THE PHYSIOLOGICAL PROFILE OF COMPETITIVE AND RECREATIONAL SURFERS

James Furness, Bond University
Wayne Hing, Bond
Ben Schram, Bond University
Sean Newcomer, California State University, San Marcos
Mike Climstein, University of Sydney, Australia

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Institutions:

A Water Based Research Unit, Bond Institute of Health & Sport, Faculty of Health Sciences, Bond University

B Surfing Australia Elite Athlete Program, Hurley Surfing Australia High Performance Centre

C Department of Kinesiology, California State University San Marcos

D Exercise Health & Performance Faculty Research Group, Faculty of Health Sciences, The University of Sydney

Corresponding Author: James Furness

Mailing Address: Bond Institute of Health and Sport, 2 Promethean Way, Gold Coast, Queensland, Australia, 4226

Email: jfurness@bond.edu.au

Contact number: +614 49002555
ABSTRACT

Surfing consists of both high and low intensity paddling of varying durations, utilizing both the aerobic and anaerobic systems. Surf specific physiological studies lack adequate group sample sizes and VO$_{2peak}$ values are yet to determine differences between competitive and recreational surfers. The purpose of this study was therefore to provide a comprehensive physiological profile of both recreational and competitive surfers. This multi-site study involved 62 male surfers, recreational ($n = 47$) and competitive ($n = 15$). Anthropometric measurements were conducted followed by DEXA, anaerobic testing and finally aerobic testing. VO$_{2peak}$ was significantly greater in competitive compared to recreational surfers ($M = 40.71 \pm 3.28$ vs. $31.25 \pm 6.31$ ml/kg/min, $p < .001$). This was also paralleled for anaerobic power ($M = 303.93$ vs. $264.58$ W) for competitive surfers. Arm span and lean total muscle mass was significantly ($p \leq .01$) correlated with key performance variables (VO$_{2peak}$ and anaerobic power). No significant ($p \geq .05$) correlations were revealed between season rank and each of the variables of interest (VO$_{2peak}$ and anaerobic power). Key performance variables (VO$_{2peak}$ and anaerobic power) are significantly higher in competitive surfers indicating this is both an adaptation and requirement in this cohort. This battery of physiological tests could be used as a screening tool to identify an athlete’s weaknesses or strengths. Coaches and clinicians could then select appropriate training regimes to address weaknesses.

Key words: Surfing, Aerobic, Anaerobic, Assessment, Screening