LREC reference Number: 05/Q0102/169

VOLUNTEER INFORMATION SHEET

An fMRI Study of Frontal Lobe Function in Attention.

We would very much like you to take part in our research study. This sheet (which you may keep) provides preliminary information regarding the procedure.

What is MRI scanning?
We can learn a great deal about how the brain works by looking at the blood flow to different parts of the brain whilst the brain performs different tasks. We need to obtain this information in both health and disease.

We measure brain function using images taken with a magnetic resonance imaging scanner. This scanner uses a strong magnetic field to create detailed images of brain structure and function. By taking a series of images whilst you perform a task we can build up a picture of the brain areas activated by this type of function. The scan does not involve any injections or X-rays and MRI is thought to be a safe, non-invasive imaging technique.

Like faces, brains come in all shapes and sizes, so that there are many normal variations of what the scan shows. There is a chance of less than 1:100 that your MR scan may show a significant abnormality of which you are unaware. In such circumstances, you will be appropriately counselled. You will be referred to the appropriate specialist in consultation with your General Practitioner if that is what you would like. Such early detection has the benefit of starting treatment early but, in a small number of cases, may have implications for future employment and insurance.

Why have I been chosen?
You have been selected for this study based on your initial recruitment to the Cambridge BioResource. When you joined this panel you provided a saliva or blood sample for genetic analysis. The results showed that your 'genotype' (genetic make-up) is relevant to the aims of this study. Please note, however, that when you come for testing, the experimenters will not have access to this information. Genetic information is only made available on completion of the study.

What does the procedure involve?
Before your scan a member of staff will ask you some questions to ensure that you have no metal within you before you enter the strong magnetic field. You will then be asked to lie in the scanner and the scanning will start. The scanning can be noisy and so we shall give you ear plugs as well as headphones to reduce this noise. It may not be appropriate for you to be scanned if you are very claustrophobic. We do not scan women who are pregnant. During some of the scans we will ask you to perform simple tasks, described below. The scanning session will take about one and a half hours, although you will not actually be scanned for more than 72 minutes of this time. The first 15 minutes will be for setting up, then brain function will be imaged for 20 to 60 minutes, and the final 12 minutes will be used to collect a very detailed picture of your brain. While measuring brain function we will use several different sequences.

What will you be doing during the study?
In this study, we are investigating the processes by which we are able to control the focus of our behaviour. Your task will involve looking at images or patterns, displayed inside the scanner via a projector screen and you will have to react to them using a button box according to certain rules. The rules are simple and you should have no problems undertaking the tasks.

If you decide to take part in this study, you will be asked to sign a consent form. You may withdraw from the study at any time without explaining why. All the information we collect is kept confidential and is only seen by members of the Cognition and Brain Sciences Unit and their collaborators. The results will be kept securely for a minimum of 10 years and possibly indefinitely in the Cognition and Brain Sciences Unit data archive in accordance with good research practice. Only one scanning session will be needed for this study.

I would like to report that the studies proposed in the above ethics application have been independently reviewed by our committee and approved. The committee is comprised of statisticians (Dr Ian Nimmo-Smith), experts in fMRI methodology (Dr Rik Henson, Dr Matthew Brett), in addition to experts in psychology and

neuroscience (myself, Professor William Marslen-Wilson, and Dr Matt Davis), and the overall report of the committee is that the studies are well-designed and will yield interesting data tractable for analysis in the time frame outlined. The studies are of scientific interest and have methodological integrity, and they are fully supported by the MRC.

If you would like further information or would like to discuss any aspect of volunteering, then please contact either of the following:

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