

# Cam-CAN Newsletter 2011



## Welcome to the first update from the Cambridge Centre for Ageing and Neuroscience

Welcome to the first newsletter from the Cambridge Centre for Ageing and Neuroscience (Cam-CAN). We hope that our regular newsletters will help keep you, our participants, informed of our aims and objectives, our findings, and our plans for the project.

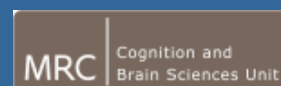
The Cam-CAN project was begun in October 2010 thanks to funding from the Biotechnology and Biological Sciences Research Council (BBSRC). It is our aim to understand how we can best maintain cognitive health across our adult lives. As the British population enjoys longer life, this issue becomes more critical in order to ensure that as we age we maintain independence, social connection, and a sense of well-being.



As with any large-scale research project, we rely on our volunteers to make sure our research reflects a broad sample of people and provides the most informative data. All of you receiving this newsletter have already given generously of your time and many of you will go on to participate in further data collection with us. I'd like to take this opportunity to thank all of you and to assure you that you are making a critical contribution to our understanding of how we can best age healthily and successfully.

Professor Lorraine K Tyler  
Principal Investigator

Supported by:



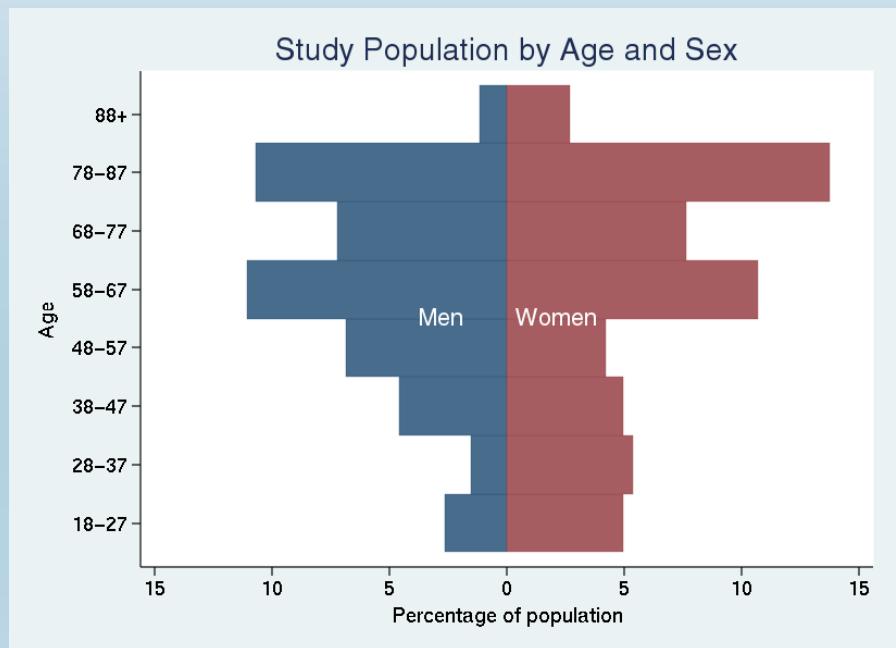
# How does Cam-CAN work?

In order to understand how cognitive abilities change over time, we will be using many sources of information about our participants. These include demographic and lifestyle information (like information about diet or educational attainment) information about brain structure and function, and measures of performance on cognitive tasks in a range of areas (like memory, emotion, and language). We know this is the best way of getting the complete picture because normal ageing can affect all these factors, which can also interact with each other.



# Who is taking part?

Hundreds of people have already joined the Cam-CAN project by agreeing to be interviewed by our Research Interviewing team, and by coming to the MRC Cognition and Brain Sciences Unit for further tests. As the figure on the right shows, we're gathering data on a wide age range from 18-year-olds up to people in their 80s and 90s. This range will help us meet a key goal of the project, which is to understand normal ageing as a lifelong process, not something that happens to us when we turn 60, 70, or 80.



Jo Mitchell meets Russell Sims on one of her regular visits to participating GP surgeries.

# Local surgeries get involved

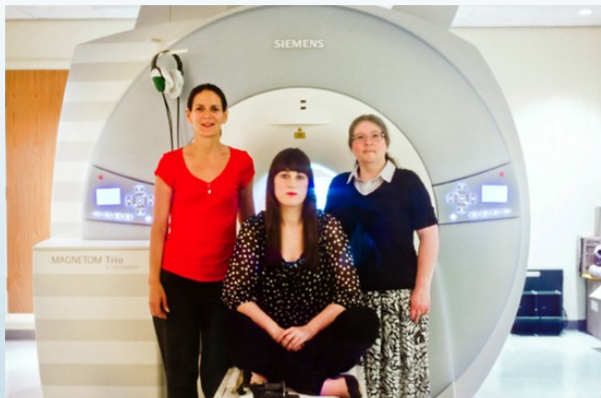
The Cam-CAN project provides a rare examination of a wide range of neural and behavioural factors across the adult life-span, providing an unprecedented opportunity to understand healthy ageing. To provide the best chance for this research to contribute to new strategies for long-term health care, we need to recruit a large number of participants and include the most representative set of people possible. To do this, we've enlisted the help of the NHS through local GP surgeries.

