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The role of diet in healthy brain ageing and dementia risk

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Four studies being presented at the Alzheimer's Association International Conference 2017 are highlighting the potential benefits of certain diets and how they can support healthy brain ageing and help to reduce dementia risk.

There is a body of evidence indicating that what is good for the heart is also good for the head, and these new large population-based studies add to this, each looking at different versions of diets and in different groups of people.

Researchers in the US used data from 5,907 healthy older people in the Health and Retirement Study to scrutinise the links between diet and memory and thinking skills. They were interested in the effects of the traditional Mediterranean diet (MedDiet) and a modified version called the MIND diet. Adjusting for socioeconomic, health (e.g. obesity and diabetes) and lifestyle (e.g. smoking and physical activity) factors, the team found that people who were relatively good or very good at sticking to the MedDiet or MIND diet were more likely to perform better on memory and thinking tests. The people with the highest scores onthese diets were 35-40% less likely to perform poorly on cognitive tests compared to those with lower diet scores.

A similar study in Sweden analysed data from 2,223 healthy older people (aged 60 and over) over a six-year period, looking at their dietary patterns and scoring them against an index called the Nordic Prudent Dietary Pattern (NPDP). Comparing the NPDP with a range of other

healthy diets; MedDiet, MIND, DASH (Dietary Approaches to Stop Hypertension) and BSD (Baltic Sea Diet), the team looked to see whether there was any effect of diet on memory and thinking skills. They found that being relatively good or very good at sticking to the NPDP was linked with lower decline in memory and thinking skills. They found similar results for MedDiet and MIND, but no link was found between DASH or BSD diets and memory and thinking skills.

In the third study being presented today, researchers looked at particular dietary components and whether they were linked with inflammatory molecules in 330 healthy older people, with an average age of 79. They found that higher levels of inflammatory molecules were associated with high intake of cholesterol, beta-carotene and lutein, and low intake of omega-3, calcium and vitamins B1, B2, B5, B6, D and E. This dietary pattern was also associated with reduced executive function speed – skills such as decision making, controlling behaviour and mental flexibility. No association was found between this diet pattern and memory, language and visuospatial skills.

While these three studies looked at associations between diet and memory and thinking in healthy older people, the fourth study focussed on associations with dementia risk. The researchers used data from the Women's Health Initiative Memory Study, which has followed women in the US for up to 20-years, recording information about lifestyle factors such as diet. Looking back at data from 7,057 women, the researchers analysed dietary information and calculated diet scores of how closely participants eating habits matched the MIND diet. They also looked at how many of the women went on to develop dementia over a follow-up period of almost 10 years, finding that women with diets most similar to the MIND diet had a lower risk of dementia.

Dr David Reynolds, Chief Scientific Officer at Alzheimer's Research UK, said:

"Understanding how the way we lead our lives could affect our brain health is important, as there may be lifestyle factors that are within our power to change that help support healthy ageing. This observational research highlights the role of healthy eating habits in helping to protect our brains as we get older, with many focussing on Mediterranean-style diets. A Mediterranean-style diet is one low in meat and dairy but rich in fresh fruit and vegetables, cereals, beans, nuts and 'healthy' fats like olive oil. This research builds on growing evidence suggesting that following a Mediterranean style diet may hold valuable health benefits as we enter our later years.

"Observational studies like these can be useful for highlighting factors linked to healthy ageing, but this type of research can't definitively answer whether specific diets can prevent dementia. Current dementia risk reduction efforts are exploring ways to support people in mid-life to adopt healthier diets, as this could be an effective way of lowering the number of people who go on to develop dementia in later life. While we know there are positive lifestyle changes that can impact dementia risk, it's important to remember that dementia is caused by complex brain diseases influenced by age, lifestyle and genetics."

Provided by Alzheimer's Research UK

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