

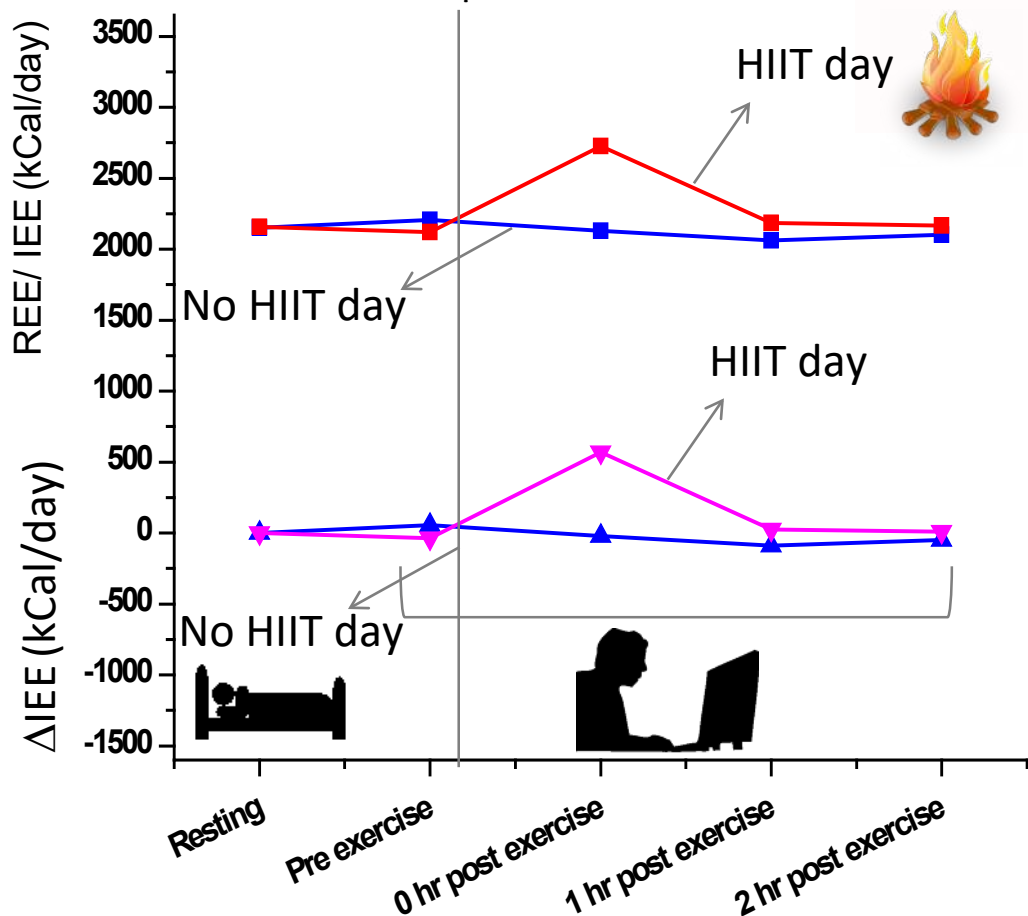
Case Study #10

How can we efficiently help patients
in exercise training?

Momentary Energy Expenditure after exercising*

Can we detect a difference in metabolism between a High Intensity Interval Training (HIIT) day vs a No-HIIT day?

