

Louder Food Noise, Heavier Snacking: Food noise associates with more frequent, calorie-dense, fat- and carbohydrate-rich snacking during post-surgical weight stability

Dale S. Bond, PhD

Yin Wu, PhD

Jason Lillis, PhD

Tair Ben-Porat, PhD, MPH, RD

Shiri Sherf-Dagan, PhD, RD

Liisa Tolvanen, PhD, RD

Darren Tishler, MD

Devika Umashanker, MD

Pavlos K. Papasavas, MD



Nothing to Disclose

Food Noise & Metabolic Bariatric Surgery (MBS)



- Food noise: persistent, intrusive thoughts about food and decisions about when, what, and how much to eat.
- Most research on food noise after GLP-1-based therapies.
- Little is known about food noise after MBS, and whether food noise is linked to dietary behaviors such as snacking, which increase risk for greater weight recurrence

Dhurandhar, et al. *Nutr Diabetes*. 2025; Ditzkas, et al. *Obesity (Silver Spring)* 2025; de Vere Hunt, et al. *JAMA Netw Open*. 2026; Chong, et al. *Clin Obes*. 2026; Allison, et al. *Obes Surg*. 2023; Athanasiadis, et al. *Surg Obes Relat Dis*. 2021; Horta Freire, et al. *Nutrition* 2012

Study Aim & Methods



Aim: To evaluate whether food noise is associated with snacking frequency, energy intake derived from snacks, and fat and carbohydrate content of snacks during post-MBS weight stability.

Participants & Procedure



Adults (18-64 yrs) enrolled in a NIH-funded parent trial



Underwent primary MBS (RYGB or SG) 6-20 months prior



Post-surgery weight stability: <10% recurrence of maximum weight loss



Baseline assessment

Food Noise Questionnaire (FNQ)

Ditkas, et al. Development and validation of the Food Noise Questionnaire. *Obesity (Silver Spring)*. 2025

Automated Self-Administered 24-hour Dietary Assessment Tool (ASA24) x 3

Subar, et al. The Automated Self-Administered 24-hour dietary recall (ASA24): a resource for researchers, clinicians, and educators from the National Cancer Institute. *J Acad Nutr Diet*. 2012



Analytic Approach: Least Absolute Shrinkage and Selection Operator (LASSO) regression identified covariates. Multivariate Linear Regression models estimated association between FNQ scores and snacking

Results: Participants



M age = 44.5 ± 9.5 yrs



88% female birth sex



- 83% White, 6% Black, 7% Other
- 23% Hispanic or Latino ethnicity



- 78% SG



- 12.1 ± 3.7 months post-op at time of assessment
- Maximum %TWL = $24.2 \pm 8.1\%$; BMI = 34.0 ± 8.0 kg/m²



FNQ score = 9.2 ± 5.7 (range: 0-20)

41.5% had “above average” food noise (≥ 10)

