

James L. Nuzzo, PhD, CSCS

Citizenship: Australia and United States of America

Residency: Perth, Australia

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OVERVIEW

I have conducted and published research for 18 years. My research interests include, but are not limited to, exercise neurophysiology, neuromuscular adaptations to resistance exercise, exercise nomenclature, the history of exercise research and equipment, sex differences in exercise preferences and performances, men's health, scientometrics and bibliometrics of academic publications, and the role of letters to the editor in academic publishing. The goals of my research are to better understand human nature, inform clinical practice, and provide individuals with the information they need to optimize their physical and mental health and flourish in the world.

EDUCATION

<i>PhD, Physiology</i>	University of New South Wales	<i>Dec 2016</i>
<i>MS, Exercise Science</i>	Appalachian State University	<i>May 2008</i>
<i>BS, Exercise Science</i>	Slippery Rock University	<i>Aug 2006</i>

HONORARY POSITIONS

<i>Adjunct Senior Lecturer</i>	Edith Cowan University	<i>Mar 2022 - Mar 2025</i>
<i>Adjunct Lecturer</i>	Edith Cowan University	<i>Mar 2021 - Mar 2022</i>
<i>Visiting Delegate</i>	Edith Cowan University	<i>Mar 2019 - Dec 2019</i>
<i>Conjoint Lecturer</i>	University of New South Wales	<i>Apr 2018 - Dec 2019</i>

EMPLOYMENT

<i>Research and Education Consultant</i>	Independent Contractor	<i>Nov 2023 - present</i>
<i>Research Assistant (casual)</i>	Edith Cowan University	<i>Aug 2022 - Dec 2024</i>
<i>Head of Exercise Science Research</i>	Vitruvian	<i>Feb 2021 - July 2022</i>
<i>Research Assistant (casual)</i>	Edith Cowan University	<i>Aug 2020 - Dec 2020</i>
<i>Postdoctoral Fellow (casual)</i>	Neuroscience Research Australia	<i>Apr 2020 - Dec 2020</i>
<i>Postdoctoral Fellow</i>	Neuroscience Research Australia	<i>Nov 2016 - Dec 2019</i>
<i>SPSS Private Tutor</i>	WyzAnt Tutoring	<i>July 2012 - Feb 2013</i>
<i>Research Support Specialist</i>	University of South Florida	<i>Nov 2010 - Dec 2012</i>
<i>Instructor</i>	Slippery Rock University	<i>Aug 2008 - May 2010</i>
<i>Strength Coach Intern</i>	Watauga High School (football, volleyball)	<i>Mar 2007 - July 2008</i>
<i>Graduate Assistant</i>	Appalachian State University	<i>Aug 2006 - May 2008</i>
<i>Strength Coach Intern</i>	UPMC Sports Performance	<i>May 2006 - Aug 2006</i>
<i>Exercise Specialist</i>	Aebersold Student Recreation Center	<i>July 2005 - May 2006</i>
<i>Strength Coach Volunteer</i>	Slippery Rock University (men's soccer)	<i>Jan 2006 - May 2006</i>

UNIVERSITY COURSES INSTRUCTED

Applied Anatomy	<i>Aug 2008 - May 2010</i>
Measurement and Statistical Applications in Exercise Science	<i>Aug 2008 - May 2010</i>
Exercise Leadership: Resistance Training	<i>Aug 2008 - May 2010</i>
Biomechanics Laboratory (*graduate teaching assistant)	<i>Aug 2006 - May 2008</i>

CERTIFICATIONS

Strength and Conditioning Specialist	National Strength & Conditioning Association	<i>Oct 2006 - present</i>
First Aid / CPR	Australia Wide First Aid	<i>Sep 2023 - present</i>

PUBLICATION METRICS

Google Scholar: *h*-index: 28

Citations: 3,827

Journal articles: 82 (*67 first author)

JOURNAL ARTICLES (PUBLISHED)

