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Supplementary Table 1. Sensor Wear

	Total Sensor	Wear (Days)	Sensor Wear (Days / Week)			
	Control Group	Continuous Monitoring Group	Control Group	Continuous Monitoring Group		
Mean	40	136	4.7	5.6		
SD	23	52	2.2	1.4		
Minimum	0	3	0.0	0.6		
10 th Percentile	1	45	1.4	3.6		
25 th Percentile	21	126	3.0	5.1		
Median	47	157	5.6	6.1		
75 th Percentile	61	172	6.6	6.6		
90 th Percentile	66	179	7.1	6.8		
Maximum	71	187	7.4	6.9		
Number of subjects	58	62	57	62		

Distributions of subject s total sensor wear and days per week of instructed sensor wear during the 6 month study period.

Supplementary Table 2. Adverse Events

Study Group	Is this a Serious Adverse Event?	Related to study device	Related to participation in the study	Description
Continuous	Yes	Not	Not related	Mild diabetic ketoacidosis (DKA)
monitoring		related		
Continuous	Yes	Not	Not related	Myasthenia gravis
monitoring		related		
Control	Yes	Not	Not related	Prolonged cephalea
		related		
Continuous	Yes	Not	Not related	Laparoscopic repair of the spermatic
monitoring		related		vein

Supplementary Figure 1. Screening, enrolment, random assignment and follow up of the study participants Assessed for eligibility (n=161) **Enrolment** Excluded (n=39) Did not meet HbA1c inclusion criteria (n=39) Eligible and entered run-in phase (n=122)Discontinued (n=2). 1 due to the study schedule. 1 for unknown reason Randomized (n=120) Allocated to control group (n=58) Allocation Allocated to intervention (real-time Received allocated control treatment continuous glucose monitoring) group (n=57)(n=62)Did not receive allocated control Received allocated intervention (n=62) treatment (n=1) (Withdrew immediately, too busy to use device) Completed the study (n=53) Completed the study (n=48) Discontinued (n=9): Discontinued (n=9): 4xToo busy to use device 3xAlarms too frequent 1xAlarms too frequent / too difficult to 2xToo difficult to operate device operate device 1xToo difficult to operate device / Follow up 2xDevice is too big technical problems with sensor 1xToo busy to use device 1xSkin inflammation at insertion site 1xToo difficult to operate device 1xTransmitter falls off during sport 1xToo frequent adhesive failure Included in analysis of primary

Included in analysis of the

primary endpoint (n=62)

endpoint (n=54)

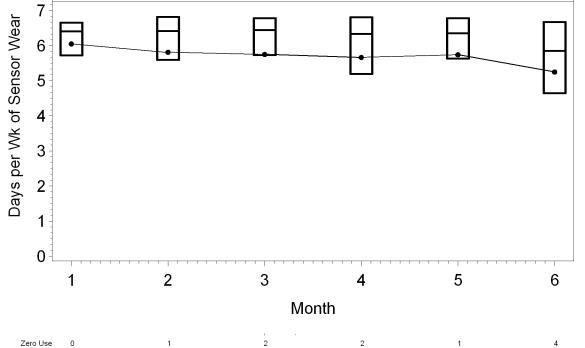
(No continuous glucose

readings were recorded for 3 of

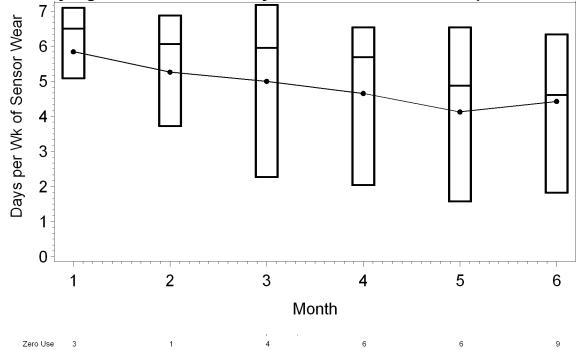
the 57 subjects who received their allocated treatment)

