

Author's Accepted Manuscript

Conventional and novel body temperature measurement during rest and exercise induced hyperthermia

Colin Towey, Chris Easton, Robert Simpson, Charles Pedlar



PII: S0306-4565(16)30176-0
DOI: <http://dx.doi.org/10.1016/j.jtherbio.2016.11.010>
Reference: TB1846

To appear in: *Journal of Thermal Biology*

Received date: 10 June 2016
Accepted date: 14 November 2016

Cite this article as: Colin Towey, Chris Easton, Robert Simpson and Charles Pedlar, Conventional and novel body temperature measurement during rest and exercise induced hyperthermia, *Journal of Thermal Biology*, <http://dx.doi.org/10.1016/j.jtherbio.2016.11.010>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Conventional and novel body temperature measurement during rest and exercise induced hyperthermia

Colin Towey^{1,1*}, Chris Easton^{4,2}, Robert Simpson^{3,3}, Charles Pedlar^{1,2,4}

¹School of Sport, Health and Applied Science, St. Mary's University, Twickenham. UK

²Massachusetts General Hospital, Boston, USA

³National Physical Laboratory (NPL), Teddington. UK

⁴Institute for Clinical Exercise and Health Science, University of the West Scotland, Hamilton. UK

colin.towey@stmarys.ac.uk

Chris.Easton@uws.ac.uk

rob.simpson@npl.co.uk

charles.pedlar@stmarys.ac.uk

*Corresponding author: Colin Towey. Research was conducted at St Mary's University. Tel.: +447842795870. Email: colin.towey@stmarys.ac.uk

Abstract

Despite technological advances in thermal sensory equipment, few core temperature (T_{CORE}) measurement techniques have met the established validity criteria in exercise science. Additionally, there is debate as to what method serves as the most practically viable, yet upholds the proposed measurement accuracy. This study assessed the accuracy of current and novel T_{CORE} measurement techniques in comparison to rectal temperature (T_{REC}) as a reference standard. Fifteen well-trained subjects (11 male, 4 female) completed 60 min of exercise at an intensity equating to the lactate threshold; measured via a discontinuous exercise test. T_{REC} was significantly elevated from resting

¹ +447842795870

² +441698 288648

³ +442089436438

⁴ +1 (781) 583-8466

Download English Version:

<https://daneshyari.com/en/article/5593542>

Download Persian Version:

<https://daneshyari.com/article/5593542>

[Daneshyari.com](https://daneshyari.com)