

ORIGINAL RESEARCH COMMUNICATION

# Differential associations of fast food and restaurant food consumption with 3-y change in body mass index: the Coronary Artery Risk Development in Young Adults Study<sup>1, 2, 3</sup>

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**Background:** Away-from-home food consumption has rapidly increased, though little is known about the independent associations of restaurant food and fast food intake with body mass index (BMI) and BMI change.

**Objective:** The aim was to compare the associations of restaurant food and fast food consumption with current and 3-y changes in BMI.

**Design:** Multivariate linear regression models, with control for demographic and lifestyle factors, were used to examine cross-sectional and longitudinal associations of away-from-home eating with BMI by using data from subjects of the Coronary Artery Risk Development in Young Adults Study ( $n = 3394$ ) obtained at exam years 7 (1992–1993) and 10 (1995–1996).

**Results:** Forty percent of the sample increased their weekly consumption of restaurant or fast food, though mean ( $\pm$  SD) changes were  $-0.16 \pm 2.39$  times/wk ( $P = 0.0001$ ) and  $-0.56 \pm 3.04$  times/wk ( $P < 0.0001$ ), respectively. Cross-sectionally, fast food, but not restaurant food, consumption was positively associated with BMI. Similarly, higher consumption of fast food at year 7 was associated with a 0.16-unit higher BMI at year 10. After adjustment for baseline away-from-home eating, increased consumption of fast food only ( $\beta: 0.20$ ; 95% CI: 0.01, 0.39) and of both restaurant food and fast food ( $\beta: 0.29$ ; 95% CI: 0.06, 0.51) were positively associated with BMI change, though the estimates were not significantly different ( $P = 0.47$ ). Increased consumption of restaurant food only was unrelated to BMI change ( $\beta: -0.01$ ; 95% CI:  $-0.21, 0.19$ ), which differed significantly ( $P = 0.014$ ) from the estimate for an increase in both restaurant food and fast food intake.

**Conclusions:** We found differential effects of restaurant food and fast food intakes on BMI, although the observed differences were not always statistically significant. More research is needed to determine whether the differential effects are related to consumer characteristics or the food itself.

**Key Words:** Energy intake • fast food • restaurant • body weight change • body mass index • young adults

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