1. **Nuzzo JL**, Pinto MD. (In press). Sex differences in upper- and lower-limb muscle strength in children and adolescents: a meta-analysis. *Eur J Sport Sci*.
2. **Nuzzo JL**. (In press). Sex differences in grip strength from birth to age 16: a meta-analysis. *Eur J Sport Sci*.
3. **Nuzzo JL**. (2024). Bibliometric guide to photographs of male participants in early exercise and physical medicine research. *J Men's Health*. 20:9-32.
4. **Nuzzo JL**. (2024). Exercise physiology degrees in the United States: an update on secular trends. *Adv Physiol Educ*. 48:923-929.
5. **Nuzzo JL**. (2024). Muscle strength preservation during repeated sets of fatiguing resistance exercise: a secondary analysis. *J Strength Cond Res*. 38:1149-1156.
6. **Nuzzo JL**, Pinto M, Kirk B, Nosaka K. (2024). Overview of resistance exercise minimal dose strategies for increasing muscle strength in the general population. *Sports Med*. 54: 1139-1162.
7. **Nuzzo JL**, Pinto MD, Nosaka K, Steele J. (2024). Maximal number of repetitions at percentages of the one repetition maximum: a meta-regression and moderator analysis of sex, age, training status, and exercise. *Sports Med*. 54: 303-321.
8. **Nuzzo JL**. (2024). Sex differences in skeletal muscle fiber types: a meta-analysis. *Clin Anat*. 37: 81-91.
9. **Nuzzo JL**, Deaner RO. (2024). Women and men report unequal interest in participating in exercise research. *J Appl Physiol*. 136: 53-55.
10. **Nuzzo JL**. (2024). "Woke" nomenclature in health research: a descriptive study of terms used in titles and abstracts of articles indexed in PubMed. *Psychreg J Psychol*. 8:81-91.
11. **Nuzzo JL**, Nosaka K. (2023). Eccentric muscle actions add complexity to an already inconsistent resistance exercise nomenclature. *Sports Med – Open*. 9: 118.
12. **Nuzzo JL**. (2023). “Male circumcision” and “female genital mutilation”: why parents choose the procedures and the case for gender bias in medical nomenclature. *Int J Hum Rights*. 27: 1205-1228.
13. **Nuzzo JL**, Pinto MD, Nosaka K. (2023). Overview of muscle fatigue differences between maximal eccentric and concentric resistance exercise. *Scand J Med Sci Sports*. 33: 1901-1915.
14. **Nuzzo JL**, Deaner RO. (2023). Men and women differ in their interest and willingness to participate in exercise and sports science research. *Scand J Med Sci Sports*. 33: 1850-1865.
15. Steele J, Pinto MD, Nosaka K, **Nuzzo JL**. (2023). Perceptions of capacity, fatigue, and their psychophysics: examining construct equivalence and the relationships between actual capacity and perception of capacity during resistance elbow flexion tasks. *Psicologica*. 44: e15498.
16. **Nuzzo JL**. (2023). Anonymous editorials in biomedical research journals: few in number but potentially problematic. *Learned Publishing*. 36: 468-472.
17. **Nuzzo JL**, Powney D, Barry JB. (2023). Comment on: “Gender-based violence is a blind spot for sports and exercise medicine professionals.” *Sports Med*. 53: 1495-1497.
18. **Nuzzo JL**. (2023). Letter writing assignment for exercise physiology students. *Adv Physiol Educ*. 47: 346-351.
19. **Nuzzo JL**, Pinto MD, Nosaka K, Steele J. (2023). The eccentric:concentric strength ratio of human skeletal muscle *in vivo*: meta-analysis of the influences of sex, age, joint action, and velocity. *Sports Med*. 53: 1125-1136.
20. **Nuzzo JL**, Pinto MD, Nosaka K (2023). Connective adaptive resistance exercise (CARE) machines for accentuated eccentric and eccentric-only exercise: introduction to an emerging concept. *Sports Med*. 25: 1-14.
21. **Nuzzo JL**, Pinto MD, Nosaka K (2023). Muscle fatigue during maximal eccentric-only, concentric-only, and eccentric-concentric bicep curl exercise with automated drop setting. *Scand J Med Sci Sports*. 33: 857-871.

