

Intense Exercise in Type 1 Diabetes: Exploring the Role of Continuous Glucose Monitoring

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Abstract

Development of the external artificial pancreas (AP) is anticipated to be incremental, starting with simple and progressing to more complex applications incorporating exercise periods of various duration and intensity. Most studies investigating the effect of exercise on glucose excursions in subjects with type 1 diabetes either explored moderate exercise, which exerts different effects compared to intense exercise, or did not adopt continuous glucose monitoring combined with frequent plasma glucose measurements. Such studies could provide vital information. Performance of continuous glucose monitors during intense exercise could be evaluated to a greater extent. Frequently sampled blood glucose would facilitate better understanding of the relationship between intense exercise and metabolic processes, providing helpful information to patients with type 1 diabetes, clinicians, and researchers involved in the development of the AP.

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Abbreviations: (AP) artificial pancreas, (CGM) continuous glucose monitor

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