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NUTRITION

MOST OF US HAVE A FIBRE DEFICIENCY AND IT COULD BE ACCELERATING OUR AGEING

Eating fibre releases fatty acids that help protect our brains. Now, experts say deficiencies could be behind the high levels of Alzheimer's and dementia

Many of us could be suffering from a rapidly ageing brain caused by fibre deficiency. The dietary flaw could explain why Alzheimer's and dementia are the leading causes of death in the UK. That's according to registered dietitian Dr Emily Leeming and nutritional psychologist Kimberley Wilson, who shared the theory during this year's Cheltenham Science Festival.

Dementia is "a model of accelerated brain ageing. It's as if you turned the dial up on ageing," said Wilson. "That's why this is relevant to everybody and not just people who think they may have a risk factor for Alzheimer's."

According to Leeming and Wilson, a fibre deficiency is one such risk factor. Yet most people in the UK are fibre deficient. "We need at least 30g of fibre every day for good health," Leeming told *BBC Science Focus*. Adults in the

UK are only getting around 19g a day, however, while US adults consume as little as 15g.

Wilson called fibre "one of the underappreciated protectors of the brain." When you feed fibre to your gut microbes, one of the byproducts is short-chain fatty acids. These support the lining of the gut, but they also cross into your bloodstream and travel to the brain. Here, they are one of the few things that can get through your blood-brain barrier (BBB): the selective structure controlling what goes into your brain, like a "bouncer outside a nightclub," according to Wilson.

Short-chain fatty acids protect the junctions within the BBB to stop anything toxic from getting through. "Are we losing some of the protective benefits from fatty acids on the BBB because our diets are so deficient in fibre?" said Wilson. "People don't tend to make that link."

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FIBRE: WHAT CAN YOU DO IF YOU'RE DEFICIENT?

Fibre is essential to the health of your gut. It helps you feel fuller, more energised and satisfied. It's been shown to help with managing blood sugar levels and blood pressure, and is linked to a lower risk of colorectal cancer, type II diabetes and heart disease. It feeds your gut microbiome and increases the fatty acids that support your brain health, which helps to fight inflammation.

5 TOP TIPS: DR EMILY LEEMING'S SIMPLE CHANGES TO IMPROVE YOUR FIBRE LEVELS

1. Focus on adding fibre-rich foods to your diet, such as rye bread and beans.
2. Snack on a handful of nuts every day, or add a mix of nuts and seeds to your breakfast.
3. Make sure that half your plate is made up of veggies.
4. If you need something sweet, 85 per cent dark chocolate is surprisingly high in fibre, containing about 11g per 100g.
5. Keep the skin on potatoes and root veggies, like carrots and parsnips, for an extra boost.

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