

Table 1.
Training Period, Level of Exercise, and Related Effects (Mean ± SD)

Parameter	Group A (moderate exercise, n = 8)				Group B (intense exercise, n = 7)				p value ^a
Training period									
Number of training sessions	7.6 ± 0.5				14.4 ± 0.8				<.0001
Total exercise time (min)	281 ± 49				1046 ± 234				<.0001
Time within heart rate limits (min)	234 ± 50				853 ± 100				<.0001
% time within heart rate limits	83.4 ± 11.6				83.8 ± 14.7				.959
Heart rate (bpm)	135.9 ± 11.8				132.7 ± 10.0				.582
Total energy consumption (kcal)	3062 ± 614				10,564 ± 1838				<.0001
	Pretraining	Posttraining	Difference pre-post	p value ^b	Pretraining	Posttraining	Difference pre-post	p value ^b	p value ^c
Impedance measurements ^d									
BFM (kg)	19.6 ± 7.4	20.0 ± 7.6	-0.4 ± 2.8	0.711	22.2 ± 5.7	22.5 ± 4.0	-0.3 ± 3.4	.832	.589
BFMP (%)	22.6 ± 6.7	23.2 ± 6.9	-0.6 ± 3.2	0.605	25.5 ± 4.8	25.9 ± 2.2	-0.3 ± 4.1	.830	.548
LBM (kg)	64.9 ± 5.1	20.0 ± 7.7	0.8 ± 3.1	0.469	64.0 ± 5.6	63.7 ± 4.7	0.3 ± 3.1	.835	.997
LBM (%)	77.4 ± 6.7	23.2 ± 6.9	0.6 ± 3.1	0.578	74.5 ± 4.8	74.1 ± 2.2	0.3 ± 4.1	.830	.521
H ₂ O (kg)	47.5 ± 3.8	64.0 ± 5.9	0.8 ± 2.2	0.340	46.9 ± 4.1	46.6 ± 3.4	0.2 ± 2.3	.800	.922
H ₂ O (%)	56.7 ± 4.9	76.8 ± 6.9	0.4 ± 2.3	0.600	54.5 ± 3.6	54.2 ± 1.6	0.3 ± 3.0	.789	.531
Self-walk test									
Duration (min)	16.6 ± 0.5	16.0 ± 0.6	0.0 ± 0.8	0.993	16.7 ± 0.5	16.9 ± 1.1	-0.2 ± 1.5	.711	.082
Average heart rate (bpm)	135.9 ± 13.1	132.5 ± 11.4	3.4 ± 9.5	0.349	131.9 ± 19.6	135.7 ± 15.7	-3.9 ± 14.7	.513	.282
Energy consumption (kcal)	233 ± 35	234 ± 36	-0.5 ± 7.6	0.858	242 ± 33	245 ± 24	-3.7 ± 17.7	.599	.043 ^e
VO ₂ max (ml/min/kg)	42.0 ± 5.9	42.7 ± 6.5	-0.7 ± 3.6	0.593	39.9 ± 3.1	37.7 ± 3.5	2.2 ± 4.9	.268	.449
Fitness index	94.9 ± 9.6	96.5 ± 14.8	-1.6 ± 8.4	0.603	88.4 ± 3.2	83.6 ± 13.7	4.9 ± 12.6	.349	.313
^a t test for between-group difference. ^b t test for within-group change (pre-post). ^c f test for between-group differences in change. ^d BFM, body fat mass; BFMP, body fat mass profile; LBM, lean body mass. ^e p value indicating statistically significant difference (< .05).									

(Table 2). Neither heart rate nor energy consumption differed within the groups comparing pretraining results versus posttraining results or between the groups. Patients in both groups also had a comparable basal insulin infusion rate and number of insulin boluses during the 21 h after start of the exercise challenge. However, prandial insulin doses were higher pretraining than posttraining in both groups. Similar amounts of additional CHO were consumed by the patients in both groups during the 21 h after the exercise challenge.

Glucose Profiles

As an example, the individual recordings from a patient in group A and B are shown in Figure 1. The in-house day prior to the study day with the exercise challenge is also displayed, showing all the parameters relevant for changes in metabolic control. The mean glucose profiles of the 21 h after the challenges, together with all individual profiles, are shown in Figure 2. No differences in the glucose profiles with respect to the exercise challenge could be observed. It is of interest