

Information Sheet

Study title: Brain stimulation in older adults: Can it improve mood?

Please read this information carefully before you decide whether or not to take part in this study. You should ask any questions and you are welcome to discuss this study with the researcher or with your own friends and family.

What is the purpose of the study?

The aim of this study is to see if brain stimulation can improve mood and the ability to identify positive and negative emotions, among healthy older adults. Some older adults have problems with low mood that persists but is not severe enough to be classified as depression. It may be possible to improve mood by stimulating the brain with a technique called transcranial electrical stimulation (tES). In younger adults, tES has improved mood, but studies have not yet been performed in older adults. We want to see if we can improve mood in typical healthy older adults, before we apply this technique to older adults with depression.

Why have you been invited to participate?

We are inviting both older and younger adults to take part as healthy volunteers. Specifically, you should have no current or past problems with depression or other mood disorders.

Who is organizing the study?

The study has been designed by Dr. Rebecca Charlton, Dr. Carys Evans, and their team in the Department of Psychology at Goldsmiths University of London. It is funded by the Dunhill Medical Trust.

What will happen to me if I take part?

If you agree to take part we will ask you to come to Goldsmiths University for two visits, each visit will be approximately 2 hours long.

On your first visit, we will ask you to complete a consent form agreeing to take part in the study. We will also ask you about your background (education, work) and general health and we will measure your blood pressure. After this, we will ask you to complete a series of tests to measure your memory and thinking abilities. For these tasks, you may be asked to read some words, remember a story, or copy some designs. You will then complete one of the tES tasks (more on tES tasks below).

On your second visit, we will again ask you to complete a few tests measuring memory and thinking abilities. After this you will complete the other tES task.

tES tasks: During one task, stimulation will be performed. During the other task, electrodes will be placed but no stimulation will occur. This will allow us to examine the effect of stimulation for each person individually. For both tasks, we

will ask you to complete some questionnaires about your mood, an emotional identification task, and a few brief memory tests before and immediately after the stimulation. We will not tell you whether you are receiving stimulation or not during the visit. After the study, if you are interested, we can tell you when you received the stimulation.

What will happen during tES?

During tES we will stimulate your brain with a weak electric current. To do this, we place salt water soaked sponges on your head and a weak electric current will be passed through these sponges by some wires. This will excite the brain tissue below the sponge pads. We will start by finding the best part of your brain to stimulate; this may be on your forehead or the top of your head. The current may cause a slight sensation over your scalp, but this is not usually unpleasant.

The only side-effect of tES is a mild tingling sensation on the scalp under the electrodes when the current is on. This sensation is very mild and becomes unnoticeable after a few seconds. The researchers have been trained to place the sponges in a ways that minimize unpleasant sensation on the skin.

tES has been used safely in thousands of individuals around the world. A researcher experienced with the technique will administer stimulation and will be present at all times to monitor your progress.

Is tES safe?

tES has been used safely in thousands of individuals around the world. Although the current is usually too weak to cause unpleasant sensations or harmful effects, it involves electricity; therefore there are some safety considerations.

tES can be harmful to people who have a **pacemaker, an implanted medication pump or metal objects inside the head** (for example a shrapnel wound). Please inform the investigators if you might have any of these. Since the effects of tES on the foetus are unknown, **you are advised not to take part if pregnant.**

You are also advised not to take part if you have **drunk alcohol in the last 24 hours**, if you have **used recreational drugs in the last month** or if you have not had a good night's sleep prior to the experiment.

With strong tES, it is theoretically possible to cause epileptic seizures in susceptible individuals with a family history of epilepsy. **Please inform the investigators if there might be cases of epilepsy in your family.**

The low current level we use follows safety guidelines and (to our knowledge) the technique is entirely safe. In the unlikely event of a seizure, you will be given appropriate medical treatment. The other known side effects of tES, in a small percent of individuals, are headache and nausea, which subsides within a few hours. **No long-term side effects of tES have been described and there are no known reasons to suspect any.**

Do I have to take part?

No. Your participation in the study is voluntary. You may refuse to participate or withdraw at any time without penalty. You may choose not to answer any questions that make you uncomfortable.

Will I be getting paid for taking part in this study?

