

May 2018

Cause

1. Sporting injuries are once again in the spotlight after results from a large-scale study were revealed this month. The study, that involved over 350,000 U.S. veterans, found that even one mild brain injury could double the risk of dementia in later years. It is believed that trauma to the brain may increase the speed in which neurodegenerative conditions develop, possibly due to the overproduction of normal waste proteins or failure to rid the brain of these proteins. Alzheimer's disease, in particular, is caused by the accumulation of toxic proteins in the brain. Further investigation is needed to further define and record the exact types of head injury that may increase the risks, not just for military personnel, but in the general population as well.
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2. Researchers, analysing data from several studies involving almost 30,000 people say anxiety in middle-aged people could be linked to dementia. A possible reason for the link could be the brain cell ageing and degeneration in the central nervous system that occurs with abnormal stress responses, typical of anxiety. The researchers concede research is needed to assess whether anxiety is a risk factor for dementia or an early symptom of dementia.
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3. According to new research, people who sit for prolonged periods of time may have an increased risk of dementia, regardless of the amount of exercise they do to try and counteract the damage. Test subjects between the age of 45 and 75 were interviewed regarding the amount of time they spent sitting during the previous week, and their brains scanned via MRI. Those participants who sat the longest, were found to have thinning of the medial temporal lobes - the part of the brain responsible for the creation and storage of memories.
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4. A new study into anticholinergic drugs, such as those used to treat depression, urinary incontinence, Parkinson's and hayfever, has revealed a possible link with dementia. Drugs used to treat Alzheimer's work by boosting the levels of acetylcholine, a neurotransmitter in the brain which people with Alzheimer's are deficient in. Anticholinergic medications block acetylcholine. The study found that people who had been diagnosed with dementia were up to 30% more likely to have been prescribed anticholinergic medications between four and twenty years prior to their diagnosis
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Cure

1. A study, conducted by researchers at the Trinity College Institute of Neuroscience and the Global Brain Health Institute at Trinity, has found focused breathing (such as in meditation and mindfulness practices) directly affects noradrenaline levels in the brain. Noradrenaline is a chemical messenger which is released when we are stressed, challenged, focused or emotionally aroused. If produced at the right levels, it helps the brain to grow new connections. The researchers believe it may be possible to use breath-control practices to stabilise attention and improve brain health.

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2. By manipulating production of a certain enzyme, researchers have reversed symptoms of Alzheimer's disease (AD) in fruit flies. The flies, genetically engineered to have all the characteristics of AD, had their memory and learning skills restored when an enzyme known as TIP60 HAT was used to counterbalance another enzyme – HDAC2. Whilst necessary for neural development, HDAC2, when unbalanced, activates neurological changes that may lead to cognitive impairment.

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Care

1. A new blood test, developed by Australian scientists, may solve the dilemma of diagnosing chronic pain in people with dementia, who may be unable to communicate or describe their pain. The scientists, using light measurement tools, discovered that chronic pain has different-coloured immune cells to that of regular acute pain. They believe the new test could revolutionise the way doctors determine the severity of pain in people with dementia, as well as very young children and animals.

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2. A new research project aims to identify the main reasons people living with dementia present at emergency departments, with the hope of reducing avoidable hospital admissions. People with dementia statistically have poorer outcomes when admitted to health facilities than the general population. The researchers say there is a need for appropriate support and information for caregivers that will empower them to make judgements concerning their loved ones' care in the event of a sudden health issue. Information gathered from emergency departments, hospital staff and caregivers will result in the development of resources that will hopefully reduce the amount of adverse events, such as falls, pressure sores and delirium, related to a stay in hospital.

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3. Researchers from the New York University Rory Meyers College of Nursing have developed an "Intelligent Dressing System" prototype for people with dementia. The goal of the researchers was to "provide assistance for people with dementia to allow them to dress themselves without a caregiver in the room", giving the person more privacy and independence. The DRESS system integrates automated tracking, motion sensors and image recognition to identify the type, location and orientation of pieces of clothing, and also monitors stress levels and will alert a caregiver if help is needed. During the guided assistance, the person with dementia receives audio prompts, recorded in the caregiver's voice, to open drawers, remove clothing, and put the clothing on. If the system detects an error or lack of movement, it gives further audio prompts to encourage and correct as necessary.

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4. Music is being described as a "super-stimulus" for the memory, by researchers from the University of Victoria who are investigating its neuro-psychological and cognitive benefits. "Voices in Motion", a new choir formed as part of the research project, features an intergenerational mix of members, both with and without dementia, including teenagers from St Andrew's Regional High School. A number of tests administered to measure any improvement (both physical and neurological) in the people living with dementia, have already shown significant shifts in ability and daily functioning.

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WA Research

One of the great challenges in research is getting people involved! Whilst clinical trials searching for a cure or effective treatment are often over-subscribed, research studies looking at the impact of dementia and how we can better support people, so-called psychosocial research often has difficulty recruiting participants. Alzheimer's WA partners with a number of Universities and research groups to help link people living with dementia, their family and researchers together. One such partnership is our link up with ECU on a study looking at sleep in carers and what health impacts a lack of sleep may have. Why is this study important? With strong evidence of how common an issue it is and the outcomes for carers when it happens we can lobby and plan for better services to respond to this issue. Overnight short stays or sleep over in-home services for example. As well as this study we are currently involved in discussions around a major new project to address this connection problem, watch this space for future news on that one.

To take part in the Sleep study please click [HERE](#)