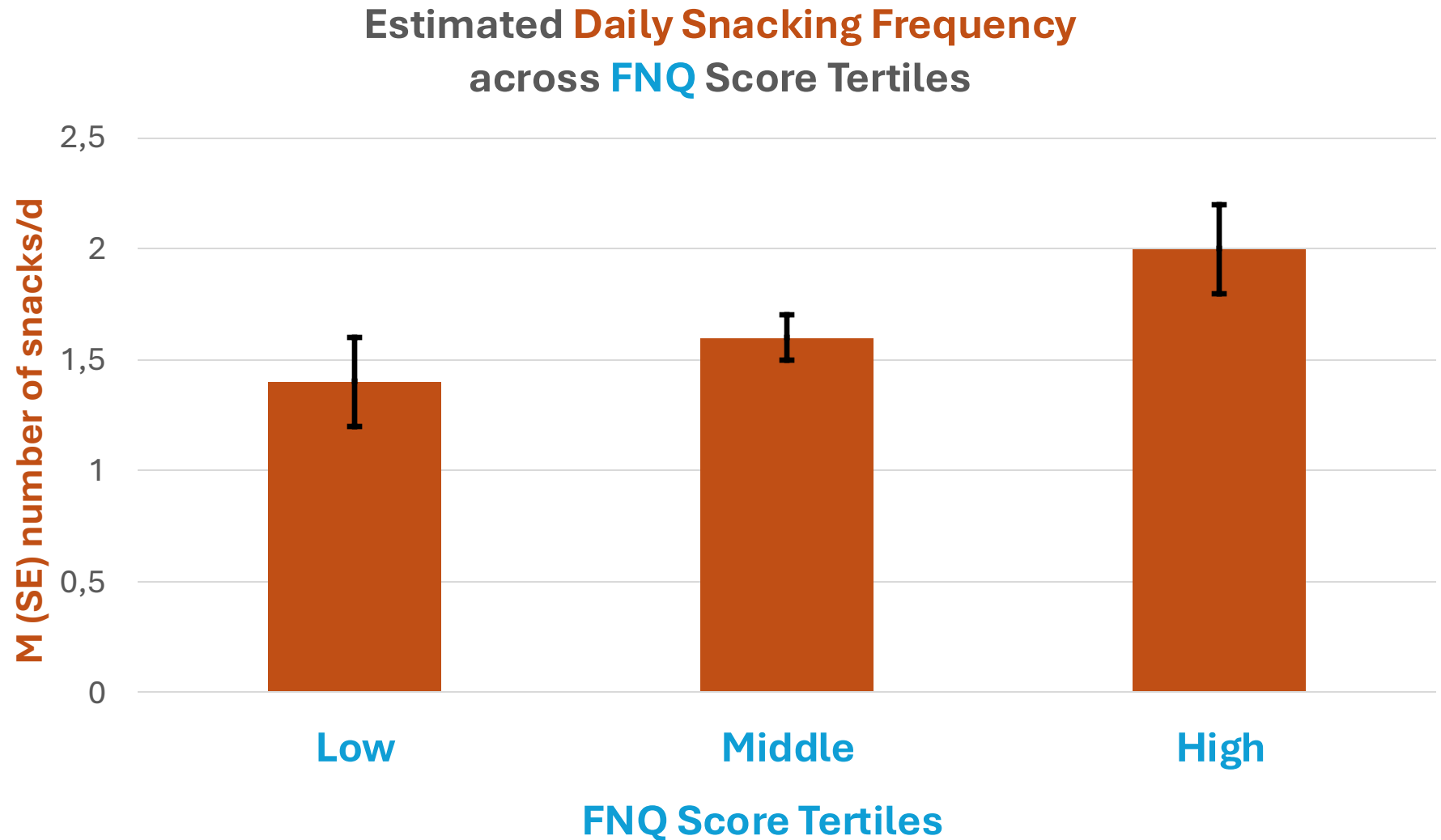
ASA24 values

- Kcal/d = 1462.1 ± 404.6
- Snacks/d = 1.7 ± 1.0
- Snacks kcal/d = 351.0 ± 245.8
- % of total kcal/d from snacks = $22.8 \pm 12.9\%$



