*Abstract*

*Introduction*

*People with type 1 diabetes (T1D) need to adapt insulin therapy and to eat carbohydrates while exercising to prevent hypoglycemia. Objective of this study is to compare time spent in hypoglycemia using a protocol based on continuous glucose monitoring (CGM) values and trends during a school camp in adolescent with T1D.*

*Methods*

*27 adolescents with T1D, for at least 1 year, treated with multiple daily injections, without co-morbidities, were enrolled in a sport-school camp. Patients with co-morbidities were excluded from the study.During the camp, patients wore a CGM sensor (Dexcom G6 ®) to monitor their glucose and they took glucose according to an ad-hoc protocol to prevent hypoglycemia (<70 mg/dL), both at rest and during physical activity. All glucose corrections were noted on electronic sheets. Patients also reduce their basal insulin by 20% and pre-meal insulins up to 50% during the school camp.*

*Results*

*Time in hypoglycemia was lower during camp (1% vs. 2,7%, p=0,04) as well as after the camp (0,6% vs. 2,7%, p=0,006). Time in hypoglycemia, with glycemia under 54 mg/dL, was lower during camp (0,03% vs. 0,89%, p=0,008) as well as after the camp (0,17% vs. 0,89% p=0,03).*

*Conclusions*

*A new ad-hoc protocol based on CGM reduces hypoglycemia, in particular glycemia under 54 mg/dL, in adolescent with T1D during sport-school camp.*

*Key words: Type 1 Diabetes, hypoglycemia, Continuous Glucose Monitoring, physical activity, adolescent.*