



Journal of Exercise Physiology **online** (JEP **online**)

Volume 8 Number 6 December 2005

Managing Editor

Robert Robergs, Ph.D.

Editor-in-Chief

Robert Robergs, Ph.D.

Review Board

Todd Astorino, Ph.D.

Julien Baker, Ph.D.

Tommy Boone, Ph.D.

Lance Dalleck, Ph.D.

Dan Drury, DPE.

Hermann Engals, Ph.D.

Eric Goulet, M.Sc.

Robert Gotshall, Ph.D.

Len Kravitz, Ph.D.

James Laskin, Ph.D.

Jon Linderman, Ph.D.

Derek Marks, Ph.D.

Cristine Mermier, Ph.D.

Daryl Parker, Ph.D.

Robert Robergs, Ph.D.

Brent Ruby, Ph.D.

Jason Siegler, Ph.D.

Greg Tardie, Ph.D.

Chantal Vella, Ph.D.

Ben Zhou, Ph.D.

Official Research Journal
of The American Society of
Exercise Physiologists
(ASEP)

ISSN 1097-9751

Editorial

RESEARCH BIAS IN EXERCISE PHYSIOLOGY

Robergs RA.

Exercise Physiology Laboratories, University of New Mexico,
Albuquerque, NM 87131.

Robergs RA. Research Bias In Exercise Physiology. *JEPonline*
2005;8(6):i-iii.

In this December 2005 issue there is a Letter to the Editor from Carpinelli (1) concerning a manuscript by Kraemer (2) and further evidence of bias in research review and scientific scholarship on the topic of resistance exercise training guidelines and recommendations. This topic and the letter content are an extension of the prior critical review by Carpinelli et al. (3) of recent recommendations and guidelines in resistance training (4). I reviewed the submitted letter, recommended several edits, and approved of the final version. I need to accompany the Letter to the Editor with an editorial so that science can be revealed to be the true beneficiary of this on-going interchange.

As an editor of a peer reviewed exercise physiology scientific journal, I have a responsibility to support, first and foremost, the integrity of science. In doing so, I recognize that science is never perfect and that scientists are not perfect. Furthermore, expressions of opposition to opinion, no matter how accepted or engrained that opinion is to a discipline or body of knowledge, are an essential feature of the scientific method. It could be argued that without an open forum for criticism and debate, the process of science is stifled. As such, criticism and debate are the life-blood of science, and each should be invited, welcomed, and most importantly, nurtured.

Given that progress in any discipline is made by deliberate professional challenge and debate, the way a discipline, and for that matter any given scientist, deals with challenge and debate are critical traits of the "scientific health" of the discipline or scientist.

I have written in the past (5,6) of my concerns of the "poor health" of the exercise sciences. It is to my dismay that I have to express that in my professional opinion the status of peer review and scholarship in the

exercise sciences is in a state of disarray. There is bias at all levels of science; authorship, peer review, and the editorial process that is meant to protect against such bias. Issues concerning the power and dominance of key organizations, and individuals who represent them, seem to be placed at a higher priority than the idealities of the scientific method. This results in the process of scholarship, peer review and eventual publication in many journals to be at risk for decisions based on issues other than the scientific quality of the work. I have personally experienced far too much of this, as have many of my colleagues. As such, there is a real risk for our field to slide down the slippery slope separating science from pseudo-science.

The Letter to the Editor from Carpinelli (1) is disturbing in how it identifies individuals involved in what is argued to be clear bias in scientific peer review and subsequent decisions for or against publication in numerous journals within the exercise and sport sciences. As editor-in-chief of *JEPonline*, I saw no reason to censor this content. If our field is to grow scientifically, then adding vague criticism to the general topic of bias in peer review and specifically in regard to exercise training guidelines and recommendations is unlikely to stimulate change.

What is needed is an effort to end this negativity within the field of resistance exercise. I also feel that the broader issue of bias in peer review within exercise and sports science can also be addressed. I propose the following.

1. A Roundtable Meeting (day 1) needs to occur on ***Resistance Exercise Training Guidelines And Recommendations***.
2. Representatives from the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA), the American Society of Exercise Physiologists (ASEP), and each of Robert Otto, Ralph Carpinelli and Richard Winett need to be present to critically evaluate all past research on resistance exercise training resulting in a revised compilation of resistance exercise training guidelines and recommendations.
3. The goal of the roundtable meeting is to devise the process needed to develop two new documents for publication in *Medicine and Science in Sports and Exercise*. The documents will be a) a scientific peer review ending in revised guidelines and recommendations for resistance training, and b) a similar article written for a lay publication, re-stating the guidelines and recommendations for the average consumer. The authors of the manuscript are to be the three organizations, and the individual authors would be recognized within the Acknowledgements section of each manuscript.
4. A second roundtable meeting (day 2) needs to occur on ***Preventing Bias In The Editorial Peer Review Process Within Exercise And Sport Sciences***.
5. The goal of this second roundtable meeting is to address bias in the editorial peer review process within the exercise and sport sciences. Invitations for representation from all journals pertaining to exercise and sport sciences will precede this meeting. An anticipated outcome of the second roundtable meeting will be to develop a Standards of Practice document that if adopted by journals would function to limit the presence and impact of bias in the editorial peer review process within the exercise and sport sciences. These standards are to be available for publication in any journal, with the intent that all journals within the exercise and sport sciences, or any other field, adopt these standards.

I recommend that these roundtable meetings be held in May 2006, with a target publication date for all manuscripts set for October 2007.

I encourage all participants in this interchange to view this invitation as a challenge and opportunity to place science and the future scientific credibility of the exercise and sport sciences ahead of

competing interests. The venue for these meetings will be the Student Union Building Conference Facility of The University of New Mexico, Albuquerque, New Mexico. The dates and times for these meetings will appear in the February issue of *JEPonline*. Submission for participation can be emailed to me at rrobergs@unm.edu.

REFERENCES

1. Carpinelli RN. The Facade of Knowledge. *JEPonline* 2005;8(6):iii-vii.
2. Kraemer WJ. The body of knowledge: use and professionalism. *Strength & Cond J* 2005;27:33-35.
3. Carpinelli RN, Otto RM, Winett RA. A critical analysis of the ACSM position stand on resistance training: insufficient evidence to support recommended training protocols. *JEPonline* 2004;7(3):1-64.
4. American College of Sports Medicine. Kraemer WJ. Writing Group Chairman. Position stand: progression models in resistance training for healthy adults. *Med Sci Sports Exerc* 2002;34:364-680.
5. Robergs RA. A critical review of peer review: the need to scrutinize the “gatekeepers” of research in exercise physiology. *JEPonline* 2003;6(2):i-xiii.
6. Robergs RA. Research, ethics and the ACSM position stand on progression models in resistance training for healthy adults. *JEPonline* 2004; 7(3):i-ii.