was (mean ± SEM) 44.05 ± 2.51 and 43.55 ± 2.52 min in men and women, respectively ($t_{24} = -0.141, P = 0.89$; unpaired sample $t$ test). Likewise, no sex differences in REM sleep were observed in the habitual sleep duration condition. This is pertinent because, like resting metabolic rate, REM sleep varies across the menstrual cycle with significant reductions observed during the postovulatory luteal phase compared with the preovulatory follicular phase (5). Therefore, if sex hormone status across menstrual phases was confounding the data previously reported, we would also expect to see sex differences in REM sleep, which were not observed.

Nevertheless, the comments by Herzog et al raise important questions. We have proposed that short sleep duration may be more closely related to body composition in women than in men (6), and it has been reported that hormonal changes across the menstrual cycle can interfere with food intake, including preferences for sweet and fat, as well as energy expenditure (4). However, it remains to be determined whether sleep duration, which has been shown to alter leptin and ghrelin concentrations (7), affects energy balance in women differently across the menstrual cycle. This area of research deserves further attention because studies have found that leptin concentrations differ across the menstrual cycle in normal-weight women (8), and there are conflicting reports on the role of sex steroid hormones on ghrelin concentrations (9, 10).

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Whereas exceeding the UL for minerals is certainly not preferable or beneficial to health, the long-term benefits of dietary supplements in helping the majority of consumers meet the RDA in the absence of a diet rich in fruit, vegetables, and whole grains, as shown by the data in Figure 1 of Bailey et al’s article, warrants their use by those individuals who do not meet the recommendations of the Dietary Guidelines for Americans and the DRI values set by the Institute of Medicine. The nutrition community should begin to reach out to the medical community with robust data as presented in this article. Health professionals and consumers are in need of educational outreach and consistent messages about the personalized use of mineral-containing dietary supplements. The dietary supplement and functional food industries in partnership with the NIH and university centers of excellence should work together to develop “middle ground” core messages so that supplements are used to appropriately help consumers meet the RDA without exceeding the UL for minerals. We must push forward as a scientific community with the concept of personalized nutrition and for the ability to allow for targeted interventions when it comes to helping consumers choose healthier diets and, if necessary, dietary supplements.

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