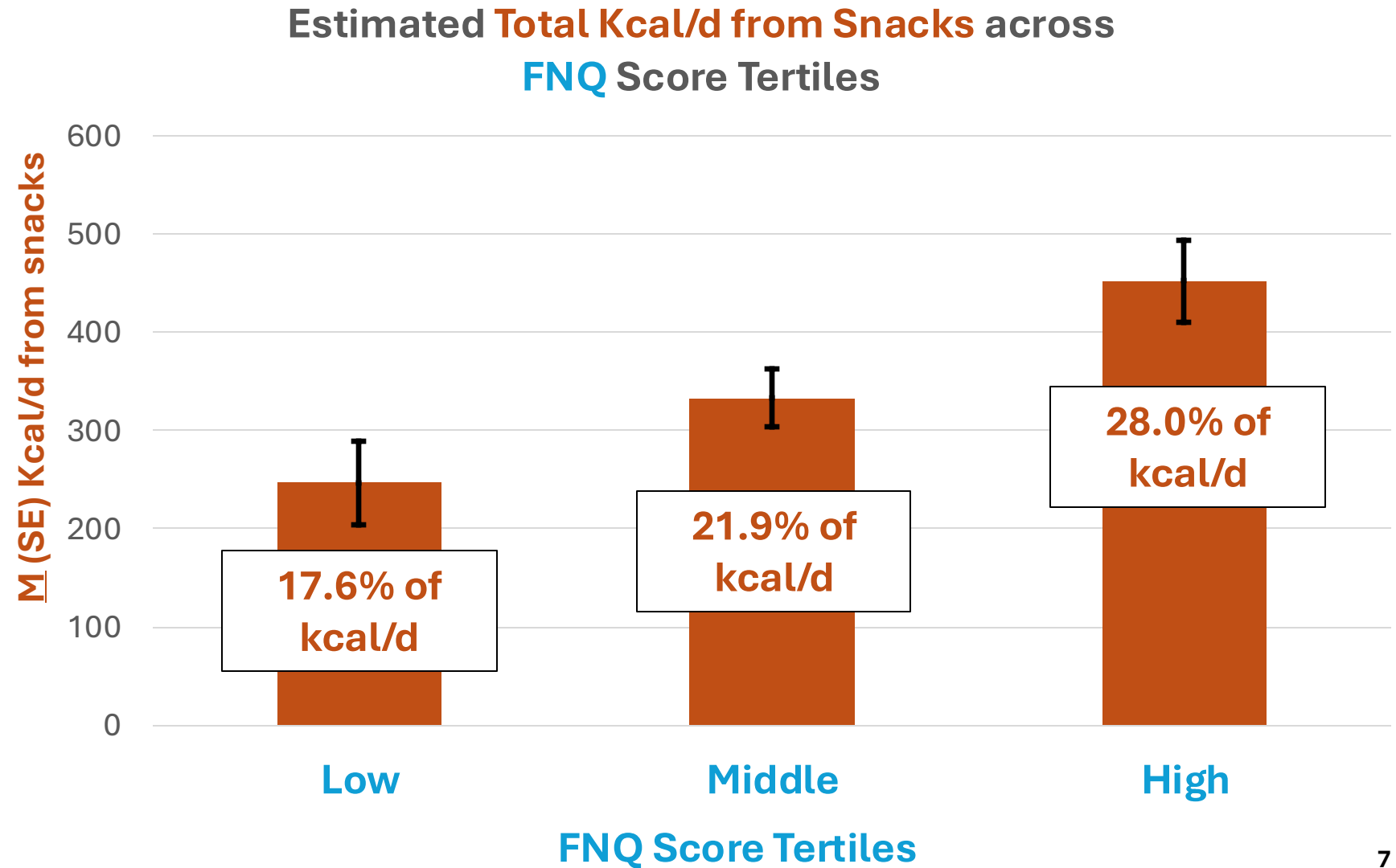
Results: *Food Noise* & *Daily Snacking Frequency*

Higher **FNQ** scores were associated with **higher snacking frequency** ($B=0.05$, $p=0.017$)