Analysis

Supplementary Figure 2a. Sensor wear by month in the Continuous monitoring Group

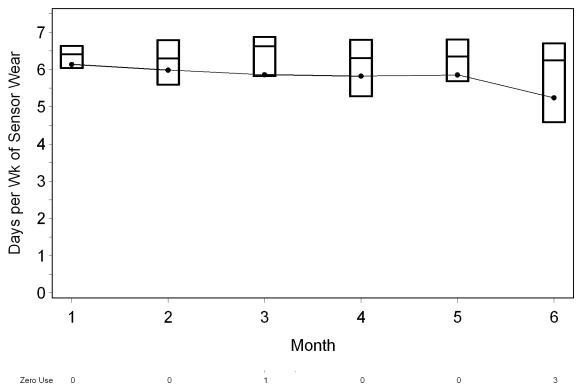




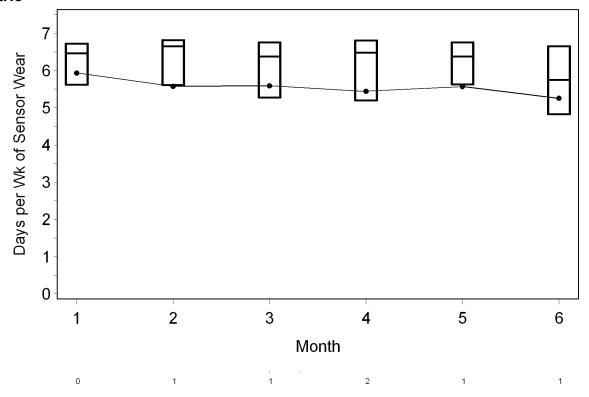


Hours per week of instructed sensor wear during the 6 month study period. Each box represents the inter-quartile range, with the horizontal line in the box representing the median and the dot representing the mean. Patients who withdrew from the study are included up to the month in which they withdrew.

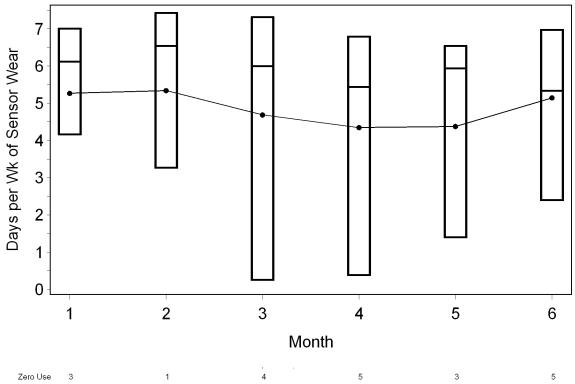
Supplementary Figure 3a. Sensor wear by month in the Continuous monitoring Group - Adult



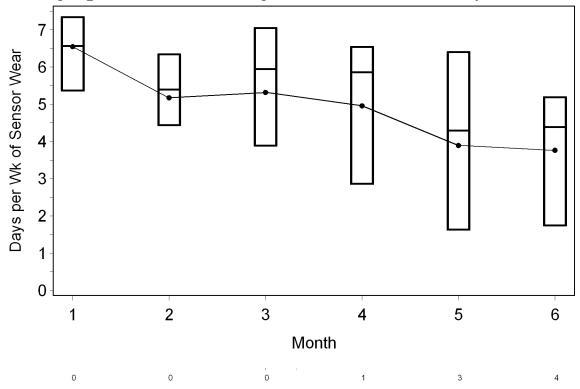
Supplementary Figure 3b. Sensor wear by month in the Continuous monitoring Group - Pediatric



Supplementary Figure 3c. Sensor wear by month in the Control Group - Adult



Supplementary Figure 3d. Sensor wear by month in the Control Group - Pediatric

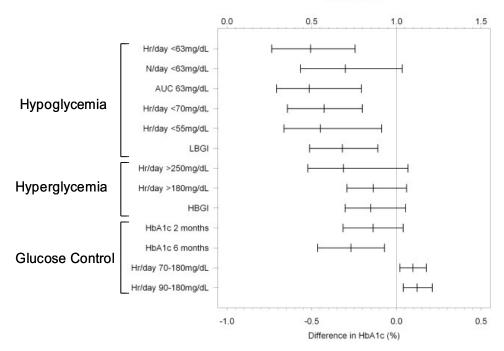


Hours per week of instructed sensor wear during the 6 month study period. Each box represents the inter-quartile range, with the horizontal line in the box representing the median

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and the dot representing the mean. the month in which they withdrew.	Patients	who w	rithdrew	from th	e study a	are includ	led up to

Supplementary Figure 4. Confidence intervals for ratio of study group means (continuous monitoring / control) and difference in means for glycated hemoglobin A1c (HbA1c).



95% confidence intervals for the ratio of the means (continuous monitoring / control) for glycemic outcomes. If the ratio of means is less than 1 then the glycemic outcome is reduced in the continuous monitoring group compared to the control group. For HbA1c the 95% confidence interval for the difference in adjusted mean in continuous monitoring group from control group is shown.