2016 represents a major milestone for the Sydney Memory and Ageing Study; the beginning of our 10th year of follow-up!

Our study began in 2005 with 1037 residents of Sydney’s eastern suburbs aged between 70 to 90. Unfortunately 250 participants are known to have passed away and 224 have been unable to continue with the study due to poor health or other difficulties. However, we are pleased to report that 563 of our valued participants as well as 479 of their relatives and friends are still involved with the study and continue to give their time towards this important project.

We are delighted to have maintained contact with so many of you over the past 10 years. Together we have accumulated an impressive amount of data on all aspects of ageing including memory and cognition, physical health, falls and balance, genetics, and brain structure. These data have led to the publication of over 100 scientific papers in respected, peer-reviewed journals with another 50 papers currently in preparation. Data from the Memory and Ageing Study have contributed to international understanding of the ageing process in fields such as neurology, psychiatry, brain imaging, genetics and nutrition. Some of our recent findings are detailed on Pages 4-5.

Towards the end of 2015 we received some terrific news; Centre for Healthy Brain Ageing (CHeBA) researchers were awarded close to $6.5 million in grant funding from the National Health and Medical Research Council. This grant will fund the largest dementia clinical trial in the world for people aged 55-75. The ‘Maintain Your Brain’ trial will recruit 18,000 people to test whether an internet coaching tool can reduce the risk of dementia.

Moving forward, our focus will continue to be on forging partnerships with research groups in Australia and around the world. CHeBA leads a consortium of 25 international studies investigating rates of and risk factors for cognitive decline with ageing. International collaboration allows researchers to determine what factors are common for cognitive decline and dementia in all human populations irrespective of race, ethnicity and socioeconomic development.

To our participants and their relatives and friends that have contributed to our research, thank you for all the time you have given us thus far. This research would not be possible without people like you. We look forward to working with you for many years to come.

Professor Henry Brodaty
Co-Director, CHeBA
Progress to Date

Wave 1
Sept 2005 - Dec 2007
Baseline Assessment
n = 1037

Blood Tests
n=943
MRI
n=544
Falls Study
n=500

Oct 2006 - Dec 2008
1-year Phone Interview
n = 970

Wave 2
Oct 2007 - Dec 2009
2-year Assessment
n = 889

Blood Tests
n=722
MRI
n=425
Falls Study
n=531

Oct 2008 - Dec 2010
3-year Phone Interview
n = 893

Wave 3
Oct 2009 - Dec 2011
4-year Assessment
n = 792

Falls Study
n = 442

Oct 2010 - Dec 2012
5-year Phone Interview
n = 751

Wave 4
Oct 2011 - March 2014
6-year Assessment
n = 708

Blood Tests
n=533
MRI
n=265
Falls Study
n=312

Oct 2012 - Dec 2014
7-year Phone Interview
n = 642

Wave 5
Oct 2013 - March 2016
8-year Assessment
n = 570

Nov 2014 - Present
9-year Phone Interview
n = 364 (Ongoing)

Wave 6
March 2016 - Present
10-year Assessment
n = 72 (ongoing)

Planned for 2017
11-year Phone Interview

563 of you have been a part of the study since 2005!
Project News

We have recently completed our 8-year follow up interviews! 570 participants and 450 of their family and friends completed these phone interviews. There was some uncertainty about the future of the study following the 8-year interviews but our recent success with research funding means that we will be able to continue the study for 9, 10 and 11 year follow-up. 364 of you have already completed the 9-year phone interview and in March 2016 we commenced our 10-year assessments.

The 10-year assessment is a face-to-face assessment that takes about 2 hours to complete (a shorter version is also available). It includes some questions about your health, memory and lifestyle, a short memory exercise, brief medical examination and some new measures to help us learn more about emotion recognition amongst older people. We are happy to come to your home for these assessments. 72 of you have already completed your 10-year assessment and we look forward to meeting with everyone else over the course of 2016 - 2017.

Congratulations to Professor Henry Brodaty on winning the 2016 Ryman Prize!

Professor Henry Brodaty, Co-Director of the Centre for Healthy Brain Ageing at UNSW and world-class researcher, clinician, advocate and pioneer, has won the 2016 Ryman Prize as recognition of his three decades of tireless work into ways to combat dementia.

The Ryman Prize is a $250,000 international prize which rewards the best work in the world that has enhanced quality of life for older people. It is the world’s richest prize of its type and was established to create the equivalent of a Nobel Prize for people working in the field of the health of older people.

Ryman Prize Juror Dr David Kerr said Professor Brodaty was a worthy winner. “We had an incredible field this year and there were some strong contenders from all over the world. Professor Brodaty’s nomination was a standout, his dedication and achievements are truly world-class. He is a pioneer in diagnosis and treatment of Alzheimer’s and dementia in Australasia and his influence has been felt around the world.”

Professor Brodaty said it was a wonderful honour.

