happens After the Test?

If glue was used, the wires are taken off with a special remover that dissolves the "hair glue". This is smelly and often leaves a sticky residue in the hair. You can wash this out with regular shampoo when you get home. The technologist will also make sure that all of the crayon marks are washed off.

If paste was used, the wires, paste and crayon marks are washed off with warm water. The paste will leave a residue in your child's hair (almost like hair gel). You can wash this out with regular shampoo when you get home.

#### When Will I Know the Results of the Test?

Your child's doctor will have the results about two weeks after the test. You will need to phone his/her office for an appointment (if you do not already have one) to discuss the results.

The technologist **cannot** give you the results of the test.

If you have an appointment with a Neurologist in the Neurology Clinic, he/she will have the results for you at the time of your appointment.

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## Visually Evoked Potentials (VEP)



**Contact the EEG Department:  
Room 1B10  
604-875-2124.**

*Developed by the health care professionals of the EEG Department with assistance from the Department of Learning & Development*

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