

Testosterone May Prevent Female Dementia

Older women suffer dementia and memory loss at twice the rate of men, and Prof Susan Davis and Dr Sonia Davison of Monash University's Women's Health Program suspect that a fall in testosterone levels after menopause may be responsible.

"There are many factors that point to dementia, which include symptoms such as a decline in cognitive function, memory loss, problem-solving skills and even disorientation," Davis said.

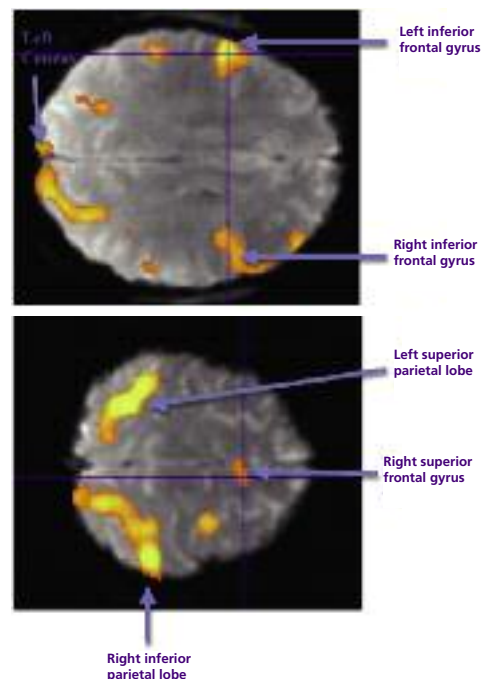
"The brain is filled with testosterone receptors but no one really knows how testosterone works in the brain. We suspect there could be a strong correlation between low testosterone levels and a decline in female brain function, and we want to test this theory."

The suspicion is fuelled by the fact that men who suffer from Alzheimer's disease are also likely to have less testos-

terone than their peers. During a previous study where women were given testosterone to see if it improved sexual function Davis says: "We threw in some cognitive tests and it seemed to help".

The researchers are seeking Victorian women on oestrogen therapy to take part in the study. Davis says women who have been on oestrogen therapy for some time have fewer confounding factors than menopausal women who are not taking hormones. Volunteers should email womens.health@med.monash.edu.au

The testosterone will be administered using a skin spray developed at Monash University, and participants will be tested with an MRI scan to show the areas of the brain used in response to verbal tests. Increased blood flow will be considered a sign that areas of the brain are being used more intensively, indicating that testosterone is working.



MRI images show the parts of the brain in use in response to differing challenges. A new study will see whether trial treatments for dementia alter the images produced.

Davis does not believe that testosterone will prove to be the only factor controlling dementia, but it may be an important part of the puzzle.

Glasses Don't Maketh the Nerd

Wearing glasses does not make you the class nerd, whatever Hollywood may say. "We have literally busted the myth that people who wear glasses are introverted or have particular personality characteristics," says A/Prof Paul Baird of the University of Melbourne's Centre for Eye Research Australia.

Baird has helped conduct the world's largest study of factors linked to myopia, using 633 twins and 278 other family members over 4 years. As well as looking at environmental and genetic factors that might relate to myopia, the study considered five standard personality spectra: openness, conscientiousness, extroversion, agreeableness and neuroticism.

Contrary to popular perception, neither introversion nor neuroticism had any correlation with myopia, but there

was a weak association with openness in both parts of the study as well as a link with agreeableness in the twin component. Baird says that each of the five categories takes in many smaller domains, and there is a possibility that there is some association between myopia and a subdomain of openness, including intelligence.

"Our next study is to explore this," Baird says. "It's possible that myopia shares some genetic or environmental aspects with one of the components of openness. This could be from a coincidental genetic alignment or evolutionary pressures – for example where myopic ancestors only survived if they had something else going for them."

"Good eye care is really important but unfortunately there are not always good associations with wearing glasses," Baird

says. He is concerned that some children delay wearing glasses because of the myths about what this says about their personalities.

The results have been published in *Investigative Ophthalmology and Visual Science*, but Baird admits it is hard for scientific papers to turn around popular perceptions. Nevertheless he says that public health campaigns telling people they will have better lives if they accept that they need to wear glasses are getting help from an unexpected source.

"Glasses are now a fashion accessory," Baird says, adding that there are about 300,000 Australians who are visually impaired because they are not wearing glasses to correct refractive errors, many of them older people who have not realised that a gradual change in their eyesight has reached the point where they would benefit from glasses.