

## Supplemental digital content 4

**Title:** Modeling the recovery of  $W'$  in the moderate to heavy exercise intensity domain.

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**This document contains data and analysis details pertaining to the repeated measures ANOVA**

### Abbreviations used in the document

$\eta^2$  – Effect size of the ANOVA.

$E_{\text{rec}}$  – Energy recovered during the recovery interval of the intermittent cycling test.

F – Test statistic of the ANOVA.

T1, ..., T9 – Intermittent cycling tests.

### Subject-wise data of the intermittent cycling tests

**Table SDC-4.1 reporting  $E_{\text{rec}}$  (%) during each intermittent cycling test for all subjects**

Subject	T1	T2	T3	T4	T5	T6	T7	T8	T9
1	29.02	44.06	38.20	5.76	6.67	7.93	-8.87	-6.80	-10.76
2	48.82	63.90	51.64	32.76	46.05	34.05	26.80	39.81	-8.64
3	43.68	37.11	53.57	22.75	25.05	34.31	14.61	20.44	8.61
4	23.21	35.57	29.80	14.57	35.17	-6.18	-34.44	-32.50	-49.30
5	29.18	31.77	16.41	23.70	36.34	13.45	13.84	7.62	-38.72
6	28.31	31.32	44.42	14.16	39.79	31.61	7.92	10.26	5.65
Mean	33.70	40.62	39.01	18.95	31.51	19.20	3.31	6.47	-15.53
SD	10.10	12.30	14.12	9.42	13.97	16.77	21.84	24.56	23.58

\*Subject 7 excluded due to reasons discussed in the manuscript.

## Results of the repeated measures ANOVA:

Table SDC-4.2 reporting results of the repeated measures ANOVA

Effect	F	Degrees of freedom, Effect, Error	p-value	Partial $\eta^2$	Observed power
$P_{rec}$	25.603	2, 10	<0.001	0.837	1
$t_{rec}^{\#}$	3.29	1.212, 6.062	0.117	0.397	0.355
$P_{rec} \times t_{rec}$	5.395	4, 20	0.004	0.519	0.929

<sup>#</sup>Greenhouse-Geisser correction used as both epsilons from Mauchly's test were <0.7.

## Results of simple main effects due to the presence of interaction effect:

### Simple main effects of $P_{rec}$ on $E_{rec}$

Table SDC-4.3 Simple main-effects analysis of  $P_{rec}$  on  $E_{rec}$  at each  $t_{rec}^*$

$t_{rec}$ (minutes)	F	Degrees of freedom, Effect, Error	p-value	Partial $\eta^2$	Observed power
2	14.745	2, 10	0.001	0.747	0.989
6	8.905	2, 10	0.006	0.640	0.906
15	53.353	2, 10	<0.001	0.914	1

\*Pairwise comparisons are reported in Table 2 of the manuscript.

## Schematic illustration of the interaction effect of $P_{rec} \times t_{rec}$ on $E_{rec}$ followed by simple main effects of $P_{rec}$ on $E_{rec}$

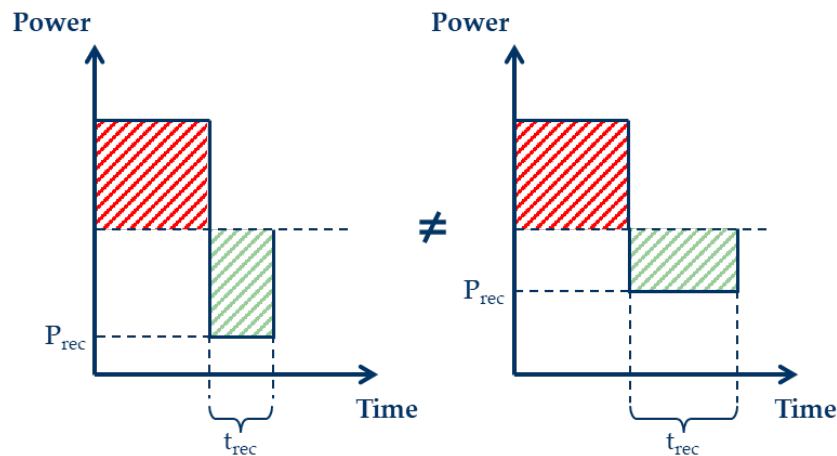


Figure SDC-4.1 The recovery areas below CP (shaded in green) are equal. However, the amount of  $W'$  recovered in these intervals, i.e.  $E_{rec}$ , are not equal.

# Simple main effects of $t_{rec}$ on $E_{rec}$

**Table SDC-4.4 Simple main-effects analysis of  $t_{rec}$  on  $E_{rec}$  at each  $P_{rec}$**

$P_{rec}$	F	Degrees of freedom, Effect, Error	p-value	Partial $\eta^2$	Observed power
L	1.25	2, 10	0.303	0.213	0.227
M	3.017	2, 10	0.094	0.376	0.456
H <sup>#</sup>	5.786	1.141, 5.705	0.053	0.536	0.537

<sup>#</sup>Greenhouse-Geisser correction used as both epsilons from Mauchly's test were <0.7.