Results: *Food Noise* & *Daily Calories from Snacks*

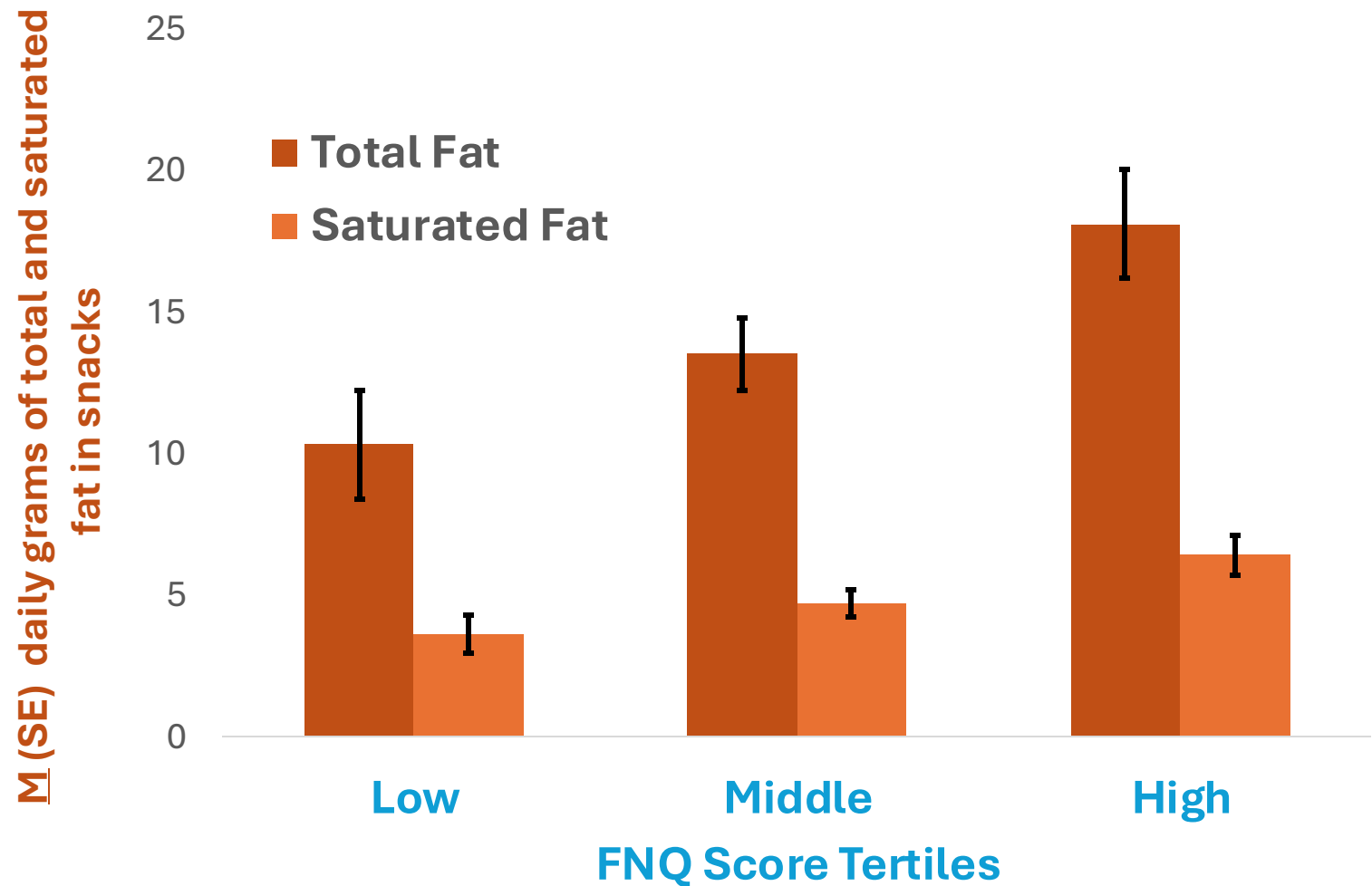
Higher **FNQ** scores were associated with **more daily calories from snacks** ($B=0.84$, $p=0.002$)



Results: Food Noise & Snacks Fat Content

Higher **FNQ** scores were associated with **more daily grams of total fat** ($B=0.63, p=0.007$)* and **saturated fat** ($B=0.23, p=0.011$) in snacks

