

PARTICIPANT INFORMATION SHEET

EEG session

Ethics Approval Reference: ERN_21-0737AP6

We would like to invite you to join a research study. Before you decide whether to take part, it is important that you understand why the research is being done and what it will involve. Please take time to read the following information carefully and ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

The purpose of this study is to examine measures at the level of the muscle and brain which may be related to impaired inhibitory control. In this study session, we will record your brain activity by means of electroencephalography (EEG) while you are presented with visual stimuli. We will ask you to make simple judgments about the stimuli by pressing switches. By analysing the ways you respond to the stimuli, we will be able to further understand the brain networks that support impulse control.

Why have I been invited?

We are asking you to think about joining this study because either: **you have Parkinson's disease AND i) are not yet taking medication OR ii) are taking ropinirole**, which can help us understand how changes during Parkinson's disease and medication can affect impulse control.

If you have Parkinson's disease, you may be eligible to participate if:

- You are between 40-80 years of age
- Other than Parkinson's disease, you have no history of neurological illness (including mild cognitive impairment and dementia)
- You have normal or corrected-to-normal vision (e.g., glasses)
- You are either **i) not yet taking medication** (de novo Parkinson's) OR **ii) taking the dopamine agonist ropinirole** (also known as Requip, Repinex, Aimpart, Ippinia, Ralnea, Raponer, Ropilynz, Ropiquial and Spiroco) **as part of your medications**

Your participation is entirely voluntary, and you may withdraw from participation at any time before the end of the experiment. There is no penalty for withdrawal.

What does this study entail?

Before you decide to take part in this study, we will offer you an initial virtual familiarisation session, where you will be shown the lab and equipment, and will have the opportunity to ask the experimenter any questions. Once you have decided to take part in this study, you will be asked to come to laboratories at the University of Birmingham, where a member of our

research team will discuss the study with you and answer any questions you may have. If you are still happy to take part, we will ask you to sign the consent form. We will also ask you to provide your medication information, including whether you are taking any medication for Parkinson's disease and what medication you have been prescribed, as well as information on dosage and duration.

The study will take approximately 2.5-3 hours to complete. To help reduce tiredness and ensure you are comfortable during the session, we will include regular breaks, provide glasses of water, and perform seated stretches e.g., ankle and shoulder rolls.

First, we will set up the EEG recording. This involves wearing a cap that is mounted with a series of electrodes that can record the small electrical signals that are constantly being generated by your brain. These electrodes can only record, and do not stimulate in any way. To record the signal from your brain, a small amount of saline gel will be placed under each electrode. This washes out easily and hair-washing facilities are available should you wish to wash your hair after the experiment is over. There is a low chance of mild skin irritation at some contact points between the electrodes and your skin. The experimenter will monitor this during the procedures, and please inform the experimenter if you feel any discomfort.

A good recording of EEG data requires the electrodes in this headcap to be close to your scalp. This means that the amount of time taken to set-up the electrodes will vary depending on the amount and style of your hair. You will be reimbursed for this time accordingly. In rare cases, we may be unable to place the electrodes close enough to your scalp, and so we will need to stop the study. In these cases, you will be reimbursed for the time taken up to that point.

If you require a female experimenter to fit the EEG headcap due to you needing to remove your head-covering, please let us know.

The experimenter will explain the specifics of the study with you when you are ready to begin. If you have any questions at any time, please feel free to ask. You will be provided with regular breaks throughout the study.

Compensation for your time

For completion of the study, you will be compensated with £10 per hour you spend with us in the university laboratories along with travel reimbursement.

Your right to withdraw

You can stop taking part in the study at any time, without giving a reason and without any penalty. We need to manage your data in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you. If you wish to stop participating, simply inform the experimenter. If you withdraw before completion of the full study, you will be compensated for your time up to that point. If you withdraw, you can also request that we destroy any data that we collected from you. If you wish us to do this, you must make your request by email *within one week* of withdrawing from the study. If you have any questions about your participation at any time, please don't hesitate to ask the experimenter.

Confidentiality and data security

All your data will be treated confidentially. Specifically, we will store one document that links your name with a specific ID number for this study (e.g. p01). This document will be stored in on secure University servers and can be accessed only by the experimenter and lead investigator.

All other data will be stored anonymously under your study ID. This data will be stored on password-protected computers within the laboratory and on the University's password-protected network drives.

Results of the study

The results of this study may be included in student dissertations, presented in academic talks, and published in academic journals. Data will always be anonymous. Fully anonymised data may be made publicly available online at the time of publishing of any academic manuscripts that include the results from this study. Importantly, this data will contain no personal identifiers, and cannot be linked to you. Further details regarding the purpose of this research will be provided after completion of the study.

Who has reviewed this study?

All research studies are checked by an ethics committee to ensure the research is conducted safely and to the best standards. This research has been reviewed by, and received favourable opinion through, the University of Birmingham Research Ethics Committee.

Funding

This study is funded by the Humane Research Trust.

Contact details

If you have more questions, please contact one of the investigators (details listed below):

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