22. **Nuzzo JL**, Pinto MD, Nosaka K (2023). Muscle strength and activity in men and women performing maximal effort biceps curl exercise on a new machine that automates eccentric overload and drop setting. *Eur J Appl Physiol*. 123: 1381-1396.
23. **Nuzzo JL** (2023). Narrative review of sex differences in muscle strength, endurance, activation, size, fiber type; and strength training participation rates, preferences, motivations, injuries, and neuromuscular adaptations. *J Strength Cond Res*. 37: 494-536.
24. Pinto MD, **Nuzzo JL** (2022). Commentaries on Viewpoint: Hoping for the best, prepared for the worst: can we perform remote data collection in sport sciences? *J Appl Physiol* 133: 1433-1440.
25. **Nuzzo JL**, Nosaka K (2022). Comment on: "Stepwise load reduction training: a new training concept for skeletal muscle and energy systems." *Sports Med* 52: 2297-2300.
26. **Nuzzo JL** (2021). Inconsistent use of resistance exercise names in research articles: a brief note. *J Strength Cond Res* 35: 3518-3520.
27. **Nuzzo JL** (2021). Letters to the editor in exercise science and physical therapy journals: an examination of content and "authorship inflation." *Scientometrics* 126: 6917-6936.
28. **Nuzzo JL** (2021). Content analysis of patent applications for strength training equipment filed in the United States before 1980. *J Strength Cond Res* 35: 2952-2962.
29. **Nuzzo JL** (2021). History of strength training research in man: an inventory and quantitative overview of studies published in English between 1894 and 1979. *J Strength Cond Res* 35: 1425-1448.
30. Latella C, Pinto M, **Nuzzo JL**, Taylor JL (2021). Effects of post-exercise blood flow occlusion on quadriceps responses to transcranial magnetic stimulation. *J Appl Physiol*. 130: 1326-1336.
31. **Nuzzo JL**, Kennedy DS, Finn HT, Taylor JL (2021). Voluntary activation of knee extensor muscles with transcranial magnetic stimulation. *J Appl Physiol*. 130: 589-604.
32. **Nuzzo JL** (2021). Preliminary evidence that letters to the editor are indexed inconsistently in PubMed and in exercise science and physical therapy journals: implications and resolutions. *Learned Publishing*. 34: 241-252.
33. **Nuzzo JL** (2021). Volunteer bias and female participation in exercise and sports science research. *Quest* 73: 82-101.
34. **Nuzzo JL** (2021). Time to reconsider foot and leg position during the bench press. *Strength Cond J* 43: 101-106.
35. **Nuzzo JL** (2020). Bias against men's issues within the United Nations and World Health Organization. *Psychreg J Psychol* 4: 120-150.
36. **Nuzzo JL** (2021). Reply to: Comment on: "The case for retiring flexibility as a major component of physical fitness." *Sports Med* 51: 189-191.
37. **Nuzzo JL** (2020). Reply to: Comment on: "The case for retiring flexibility as a major component of physical fitness." *Sports Med* 50: 1409-1411.
38. **Nuzzo JL** (2020). The case for retiring flexibility as a major component of physical fitness. *Sports Med* 50: 853-870.
39. **Nuzzo JL** (2020). Correcting a historical error about female participation in studies prior to 1975. *Quest* 72: 373-382.
40. **Nuzzo JL** (2020). Sex difference in participation in muscle-strengthening activities. *J Lifestyle Med* 10: 110-115.
41. **Nuzzo JL**, Steele, J. (2020). Letter to the editor: parkrun and the claim of "elitism" in paid-entry run/walk events. *Am J Health Promot* 34: 806-807.
42. **Nuzzo JL** (2020). Growth of exercise science in United States since 2002: a secondary data analysis. *Quest*. 72: 358-372.
43. **Nuzzo JL** (2020). Large sex difference despite equal opportunity: authorship of over 3,000 letters in exercise science and physical therapy journals over 56 years. *Scientometrics*. 124: 679-695.
44. **Nuzzo JL**, Steele J (2020). Time for a causal systems map of physical activity. *Bull World Health Organ* 98: 224-225.
45. **Nuzzo JL** (2020). Men's health in the United States: a national health paradox. *Aging Male* 23: 42-52.

