



Wine's effect on thinking, remembering, reasoning and learning



Introduction

The collective scientific word for the mental processes of thinking, remembering, reasoning, judging and learning is 'cognitive function'. It's really part of information processing.

A person's cognitive function can change as they get older, for example, they may not remember names of people and places as well, which may be influenced by their general health and wellbeing.

Dementia is a form of cognitive change or impairment (dys-function) where a person loses the ability to think, remember and reason due to physical changes in the brain. A specific type of dementia is Alzheimer's disease.

Dementia usually occurs in people aged over 65 years and it is the leading cause of disability in this age group. In 2016, 10% of

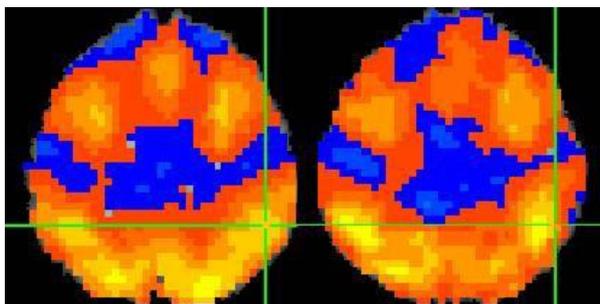
the Australians aged over 65 years were diagnosed with dementia, and its incidence doubles every five years from the age of 65. Of those who have dementia, approximately 75% may have Alzheimer's disease.

Did you know?

- Most scientific studies show that there is a j-shaped relationship between the amount of wine that you drink and your cognitive function (i.e. your ability to think, remember, reason, judge and learn).
- This means that if you drink a light to moderate amount of wine you will be able to think, remember, reason, judge and learn better than if you don't drink any wine or drink heavy amounts of wine. Your risk of developing dementia is also decreased. Wine may act protectively on the brain's blood vessels and cells as it does on those of the heart.



- If you continuously drink heavy amounts of wine, however, you increase your risk of 'cognitive impairment' and developing dementia as you age. The brain of people aged over 65 years is also the most sensitive to the toxic effects of the alcohol contained in wine. Light to moderate drinking is considered as 10 to 20 grams of alcohol per day or 1 to 2 standard drinks per day.
- Certain 'cognitive impairment' such as damage to your short-term memory is reversible when you stop drinking alcohol. The alcohol contained in wine may act on chemicals in the brain which transmit signals between brain cells to control learning and memory.
- If you continue to drink heavy amounts of wine for years you could, however, irreversibly damage your short-term memory and your prospective memory (your ability to remember), or go on to develop a brain disorder called Wernicke-Korsakoff syndrome where, unable to form new memories, you can't remember new information for more than a few seconds.



The left image is an averaged image of 10 nondrinker or social drinker young women, and the right is an averaged image of 10 alcohol-dependent young women. Red, orange, and yellow show where the brain was active during memory activities, with yellow indicating the highest level of activity. There is less yellow in the bottom of the picture and right side of the alcohol-dependent women's functional magnetic resonance imaging (fMRI).

<http://ucsdnews.ucsd.edu/archive/newsrel/health/fMRIstudies.htm>

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