Columbia University Consent Form

Protocol Information

Attached to Protocol: IRB-AAAR9148
Principal Investigator: Daniel Wolpert (dmw2173)
IRB Protocol Title: Mechanisms of human sensorimotor control

General Information

Consent Number: CF-AABL6857
Participation Duration: 1-4 hours
Anticipated Number of Subjects: 1500
Research Purpose: To investigate how the brain controls movement.

Contacts

Contact	Title	Contact Information
Daniel Wolpert	Principal Investigator	Email: wolpert@columbia.edu

Information on Research

We are asking you to take part in a research study. This form explains why we are doing this study and what you will be asked to do if you choose to participate. It also describes the way we would like to use and share information about you. Please take the time to read this form. We will talk to you about taking part in the study and you should ask us any questions you have about this form and the study. You do not have to participate if you don't want to.

Why the study is being done:
We are doing this research to undertand how humans control movement.

The things that you will be asked to do if you are in the study:
We will ask you to complete a questionnaire to determine your handedness.
The inclusion criteria for the study are that you need to be right-handed and between 18-45 years old.

You will be asked to make arm and/or eye movements. Visual information is provided by computer monitor or a 3D (stereoscopic) display systems and external forces may be applied to your arm by robotic interfaces. The pattern of

muscle activation may be measured with surface electromyogram (EMG). Limb movements are tracked either using the robotic interface or using standard techniques involving commercial optical or electromagnetic motion tracking systems. Eye movements may be recorded using standard non-contact techniques involving commercial infrared light sources and camera systems. All these methods are non-invasive.

The study will involve several movement trials, lasting from 1 to 4 hours.

Risks

The study is purely behavioural and non-invasive. We have used similar procedures for over 20 years and have had no problems with discomfort or inconvenience. Sometimes the experiments can be mildly physically tiring and we ensure regular rest periods where you can rest for as long as needed.

Although we will make every effort to keep your information confidential, no system for protecting your confidentiality can be completely secure. It is possible that unauthorized persons might discover that you are in this study, or might obtain information about you.

Benefits

You will not benefit directly from taking part in this research study. The study guides our understanding of normal human brain function. We hope that the results of this research will one day help patients who suffer from neurological and psychiatric disorders that affect movement.

Confidentiality

Any information collected during this study that can identify you by name will be kept confidential. We will do everything we can to keep your data secure, however, complete confidentiality cannot be guaranteed. Despite all of our efforts, unanticipated problems, such as a stolen computer may occur, although it is highly unlikely.

We will assign an identification code to the study records. We will keep the link between your name and the code and the study records secure and in a separate location. We will keep the link between the code and your name indefinitely. If we publish the results of this study we will not use your name.

Government or university staff sometimes review studies such as this one to make sure they are being done safely and legally. The following individuals and/or agencies will be able to look at and copy your research records:
- The investigator, Columbia University Medical Center (and NewYork-Presbyterian Hospital if applicable); study staff

and other medical professionals who may be evaluating the study
- Authorities from Columbia University (and NewYork-Presbyterian Hospital if applicable), including the Institutional Review Board ('IRB')
- The Office of Human Research Protections ('OHRP');

If a review of this study takes place, your records may be examined. The reviewers will protect your privacy. The study records will not be used to put you at legal risk of harm.

Compensation

If you agree to be in the study, we will pay you to partially compensate you for your time. You will be paid $17 per hour. Additionally, you may have the opportunity to earn additional money. The money will be loaded onto a pay card.

Note that if you participate through the Columbia Psychology Department Participant Pool you will instead be credited with 1 credit per half hour up to 3 credits rather than financial remuneration.

Voluntary Participation

Taking part in this study is your choice. You may refuse to take part in the study or withdraw from the study at any time without jeopardizing your employment, student status, or any other rights. The investigator may withdraw you at his/her discretion.

Additional Information

If you have any questions or are hurt while taking part in this research study, you should contact Daniel Wolpert (wolpert@columbia.edu).

If you have any questions about your rights as a research subject, you should contact the Human Research Protection Office and Institutional Review Board by phone at (212) 851-7040 or by email at askirb@columbia.edu.

More information about taking part in a research study can be found on the IRB website at http://www.columbia.edu/cu/irb

Statement of Consent

I have read the consent form and talked about this research study, including the purpose, procedures, risks, benefits and alternatives with the researcher. Any questions I had were answered to my satisfaction. I am aware that by signing below, I am agreeing to take part in this research study and that I can stop being in the study at any time. I am not waiving (giving up) any of my legal rights by signing this consent form. I will be given a copy of this consent form to keep for my records.

Signatures

Participant Signature Lines

Study Participant

Print Name _____ Signature _____

Date _____

Research Signature Lines

Person Obtaining Consent

Print Name _____ Signature _____

Date _____