Avoid Delayed Hypoglycemia in Type 1 Athletes

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KEYSTONE, Colo. — Delayed-onset hypoglycemia can become a concern in patients with type 1 diabetes after high-intensity prolonged exercise, said diabetes counselor Gary Scheiner, who spoke at a conference on the management of diabetes in youth.

The effect is “due to a combination of the body’s increased sensitivity to insulin caused by exercise and the muscles’ need to replace their glycogen stores,” said Mr. Scheiner of Integrated Diabetes Services, Wynnewood, Pa.

An unprepared patient is caught off guard by this phenomenon, since the blood sugar typically doesn’t occur until 24 hours after the end of a hard 2-hour-plus exercise session. Occasionally it can happen up to the 24-hour mark, he said at the confererence, which was sponsored by the Barbara Davis Center for Childhood Diabetes, the University of Colorado, and the Children’s Diabetes Foundation at Denver.

The key to prevention is to carefully track its occurrence pattern, both in terms of the preceding workouts and the carbohydrate snacks consumed during exercise. An effective preventive strategy may include reducing basal insulin by 20%-30% following a high-risk activity. Alternatively, the athlete can cut back on meal or snack insulin boluses up until the time the delayed-onset low is expected. During that at-risk period, the patient should eat snacks composed of slow-acting, low-glycemic carbohydrates that don’t require insulin boluses.

It’s a good idea for the patient to check blood glucose levels following a high-risk workout more frequently than normal. Mr. Scheiner is a consultant to Unomedical, CardioCom, and Byram Healthcare, serves on the speakers bureaus of Smith Medical, Sanofi-Aventis, and Medtronic, and has received research grants from NovoNordisk.