Instructions and questionnaire for anesthesia project

# **Introduction**

On the day of the anesthesia experiment, you will meet at Domus Medica for transport to Kongsberg Hospital. **You will need to abstain from eating anything the last six hours before the start of the ketamine sedation, and you must abstain from drinking anything the last two hours before the start of anesthesia**.

During the experiment at Kongsberg Hospital, you will be sedated with ketamine, and we will record your EEG while you are sleeping. Before the session begins, we will ask you about how you are doing on that day, your expectations and worries, and some background information about you. You will be asked about your current mood, stress levels, and expectations. We will also ask about your sex, gender, age, height, weight, and drug habits like alcohol, nicotine, cocaine, etc.

During sedation, you will every once in a while be awakened by one of the experimenters calling your name and squeezing your shoulder muscle (trapezius). As soon as you are awake, we will ask you about any (dream) experiences you might have had. We will also give you a simple memory task and a short knowledge quiz. The questions will be the same for each awakening, except that the exact items on the memory task and the knowledge quiz will change (see questionnaire on next page).

However, when you are drowsy and confused right after waking up, it can be very hard to understand and answer even quite simple questions (or even speak clearly). Therefore it is important to make sure that you understand all the questions beforehand (ask if something is unclear). Please read through the questions and their explanations a couple of times, until you are familiar with all the questions and their intended meaning. Make sure you understand everything and ask us if anything is unclear.

After the sedation part of the experiment, the experimenter will guide you through another set of questionnaires which are directed towards the experience you had under sedation. You will receive questions about how it changed your self-understanding, your degree of psychological insight, and whether it was emotionally challenging.

***Please note: The only thing important to the experiment is that you describe your experience faithfully, and we do not necessarily expect you to always, or even once, report an experience. If the most faithful description is “there was nothing”, then that is what you should report.***

**Questionnaires during sedation**

## **Induction**

### **Q0: Please count upwards from 1 as far as you can.**

Count upwards from 1 as far as can until you fall asleep. It is normal for this to take quite a while. You might forget some numbers or be momentarily distracted as you get more drowsy, but that is fine, just keep counting from the last number you do remember.

## **Awakening (repeated 3 times)**

### **Q1: Did you experience anything?**

Answer ‘yes’ if you were experiencing something just before being awakened, answer ‘no’ if you were not experiencing anything. If you remember experiencing something or feel like there was something, but you can’t really remember any of the *contents* of that experience, please answer ‘maybe’. Experiences can for example consist of visual imagery, thoughts or emotions. For a more detailed explanation of what we mean by *experience*, please see the instructions for Question 2. *The only thing important to the experiment is that you answer what best describe your subjective assessment (what feels most correct to you), whether that is ‘yes’, ‘no’ or ‘maybe’.*

### **Q2: What did you experience?**

Describe the most recent experience (for example image, thought or emotion) which you had before being awakened (but after falling asleep),*if you experienced anything at all - it is just as fine if you didn’t experience anything.* By experience we mean “any kind of mental activity”, including thoughts, dreams, perceptions, emotions, etc. Take your time and describe your experience as completely as you can. We will stop you if we need to go on to the next question.

There are no wrong or right answers, and your description could for example include:

● no experience or just a feeling of having experienced something without any memory of the experience

● emotions or feelings you were having

● sensations or perceptions (seeing, hearing, smelling, feeling, tasting, bodily sensations etc.)

● features (shape, color, size, texture, etc.)

● objects and scenery that were part of your experience (people, animals, inanimate objects, rooms, landscapes, etc.)

● movement, change, activities and events (what was going on and who/what was doing what)

● your own role in the experience (actively participating, only observing)

● awareness that you were experiencing something

● your experience of self

● narrative structure of the experience

● thoughts or reflections

● intentions, plans

● awareness that you were asleep and that your experience was a dream

● etc, etc …

*Right after awakening, you may find that it is hard to speak clearly, but just keep trying to communicate your experience, it will usually become a little easier to speak with time. Also, people often forget to report emotions, so please note that we are also interested in any emotions you might have had.*

### **Q3: To what extent did you experience a dissolution of your normal feeling of self or identity?**

*Try to give an indication to what extent you experienced a reduction in self-referential awareness that is typical for a normal state of awake consciousness. This may include a loosening of your self identity and feeling of being a subject separate from the world. Answer ‘none’ if you experienced no such disruption of the typical subject-object experience.*

**Q4: To what extent did you feel at one with the universe?**

*Try to give an indication to what extent you experienced a feeling of unity or oneness with the world outside your body. This may include a disruption of self-world boundaries or an increased experience of unity with others' and your surroundings. Answer ‘none’ if you experienced no such disruption of the typical distinction between you and the world/other people.*

### **Q5: Remember these five words: [five one-syllable common nouns]. Which five words did i say?**

Repeat the words that you were told to remember.

### **Q6: I will name six cities. Answer the country if you know, answer ‘next’ otherwise: [some well known and less known cities]**

We will name some cities. Your task is to name the country where the city lies. Some of the cities will be well known, some will be less well known. Answer the country if you know for sure, answer ‘don’t know’ otherwise. *It is completely fine if you do not manage to name the country for all the cities.*

**Q7: What smell is this?**

A6 (example): Introducing smell of pastry’, ‘Croissants’.

Instructions: I will introduce a smell. Your task is to try to identify the smell. Answer what you think is in front of you, answer ‘I don’t know’ otherwise. *It is completely fine if you cannot identify the smell.*

## **Emergence**

### **Q8. Can you tell us about your experiences during anesthesia?**

Tell us everything you remember after the start of induction.

### **Q9. Do you remember anything related to the experiment itself?**

Tell us anything you might remember related to the experiment itself (awakenings, talking, the room, etc) that happened after the start of ketamine sedation.

### **Q10. Do you remember any dreams?**

Please tell us about any dreams that you might have had during ketamine sedation, and as much as you are able to remember about the contents of those dreams.

### **Q11. What was the last thing you remember before falling asleep (and what is the last number you remember)?**

Please tell us the last things you remember before falling asleep.

### **Q12. Anything else?**

Just take some time, tell us about any other dreams or experiences during the ketamine sedation that might come to mind, any thoughts you might have, etc.

### **Q13. Which of these odors did you smell just before emerging from ketamine sedation?**

Right before emerging from ketamine sedation (while you are still sleeping), we will present you with one of multiple alternative odors. This question then asks you to pick out the smell that was previously presented to you. First by guessing freely, then from four alternatives, and finally two alternatives.

*While we are tidying up, one of the experimenters will guide you through a final set of standardized questionnaires which consist of specific questions regarding the experience you just had.*