

### **General**

Information processing in the central nervous system occurs, among other things, by electrical activity of the nerve cells. This minimal, continuous electrical activity of the brain, which is produced by the brain itself, can be measured and recorded by using electrodes. The result of such a measurement is called an ElectroEncephaloGram, or EEG for short.

Because the signals that are measured are extremely weak, it is important to prevent disturbing environmental signals from influencing the brain signals. The EEG measurement therefore takes place in a specially shielded room. Depending on the research goal, the duration of the EEG registration varies from about 30 minutes up to 2 hours.

### **Preparation at home**

To make the EEG-measurement run more smoothly, you can run through the following steps:

- Wash and dry your hair beforehand;
- Do not use gel, hairspray, etc.;
- Do not use face cream or make-up;
- If needed, bring a comb or hair brush;
- Always bring your (reading) glasses. Also if you are wearing contact lenses.



### **Preparation at the DCCN**

A cap (sort of bathing cap) will be put on to your head. In this cap a large amount of measuring electrodes will be attached. In addition, a few single electrodes will be attached around your eyes and behind your ears using small stickers. Your eyes, nose, mouth and the underside of your face will remain free.

To obtain good signals it is important that the resistance of the skin is not too high. If necessary, the experimenter will make sure the resistance between your skin and the electrodes drops to the desired value by using some alcohol and conducting gel.

### **The experiment**

After this preparation you can enter the shielded room. You will get instructed about what you have to do during the experiment. It may be that you have to look at a computer screen, listen to sounds (possibly through headphones), carry out a reaction-time task, make certain movements, or just sit and be relaxed. During the measurement the door of the shielded room is closed, but not locked. The experimenter can see you by use of a video camera and talk to you by means of an intercom. Sometimes the experiment will be video and/or -audio recorded for strict scientific purposes. The experimenter will inform you about this in timely fashion prior to the experiment. The measurement itself will not be noticeable for you. When enough data are obtained, the measurement is completed. The experimenter will enter the room again and will remove the cap with the electrodes. If you want you can rinse out your hair, wash and dry it. For this purpose, shampoo and towels are available. For hygienic reasons it is practical if you bring your own comb.

### **Additional information**

The risk associated with participation can be considered as negligible risk and minimal burden. No invasive procedures are involved.

You can **NOT** participate in a EEG-experiment if one of the following applies:

- 1) You had head/brain surgery.
- 2) You suffer from epilepsy.
- 3) You suffer from claustrophobia.
- 4) You are pregnant or you think you are.
- 5) You are younger than 16 years of age.

If one of the above is applicable, please contact the researcher before the day of the experiment.