

# Things you need to know about the Brainstem Auditory Evoked Potentials Test (BAER)



## EEG Department

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[www.bcchildrens.ca](http://www.bcchildrens.ca)

## What is a brainstem auditory evoked potential test or BAER?

It is a test that records how fast a sound travels from the ear to the brainstem. When this test is done in the EEG department it tests brainstem function, not hearing. Hearing is tested in the Audiology department.

## Are there things I need to do to get ready for my child's BAER test?

Yes.

1. Know if your child's doctor has ordered sedation for this test. Sedation is a medicine that will cause your child to go to sleep or be very drowsy for the test. If your child has been ordered sedation then a parent or legal guardian of the child must be with the child for the test. If this is not possible, please call the EEG Department at 604-875-2124 to change the appointment time to when you can be there with your child.

There is more information about why your child may be sedated later in this pamphlet.

2. Make sure your child is very sleepy by sleep depriving her or him. The sedation works best if your child is tired when you arrive at the hospital.

## How do I do sleep deprive my child?

Here is a table that tells you how to sleep deprive your child according to his or her age.

Infants (under one year of age)	Awake 3 hours before the appointment time
Children who are less than 3 years	To bed 2 hours later the night before and awake 2 hours earlier on the morning of the test
Children who are older than 3 years	To bed at midnight the night before and awake at 5:00 the morning of the test

**When you wake your child following these instructions, keep her or him awake. Do not let your child fall asleep in the car.**

### **Tips that help keep your child awake:**

- Have a second person sit in the back with your child to keep him or her awake if possible.

- If your appointment is for later in the day, arrive early so that there is time for your child to be alert and active for a couple of hours before the test.
3. Bring your child's history of her or his;
    - birth,
    - development such as when she or he walked, and talked,
    - schooling,
    - family medical history,
    - as well as the names and dosages of any medications your child takes.
  4. Plan to get to the hospital at least 20 minutes before your appointment time. Give yourself extra time as it is a big area with several different hospitals.

## What does my child need to do to get ready for the test?

- Only drink clear fluids such as apple juice or water in the two hours before the appointment time. This is because your child will be getting sedation. Do not let your child eat or drink anything else two hours before the appointment time.
- Keep your child awake once you have woken her or him.
- Wash and dry your child's hair the day before the appointment.

## Things to know for the appointment day.

### **Parking**

Try to arrive at the hospital 20 minutes before your appointment to give yourself time to park and get to the EEG Department. You can also use the valet parking located at the main entrance of the hospital. There is no extra charge for this service, but you will still pay the regular parking fees.

### **Where do we go when we come in the hospital?**

Please come directly to the EEG Department in Room 1B10. There is an information desk in the lobby if you need help finding the room.

If the hospital's Admitting Department did not call to register your child before your appointment day you might need to do this when you arrive at the hospital.

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After you arrive at the EEG Department, we will let you know if you need to return to Admitting.

## Why does my child need to be given sedation for the test?

To get the best results, your child needs to lay very still and be relaxed for this test. We get the very best results when your child is asleep or very, very drowsy. This is the reason your child will be sedated for this test. If your child does not fall asleep, we will still do the BAER, but the results may not be as good.

## Is the sedation safe?

Yes. The medicine that is used is called Chloral Hydrate. It is one of the safest sedating medications for infants and children. It is a liquid that your child swallows. It is not given by needle. Our nurse will ask you questions about your child's health to make sure that there are no potential problems with your child being sedated.

## What happens during the test?

The entire appointment will take from 1 to 1½ hours.

1. The technologist asks you questions about your child's medical history. You will be asked about his or her:
  - birth history, development such as walking and talking, schooling, family medical history, and the names and dosages of any medications.
2. The technologist puts 4 small electrodes on your child's head. Two are put on the top of the head and one on either ear lobe. This takes about 5 minutes. To do this the technologist;
  - First measures your child's head and marks her or his scalp with a red crayon. The marks show where the 4 electrodes will be placed.  
The electrodes measure the electrical signals coming from your child's brain. This does not hurt.
  - Next, each mark is rubbed with a Q-tip dipped in a special cleaning gel.
  - The electrodes are put on with a special paste.
  - Then small foam earpieces are placed in each ear.

Your child lies on a bed during the test. You may cuddle your child if it will help him or her to relax and settle better. The technologist will ask your child to close his or her eyes and relax. The technologist will wait until your child is relaxed and settled before starting the test.

Each ear is tested separately. Your child will hear a clicking sound from the foam earpiece in the ear being tested and a "whooshing" sound from the earpiece in the other ear.

## What happens after the test?

The technologist removes the electrodes. The paste and crayon marks are washed off with warm water. There may be remains of paste in your child's hair. It looks and feels almost like hair gel. You can wash this out with regular shampoo when you get home.

If your child was sedated, the sedation nurse will make sure that there are no adverse reactions to the medication. She will give you instructions on what to expect for the rest of the day.

## When will I know the results of the test?

Your child's doctor will have the results about 2 weeks after the test. The technologist cannot give you the results of the test.

Call your doctor's office to make an appointment to talk about the results if you do not already have one.

## Remember:

1. Make sure you or a legal guardian are with your child at the appointment if she or he will be given sedation.
2. Make sure your child stays awake after you followed the instructions to sleep deprive her or him.
3. If your child is hungry or thirsty in the two hours before the test, make sure that she or he only drinks water or apple juice.
4. Bring your child's medical, developmental and school history with you.
5. Bring a list of the medications and dosages your child takes.
6. Make sure your child has clean, dry hair.
7. Get to the hospital 20 minutes before your appointment time.
8. Come directly to the EEG Department in Room 1B10.

## Have questions?



Call 604-875-2124

Call for free in BC:

1-888-300-3088 ext 2124.

**It's good to ask!**