

INSTRUCTIONS FOR PATIENT PREPARATION
FOR THE VEP AND ERG

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PREPARING A PATIENT FOR A VEP

1. Measure the patient's distance from their nasium (area between eyebrows) to their inium (ocipital protruberance) in millimeters, with a fexible measuring device.

(NOTE: before any electrodes are placed on the patient's head the skin must be preped first. Those instructions will follow.)

2. Take 10% of the above measurement. This is the distance above the inium that the first electrode is placed. (For example: If the above measurement was 24 millimeters the first electrode would be placed 2.4 millimeters above the inium.) (electrode #1)
3. The next electrode is placed on the top of the skull midway between the ears. (electrode #2)
4. The last electrode is placed midway between the other two electrodes on the skull. (electrode #3)
5. It does not matter what color electrode you place on the three areas of the skull, what matters is how they are wired which will be discussed later.

SKIN PREPARATION

1. Put skin prep gel on a cotton gauze pad. Use a swab and rub the gel vigoursly into the three areas of the scalp that were previously measured.
2. Put electrode conduction paste on to each of the electrodes one at a time. Use enough paste to fill the entire electrode cavity.
3. Place the electrodes one at a time on each of the areas of the scalp that were previously prepared with the skin preping gel. Using a small piece of white medical tape, tape each eletrode into place.
4. Now plug all three electrodes into the impedance meter and check the impedance of the three electrodes. To use the impedance meter, push the red button to turn the meter on.
NOTE: It does not matter which electrode is in each of the numbered holes. Just use the first three holes.
5. Turn the rotary switch from number one to two to three to check each of the impedences of each of the electrodes. Check to make sure the impedance is under 10. If the impedance is over 10, gently massage each of the electrodes into the scalp. If you are still unsuccessful in getting

the impedences under 10, you will have to re-prep the scalp with the skin prepping gel.

WIRING OF THE ELECTRODES

1. This step is the most important step of the whole procedure!

The long cord in amplifier #1 (top amplifier) is to be used for the VEP. (Check to make sure the input cable from the computer is placed in the top amplifier) Electrode #1 is inserted into G1 marked on the cord. (electrode #1 is the electrode over the occipital lobe.)

2. Electrode #2 is inserted into G2 marked on the cord. (electrode #2 is the electrode on the top of the scalp.)
3. Electrode #3 is inserted into the iso ground hole marked on the cord. (electrode #3 is the electrode that is midway between electrodes #1 and #2.)
4. **MAKE SURE YOU DOUBLE CHECK YOUR WIRING OTHERWISE THE TEST RESULTS WILL NOT BE ACCURATE.**
5. Place the patient in front of the video monitor at a distance using the string attached to the side of the monitor.
6. You are now ready to begin testing. Refer to computer instructions to begin the test.
7. Patch the left eye, and run approximately three series of the test.
8. Next patch the right eye and run another three series.
9. Now run three series without either eye being patched.
10. Tell the patient to always keep looking at the screen.
11. When you are finished with the test, disconnect the electrodes and clean with soap and warm water.

Preparing A Patient For An ERG

1. Instill 2 drops of Proparacaine or another ocular anesthetic in both eyes. Be sure to use the punctal occlusion technique.
2. Make sure the ERG haptic electrode is clean. Place the ERG haptic electrode under the patient's upper eyelid while having the patient look down. Then lift up gently on the electrode and place the bottom of the electrode on the lower lid. Then have the patient look straight ahead.
3. Now take a single electrode and fill the electrode cavity with conducting paste.
4. Place this electrode on the side of the forehead with white surgical tape.

WIRING OF THE ELECTRODES

1. Amplifier #2 will be used. (This is the lower amplifier, check to make sure the input cable from the computer is connected to the lower amplifier.)
2. The large gray cable from amplifier #2 will be used for the ERG.
3. The **WHITE** wire is connected to the lead marked **G1** on the large gray cable.
The **BLACK** wire is connected to the lead marked **G2** on the large gray cable.
The electrode on the side of the forehead is connected to the lead marked **ISO-GROUND**.
4. Tape the wires to the patients cheek so the haptic electrode will not fall out of the eye.
5. Place the patient in the viewing bowl and advise them to look straight ahead until you advise them differently.
6. When you are finished with the test clean the electrodes with soap and warm water using extreme care not to damage the electrodes.