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**High dietary acid load is associated with increased prevalence of hypertension: the Furukawa Nutrition and Health Study.**

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**OBJECTIVE:**

Acid-base status has been suggested to influence blood pressure, but there is a paucity of epidemiologic evidence linking dietary acid load to hypertension. We examined cross-sectionally the association between dietary acid load and hypertension in a Japanese working population.

**METHODS:**

Data were derived from health surveys from 2028 employees, ages 18 to 70 y, in two workplaces in Japan. A validated brief diet history questionnaire was used to assess diet. Two measures were used to characterize dietary acid load: potential renal acid load and estimated net endogenous acid production, which were derived from nutrient intakes. Multilevel logistic regression was used to examine the association between dietary acid load and hypertension with adjustment of potential confounding variables.

**RESULTS:**

High dietary acid load was suggestively associated with increased prevalence of hypertension. The multivariable adjusted odds ratios (95% confidence interval) of hypertension for the lowest through highest tertiles of net endogenous acid production were 1.00 (reference), 1.07 (0.80-1.42), and 1.33 (0.998-1.78), respectively (P for trend = 0.053). This positive association was statistically significant among normal-weight (body mass index <23 kg/m<sup>2</sup>); P for trend = 0.03) and non-shift workers (P for trend = 0.04). Similar positive associations were observed between potential renal acid load and hypertension.

**CONCLUSIONS:**

The present findings suggest that high dietary acid load may be associated with increased prevalence of hypertension among those who were normal weight and non-shift workers.