

PEER-REVIEW REPORT

Name of journal: World Journal of Cardiology

Manuscript NO: 49375

Title: Impact of training specificity on exercise-induced cardiac troponin elevations in professional athletes

Reviewer's code: 02565578

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Assistant Professor

Reviewer's country: Italy

Author's country: Sweden

Reviewer chosen by: Li-Jun Cui (Quit in 2019)

Reviewer accepted review: 2019-06-17 06:20

Reviewer performed review: 2019-06-17 08:11

Review time: 1 Hour

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input checked="" type="checkbox"/> Grade D: Fair	<input checked="" type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input checked="" type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The Authors report an interesting observation that cTn in the athletes trained for performing intermittent exercise the cTn reaches higher levels after intermittent exercise than after the resistance exercise. A review of the cTn kinetics literature demonstrates a pattern of elevation and peak within the first 4 h after exercise dropping within 24h. In contrast myocardial necrosis demonstrates a later cTn peak with a slower reduction occurring over several days. These data derive mainly from the studies in endurance athletes (see Baker et al. Int J Cardiol Heart Vasc. 2019;22:181-186), such as marathon racers. The Authors do not meaningfully compare their work to the already published data (e.g., the above mentioned review is not cited). The comparison with one of the published papers should be moved from the Introduction to Discussion section. In the discussion and conclusions, the significance of present findings is not clear, especially since cTn elevation following exercise is considered benign and affected individuals are not counselled nor treated. Would it be advisable to include both types of exercise in the training of professional athletes in order to avoid cTn elevation? Some animal experiments have shown that trauma and stress induce the cTnT isoform in skeletal muscle. It can be speculated that chronic skeletal muscle damage could induce cTnT in a similar way in athletes. The authors should include this concept in the discussion of their results. Data are presented in two tables and one figure. The figure unfortunately cannot be viewed in the present submission, but the two tables report exactly the same data (different p for the comparison between time points in the same exercise and different exercisers) and could be easily combined.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-223-8242
E-mail: bpgoffice@wjgnet.com
<https://www.wjgnet.com>

☐ Plagiarism

☐ No

BPG Search:

☐ The same title

☐ Duplicate publication

☐ Plagiarism

☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Cardiology

Manuscript NO: 49375

Title: Impact of training specificity on exercise-induced cardiac troponin elevations in professional athletes

Reviewer's code: 02729101

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Associate Professor

Reviewer's country: Italy

Author's country: Sweden

Reviewer chosen by: Li-Jun Cui (Quit in 2019)

Reviewer accepted review: 2019-06-20 13:12

Reviewer performed review: 2019-06-20 13:28

Review time: 1 Hour

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The study is interesting demonstrating that intermittent high grade efforts but not continuous exercise, despite similar levels of maximal load achieved , may lead to high-sensitivity cardiac troponin T (hs-cTnT) release. As reported in discussion this may lead to misinterpretation of clinical significance of values above 99th percentile in clinical setting. Several papers showed that also a small increase in troponin in cardiovascular stress conditions (eg after non cardiac surgery) are associated with a worse early and long term prognosis. Release pf hs-cTnT may show similar pathophysiological mechanisms in some of these patients but at present we have no way to differentiate "physiological" from "pathological" hs-cTnT increase.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Cardiology

Manuscript NO: 49375

Title: Impact of training specificity on exercise-induced cardiac troponin elevations in professional athletes

Reviewer's code: 02636166

Position: Editorial Board

Academic degree: MD, MPhil

Professional title: Assistant Professor, Chief Doctor

Reviewer's country: Taiwan

Author's country: Sweden

Reviewer chosen by: Li-Jun Cui (Quit in 2019)

Reviewer accepted review: 2019-06-17 03:07

Reviewer performed review: 2019-06-25 12:31

Review time: 8 Days and 9 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input type="checkbox"/> Anonymous
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			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Dear Drs. Wedin and Henriksson: This is an interesting paper addressing the impact of training specificity on exercise-induced cardiac troponin elevations in professional athletes. Firstly this an observational experimental study. Only nine male athletes were included for the investigations. Although the study was well conducted, there were some issues needed to be addressed. 1. First, there were only nine male participants and the topic had better name as a pilot study for male athletes. 2. The baseline data such as ECG and echo were not provided in the table. 3. Serial lactate levels and hemodynamic parameters like heart rate and BP should be provided in the table. 4. Are there any data for other cardiac enzymes such as CPK and MB-isoforms as well as BNP levels available? If not please mention them in the future works.

INITIAL REVIEW OF THE MANUSCRIPT

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- ☐ Plagiarism
- ☐ No

BPG Search:

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- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No