

Effect of Time of Day on Blood Glucose Responses to Aerobic Exercise in Type 1 Diabetes

PROJECT DESCRIPTION

Aerobic exercise is associated with a high risk of hypoglycemia in people with type 1 diabetes, due to the use of exogenous insulin. The body has several counter regulatory hormones that help protect against hypoglycemia, including epinephrine, glucagon, growth hormone and cortisol. Early morning, when individuals are fasting, levels of glucagon, growth hormone and cortisol are naturally higher than they are later in the day. It's possible that performing aerobic exercise under these conditions would have a protective effect against declines in blood glucose in people with type 1 diabetes. To test this hypothesis we are recruiting 12 individuals with type 1 diabetes who will be asked to return to the lab on two separate occasions, separated by three days. One occasion will be at 7am, the other will be at 5pm. They will perform 45 minutes of aerobic exercise at 60% of their peak aerobic capacity. Blood samples will be collected during exercise, and continuous glucose monitors will be used to observe blood glucose levels for 12 hours before, and 24 hours after exercise.

FACULTY-DEPARTMENT

Augustana- Physical Education

DESIRED FIELD OF (STUDENT) STUDY

Medicine or kinesiology

INTERNSHIP LOCATION

University of Alberta Main Campus – Edmonton and Augustana- Camrose

NUMBER OF INTERNSHIP POSITIONS

1

INTERNSHIP START DATE

April 1

Contact: Brendan Cavanagh, Internship Coordinator (Inbound)
University of Alberta International
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INTERNSHIP END DATE

June 30

ARE THE DATES FLEXIBLE?

Yes, I am flexible regarding the internship dates. Selected students can contact me to request a date change.