Sleep hygiene recommendations are widely disseminated despite the fact that few systematic studies have investigated the empirical bases of sleep hygiene in the home environment. For example, studies have yet to investigate the relative effects of a given dose of caffeine administered at different times of day on subsequent sleep.

**Current Literature**

Despite widespread but often disparate recommendations to refrain from caffeine intake close to bedtime, no studies have investigated the effects of a given dose of caffeine taken at different times before sleep.

Understanding the temporal effects of caffeine on sleep are important given

- the increased utilization of caffeine,
- need for empirical data to support specific sleep hygiene recommendations regarding caffeine.

**Methodology**

This study compared the potential sleep disruptive effects of a fixed dose of caffeine (400 mg) administered at 0, 3, and 6 hours prior to habitual bedtime relative to a placebo on self-reported sleep in the home.

Sleep disturbance was also monitored objectively using a validated portable sleep monitor.

There were no differences in these parameters across the study conditions (p > 0.05).

Results of this study suggest that 400 mg of caffeine taken 0, 3, or even 6 hours prior to bedtime significantly disrupts sleep. Even at 6 hours, caffeine reduced sleep by more than 1 hour.

This degree of sleep loss, if experienced over multiple nights, may have detrimental effects on daytime function.

- Thus, the present results suggest the common practice of afternoon consumption of caffeine should at a minimum be restricted to before 17:00, particularly with regard to the moderate-large doses of caffeine commonly found in increasingly popular premium coffees and energy drinks.

Caffeine-induced sleep disturbance was detected by both the self-report diary and objective sleep measures when taken at bedtime and 3 hours prior to bedtime, whereas only the objective measure detected differences when caffeine was taken 6 hours prior to bedtime.

Future research is needed to determine the sleep disruptive effects of afternoon caffeine in insomniacs relative to normal sleepers.

**References**

Drake C; Roehrs T; Shambroom J; Roth T. Caffeine effects on sleep taken 0, 3, or even 6 hours prior to bedtime significantly disrupts sleep. Even at 6 hours, caffeine reduced sleep by more than 1 hour.

