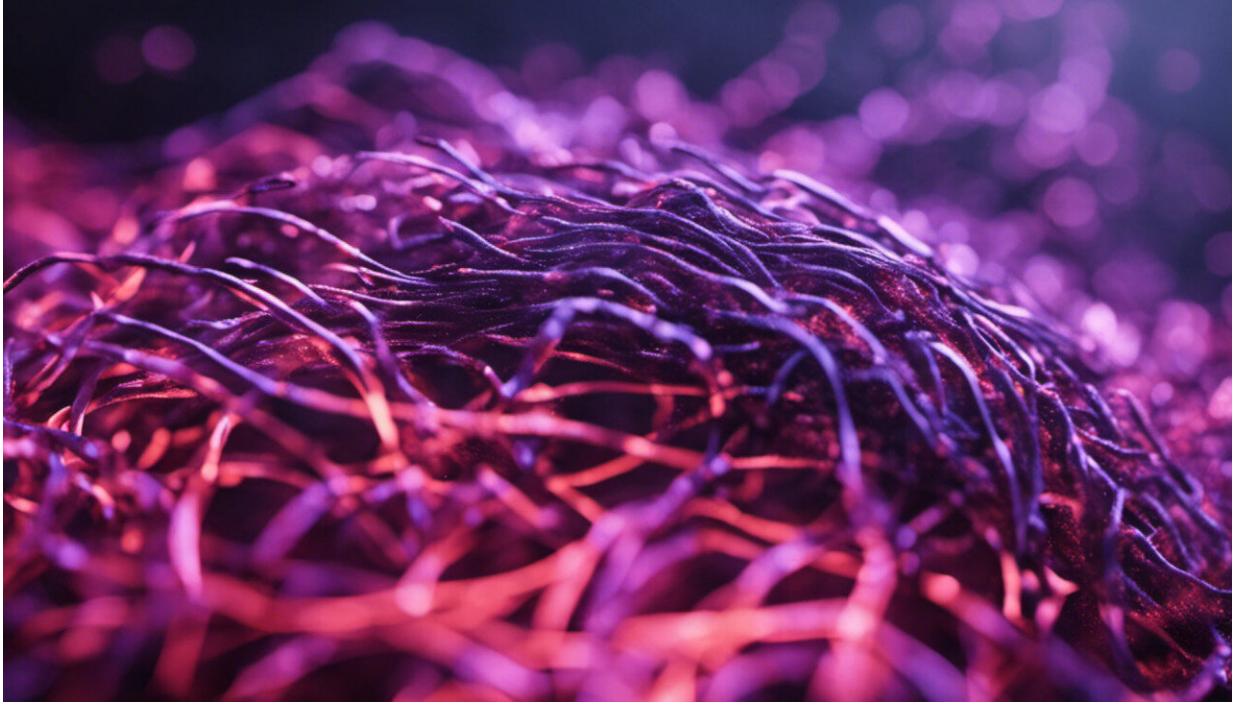


Fiber boost could combat 'chemo brain' drain

October 5 2023



Credit: AI-generated image ([disclaimer](#))

Brain inflammation is a common side effect of ongoing chemotherapy and a catalyst for a range of debilitating physical and psychological symptoms for which there's no solution.

But now new research from SAHMRI and the University of Adelaide, led by Dr. Courtney Cross and [published in *Brain, Behavior and Immunity*](#), has shown that using a supplement to increase fiber intake

while undergoing chemotherapy can significantly reduce brain inflammation and the associated health issues.

"Using pre-clinical models, we found that fiber supplementation directly causes positive changes in the [gut microbiome](#) and has the potential to alleviate [brain inflammation](#) following chemotherapy," Dr. Cross said.

"Our study showed fiber reduced inflammation in the brain region responsible for memory by as much as 50%.

"This is really exciting because fiber supplementation is such a simple intervention that can be implemented cheaply and easily."

Dietary fiber affects the microbiome by increasing the number of good microbes that produce anti-inflammatory metabolites called short-chain [fatty acids](#). These short chain fatty acids can enter the bloodstream and decrease inflammation around the body, including the brain.

Brain inflammation has been linked to a litany of neuropsychological issues, including [cognitive impairment](#), depression, anxiety and fear of cancer recurrence, making it a target for researchers trying to reduce the non-physical side effects of cancer treatment.

"We're all about improving the lives of people living with and beyond cancer any way we can, because in addition to receiving acute treatment, patients are also often on long term chemotherapy to prevent cancer recurrence and that significantly impacts their quality of life," Dr. Cross said.

"We're optimistic that increasing fiber intake could have the potential to provide relief by improving the burden associated with all neuropsychological symptoms with one intervention."

Researchers are now working towards starting [clinical trials](#) to prove whether upping [dietary fiber](#) has the same benefits on humans.

More information: Courtney Cross et al, Fibre-rich diet attenuates chemotherapy-related neuroinflammation in mice, *Brain, Behavior, and Immunity* (2023). [DOI: 10.1016/j.bbi.2023.09.018](https://doi.org/10.1016/j.bbi.2023.09.018)

Provided by South Australian Health and Medical Research Institute (SAHMRI)

Citation: Fiber boost could combat 'chemo brain' drain (2023, October 5) retrieved 12 May 2024 from <https://medicalxpress.com/news/2023-10-fiber-boost-combat-chemo-brain.html>

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