

Online Supplemental Material

Supplementary Table 1. Data Availability in Analysis Cohort

	Number of Participants	Number of Events*
Included Participants		
Number of participants with a) ≥ 72 hours of CGM data (including ≥ 24 hours of data overnight), b) no pancreatic antibodies, and c) baseline central laboratory HbA1c < 39 mmol/l ($< 5.7\%$)	153	NA
Exercise-Related Analyses Cohorts		
Total number of logged exercise events	127	843
<i>During Exercise and Overnight Analyses</i>		
Number of exercise events with a) duration ≥ 20 min, b) no meal within 30 minutes prior to exercise, c) ≥ 15 min of CGM data during exercise, and d) ≥ 1 CGM reading within 15 min prior to exercise	110	451
Number of nights following exercise with ≥ 1 hr overnight CGM data	94	289
Number of nights following no exercise with ≥ 1 hr overnight CGM data	134	656
<i>During Exercise and Overnight Analyses by Exercise Type</i>		
Number of exercise events with a) duration ≥ 20 min, b) no meal within 30 minutes prior to exercise, c) ≥ 15 min of CGM data during exercise, d) ≥ 1 CGM reading within 15 min prior to exercise, and e) non-missing exercise type	110	420
Number of nights following exercise with a) ≥ 1 hr overnight CGM data, and b) non-missing exercise type	91	270
Meal-Related Analyses Cohorts		
Total number of days with ≥ 1 logged meal, including snacks	152	1423
Number of days with a) breakfast, lunch, and dinner logged (3 meals; alcoholic drinks consumed within ± 60 minutes of meals were considered to be part of the meal), b) ≥ 4 hr between meals, c) ≥ 1 hr post-prandial CGM data per meal, and d) ≥ 1 CGM reading in the 15 min prior to meal time	56	102
Alcohol Analysis Cohort (N=88 participants aged ≥ 21 yr)		
Number of days with alcoholic drinks logged and ≥ 1 hr overnight CGM data	58	234
Number of days with no alcoholic drinks logged and ≥ 1 hr overnight CGM data	84	534
Dawn Analysis Cohort		
Number of nights with ≥ 15 minutes of CGM data within ± 15 minutes of 1, 3, and/or 5 AM	149	911

* Either number of exercise events, days, or nights, depending on the specified metric.

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Supplementary Table 2. Participant Characteristics (N=153)

	Overall (N=153)	Age <18 yrs (n=57)	Age ≥18 yrs (n=96)
Age (years) mean ± SD	31 ± 21	12 ± 3	42 ± 19
6 to <12	27 (18%)	27 (47%)	NA
12 to <18	30 (20%)	30 (53%)	NA
18 to <25	29 (19%)	NA	29 (30%)
25 to <60	41 (27%)	NA	41 (43%)
≥60	26 (17%)	NA	26 (27%)
<i>[min to max]</i>	[7 to 80]	[7 to 17]	[18 to 80]
Gender – Male n (%)	52 (34%)	27 (47%)	25 (26%)
Race/ethnicity n (%)			
White non-Hispanic	129 (84%)	53 (93%)	76 (79%)
Black non-Hispanic	2 (1%)	0 (0%)	2 (2%)
Hispanic or Latino	15 (10%)	3 (5%)	12 (13%)
Asian	3 (2%)	1 (2%)	2 (2%)
More than one race	4 (3%)	0 (0%)	4 (4%)
Body mass index (BMI) mean ± SD			
BMI (kg/m ²)	NA	NA	24.4 ± 3.2
BMI percentile	NA	52% ± 26%	NA
BMI Category* n (%)			
Underweight	3 (2%)	0 (0%)	3 (3%)
Normal Weight	106 (69%)	55 (96%)	51 (53%)
Overweight	44 (29%)	2 (4%)*	42 (44%)
HbA1c mean ± SD – mmol (%)	32 ± 3.3 (5.1 ± 0.3)	32 ± 2.2 (5.1 ± 0.2)	32 ± 3.3 (5.1 ± 0.3)
Min to Max – mmol (%)	49 ± 38 (4.2 to 5.6)	49 ± 37 (4.5 to 5.5)	49 ± 38 (4.2 to 5.6)
Has first-degree biological family member with T1D[‡]	<i>N=150</i>	<i>N=57</i>	<i>N=93</i>
n (%)	49 (33%)	29 (51%)	20 (22%)
Parent with T1D	10 (7%)	5 (9%)	5 (5%)
Sibling with T1D	26 (17%)	25 (44%)	1 (1%)
Child with T1D	15 (10%)	0 (0%)	15 (16%)

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*The underweight, normal weight, and overweight BMI categories for participants aged ≥18 years are: <18.5, 18.5 to <24.9, and ≥24.9, respectively. The underweight, normal weight, and overweight BMI percentile categories for participants aged <18 years are: <5th percentile, 5th to <85th percentile, and ≥85th percentile, respectively (calculated using the 2000 CDC growth charts). The two pediatric participants in the overweight category had BMI percentile of <86%.

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[‡]3 participants indicated unknown for having a first-degree family member with T1D and were excluded from denominator.

