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High Intake of Fried Food Linked to Risk of Anxiety and Depression

If you are fond of fried food, then think again before you reach out for that plate of French fries. Preliminary results from a recent study from China published April 24, 2023 in the journal *Proceedings of the National Academy of Sciences (PNAS)* show that people who often eat fried food, especially fried potatoes are at higher risk of anxiety and depression.¹

Researchers evaluated data of 1,40,728 people from the UK Biobank database. Over a follow-up period of 11 years, 8,294 cases of anxiety and 12,735 cases of depression were diagnosed. Those who ate >1 serving of fried food daily a 12% higher risk of anxiety and a 7% higher risk for depression compared to people who did not eat fried foods. Among those who regularly consumed fried food, 8,294 were diagnosed with anxiety and 12,735 with depression. Compared to fried white meat, fried potatoes were associated with a 2% increase in risk of depression. These associations were more evident among male subjects, younger participants and smokers.

The researchers attribute this increased risk to long-term exposure to acrylamide in fried foods, which is formed during high temperature cooking such as frying, baking and roasting.

The authors note that "long-term exposure to acrylamide induces anxiety- and depressive-like behaviors via oxidative stress-mediated neuroinflammation". Disturbance of the sphingolipid and phospholipid metabolism upon exposure to acrylamide along with lipid peroxidation and oxidation stress causing cerebral neuroinflammation have been suggested as the mechanisms for acrylamide induced "anxiety- and depressive-like behaviors".

However, this study has only shown an association and not established a causal link between the two. Further studies are needed to better comprehend the underlying mechanisms of this association.

While the association between fried food and high blood pressure, obesity and other health problems are well-recognized, this study has implications for mental health.

REFERENCE

1. Wang A, Wan X, Zhuang P, Jia W, Ao Y, Liu X, et al. High fried food consumption impacts anxiety and depression due to lipid metabolism disturbance and neuroinflammation. *Proc Natl Acad Sci U S A.* 2023;120(18):e2221097120.

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