

### **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. EEG, alongside with measurement of eye signals and chin muscle activity with similar electrodes, is the 'gold standard' in sleep research. To allow for convenient sleep recordings at home, a wearable sleep EEG recorder can be applied at the Donders Institute and then taken home for the night.

### **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;



### **Preparation at the DCCN**

About 15 single electrodes will be attached on your head, behind your ears, around your eyes and at your chin using water-soluble glue and/or small stickers. 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 recorder will be attached with straps to your shoulder and chest above your shirt. In order to avoid changing clothes and thus needing to detach the recorder, please come already with a shirt/ pyjama that you will wear during the night.

### **The experiment**

After this preparation, you will get instructed about what you have to do during the experiment and during the following night at home. You can sleep normally with the sleep recorder. It generally should not interfere with your sleep quality, although wearing the electrodes and recorder might feel a bit unaccustomed in the beginning. The recorder will run during the whole night, the measurement itself will not be noticeable for you. The experimenter will instruct you how to stop and detach the recorder in the morning. Electrodes can be cautiously detached from hair and skin by soaking the gel/glue with water for about a minute. Alternatively, you can also leave the electrodes attached and let the experimenter detach everything at the institute. In this case, 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.

**SCREENING FORM EEG**

Version 2.1

**To be filled out prior to the start of the experiment**

Please answer the following questions first	Yes	No
- Have you had head/brain surgery?		
- Are you suffering from epilepsy?		
- Do you suffer from claustrophobia?		
- Are you pregnant or do you think you are?		
- Are you younger than 16 years?		

*If you answered "Yes" to one of the above questions, you CANNOT participate in the experiment.*

Subject name:

  

Date of birth:

*\* This form is applicable for research in healthy volunteers ( $\geq 16$  year). The subject involved needs to provide his or her written consent personally.*

**P.T.O**

**SCREENING FORM EEG**

Version 2.1

To be filled out **completely** by the RESEARCHER after the experiment

Name:	Project number:
Role:	Sona systems study name :
Signature:	Date:
<input type="checkbox"/> Payment ..... euro	
<input type="checkbox"/> No payment	
-----	
<b>Reporting events or findings:</b>	
<u>Adverse Event</u>	<b>YES/ NO*</b>
<b>If YES:</b>	<u>dd/mm/yyyy</u> <u>time</u>
• Date and time of occurrence	.....
• Description:	
• Severity	mild/ moderate/ serious*
• Relation to procedure:	none/ unlikely /possible / likely / definite *
• Action taken:	
• Abated/ follow up:	
<input type="radio"/> Follow Standard Operating Procedure Adverse Event!	
<u>Incidental Finding</u>	<b>YES/ NO*</b>
<b>If YES:</b>	<u>dd/mm/yyyy</u>
Date:	.....
<input type="bullet"/> Follow Standard Operating Procedure Incidental Finding!	
<i>*make a choice</i>	



**STUDYSPECIFIC INFORMED CONSENT FORM**

For participation in: \*

MEG     EEG     MRI     NIRS     tCS     Behavioural

\*tick the appropriate box(es)

I confirm that:

- I was satisfactorily informed about the study concerned both verbally and in writing by means of the general information brochure and additional study specific information brochure(s) (CMO2014/288; December 2017, version(s) 2.1).
- I have had the opportunity to put forward questions regarding the study and that these questions have been answered satisfactorily
- I have carefully considered my participation in the experiment.
- I participate of my own free will.

I agree that:

- My data will be acquired and stored for scientific purposes as mentioned in the general information brochure.
- In the scope of this study photo/video and/or audio recordings may take place
- I will be informed by my home physician or the academic GP of General Practitioner Center Heijendaal about any new information which is of medical relevance to me.
- For study purposes audio and/or video recordings may be made
- Beyond the scope of this study: my anonymized experimental data will be shared with other researchers or research groups

I understand that:

- I have the right to withdraw from the experiment at any time without having to give a reason.
- I have the right to request disposal of my experimental data up to 1 month after participation
- My data will be protected according to applicable European and Dutch privacy law.
- My consent will be sought every time I participate in a new experiment.
- 

**I give my consent to take part in this experiment:**

Name:..... Date of birth:..... (dd-mm-yyyy)

Signature:..... Date and place:.....

**I agree** that for scientific purposes collected potential identifiable photo/video/audio recordings beyond the scope of this study will be shared with other researchers or research groups.

**YES? NO/ not applicable\***

**I may be approached** for a future study.

**YES/ NO\***

(\*encircle choice-)

**To be filled by the RESEARCHER prior to the start of the experiment:**

The undersigned declares that the person named above has been informed both in writing and in person about the experiment. He /she guarantees subjects' privacy protection.

Name:..... Project code:.....

SONA title of the study:.....

Signature:..... Date (dd-mm-yyyy):.....