

# **The 24-Hour Equation: How do Physical Activity, Sedentary Behaviour, and Sleep Interact to Promote Healthy Aging?**

**Centre for Arts and Physical Education (CAPE), Faculty of Education**

**Date:** 18 September 2025 (Thursday)

**Time:** 19:00-20:30

**Venue:** E33-2036, Faculty of Education

**Language:** English

**Registration:** <https://go.um.edu.mo/fw7eak2a> or



**Enquiries:** Mr. Brendan LEI (Email: fed\_event@um.edu.mo / Tel: 8822-4120)

## **Speaker:**

Dr. Ryan Stanley FALCK, Research Associate in the School of Biomedical Engineering at the University of British Columbia – Vancouver Campus is invited to be the speaker of the seminar. Dr. Falck's research investigates how to promote healthy cognitive aging through lifestyle. He received his PhD degree in Rehabilitation Sciences from the University of British Columbia in 2020. His doctoral thesis examined the dynamic relationships and specific impacts of physical activity, sedentary behaviour, and sleep on the cognitive health of older adults at risk for dementia.

## **Abstract:**

By 2030, one in six people will be aged 60 years or older. Older adults are at risk for numerous chronic conditions, including: diabetes, depression, frailty syndrome, and demntia. Population health thus faces major challenges in meeting this demographic shift. A key contributor to healthy aging is maintaining health behaviours as adults age. Three key health behaviours that are critical to promoting healthy aging are physical activity, sedentary behaviour, and sleep. These behaviours occupy most of the 24-hour day and are associated with a multitude of health outcomes. Until recently, each behaviour has been viewed as independent; however, there is a growing recognition that physical activity, sedentary behaviour, and sleep share an interactive relationship behaviourally (i.e., displacement of one with another), which can synergistically affect health (i.e., one unhealthy behaviour amplifies health risks of another). In this lecture, we will discuss how

these behaviours interact to promote healthy aging, as well as identify the current challenges and knowledge gaps which need to be addressed in this field.