Investigating Temporal Patterns of Glycemic Control around Holidays

Do people have worse glycemic control during holidays?

A significant fraction of people with diabetes fail to achieve recommended goals for glycemic control. Changes in person’s routine during holidays may further affect glycemic control in diabetes patients.

Hypothesis

People with diabetes have worse glycemic control during holidays compared to non-holidays.

Method

14 subjects with type 1 diabetes
91 days continuous glucose monitor (CGM) data (week 46 to week 6)

Holiday Weeks:
Week 46: Thanksgiving
Week 52: Christmas
Week 1: New Year

- Compared blood glucose data during holiday weeks with non-holiday weeks using clinically-validated metrics for quantifying diabetes management

Results

Glycemic Control during Holidays versus Non-Holidays

One Week of CGM Data during Thanksgiving Week (for Subject 2)

Blood Glucose Levels across all Subjects

KEY TAKEAWAYS

86% Subjects had worse glycemic control during holiday weeks

42% Subjects had more hypoglycemic events during holidays

References