46. Jones MJ, **Nuzzo JL**, Taylor JL, Barry BK (2019). Aerobic exercise reduces pressure more than heat pain sensitivity in healthy adults. *Pain Med* 20: 1534-1546.
47. **Nuzzo JL**, Finn HT, Herbert RD (2019). Causal mediation could resolve whether training-induced increases in muscle strength are mediated by muscle hypertrophy. *Sports Med* 49: 1309-1315.
48. **Nuzzo JL**, Taylor JL, Gandevia SC (2019). CORP: Measurement of upper and lower limb muscle strength and voluntary activation. *J Appl Physiol* 126: 513-543.
49. Donges SC, Taylor JL, **Nuzzo JL** (2019). Elbow angle modulates corticospinal excitability to the resting biceps brachii at both spinal and supraspinal levels. *Exp Physiol* 104: 546-555.
50. **Nuzzo JL** (2019). Reply to: Comment on: "Equity in physical activity: a misguided goal." *Sports Med* 49:641-443.
51. **Nuzzo JL** (2019). Equity in physical activity: a misguided goal. *Sports Med* 49: 501-507.
52. **Nuzzo JL** (2018). Equity in physical activity is a misguided goal. *Med Sci Sports Exerc* 50: 1341.
53. **Nuzzo JL**, Barry BK, Gandevia SC, Taylor JL (2018). Effects of acute isometric exercise on cervicomedullary motor evoked potentials. *Scand J Med Sci Sports* 28: 1514-1522.
54. **Nuzzo JL**, Barry BK (2017). Editorial makes unsubstantiated claims about high-load resistance training. *J Appl Physiol* 123: 1419-1420.
55. **Nuzzo JL**, Barry BK, Jones MD, Gandevia SC, Taylor JL (2017). Effects of four weeks of strength training on the corticomotoneuronal pathway. *Med Sci Sports Exerc* 49: 2286-2296.
56. **Nuzzo JL** (2017). Words and patterns that comprise resistance exercise names. *J Strength Cond Res* 31: 826-830.
57. **Nuzzo JL**, Barry BK, Gandevia SC, Taylor JL (2016). Stability of biceps brachii M_{max} with one session of strength training. *Muscle Nerve* 54: 791-793.
58. **Nuzzo JL**, Trajano GS, Barry BK, Gandevia SC, Taylor JL (2016). Arm posture-dependent changes in corticospinal excitability are largely spinal in origin. *J Neurophysiol* 115: 2076-2082.
59. **Nuzzo JL**, Barry BK, Gandevia SC, Taylor JL (2016). Acute strength training increases responses to stimulation of corticospinal axons. *Med Sci Sports Exerc* 48: 139-150.
60. **Nuzzo JL** (2015). The National Football League Scouting Combine from 1999 to 2014: normative reference values and an examination of body mass normalization techniques. *J Strength Cond Res* 29: 279-289.
61. Mayer JM, **Nuzzo JL** (2015). Worksite back and core exercise in firefighters: effect on development of multifidus muscle size. *Work* 50: 621-627.
62. **Nuzzo JL**, Haun D, Mayer JM (2014). Ultrasound measurements of lumbar multifidus and abdominal muscle size in firefighters. *J Back Musculoskelet Rehabil* 27: 427-433.
63. **Nuzzo JL** (2014). Commercial and non-commercial strength and conditioning practices in the United States. *Strength Cond J* 36: 66-72.
64. **Nuzzo JL**, Schindler CL, Ryan WJ (2013). Exercise dependence symptoms in a sample of exercise science students in the United States. *Int J Ment Health Addict* 11:611-618.
65. **Nuzzo JL**, Mayer JM (2013). Body mass normalization for tests of muscle endurance. *J Strength Cond Res* 27: 2039-45.
66. **Nuzzo JL**, McBride JM (2013). The effect of loading and unloading on muscle activity during the jump squat. *J Strength Cond Res* 27: 1758-1764.
67. Martuscello JM, **Nuzzo JL**, Ashley CD, Campbell BI, Orriola JJ, Mayer JM (2013). Systematic review of core muscle activity during physical fitness exercises. *J Strength Cond Res* 27: 1684-1698.
68. **Nuzzo JL**, Mayer JM (2013). Body mass normalisation for ultrasound measurements of lumbar multifidus and abdominal muscle size. *Man Ther* 18: 237-242.
69. Mayer JM, Graves JE, Manini TM, **Nuzzo JL**, Ploutz-Snyder LL (2013). Lumbar muscle activation during common lifts: a preliminary study using magnetic resonance imaging. *J Appl Biomech* 29: 147-154.
70. Mayer JM, **Nuzzo JL**, Dagenais S (2013). Use of participant focus groups to identify barriers and facilitators to worksite exercise therapy adherence in randomized controlled trials involving firefighters. *Patient Prefer Adher* 7, 207-215.
71. Mayer JM, **Nuzzo JL**, Chen R, Quillen WS, Verna JL, Dagenais S (2012). The impact of obesity on back and core muscular endurance in firefighters. *J Obes* 2012: doi:10.1155/2012/729283.

