

September 2020

1. A Brisbane-based artist is creating murals for people living with dementia in aged care facilities, to provide visual stimulation, comfort and a non-restrictive way of improving safety and reducing risk. Sharron Tancred takes into account the effect dementia has on a person's vision and depth-perception and how certain subject matter can cause ill-feeling or distress. The murals prompt memory and reminiscing, as well as changing how people engage with a space. It can encourage them to move away from a dangerous area ("exit diversion") or make a space seem more inviting.

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2. A study from the U.S has shown for the first time that when one optic nerve in the eye is damaged, in conditions such as glaucoma, the opposite optic nerve comes to the rescue by sharing its metabolic energy. This process means the undamaged optic nerve becomes vulnerable to further metabolic stress, which could explain why the neurodegeneration observed in this and other diseases spreads between brain regions.

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3. A blood test, with up to 98% accuracy in diagnosing Alzheimer's disease (in a laboratory setting), has been developed by collaborating scientists in the U.S., Columbia and Europe. The blood test focuses on tau protein p-tau217 which has proven to be a more reliable indicator than amyloid, appears to be able to detect the beginnings of the disease decades before symptoms start.

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4. Recent studies in mice have shown there is evidence of a strong link between gut health and Alzheimer's disease, with people who have the condition showing a less diverse mix of gut microbes and more inflammatory ("bad") bacteria. Now researchers claim a supplement that nourishes "good" bacteria in the gut may provide protection. Mice, fed with a supplement (R13) were found to be less likely to accumulate beta-amyloid in their guts. Scientists believe that this toxic protein can travel from the gut into the brain, causing Alzheimer's symptoms.

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5. Hearing loss has been linked to increased risk of dementia for many years. New research suggests that the memory centres residing deep in the temporal lobe are used when hearing becomes difficult, thus rendering them unavailable for other tasks such as short-term memory storage. [Read now](#)

6. Scientists, conducting research into the reasons women are more at risk of Alzheimer's, have discovered that the disease causes impairments in the mitochondria of brain synapses in female – but not male – mice. They found that the brain and body try to adapt to this metabolic impairment by shifting from processing glucose (sugars) to lipids (fatty acids) and that males were better able to accommodate these changes. It is well known amongst researchers that the brain's ability to metabolise glucose is linked to risk of Alzheimer's.

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7. Researchers in Australia have found that the hippocampus, the part of the brain responsible for memory and learning, shrinks in people who suffer with depression, and this may greatly increase the risk of developing Alzheimer's. Strangely, people who have depression *and* anxiety do not have the same level of shrinkage. With one in six Australians suffering from mental health issues, the researchers say it is vital people seek treatment and reduce their risks.

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8. Researchers from the University of Queensland are studying the impact of emerging transport technologies on people living with dementia. Changes in the way we travel – such as ride-sharing and the advent of driverless vehicles becoming a very real possibility – could mean people living dementia are disadvantaged. The study will gather information about current and future technologies, identify possible issues from the viewpoint of people living with dementia, their carers, and experts in transportation technology. It will help develop key considerations for future transport technology and research.

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9. Researchers claim feeling lonely is the social equivalent of experiencing physical pain and that it triggers the same neural pathways. Social isolation experienced by seniors during the current COVID-19 pandemic may be increasing their risk of developing dementia by as much as 20%. Evidence suggests that prolonged feelings of loneliness can contribute to unhealthy behaviours such as excessive drinking, smoking and avoiding exercise. The body's stress responses are also heightened when people feel lonely for extended periods of time, which can increase inflammation in the body and reduce immunity.

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