A high-fiber diet may reduce risk of dementia

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We're always hearing that we should eat more fiber. It's known to be vitally important for a healthy digestive system and also has cardiovascular benefits like reduced cholesterol. Now, evidence is

emerging that fiber is also important for a healthy brain. In a new study published this month in the journal *Nutritional Neuroscience*, researchers in Japan have shown that a high-fiber diet is associated with a reduced risk of developing dementia.

"Dementia is a devastating disease that usually requires long-term care," says lead author of the study Professor Kazumasa Yamagishi. "We were interested in some recent research which suggested that dietary fiber may play a preventative role. We investigated this using data that were collected from thousands of adults in Japan for a large study that started in the 1980s."

Participants completed surveys that assessed their dietary intake between 1985 and 1999. They were generally healthy and aged between 40 and 64 years. They were then followed up from 1999 until 2020, and it was noted whether they developed dementia that required care.

The researchers split the data, from a total of 3,739 adults, into four groups according to the amount of fiber in their diets. They found that the groups who ate higher levels of fiber had a lower risk of developing dementia.

The team also examined whether there were differences for the two main types of fiber: soluble and insoluble fibers. Soluble fibers, found in foods such as oats and legumes, are important for the beneficial bacteria that live in the gut as well as providing other health benefits. Insoluble fibers, found in whole grains, vegetables, and some other foods, are known to be important for bowel health. The researchers found that the link between fiber intake and dementia was more pronounced for soluble fibers.

The team has some ideas as to what might underlie the link between dietary fiber and the risk of dementia.

"The mechanisms are currently unknown but might involve the interactions that take place between the gut and the brain," says Professor Yamagishi. "One possibility is that soluble fiber regulates the composition of gut bacteria. This composition may affect neuroinflammation, which plays a role in the onset of dementia. It's also possible that dietary fiber may reduce other risk factors for dementia, such as body weight, blood pressure, lipids, and glucose levels. The work is still at an early stage, and it's important to confirm the association in other populations."

In many countries today, such as the U.S. and Australia, many people consume less fiber than is recommended by nutritionists. By encouraging healthy eating habits with high dietary fiber, it might be possible to reduce the incidence of dementia.

More information: Kazumasa Yamagishi et al, Dietary fiber intake and risk of incident disabling dementia: the Circulatory Risk in Communities Study, *Nutritional Neuroscience* (2022). DOI: 10.1080/1028415X.2022.2027592

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