

The mental cost of skipping meals may run higher than most people realize

May 27 2026, by Sanjukta Mondal



Adults with irregular main-meal patterns had a higher risk of developing depression compared to those with regular eating habits. Credit: Kritsana (Kid) Takhai for Pexels.

Skipping a few meals here and there, or eating whenever one can make

time in their schedule, might seem like a benign act. Research, however, shows that these habits are far from being harmless. A [recent large-scale study](#) tracked the eating habits of more than 20,000 Korean adults, focusing on how regularly they ate breakfast, lunch, and dinner—including skipped and late-night meals.

The researchers found that people with irregular eating patterns were 1.55 times more likely to experience depression compared to those who were regular with their main-meal routines. This connection was stronger for men, smokers and late-night eaters.

Even among those who frequently skipped meals, the effect depended on the diet quality. People who ate a diverse diet containing the major nutrient groups appeared to be less affected by irregular eating schedules than those whose diets lacked variety.

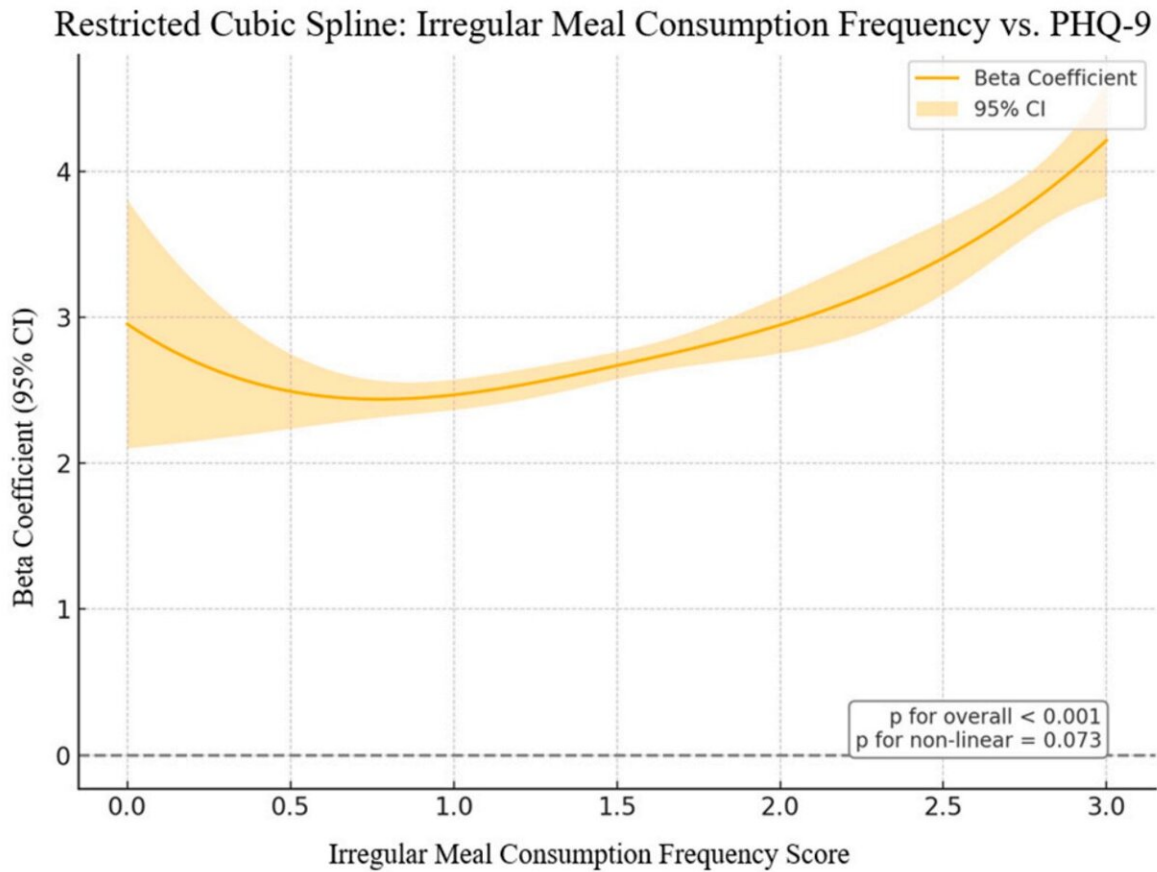
The findings are published in the *Journal of Affective Disorders*.