We can offer you a small payment to reimburse you for your time and travel expenses. This will amount to £20 on completion of the entire study.

Who will know I am taking part in the study?

All information will be kept strictly confidential. It is up to you who you choose to tell about the study. All data collected from the study will be made anonymous so that you cannot be recognized from it. If the results of this research study are published and presented at meetings, your name will not be shown.

Some of the information we collect during the study for example blood pressure measures, may be useful to share with your GP. We will always ask you before we share any information and will not do so without your consent.

Who has reviewed the study?

The study has been reviewed and approved by Goldsmiths University Research Ethics Committee.

What will happen to the results of the study?

The results of this study will be used to help understand more about how we can improve mood and reduce depression in older adults. If you would like a copy of the results for the study, please let the researcher know or contact Dr Rebecca Charlton at the Department of Psychology, Goldsmiths University, or on 020 7919 7222 (r.charlton@gold.ac.uk).

What do I do if I have any questions?

If you have any questions about the study, you may contact:

Adam Claessens on 020 7896 2798 or a.clae001@gold.ac.uk

Dr Carys Evans on 020 7896 2798 or c.evans@gold.ac.uk

Dr Rebecca Charlton on 020 7919 7222 or r.charlton@gold.ac.uk or via the address below.

You may contact Dr. Charlton the principle investigator on this study at any time using the following information.

Postal address: Dr Rebecca Charlton, Department of Psychology, Goldsmiths University, New Cross, SE14 6NW

Telephone: 020 7919 7222 E-mail: r.charlton@gold.ac.uk

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Information Sheet, Version 2

Date: 5th July 2017

Do you currently have any of the following fitted to your body? <input type="checkbox"/> Heart pacemaker <input type="checkbox"/> Medication pump <input type="checkbox"/> Cochlear implant <input type="checkbox"/> Surgical clips <input type="checkbox"/> Any other metallic object	YES	NO
Do you have any metal in your brain or elsewhere in your body? (If YES, please specify item and location.)	YES	NO
Have you ever undergone a neurosurgical procedure (including eye surgery)? (If YES, please describe.)	YES	NO
Do you have a personal or family history of epileptic fits or seizures? (If YES, then please state your relationship to the affected family member.)	YES	NO
Have you ever suffered from febrile convulsions (in infancy)?	YES	NO
Have you ever fainted? (If YES, please describe the frequency and circumstances.)]	YES	NO
Do you have a personal history of migraines? (If YES, please describe.)	YES	NO
Have you ever had a head trauma that was diagnosed as a concussion or was associated with a loss of consciousness? (If YES, please describe.)	YES	NO
Do you have any other medical/psychiatric/neurological disorder? (If YES, please describe.)	YES	NO
Could you be pregnant?	YES	NO
Are you currently taking any prescribed or unprescribed medication (or herbal remedies), or participated in the last month in a pharmacological experiment? (If YES, please describe.)*	YES	NO
Have you drunk any alcohol or used any recreational drugs in the last 24 hours?	YES	NO
Have you had more than one cup of coffee, or other sources of caffeine, in the last hour?	YES	NO
What is your typical caffeine intake (e.g. one cup of coffee per hour)?		
When did you have your last proper meal?		
How many cups of fluids (water, juice, etc.) have you had today?		
Have you removed all metallic items (e.g. jewellery, coins, watches) from yourself?	YES	NO
Have you had a full night's sleep (≥ 6 hours) the night before the study?	YES	NO
Have you participated in a TMS study in the last 7 days? (If YES, when?)	YES	NO
Have you participated in a tCS study in the last 7 days? (If YES, when?)	YES	NO
Do you understand that you should not drive for one hour after receiving tCS/TMS?	YES	NO

I confirm that the above information is correct to the best of my knowledge.

