

## Accepted Manuscript

Title: Measurement of muscle thickness of the serratus anterior and lower trapezius using ultrasound imaging in competitive recreational adult swimmers, with and without current shoulder pain

Authors: Leanda J. McKenna, Mandy de Ronde, Minyang Le, William Burke, Anna Graves, Sian A Williams



PII: S1440-2440(17)30939-8  
DOI: <http://dx.doi.org/doi:10.1016/j.jsams.2017.06.022>  
Reference: JSAMS 1561

To appear in: *Journal of Science and Medicine in Sport*

Received date: 7-12-2016  
Revised date: 13-6-2017  
Accepted date: 27-6-2017

Please cite this article as: McKenna Leanda J, Ronde Mandy de, Le Minyang, Burke William, Graves Anna, Williams Sian A. Measurement of muscle thickness of the serratus anterior and lower trapezius using ultrasound imaging in competitive recreational adult swimmers, with and without current shoulder pain. *Journal of Science and Medicine in Sport* <http://dx.doi.org/10.1016/j.jsams.2017.06.022>

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 proof before it is published in its final 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.

**Title Page**

Title

Measurement of muscle thickness of the serratus anterior and lower trapezius using ultrasound imaging in competitive recreational adult swimmers, with and without current shoulder pain

Authors

Leanda J McKenna <sup>a</sup>,

Mandy de Ronde <sup>a</sup>,

Minyang Le <sup>a</sup>

William Burke\* <sup>a</sup>,

Anna Graves <sup>b</sup>

Sian A Williams <sup>a</sup>.

Institution and Affiliations

<sup>a</sup> School of Physiotherapy and Exercise Science, Faculty of Health Sciences, Curtin University.

<sup>b</sup> Department of Medical Radiation Sciences, Faculty of Science and Engineering, Curtin University.

GPO Box U1987, Perth Western Australia 6845.

Corresponding author

Leanda J McKenna

Email; l.mckenna@curtin.edu.au

Word Count

Manuscript word count = 2996

Abstract word count = 243

Number of tables = 2

Number of figures =1

Download English Version:

<https://daneshyari.com/en/article/8592999>

Download Persian Version:

<https://daneshyari.com/article/8592999>

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