

Exercise on Sleep

Researchers in the department of Human Health and Nutritional Sciences are recruiting individuals of any sex, 18-50 years of age, interested in understanding how different forms of evening exercise effect sleep.

We are assessing how evening high-intensity interval exercise (HIIE) and moderate intensity continuous exercise (MICE) influence sleep quality and sleep architecture.

Commitment: Interested participants are asked to complete 4 visits (~4 hours total) over 1-4 weeks.

Incentive: Monetary – \$40

Visit types

Introductory visit (~1 hour): You will perform an exercise test on a cycle ergometer (a stationary bike) to assess cardiorespiratory fitness and determine exercise intensities for the subsequent visits.

Three testing visits (~1 hour each): You will complete a no exercise control visit, evening HIIE, and evening MICE, 1 hour before your habitual sleep time. Visits will be randomized. The day before each visit we will be provided with a ring that measures activity and sleep. The day of each visit, you will be asked to consume the same diet for each visit (whatever your normal diet consists of). In addition, the night of each visit we will measure light exposure. You will not perform exercise during the control visit, a bout of HIIE (ten 1-minute work intervals interspersed with 1-minute rest intervals) during the HIIE visit, and a bout of MICE (30 minutes, work rate matched to the HIIE condition) during the MICE visit.

The researchers wish to be inclusive in their recruitment process. This project requires:

- Completion of daily sleep questionnaires for 1 week before the first testing visit to measure habitual sleeping habits.
- That you wear a ring around a ringer to measure activity and sleep twenty-four hours prior to each testing visit and until the morning after each testing visit.
- Food and beverage consumption is similar between testing visits and recorded using an online app the day of each testing visit.
- To assess light exposure, we will give you a lux meter and you will place it in the room you sleep in.
- That you come to the lab to perform the exercise protocols 1 hour before your habitual bedtime.

If for any reason you may feel uncomfortable taking part, please contact the researcher to discuss possible modifications to the procedure to address your concerns.

This project has been reviewed by the Research Ethics Board for compliance with federal guidelines for research involving human participants (REB #1898).

If you are interested, please contact Julian Bommarito (jbomma01@uoguelph.ca) OR the principal investigator, Dr. Philip Millar (pmillar@uoguelph.ca)