

Les Mills Lab

Continuous Glucose Monitoring Study



INTRODUCTION

High variability in blood glucose is associated with earlier onset of disease in healthy adults without diabetes. More specifically, prospective studies demonstrate that higher glucose variability is associated with an increased risk of cardiovascular disease, Alzheimer's disease, frailty, cardiovascular death, and cancer death compared to lower glucose variability.

METHOD

Thirty-five healthy, active adults wore a continuous glucose monitor for two weeks, maintained their typical exercise routines, and recorded the data. They also completed each planned exercise session with a heart rate chest transmitter. The study participants logged these training sessions (total time, intensity zones, perceived exertion) as well as daily meals (time of day, macronutrient grams), sleep (total time, subjective quality), and emotions (stress, motivation, fatigue).

RESULTS

In order to reduce glucose variability, a greater number of independent cardio sessions is more impactful than a singular session for a longer duration. In terms of nutrition, greater protein grams at breakfast and a higher daily fat percentage lessen glucose variability. And finally, reducing fatigue through lifestyle choices may diminish detrimental fluctuations.

CONCLUSION

Our data demonstrate that there are multiple lifestyle factors that can minimize glucose variability and thereby potentially lower future disease risk.

Reference

Gottschall, J. S., Henderson, N. A., Mac Cassin, C., Hastings, B., Zignoli, A., Skroce, K., ... & Zisser, H. (2023). Greater Number Of Cardio Sessions, Protein For Breakfast, And Reducing Fatigue Can Minimize Glucose Variability: 2330. *Medicine & Science in Sports & Exercise*, 55(9S), 773-774.