72. **Nuzzo JL**, Anning JH, Scharfenberg JM (2011). The reliability of three devices used for measuring vertical jump height. *J Strength Cond Res* 25: 2580-2590.
73. Dayne AM, McBride JM, **Nuzzo JL**, Triplett NT, Skinner J, Burr A (2011). Power output in the jump squat in adolescent male athletes. *J Strength Cond Res* 25: 585-589.
74. **Nuzzo JL**, McBride, JM, Dayne AM, Israel MA, Dumke CL, Triplett NT (2010). Testing of the maximal dynamic output hypothesis in trained and untrained subjects. *J Strength Cond Res* 24: 1269-1276.
75. McBride JM, **Nuzzo JL**, Dayne AM, Israel MA, Nieman DC, Triplett NT (2010). Effect of an acute bout of whole body vibration exercise on muscle force output and motor neuron excitability. *J Strength Cond Res* 24: 184-189.
76. Israel MA, McBride JM, **Nuzzo JL**, Skinner JW, Dayne AM (2010). Kinetic and kinematic differences between squats performed with and without elastic bands. *J Strength Cond Res* 24: 190-194.
77. **Nuzzo JL**, Cavill MJ, Triplett NT, McBride JM (2009). A descriptive study of lower-body strength and power in overweight adolescents. *Pediatr Exerc Sci* 21: 34-46.
78. McBride JM, McCaulley GO, Cormie P, **Nuzzo JL**, Cavill MJ, Triplett NT (2009). Comparison of methods to quantify volume during resistance exercise. *J Strength Cond Res* 23: 106-110.
79. McCaulley GO, McBride JM, Cormie P, Hudson MB, **Nuzzo JL**, Quindry JC, Triplett NT (2009). Acute hormonal and neuromuscular response to hypertrophy, strength and power type resistance exercise. *Eur J Appl Physiol* 105: 695-704.
80. **Nuzzo JL**, McBride JM, Cormie P, McCaulley GO (2008). Relationship between countermovement jump performance and multi-joint isometric and dynamic tests of strength. *J Strength Cond Res* 22: 699-707.
81. **Nuzzo JL**, McCaulley GO, Cormie P, Cavill MJ, McBride JM (2008). Trunk muscle activity during stability ball and free weight exercises. *J Strength Cond Res* 22: 95-102.
82. McCaulley GO, Urbiztondo ZG, Cavill MJ, **Nuzzo JL**, Cormie P, McBride JM (2007). Mechanical efficiency during repetitive vertical jumping. *Eur J Appl Physiol* 101: 115-123.