“We are all ageing. Older people are the fastest growing sector of our population and mental health is the largest contribution to disease burden as we age,” he said. “I’m absolutely thrilled to receive this award. The Ryman Prize highlights the importance of enhancing the profile of research to improve the quality of life for older people.”
Research Highlights

Reaction time test predicts risk of dementia

Researchers from the Centre for Healthy Brain Ageing have found that older adults’ performance on reaction time tasks indicated their likelihood of developing dementia within the next four years.

The study tested 861 community living 70-90 year-olds from the Sydney Memory and Ageing Study using computer-administered reaction time tasks and was published in the March edition of the American Journal of Geriatric Psychiatry.

These findings highlight the potential of reaction time tasks to detect early cognitive changes associated with various types of dementia, according to lead author Dr Nicole Kochan.

“We were surprised that these brief computerised tests that take only about four minutes to complete were comparable to a lengthy two hour traditional battery of neuropsychological tests in predicting a loss in everyday function over the four year period”, explained Dr Kochan.

The simplest of the tasks - requiring participants to quickly touch the screen as soon as a coloured square appeared - was the best predictor of dementia. Individuals who had slower responses on this simple reaction time task compared to the typical performance of the group were two to three times more likely to receive a diagnosis of dementia within four years. Slower reaction time and more inconsistent or variable responses on the task represented an important risk for dementia, after accounting for other typical dementia risk factors such as age, depression, cerebrovascular risk and genetic susceptibility.

Computer-administered reaction measures have the potential to provide cost-effective, efficient and accessible screening of cognitive impairment and dementia and may be suitable for inclusion in an annual broad health check for aged persons, said Dr Kochan.

“Reaction time measures are attractive for a number of reasons. They are simple and quick to administer, allow better standardisation and may offer an excellent opportunity to identify persons at risk of dementia without the need for highly trained clinical staff.”

Computer-based reaction measures may also be applied to a broader section of the population since they do not need linguistic content, which may affect the reliability of tests for individuals from culturally and linguistically diverse backgrounds, and those with limited education or pre-existing conditions such as dyslexia.
Research Highlights

No link between alcohol consumption and dementia risk among 70-90 year olds

Our research team found no evidence for alcohol consumption being associated with dementia risk amongst 70-90 year olds regardless of APOE ε4 carrier status, a known risk factor for Alzheimer’s disease. The findings were published in the Journal of Alzheimer’s Disorder.

Lead author on the study, Dr Megan Heffernan, said that while alcohol has been identified as a potentially modifiable risk factor for dementia, findings to date have been divided. This study found no association between recent and previous alcohol intake and risk of dementia when examined separately, and no change with APOE ε4 status.

“One possible implication of our study is that, despite increasing research in this area, there is not enough consistent evidence to offer advice on the amount of alcohol that can be consumed to reliably reduce dementia risk,” said Dr Heffernan.

We sought to investigate whether alcohol consumption predicts incident dementia over four years and whether this was affected by the presence of the APOE ε4 gene. The study examined 594 participants from the Sydney Memory & Ageing Study, 48 of whom developed dementia.

Dr Heffernan said that given the relatively small number of people with dementia in the sample, the lack of findings is not enough to offer guidance about the association between amount of alcohol consumption and dementia.

Professor Henry Brodaty said that these findings indicated the need for comprehensive research around modifiable risk factors to ensure that advice is supported by the evidence base.

“The association between alcohol and dementia risk may need to be studied in younger age groups and over a longer period of time to better understand how alcohol influences dementia onset,” said Professor Brodaty.
The brain changes that cause dementia begin many years before any symptoms appear.

The evidence suggests that midlife is a critical time to think about looking after your brain, body and heart.

It is never too late to make changes that will improve your brain health.

-Alzheimer’s Australia

Healthier lifestyles could lower rates of dementia

A report released by Alzheimer’s Australia and the Centre for Healthy Brain Ageing, *Is the Incidence of Dementia Declining?*, suggests that preventative measures earlier in life could lower the risk of dementia for future generations.

Professor Perminder Sachdev, a lead investigator on the Sydney Memory and Ageing Study and Chief Medical Adviser to Alzheimer’s Australia, said: “There is evidence from recent studies in Europe that the age-specific rates of dementia may be modifiable. It is possible that environmental and lifestyle factors, such as diet and exercise, could make a significant contribution to reducing the risk of developing dementia.”

Alzheimer’s Australia’s National President, Ita Buttrose, said that the report highlights the importance of changing the way Australians think about dementia.

“The changes in the brain that lead to dementia begin up to 20 years before symptoms first appear. People of all ages can make simple lifestyle changes that may reduce their risk of dementia, such as increasing physical activity and controlling blood pressure and cholesterol,” Ms Buttrose said. “We are fortunate in Australia to have the world’s first publicly-funded dementia risk reduction program, *Your Brain Matters*, delivered by Alzheimer’s Australia.”

*Your Brain Matters* suggests 5 Simple Steps to Maximise Your Brain Health:

**Step 1: Look after your heart** - What’s good for your heart is good for your brain. The risk of developing dementia appears to increase as a result of conditions that affect the heart or blood vessels, such as high blood pressure, high cholesterol, type 2 diabetes, and obesity.