Cornford House Surgery's Practice Manager, Russell Sims, explains why his surgery is lending its support to the project: "Here at Cornford House Surgery we have a greater

proportion of elderly patients than the norm. As a result we have a particular interest in the ageing process because we want to understand it more, to better care for our patients. Our aim is to become a beacon for elderly care in Cambridgeshire. As such, we have been more than happy to become involved with this long term study by Cam-CAN which aims to help our understanding of the effects of ageing and why some patients' cognitive health differs from others over time."

## Meet your Research Assistants!

Many of our participants will be spending quite a bit of time with our Research Assistants (RAs). All experienced researchers before joining the Cam-CAN project, they are critical research team members.



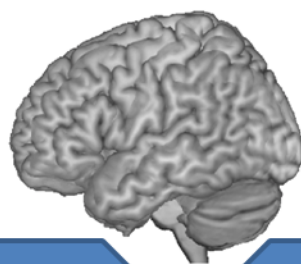
*From left to right, meet Tina Emery, Claire Hanley, and Sharon Erzinçlioğlu:*

Tina graduated from Edinburgh University and has experience working in the NHS and the University of Cambridge administering a broad range of neuropsychological tests.

Claire comes to us from completing an M.Res in Brain Imaging and Cognitive Neuroscience at the University of Birmingham where she employed a variety of neuroimaging techniques.

Sharon began her academic career in Animal Behaviour at the University of Durham, and has been conducting research for the MRC for the past 10 years.

## Looking at what your brain is doing



### MEG

#### (Magnetoencephalography)

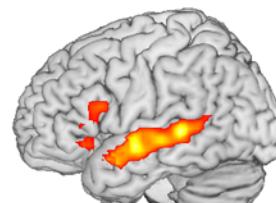
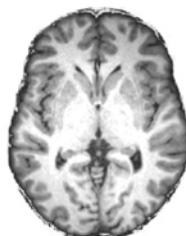
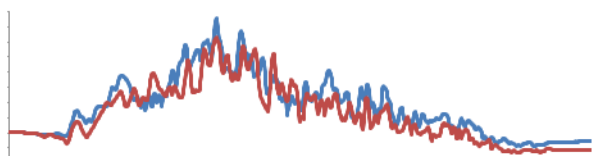
MEG measures the changes in the brain's electrical activity that occur when performing cognitive tasks. This is a passive recording, and the sensors are sensitive enough to provide real-time data on brain activity with millisecond precision.



### MRI

#### (Magnetic Resonance Imaging)

MRI is a noninvasive method that uses a powerful magnet and radio waves to make a detailed image of the brain. In conjunction with structural MRI, functional MRI provides information about neural activity.



*Each method provides a different piece of the puzzle towards understanding how our brains change across the lifespan. MEG provides fine-grained information about brain activity from millisecond to millisecond. Using functional MRI, changes in activity are measured over several seconds, but information about the location of brain activity is much more accurate than MEG. Normal ageing is known to affect the timing of activity, what brain regions are active, and the underlying brain structure, but it is not very common to collect MEG, structural MRI, and functional MRI on a single person. By combining these different sources of data, the Cam-CAN project will provide a unique resource of information on neural function across the adult lifespan.*

## Meet the Admin team

A research study as large as Cam-CAN needs an efficient administration team to operate successfully. We are lucky enough to have three experienced administrators working hard to help us meet our recruitment targets and support the research team.

You have probably already had some contact with Marie Dixon (pictured right), our project Administrator and Laura Willis (left), our Administrative Assistant. They are your main point of contact with the project, and are responsible for invitations, appointment scheduling, and answering any questions you may have about the study. Jo Mitchell (centre), our Epidemiology Research Co-ordinator, liaises with participating GP surgeries and co-ordinates the Research Interviewers, one of whom visited you at the start of your involvement with the project.



All three have previous research administration experience: Marie has spent six years at the University of Cambridge supporting ageing, language and stroke studies, Laura administered diabetes and heart disease research at Imperial College London, and Jo has a varied background in research administration and fieldwork in diabetes and ageing related fields.

They are always available for a chat so if you want to discuss the project please do call, e-mail or even pop into our Downing Street offices for a cup of tea. They would love to hear from you.

**Keep up to date with the  
Cam-CAN latest news and  
events on our website at  
[www.cam-can.com](http://www.cam-can.com)**

**MRC-CBU**



## What's next?

The Cam-CAN project has three main stages. We are currently in stages 1 and 2, collecting data from the interview and inviting 700 people to come in for a set of three imaging/cognitive sessions.

Preparations are under way for stage 3, involving detailed imaging sessions for 280 people, which should start in 2012-13. You will hear from us if we would like to invite you to complete stages 2 or 3. In addition, the data collected so far is already leading us to exciting new research questions that we hope to investigate in the future. We will keep you updated of these developments through our newsletters and website. We do hope that you will be interested in supporting further research with the Cam-CAN team.

## Thank you for taking part and please do keep in touch...

We are very grateful for your participation in the Cam-CAN project and for the time you have generously given us. Your contribution to our research is invaluable - we really couldn't do it without you! We hope that you are interested in future stages of the research and are willing to continue your participation.

So that we can keep in touch, please let us know if you have recently changed your contact details or if you have any questions about the research. You can contact us on:

Tel: 01223 766458 or 764414, Fax: 01223 766452, E-mail: [admin@cam-can.com](mailto:admin@cam-can.com)

Or you can write to us at Cam-CAN, Dept. of Experimental Psychology, University of Cambridge, Downing Street, Cambridge, CB2 3EB.

*Thank you*