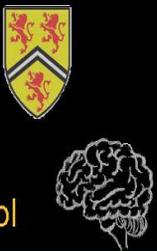


**WATERLOO RESEARCH IN AGING
 PARTICIPANT POOL (WRAP Pool)
 Annual Newsletter - Issue 4
 Fall 2010**

Waterloo
 Research in
 Aging
 Participant Pool



"Linking the senior community to university research"

Greetings from WRAP

The WRAP team would like to thank you for taking the time to take part in our research studies. Your contribution will assist in furthering our knowledge of the aging process and investigate the differences between healthy aging, and disease processes including but not limited to stroke, Parkinson and Alzheimer disease. We are currently looking for more volunteers like yourself to participate in studies. If you know of someone that may be interested in participating please have them contact the WRAP Coordinator, Michelle Manios, at 519-888-4567 ext.37776.

Research Update

Composite Behavioural Markers to Assess and Monitor Alzheimer's Disease

Researchers: Dr. Pascal Poupart, Dr. Eric Roy, Dr. William McIlroy, Dr. Sherry Dupuis, Dr. John Zelek, Dr. Sandra Black, Dr. Kenneth Rockwood, Dr. Richard Mann, Dr. Jan Huissoon

Current methods to assess Alzheimer's disease (AD) involve structured interviews and neuropsychological testing to evaluate cognitive, functional and neuropsychiatric deficits. However, these interviews do not directly evaluate the performance on relevant daily tasks and their limited frequency makes it difficult to detect subtle changes in cognitive abilities. There is a need for tools to assess and monitor Alzheimer's disease subjects continuously in their everyday activities in order to observe the progression of symptoms and the effect of treatments.

In this study we are collecting physiological, mobility, behavioural, activity and speech data with two groups of participants: (i) healthy subjects and (ii) subjects diagnosed with mild to moderate Alzheimer's disease. Statistical techniques will be developed to extract relevant information from raw data that may be predictive of Alzheimer's disease.

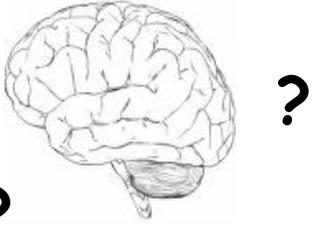
LONG-TERM GOAL: This is exploratory research intended to provide a proof of concept for the eventual development of automated monitoring

(Continued on next page....)

Brain

Teasers

Try these out just for fun!



From Riddles.com

Riddle A: Blindingly Helpful

*I build up castles.
 I tear down mountains.
 I make some men blind.
 I help others to see. What am I?*

Riddle B: The Special Number

What is special about the number: 854917632?

Riddle C: What Is

What is 1/2 of 1/4 of 2/9 of 3/7 of 84 of 84?

Answers: A: sand. **B:** it contains the numbers 1 to 9 in alphabetical order. **C:** 1. - 3/7 of 84 = 36, 2/9 of 36 = 8, 1/4 of 8 = 2, 1/2 of 2 = 1.
Word Scramble: 1) football; 2) applicider; 3) Halloween; 4) Leaf.

Winter Word Scramble

Unscramble the words below

1. toofblla _____
2. pecrlapdei _____
3. Heoenwla _____
4. Lfea _____

Research Update Continued

(...Continued from previous page)

techniques to passively and unobtrusively assess AD symptoms and their progression. This will be particularly useful to monitor the effects of treatments, including disease-modifying drugs and behavioural therapies.

Updating intention in the right parietal cortex

Researchers: Dr. James Danckert

Successful behavior requires an awareness of the world around us and the use of that information in adapting our conduct to present circumstance. We understand relatively little about the brain mechanisms involved in this type of behavior. Is it a general property of all brain regions or are there specific circuits and mechanisms that underlie our ability to update to circumstance? This project will examine the issues of how the rate of environmental change influences our behavioral choices and also how much we depend on the environment per se, or as mediated by consequences. Thus, this study will help us to learn how we update our expectations of the environment based on history and success.

Specifically, this project aims to examine the role of the inferior parietal cortex in updating intention. In other words, this study investigates how people make choices based on information they gain from previous experiences. Participants will play a computer version of Rock, Paper, Scissors. There are three versions of the task to be completed, with varying probability factors, in order to ascertain how participants are able to update intentions. Each choice - rock, paper or scissors - can 'beat' one other choice. Participants enter their choices via a button press. Three versions with different probabilities of each object occurring will enable us to determine if the right parietal lobe plays a key role in this updating process. Our hypothesis is that participants with right parietal damage will perform more poorly on this task than those with frontal lobe damage or healthy controls.

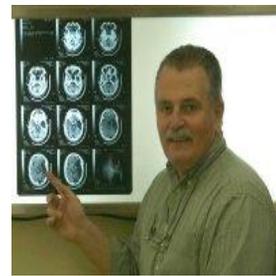
The study will be important in providing a foundation for further research on the subject of how we update our representations of the environment. Not only will this inform current models of the 'normal' functioning, but it will also provide important advances in our understanding of neuropsychological syndromes associated with parietal damage. Through a better understanding of what drives people to update their models of the world and the brain systems involved, we may one day be better able to design and implement effective rehabilitative strategies for people who have suffered stroke and other types of brain injury.

WRAP Members

WRAP Directors



Dr. Myra Fernandes
Department of
Psychology



Dr. Eric Roy
Department of
Kinesiology

WRAP Coordinator



Michelle Manios

Call for Participants!

If you already are a volunteer, please share this newsletter with any family and friends who you think might be interested in taking part in research studies.

For further information please contact us

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