

# Trans fat consumption is linked to diminished memory in working-aged adults

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High trans fat consumption is linked to worse memory among working-age men, according to research presented at the American Heart Association's Scientific Sessions 2014.

In a recent study of approximately 1,000 healthy men, those who consumed the most trans fats showed notably worse performance on a word memory test. The strength of the association remained even after taking into consideration things like age, education, ethnicity and depression.

"Trans fats were most strongly linked to worse memory, in young and middle-aged men, during their working and career-building years," said Beatrice A. Golomb, M.D., Ph.D., lead author and professor of medicine at the University of California-San Diego. "From a health standpoint, trans fat consumption has been linked to higher body weight, more aggression and [heart disease](#). As I tell patients, while trans fats increase the shelf life of foods, they reduce the shelf life of people."

Golomb and her coauthor studied adults who had not been diagnosed with heart disease, including men age 20 or older and postmenopausal women. Participants completed a dietary questionnaire, from which the researchers estimated participants' trans fat consumption. To assess memory, researchers presented participants with a series of 104 cards showing words. Participants had to state whether each word was new or a word duplicated from a prior card.

They found:

- Among men under age 45, those who ate more trans fats showed notably worse performance on the word memory test. The strength of the association remained even after taking into consideration things like age, education, ethnicity and depression.
- Each additional gram a day of trans fats consumed was associated with an estimated 0.76 fewer words correctly recalled.
- For those eating the highest amounts of trans fats, this translated to an estimated 11 fewer words (a more than 10 percent reduction in words remembered), compared to adults who ate the least trans fat. (The average number of words correctly recalled was 86.)

"Foods have different effects on [oxidative stress](#) and cell energy," Golomb said. In a previous study, we found chocolate, which is rich in antioxidants and positively impacts cell energy, is linked to better word memory in young to middle-aged adults. In this study, we looked at whether trans fats, which are prooxidant and linked adversely to cell energy, might show the opposite effect. And they did."

Oxidative stress is associated with the development of diseases such as heart disease and cancer.

Industrial trans fats are artificially produced to turn liquid oils into solids at room temperature and extend food [shelf life](#). They can be found in margarines, fast foods, baked goods, snack foods, frozen pizza, coffee creamers and some refrigerated doughs. The Food and Drug Administration is taking further steps to reduce the amount of artificial [trans fats](#) in the U.S. food supply.

Analyses in younger women are needed to determine whether effects extend to this group, Golomb said.

Provided by American Heart Association

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