Investigating the depression–diet association

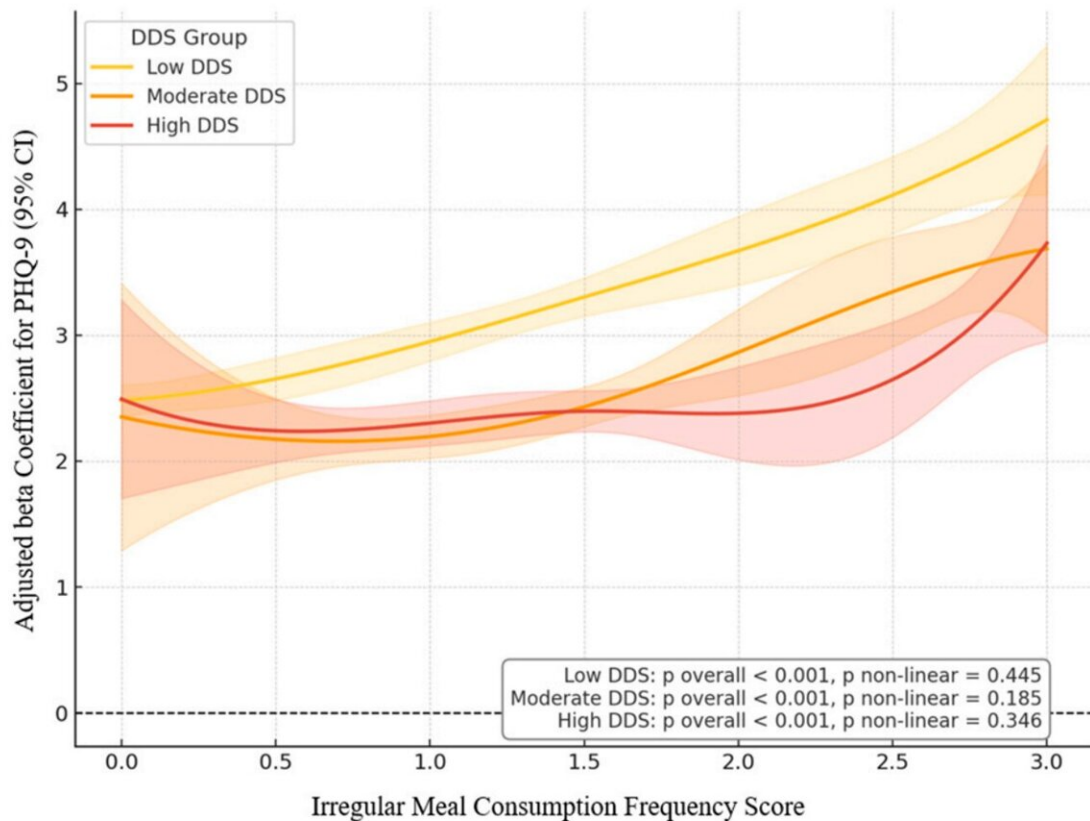
Despite making up only about 2% of body weight, the [brain](#) consumes nearly 20% of the body's total energy, making it one of the most energy-hungry organs in the body. To keep cognitive functions and other essential processes running smoothly, it relies on a constant supply of nutrients. Research has increasingly shown that the food we eat can influence not just physical health, but also mood and mental well-being.

Depression affects approximately 3.8% of the global population and ranks among the leading causes of disability worldwide, with numbers continuing to climb. To develop better strategies for managing these disorders, it is important to clearly understand the factors that may either protect against them or increase their risk. Since research has already established a link between food and mood, the researchers in this study

explored whether irregular eating patterns and diet quality were associated with depressive symptoms.



Adjusted association between irregular meal consumption frequency score and Patient Health Questionnaire-9 (PHQ-9) depressive symptom scores estimated through restricted cubic spline regression. Credit: *Journal of Affective Disorders* (2026). DOI: 10.1016/j.jad.2026.121417



Adjusted associations between irregular meal consumption frequency score and PHQ-9 depressive symptom scores stratified by tertiles of Dietary Diversity Score. Credit: *Journal of Affective Disorders* (2026). DOI: 10.1016/j.jad.2026.121417

The team procured data from a national health survey called KNHANES, conducted between 2014 and 2022, and analyzed eating patterns from a large cohort of 21,568 Korean adults aged 19 years or older. They looked at how often people ate their three main meals, and if a person ate any of these meals fewer than 5 times a week, they labeled it irregular.

The participants were asked to fill in [PHQ-9](#), a standard questionnaire widely used to measure depressive symptoms and help identify signs of depression. The team also recorded whether participants' diets included six essential food groups: fruits, vegetables, legumes and nuts, grains, meat, and dairy. To ensure the findings more accurately reflected the link between meal patterns and mood, they adjusted for other factors that could influence mental health.

The results indicated that what you eat and when did affect the risk of developing mental health issues. People who ate their main meals irregularly were more likely to have depressive symptoms. The more irregular the meal schedule, the more severe the effect. Skipping breakfast regularly made people more vulnerable to the effects of irregular eating patterns, whereas a diet that included a variety of food groups softened the impact.

The researchers noted that simple habits like eating meals regularly and maintaining a [more diverse diet](#) could be a practical, non-pharmacological way to reduce the risk of depression. These findings can help health care professionals design tailored interventions and educate people about the significance of healthy dietary habits for mental well-being.

More information: Hyejin Tae et al, Irregular meal frequency and depressive symptoms: Moderating roles of dietary diversity and breakfast skipping, *Journal of Affective Disorders* (2026). [DOI: 10.1016/j.jad.2026.121417](#)

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