

Male Volunteers Required For Alzheimer's Trial

Last year, the Australian Alzheimer's Research Foundation together with researchers from Edith Cowan University commenced the largest clinical trial to date to investigate the influence of testosterone on a key marker of Alzheimer's disease risk called amyloid beta. The dominant theory of the disease's cause is that amyloid beta, a sticky protein, accumulates irregularly in the brain of patients and clumps together to form plaques. These plaques disrupt the communication between brain cells and trigger inflammation, ultimately causing the cells to die. This process continues while memory and other brain functions gradually deteriorate over time until the loss of basic functions or disease-related complications lead to death.

There is currently no cure for Alzheimer's. In fact, the only available drugs treat the symptoms of the disease rather than the brain changes themselves. This is a startling consideration given that Alzheimer's accounts for up to 70% of dementia cases and dementia is the second leading cause of death in Australia. The disease also places an immense strain on health services and families as sufferers become less and less capable of independent living over time. Further, a global ageing population means that these impacts will only get worse unless research strides are made. Experts believe that prevention is the best intervention given that current knowledge suggests that the brain changes are irreversible.

Our team is hopeful that testosterone will offer a new option for prevention. Age-related decrease in testosterone levels in men has been linked to an increased risk of Alzheimer's disease. Previous work by Professor Ralph Martins and his research team at Edith Cowan University has also found that the effects of testosterone therapy may extend to both the accumulation and clearance of amyloid beta in the brain, making it potentially viable for preventing or delaying the onset of symptoms in older men.

The project will also trial an omega-3 fatty acid found in fish oil called DHA (Docosahexaenoic Acid). DHA is thought to protect brain cells from the damage caused by the accumulation of amyloid beta. It is hoped that combining fish oil with testosterone will have a stronger preventative effect.

The trial, called the TotAL Study (Testosterone and Omega Three – Amyloid Lowering), is currently seeking volunteers. Participants must be male, concerned about their memory, aged 60 to 80, free from any major or unstable medical conditions, and not be currently taking testosterone treatment. Other criteria will follow assessments at the Australian Alzheimer's Research Foundation's Nedlands research centre. Most crucial of these is the individual's current testosterone level – which is required to be on the low side of normal.

Finding participants within the required range for testosterone presents a challenge. A blood sample will be collected for this purpose for all interested participants, but if you have had a previous test and know (or suspect) that your testosterone is on the low side of normal, the Foundation would especially love to hear from you.

Participation requires initial screening to identify volunteers who are safe and suitable to take part. This is first done by a phone questionnaire, followed by two clinic visits to discuss the trial and your medical history with a study doctor, blood tests, and memory assessments. If eligible, you will be asked to undergo more memory testing, brain scans, and other assessments before and after being treated with testosterone and fish oil (or a placebo version of one or both) for a 56 week period. All study procedures are conducted in Nedlands and participation is expected to last approximately 18 months.

If you would like to take part or would like further information, please contact the study team on (08) 6304 3966 / trial@alzheimers.com.au (Perth) or 0493 152 142 / combat.ad@mq.edu.au (Sydney).