

Diet-induced inflammation positively tied to marker of heart failure

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There is a positive correlation between diet-induced inflammation and a heart failure biomarker, according to a study [published](#) online June 5 in *PLOS ONE*.

Teng-Chi Ma, from the First Affiliated Hospital of Xi'an Jiaotong University in China, and colleagues used data from the National Health and Nutrition Examination Survey (1999 to 2004; 10,766 individuals) to investigate the association between diet-induced inflammation (measured by the Dietary Inflammatory Index [DII]) and [heart failure](#) (measured by N-terminal pro B-type [natriuretic peptide](#) [NT-proBNP]).

The researchers found that in individuals without heart failure, a unit increase in the DII was significantly associated with an increase in NT-proBNP levels when adjusting for demographic factors (8.57 pg/mL) and with further adjustments for health variables (5.54 pg/mL).

For individuals with a history of heart failure, there was a trend toward higher NT-proBNP levels in the second and third DII quartile versus the lowest quartile (717.06 pg/mL and 855.49 pg/mL, respectively). There were also significant interactions by age (younger than 50 years: $\beta = 3.63$; 50 to 75 years: $\beta = 18.4$; 75 years and older: $\beta = 56.09$), gender (men: $\beta = 17.82$; women: $\beta = 7.43$), hypertension ($\beta = 25.73$), and diabetes ($\beta = 38.94$).

"This study identified a positive correlation between the DII and NT-proBNP levels, suggesting a robust link between pro-inflammatory diets and increased heart failure biomarkers, with implications for dietary modifications in cardiovascular risk management," conclude the authors.

More information: Teng-Chi Ma et al, Association between dietary inflammatory index and NT-proBNP levels in US adults: A cross-sectional analysis, *PLOS ONE* (2024). [DOI: 10.1371/journal.pone.0304289](#)

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