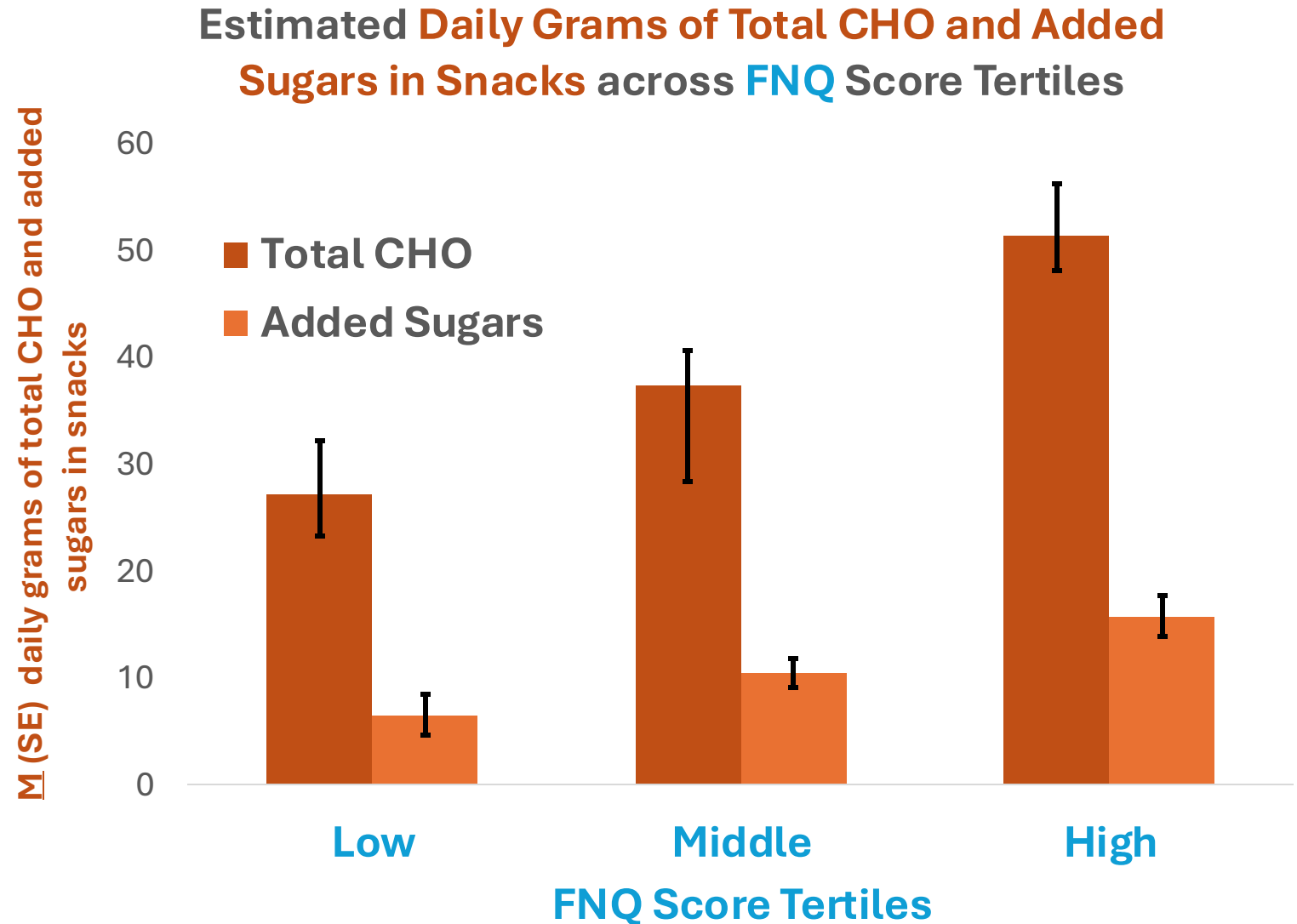
Estimated **Daily Grams of Total and Saturated Fat in Snacks** across **FNQ** Score Tertiles