Supplementary Table 3. Effect of Alcohol on Overnight Glycemia

	Nights following Alcohol Consumption ^a			Nights following No Alcohol Consumption ^c
	Overall	1-2 Drinks	≥3 Drinks	
No. of Participants / No. of Nights	58/234	51/177	28/50	84/534
Overnight ^b Mean Glucose (mg/dL) mean (SD)- mmol/l [mg/dL]	5.4 (0.5) [99 (10)]	5.4 (0.6) [99 (11)]	5.5 (0.6) [100 (12)]	5.6 (0.5) [101 (10)]
Overnight ^b Nadir Glucose (mg/dL) mean (SD) – mmol/l [mg/dL]	4.7 (0.6) [85 (11)]	4.7 (0.6) [85 (12)]	4.7 (0.7) [85 (13)]	4.7 (0.4) [86 (9)]

Summary statistics are on a subject level. Analysis limited to participants 21 years of age and older. If alcohol consumption was logged but number of drinks was not specified, it is assumed that the participant had at least 1 drink, so the night is included in the overall category but not in the 1-2 or ≥3 drinks category.

a – A day in which consumption of at least one alcoholic drink between the hours of 5 AM and midnight was logged.

b – Midnight to 5 AM. Minimum 1 hr of CGM data during each night.

c – A day in which no alcoholic drinks were logged.

Supplementary Table 4. Morning Glucose Levels

	All Participants	Age Group (yrs)				
		6-<12	12-<18	18-<25	25-<60	≥60
All						
No. of Participants / No. of Days^a	149/911	26/129	28/179	29/214	40/234	26/155
Mean glucose level at 1 AM^b <i>mean (SD) – mmol/l [mg/dL]</i>	5.6 (0.6) [102 (12)]	5.5 (0.7) [100 (14)]	5.5 (0.5) [100 (10)]	5.6 (0.4) [101 (9)]	5.6 (0.4) [101 (9)]	5.9 (0.7) [108 (14)]
Mean glucose level at 3 AM^c <i>mean (SD) – mmol/l [mg/dL]</i>	5.3 (0.5) [97 (10)]	5.2 (0.6) [95 (11)]	5.2 (0.4) [95 (9)]	5.3 (0.4) [96 (8)]	5.3 (0.4) [96 (9)]	5.6 (0.7) [102 (13)]
Mean glucose level at 5 AM^d <i>mean (SD) – mmol/l [mg/dL]</i>	5.2 (0.5) [95 (10)]	5.1 (0.6) [93 (12)]	5.1 (0.3) [93 (7)]	5.2 (0.4) [94 (8)]	5.2 (0.4) [95 (9)]	5.5 (0.6) [100 (11)]
Females						
No. of Participants / No. of Days^a	99/620	13/70	16/113	19/137	32/196	19/104
Mean glucose level at 1 AM^b <i>mean (SD) – mmol/l [mg/dL]</i>	5.6 (0.5) [102 (10)]	5.7 (0.6) [103 (11)]	5.4 (0.6) [99 (12)]	5.7 (0.4) [103 (8)]	5.6 (0.4) [101 (9)]	5.8 (0.6) [105 (11)]
Mean glucose level at 3 AM^c <i>mean (SD) – mmol/l [mg/dL]</i>	5.4 (0.4) [98 (8)]	5.4 (0.3) [99 (7)]	5.2 (0.4) [95 (9)]	5.3 (0.4) [97 (8)]	5.3 (0.4) [97 (9)]	5.5 (0.4) [100 (9)]
Mean glucose level at 5 AM^d <i>mean (SD) – mmol/l [mg/dL]</i>	5.3 (0.4) [96 (9)]	5.3 (0.3) [97 (7)]	5.1 (0.4) [93 (8)]	5.2 (0.4) [95 (8)]	5.2 (0.4) [95 (9)]	5.4 (0.5) [98 (10)]
Males						
No. of Participants / No. of Days^a	50/291	13/59	12/66	10/77	8/38	7/51
Mean glucose level at 1 AM^b <i>mean (SD) – mmol/l [mg/dL]</i>	5.6 (0.7) [101 (14)]	5.3 (0.9) [96 (17)]	5.6 (0.4) [102 (9)]	5.3 (0.5) [97 (10)]	5.4 (0.4) [99 (8)]	6.4 (1.1) [116 (20)]
Mean glucose level at 3 AM^c <i>mean (SD) – mmol/l [mg/dL]</i>	5.3 (0.7) [96 (13)]	5.0 (0.7) [91 (13)]	5.2 (0.4) [95 (9)]	5.2 (0.5) [95 (10)]	5.2 (0.4) [94 (8)]	6.0 (0.9) [109 (18)]
Mean glucose level at 5 AM^d <i>mean (SD) – mmol/l [mg/dL]</i>	5.2 (0.6) [94 (11)]	4.9 (0.8) [89 (15)]	5.1 (0.3) [93 (7)]	4.9 (0.2) [90 (5)]	5.3 (0.4) [96 (8)]	5.8 (0.7) [105 (14)]

Summary statistics are on a subject-level.

a - Only days with ≥ 15 minutes of glucose readings within each time period were included.

- b – Mean glucose from 12:45 AM to <1:15 AM.
- c – Mean glucose from 2:45 AM to <3:15 AM.
- d – Mean glucose from 4:45 AM to <5:15 AM.