Results Median (IQR) sleep duration was 8 hrs (7.5, 8.9) at baseline. The% TEI from each macronutrient (fat/carbohydrate/protein) at 0, 6 and 12 months was 35/42/18%, 34/43/18% and 33/44/19%. Substituting 1% TEI from protein or fat with carbohydrate was associated with 2.6 minutes shorter sleep cross-sectionally at 12-months but not at baseline or 6 months (figure 1). Higher carbohydrate intake (in place of protein or fat) was associated with a decrease in sleep duration by 1.5 to 2 minutes from 0–6 and 6–12 months. All longitudinal and cross-sectional macronutrient specific substitution models (but 12 months cross-sectional) suggested replacing protein with carbohydrate results in more sleep duration reduction (about one minute) than replacing fat with carbohydrate.

Discussion Lower protein and higher carbohydrate intake are consistently associated with shorter sleep duration. Replacing 5% protein with 5% carbohydrate results in 10–15 minutes less sleep duration 6 months later.

REFERENCE