

## Depression linked to consuming an inflammatory diet, increasing risk of frailty

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A new study published in *The Journal of Gerontology: Series A* found a link between depression, diet, and the development of frailty. Frailty, defined as a recognizable state of increased vulnerability resulting from a decline in function across multiple physiological systems, affects 10–15% older adults and often co-occurs with other health conditions,



like depression. Diet is thought to be a major contributor to frailty development. While previous studies established a link between an inflammatory diet—including artificial trans fats (like partially hydrogenated oil), refined carbohydrates, and saturated fats—and the risk of development frailty, this is one of the first studies to try to understand the impact of depression on dietary inflammation and frailty.

The study attempted to determine if individuals with <u>depressive</u> <u>symptoms</u> are more vulnerable to frailty development in response to dietary inflammation. The study utilized data from the Framingham Heart Study Offspring cohort. The 1,701 non-frail participants reported their diet and depressive symptoms at baseline and were followed for ~11 years when frailty status was reassessed. The study found an association between inflammatory diet and increased odds of frailty appeared somewhat stronger among those with depressive symptoms. The researchers hypothesize that since individuals with depressive symptoms typically have higher levels of inflammation, adding dietary inflammation on top of that accelerates the development of frailty.

Courtney L Millar, Ph.D., Post-Doctoral Fellow, Marcus Institute of Aging Research, Hebrew SeniorLife, and Harvard Medical School, is the lead author. "This study found that depressive symptoms may exacerbate the development of frailty in response to consuming an inflammatory diet. This suggests that consuming a diet rich in anti-inflammatory compounds (e.g., fiber and plant-based compounds called flavonoids) may help prevent the development of frailty," Dr. Millar said.

"Our exploratory data also suggests that when middle-aged and <u>older</u> <u>adults</u> consume a pro-inflammatory diet, they are more likely to newly develop depressive symptoms and frailty at the same time rather than develop either condition alone," she added.

This research follows two prior studies conducted by Dr. Millar, one



published in May in the *American Journal of Clinical Nutrition* that showed that consuming a Mediterranean-style diet may prevent the development of frailty, and one published in February in the *American Journal of Clinical Nutrition* that showed a pro-inflammatory diet increased the risk of frailty development.

"This study contributes to the understanding of the relationship between dietary inflammation, depression, and <u>frailty</u>," Dr. Millar said. "For those with depression, it may be even more important to increase their intake of fruits and vegetables that are rich in fiber, flavonoids as well as other dietary antioxidants."

**More information:** Courtney L Millar et al, Association of proinflammatory diet with frailty onset among adults with and without depressive symptoms: results from the Framingham Offspring Study, *The Journals of Gerontology: Series A* (2022). DOI: 10.1093/gerona/glac140

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