*Adjusted for age

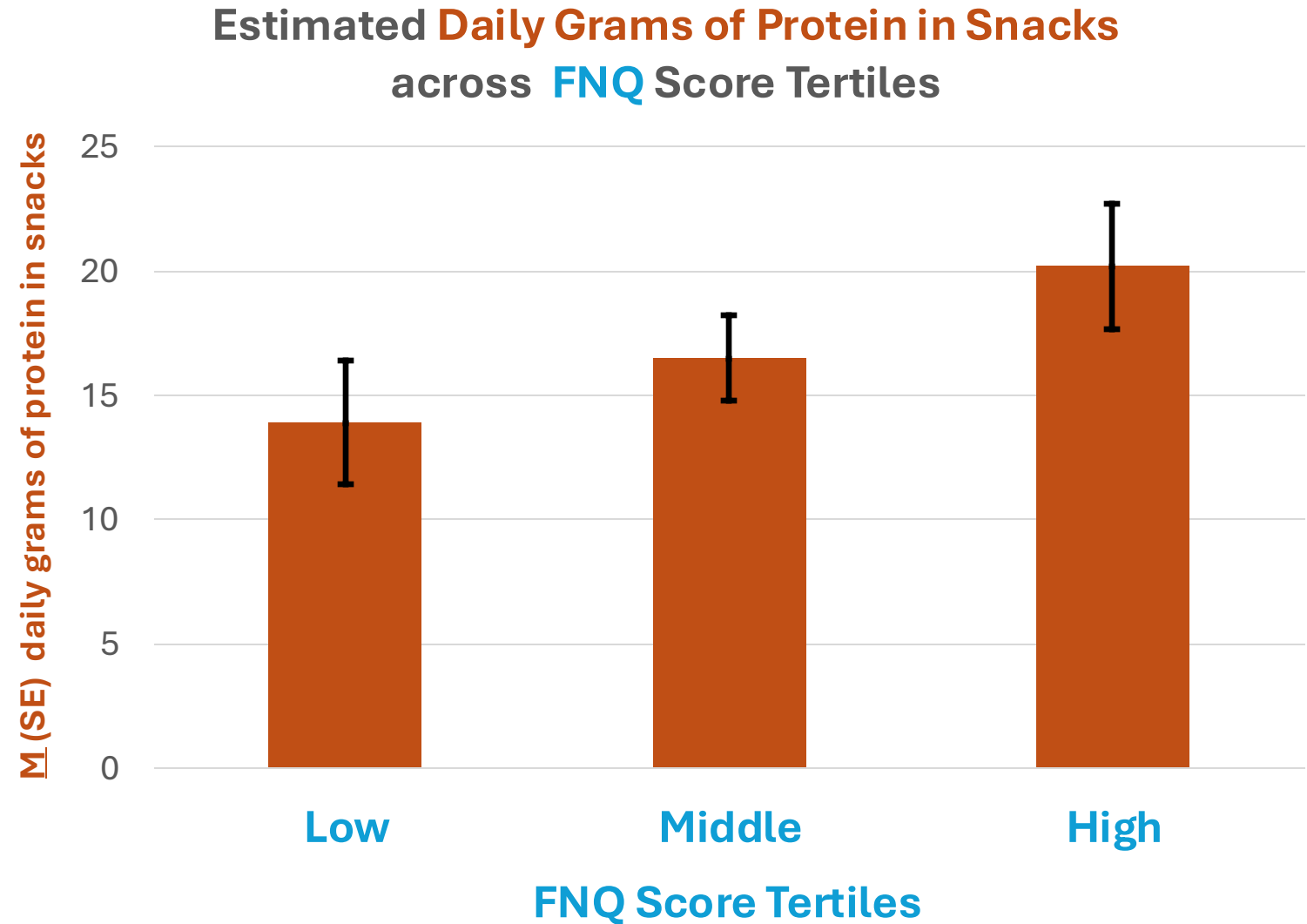
Results: *Food Noise* & *Snacks Carbohydrate (CHO) Content*

Higher **FNQ** scores were associated with **more daily grams of total CHO** ($B=1.95$, $p=0.001$)* and **added sugars** ($B=0.75$, $p=0.002$)** in snacks



Results: *Food Noise* & *Snacks Protein Content*

Higher **FNQ** scores were not associated with **daily grams of protein in snacks** ($B=0.51$, $p=0.100$)



Conclusions

- Higher food noise was associated with more frequent consumption of calorie-dense, fat- and carbohydrate-rich snacks during post-surgery weight stability.
- **Perspective:** Participants with the highest levels of food noise consumed, on average, four more snacks per week than those with the lowest levels, yielding an extra 1,434 kcal per week (~an entire day of kcal) and a higher intake of saturated fat and added sugars.
- Patients experiencing higher food noise may be more prone to reward-driven eating and to consuming more palatable, calorie-dense snacks between meals.

Strengths & Limitations



- First study to assess the link between food noise and eating/snacking patterns in MBS
- Used validated measures of food noise, dietary intake, and eating patterns



- Cross-sectional design
- Cannot determine whether snacking was intentional or unplanned.

Need prospective research to understand how food noise and relationships with dietary and eating patterns evolve over time after MBS, and whether they contribute to recurrence of weight gain and co-occurring conditions.

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PhD



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PhD, MPH, RD



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PhD, RD



Chloe David
CRC



Emma Dineen,
CRA



Liisa Tolvanen,
PhD, RD



Devika Umashanker,
MD



Darren Tisher,
MD



Pavlos Papasavas,
MD

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