**Step 2: Be physically active** - Physical activity increases blood flow to the brain and stimulates the growth of brain cells and the connections between them. It also reduces the risk of cardiovascular conditions which are associated with increased risk of cognitive decline and dementia.

**Step 3: Mentally challenge your brain** - Challenging the brain with new activities helps to build new brain cells and strengthen the connections between them. Challenge yourself often and keep learning new things throughout life. It could be a new language, sport or hobby, as long as it’s learning something new!

**Step 4: Follow a healthy diet** - Eating a healthy and balanced diet may help in maintaining brain health and functionality.

**Step 5: Enjoy social activity** - Most of us are social beings and usually prefer the company of others. To help look after your brain it’s important to be social with people whose company you enjoy and in ways that interest you.

Learn more at http://www.yourbrainmatters.org.au/
Wipeout Dementia 2016 Exceeds Fundraising Target

Twenty of Sydney’s corporate surfers, led by Ambassador Richard Grellman AM, combined forces to raise awareness around the modifiable lifestyle factors for improving brain health, as part of the third Wipeout Dementia campaign.

The gruelling four-week strength for surfing training course culminated in a Surf Off on Saturday 28 May, where participants demonstrated their newly honed skills while raising funds for The Dementia Momentum, an initiative of the Centre for Healthy Brain Ageing.

“We are delighted and encouraged by the growing awareness and support Wipeout Dementia is generating within the Australian corporate community,” said Richard Grellman. “Long-term partnership between research and business is critical for us to face the social and economic challenges dementia incidence poses.”

Wipeout Dementia Ambassador and 1978 World Surfing Champion Wayne ‘Rabbit’ Bartholomew AM congratulated participants for their enthusiasm and involvement.

“The appeal of the Wipeout Dementia campaign is that all funds raised go directly to researching the prevention, diagnosis and treatment of dementia,” said Rabbit. “At the same time, we get to have a lot of fun doing something we love.”

Richard Grellman confirmed that the team exceeded their goal by raising over $82,000 to advance the large-scale, “big data” research being conducted at CHeBA. This fundraising event is held in honour of Richard’s wife Suellen, who has advanced young onset Alzheimer’s disease and has been in High Care since December 2015.

To learn more about Wipeout Dementia, visit https://cheba.unsw.edu.au/content/wipeout-dementia

City 2 Surf 2016

Team CHeBA proudly promotes positive ageing in the City 2 Surf with team members across all generations running alongside our Co-Directors Professor Henry Brodaty and Professor Perminder Sachdev.

All funds raised go directly to CHeBA’s research into healthy brain ageing with a goal of changing the future of dementia.

Anyone can run for Team CHeBA, just head to www.city2surf.com.au for more information. If you’re not up to the hilly challenge but would like to support the Professors you can make a contribution at https://cheba2.everydayhero.com/au/henry-perminder
Brain Donation

Brain imaging technology has improved markedly over the past few decades. However, even the most sophisticated imaging techniques cannot answer all our questions. To understand cellular changes in both healthy and disease-affected individuals researchers need to examine brain tissue.

The Centre for Healthy Brain Ageing has partnered with the Sydney Brain Bank. Participants in the Sydney Memory and Ageing study are able to donate their brain to this program if they wish. By comparing brain tissue to the huge volume of information we have collected over the last 10 years, we hope to gain new insights into the neurobiological basis of cognitive decline.

If you would like more information about brain donation or would like to register as a brain donor, please contact our friendly staff on (02) 9385 0425.

Meet the team

Over the next year or two you will receive a call or visit from one of our friendly research team members

Kate Maston, Study Coordinator (left)
Kate has a Masters Degree in Clinical Psychology and practiced as a Clinical Psychologist with children and adolescents before moving into Ageing Research at UNSW in 2011. She’s had the pleasure of meeting with hundreds of Memory and Ageing Study participants over the past 5 years.

Nicole Dargue, Research Assistant (centre)
Nicole is currently studying a Masters Degree in Clinical Neuropsychology combined with a PhD at Macquarie University. She started working with the Memory and Ageing Study at the beginning of 2016 after completing her Bachelor of Psychology (Honours).

Paul Strutt, Research Assistant (right)
Paul is in the final stages of completing his PhD in social cognition at the University of Newcastle and has recently started a Masters Degree in Clinical Neuropsychology at Macquarie University. Paul started working with the Memory and Ageing Study at the beginning of 2016.

Are you 95 years or older? Do you know someone 95 or older?

The Sydney Centenarian Study is seeking volunteer research participants aged 95 and above to help us discover the secrets to long life.

Participation involves two separate interviews in which you will be invited to answer some questions about your history, health, diet, memory and lifestyle, and undergo a short physical examination (height, weight, blood pressure). There is also the option to provide a blood sample and undergo a brain scan.

It doesn’t matter if you have memory or mobility difficulties, we are interested in meeting ALL people aged 95 or more.

Participants will be offered a $50 Coles-Myer gift card to thank them for their time.

If you are interested in learning more, please contact Adam Theobald (Study Coordinator) on 9385 0433 or a.theobald@unsw.edu.au