Devon

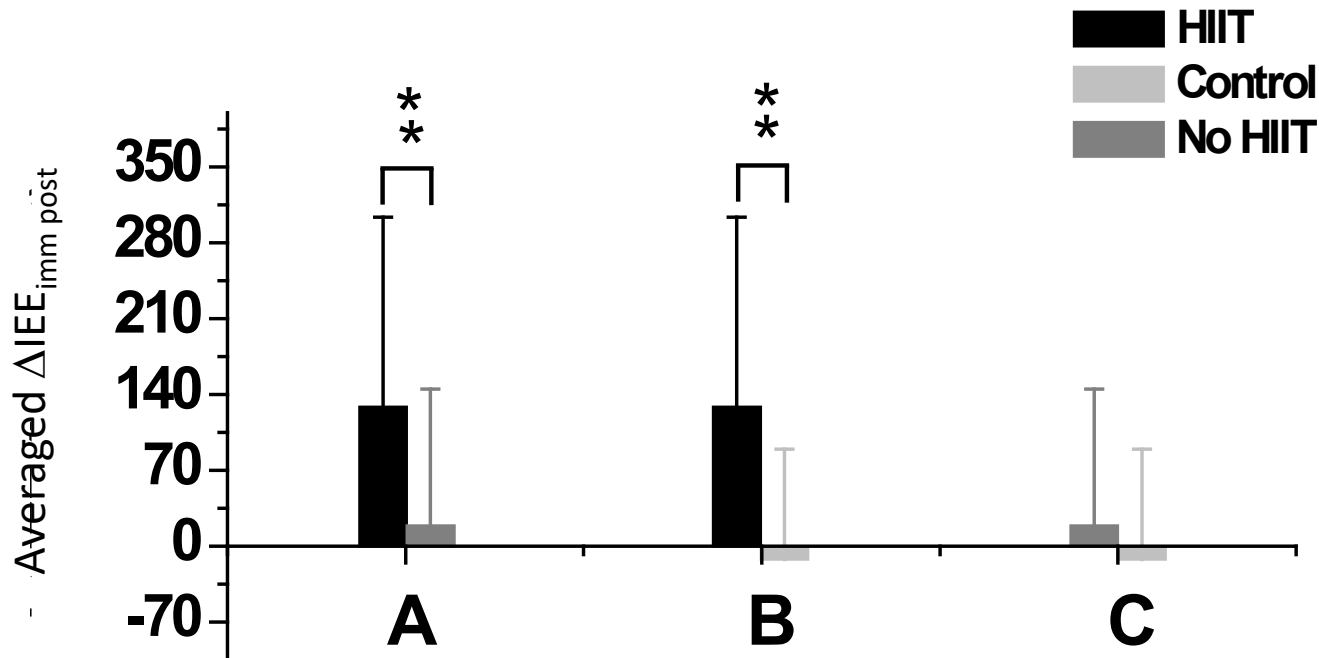


* Squatting work of 36-55 lbs and 0.53 m with up & down

* In collaboration with Barb Ainsworth (Former ACSM President), Troy Anderson (CPT), and D. Jackemeyer (ASU)

Momentary Energy Expenditure after exercising*

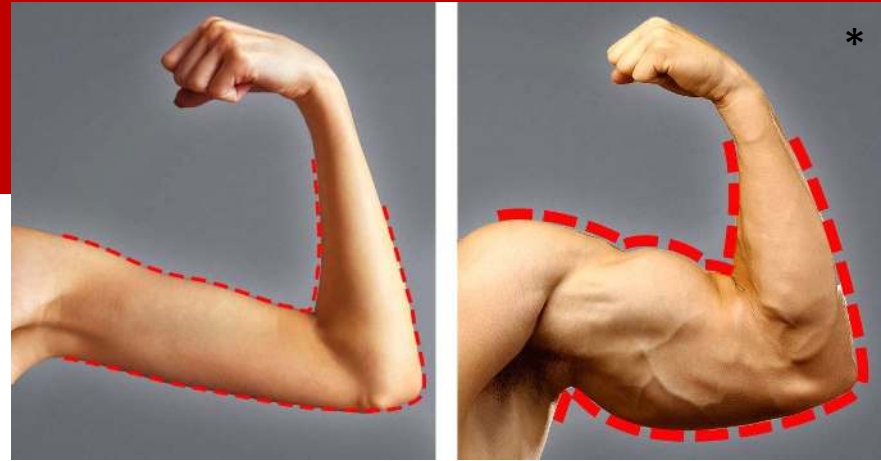
Effect of HIIT on individual's energy expenditure throughout training sessions



Averaged change of pre- and post- energy expenditure ($\Delta IEE = EE_{post} - EE_{pre}$) was significantly different:

- ✓ HIIT day vs. NO HIIT day (HIIT group)
- ✓ HIIT day (HIIT group) vs. CONTROL (Control group)

Momentary Energy Expenditure after exercising*



Correlation of EE changes and muscle mass

The change of muscle mass over the 6 weeks emerged as a consequence of HIIT training in the IG, significantly increasing for the IG ($t=-2.42$, $P=0.03$) vs. the CG ($t=-1.66$, $P=0.13$)

Within the IG: two subgroups were identified.

A- Subjects with 6% or larger increase in muscle mass, and

B - Subjects with 1% or no change in muscle mass.

Analysis of EPOC effect via $\Delta EE_{imm-post}$ in the subgroup with 6% muscle increase (N.=5) had an averaged $\Delta EE_{imm-post}$ of 241 kcal/day (SEM=77), whereas in the subgroup showing 1% increase or no change in muscle mass (N.=7) had an average 70 kcal/day (SEM=58).

ORIGINAL ARTICLE

Personal mobile tracking of resting and excess post-exercise oxygen consumption with a mobile indirect calorimeter

Xiaojun XIAN¹, Francis TSOW¹, Samita RAI¹, Troy ANDERSON²,
Amlendu PRABHAKAR¹, Mirna TERRERA¹, Barbara AINSWORTH³,
David JACKEMEYER¹, Ashley QUACH^{1*}, Nongjian TAO^{1,4}, Erica FORZANI^{1,5*}

¹Center for Bioelectronics and Biosensors, The Biodesign Institute, Arizona State University, Tempe, AZ, USA; ²Anderson Training Systems, Tempe, AZ, USA; ³School of Nutrition and Health Promotion, Arizona State University, Tempe, AZ, USA; ⁴School of Electrical, Computer and Energy Engineering (ECEE), Arizona State University, Tempe, AZ, USA; ⁵School of Engineering for Matter, Transport, and Energy (SEMTE), Arizona State University, Tempe, AZ, USA

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Thank YOU !

Questions to:

info@brezing.com