

Specific insulin-based exercise strategies help in T1DM pump Tx

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(HealthDay)—Insulin-based strategies of basal rate reduction or pump cessation may be the best approach in avoiding hypoglycemia associated with exercise after lunch, according to a study published online Oct. 8 in *Diabetes, Obesity & Metabolism*.

Sylvia Franc, M.D., from the Centre for Study and Research for Improvement of the Treatment of Diabetes in Evry, France, and colleagues validated strategies to prevent [exercise](#)-induced [hypoglycemia](#) via insulin dose adjustment. Twenty adults with type 1 [diabetes](#) on pump therapy were randomized to perform four 30-minute late post-lunch exercise sessions (two moderate sessions with 50 or 80 percent basal rate [BR] reduction during exercise, and two intense sessions, with 80 percent BR reduction or with their pump stopped; all performed three hours after lunch) and a rest session. Hypoglycemia incidence was

compared for BR reduction versus bolus reduction in two early post-lunch sessions (90 minutes after lunch).

The researchers found that, compared with the rest session, in the afternoon, no more hypoglycemia events occurred with 80 percent BR reduction/moderate exercise or with pump discontinuation/intense exercise, while more hypoglycemic events occurred with 50 percent BR reduction/moderate exercise and 80 percent BR reduction/intense exercise. There was a trend toward fewer hypoglycemic episodes with bolus reduction versus BR reduction ($P = 0.07$).

"To limit the hypoglycemic risk associated with 30 minutes of exercise three hours after lunch, without carbohydrate supplements, the best options seem to be to reduce BR by 80 percent or to stop the pump for moderate or intense exercise," the authors write.

The study was partially funded by Lifescan. Medtronic provided the Ipro2 devices and sensors.

More information: [Abstract](#)
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