

# Researchers discover potential explanation for why a diet high in DHA improves memory

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We've all heard that eating fish is good for our brains and memory. But what is it about DHA, an omega-3 fatty acid found in fish, that makes our memory sharper?

Medical researchers at the University of Alberta discovered a possible explanation and just published their findings in the peer-reviewed journal *Applied Physiology, Nutrition, and Metabolism*.

Principal investigator Yves Sauve and his team discovered lab models fed a high-DHA diet had 30 per cent higher levels of DHA in the memory section of the [brain](#), known as the hippocampus, when compared to animal models on a regular, [healthy diet](#).

"We wanted to find out how fish intake improves memory," says Sauve, a researcher in the Faculty of Medicine & Dentistry who works in the department of physiology, the department of ophthalmology and the Centre for Neuroscience.

"What we discovered is that memory cells in the [hippocampus](#) could communicate better with each other and better relay messages when DHA levels in that region of the brain were higher. This could explain why memory improves on a high-DHA diet."

Sauve noted it is a key finding that when a diet is supplemented with

DHA, that additional stores of the omega-3 fatty acid are deposited in the brain. His team confirmed this finding, a discovery other labs have noted as well.

Supplementing your diet with DHA, such as increasing fish intake or taking supplements, could prevent declining DHA levels in the brain as we age, says Sauve.

This research was funded by Alberta Innovates – Health Solutions.

Earlier this year, Sauve and other colleagues discovered DHA prevents the accumulation of a toxic molecule at the back of the eye that causes age-related vision loss. He is continuing his research in this area.

Provided by University of Alberta Faculty of Medicine & Dentistry

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