

## Maple Syrup May Protect Brain From Alzheimer's And Other Neurodegenerative Disease

Pure maple syrup may help the brain protect itself against damage that could lead to Alzheimer's Disease.

Starting your day off with a stack of maple syrup-soaked pancakes may help keep your brain safe from harm. An international team of scientists published a large body of research to support the beneficial effects of natural products on neurodegenerative diseases, like Alzheimer's. The findings, presented at the American Chemical Society's annual meeting, revealed the potential protective effect maple syrup may have on brain cells against damage.



The team examined the results from 24 different studies that were focused on promoting a healthy brain through diet, and a pattern began to emerge. Researchers found real maple syrup — the kind that comes from the sap of a maple tree — may help prevent two types of proteins found in brain cells from clumping together. When these cellular proteins, beta amyloid and tau peptide, improperly fold and accumulate together they form plaque in the brain, which is a root cause of Alzheimer's and other brain diseases.

Scientists also found in patients who are already diagnosed with Alzheimer's that maple syrup extract may be able to prolong the patient's lifespan by protecting the brain cells from tangling up known as fibrillation. When protein pieces called beta-amyloid clump or tangle together, the small clumps they form may block cell-to-cell signaling, making it difficult for certain brain regions to send messages of communication to other areas. Blockages activate immune system cells that trigger inflammation and destroy disabled cells. Maple syrup's ability to keep beta-amyloid from sticking together or becoming tangled may be the trick to protect the brain and keep it functioning properly.

"We already know that maple has more than 100 bioactive compounds, some of which have anti-inflammatory properties," said Serge Beaulieu, the president of the Federation of Quebec Maple Syrup Producers, in a statement. "Brain health is the latest topic of exploration and we look forward to learning more about the potential benefits that maple syrup might have in this area."

Researchers suspect the phenol concentrations found in maple syrup may be the key ingredient. Phenolic compounds found in plants have antioxidant effects, which enable them to capture harmful free radicals before they cause serious damage to cells. Resveratrol is another type of phenolic compound found in grape skins and red wine that has been shown to have anticancer benefits in addition to its neuroprotective effects.

"Natural food products such as green tea, red wine, berries, and pomegranates continue to be studied for their potential benefits in combating Alzheimer's disease," said lead researcher Dr. Navindra P. Seeram, a scientist at Texas State University, in the statement. "And now, in preliminary laboratory-based Alzheimer's disease studies, phenolic-enriched extracts of maple syrup from Canada showed neuroprotective effects, similar to resveratrol, a compound found in red wine."

Alzheimer's disease is a progressive condition that gradually worsens over time and causes memory loss, difficulty with language, concentrating, planning, and organizing. According to the Alzheimer's Association, current treatments cannot stop the disease progression, but they can temporarily slow the worsening of symptoms to improve the quality of life. Using diet to prevent or delay the onset of the neurodegenerative disease may be an effective and inexpensive intervention, however researchers plan to continue their investigation to confirm the benefits.

Source: Weaver D and Seeram NP, et al. American Chemical Society National Meeting & Exposition.