

## Exercise and Glucose Metabolism in Persons with Diabetes Mellitus: Perspectives on the Role for Continuous Glucose Monitoring

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### Abstract

Exercise causes profound changes in glucose homeostasis. For people with type 1 diabetes, aerobic exercise usually causes blood glucose concentration to drop rapidly, while anaerobic exercise may cause it to rise, thereby making glycemic control challenging. Having the capacity to know their glucose levels and the direction of change during exercise increases self-efficacy in these persons who are prone to hypo- and hyperglycemia. For people with type 2 diabetes, learning first hand that regular exercise improves glucose levels may be a motivating factor in getting them to be more active. Continuous glucose monitoring is a potentially useful adjunct to diabetes management for the active person with either forms of diabetes. This review aims to guide the reader to use this technology to its maximum advantage by providing an overview of technical features, performance characteristics, and clinical utility, all balanced against the limitations that may be more prominent during physical activity.

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**Abbreviations:** (CGM) continuous glucose monitoring, (HbA1c) hemoglobin A1c, (RCT) randomized control trial, (SMBG) self-monitoring of blood glucose, (YSI) Yellow Springs Instrument

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