Self-reported rate of eating is associated with higher circulating ALT activity in middle-aged apparently healthy Japanese men

Purpose
Elevated circulating activities of alanine aminotransferase (ALT), a marker for liver injury, and the lifestyle of a higher rate of eating in healthy and preclinical subjects are associated with increased risk of obesity and diabetes. In this study, we examined the associations between self-reported rate of eating and circulating ALT activity in middle-aged apparently healthy Japanese men.

Methods
We conducted a cross-sectional study of 3,929 apparently healthy men aged 40–59 years (mean ± SD age, 49.2 ± 5.8 years; BMI, 23.5 ± 2.8 kg/m²) who participated in health checkups in Japan. We analyzed their clinical serum parameters and lifestyle factors, including self-reported rate of eating. Associations between self-reported rate of eating and liver injury markers [ALT, γ-glutamyl transpeptidase (GTP), and aspartate aminotransferase (AST)], other clinical parameters or lifestyle factors were determined using analysis of variance followed by Tukey’s test. Multivariate logistic regression analyses (MLRA) were performed with ALT activity as the dependent variable and independent variables that included self-reported rate of eating.

Results
MLRA showed that ALT activity showed trends for higher self-reported rate of eating after adjustment for age, energy intake, and smoking status. The association between ALT activity and self-reported rate of eating disappeared after adjustment for BMI.

Conclusion
The results of this study show that ALT activity is positively associated with self-reported rate of eating in middle-aged apparently healthy Japanese men.