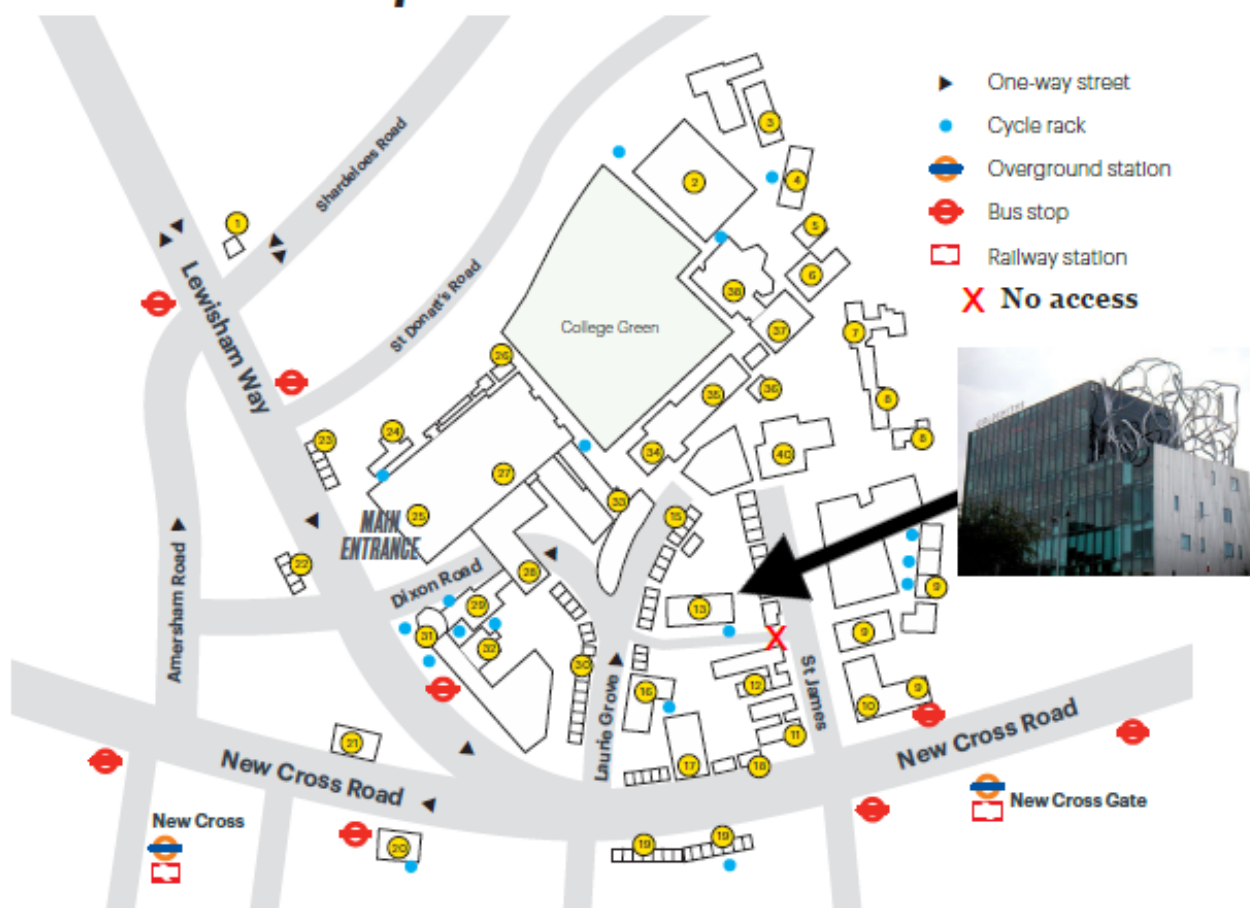
Participant name: _____ Date: _____

Signature: _____

The study will take place on the first floor of the **Ben Pimlott Building**: building 13 on the map. I will meet you in the reception area on the ground floor.

Only access is via Laurie Grove; access is blocked via St James for building work.

Goldsmiths site map gold.ac.uk/find-us



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30-40 Lewisham Way **23**

41-43 Lewisham Way **22**

286/288 New Cross Road **18**

Barriedale Building B (Studio B) **03**

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Batavia Mews **19**

Ben Pimlott Building 13

The Bungalow **36**

Careers Service **15**

Central Stores **12**

Chaplaincy Centre **30**

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& Performance **41**

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Professor Stuart Hall Building **02**

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Rutherford Building (Library & IT
Services) **31**

Santander Bank **27**

St James Annexe **11**

St James Hall **07**

St James Hall (Media &
Communications) **08**

St James Hatcham Building **40**

Students' Union **28**

Surrey House & Surrey Annexe **01**

Warrington Tower **32**

Whitehead Building **35**