JOURNAL ARTICLES (UNDER REVIEW, IN PREPARATION)

1. **Nuzzo JL**. (Under review). Sex differences in sit-and-reach flexibility in children and adolescents: a meta-analysis. *J Bodywork Mov Ther*.
2. **Nuzzo JL**. (Under review). Ladies in the laboratory: a bibliometric guide to photographs of female participants in early exercise and physical medicine research. *Adv Physiol Educ*.
3. **Nuzzo JL**, Steele J. (In preparation). Names of resistance exercises: a text analysis of survey responses. *Int J Strength Cond*.
4. **Nuzzo JL**. (In preparation). Drop sets – redefined. *Int J Strength Cond*.
5. **Nuzzo JL**, Taylor JL, Latella C. (In preparation). Muscle strength, muscle endurance, voluntary activation, perception of effort in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS): an overview. *Disabil Rehabil*.
6. Latella C, **Nuzzo JL**, Blazeovich T, Pearcey G, Taylor JL (In preparation). Persistent inward currents in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Clin Neurophysiol*.

BOOK CHAPTERS

1. **Nuzzo, JL**, Cormie, P, McBride, JM (2009). Power in resistance exercise. In M. Duncan, & M. Lyons (Eds.), *Advances in strength and conditioning research* (pp. 123-145). New York, NY: Nova Science Publishers Inc.

CONFERENCE PRESENTATIONS

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|---|-----------------|
| 1. Exercise and Sports Science Australia Research to Practice Meeting (Virtual) | <i>May 2022</i> |
| 2. American Physiological Society New Trends in Sex and Gender Medicine (Virtual) | <i>Oct 2021</i> |
| 3. British Psychological Society Men’s Mental Health and Wellbeing Conference (Virtual) | <i>Oct 2021</i> |
| 4. Australian Neuroscience Society Sensorimotor Control Meeting (Adelaide, Australia) | <i>Dec 2019</i> |
| 5. International Motor Impairment Conference (Sydney, Australia) | <i>Nov 2018</i> |
| 6. Annual Congress of the European College of Sports Science (Dublin, Ireland) | <i>Jul 2018</i> |
| 7. Progress in Motor Control XI (Miami, USA) | <i>Jul 2017</i> |
| 8. Australian Neuroscience Society Sensorimotor Control Meeting (Hobart, Australia) | <i>Dec 2016</i> |

9. Society for Neuroscience Conference (San Diego, USA)	<i>Nov 2016</i>
10. Australian Neuroscience Society Sensorimotor Control Meeting (Brisbane, Australia)	<i>Feb 2015</i>
11. XX Congress of International Society of Electrophysiology and Kinesiology (Rome, Italy)	<i>Jul 2014</i>
12. University of South Florida Health Research Day (Tampa, USA)	<i>Feb 2012</i>
13. National Strength and Conditioning Association National Conference (Orlando, USA)	<i>Jul 2010</i>
14. National Strength and Conditioning Association National Conference (Las Vegas, USA)	<i>Jul 2008</i>
15. National Strength and Conditioning Association National Conference (Atlanta, USA)	<i>Jul 2007</i>
16. American College of Sports Medicine Mid-Atlantic Regional Conference (Bushkill, USA)	<i>Nov 2005</i>

AWARDS & HONORS

Australia Distinguished Talent Visa (subclass 585)	<i>May 2022</i>
Mark Rowe Prize for outstanding thesis in neurophysiology	<i>Nov 2017</i>
Neuroscience Research Australia Supplementary Scholarship	<i>June 2013</i>
UNSW International Postgraduate Research Scholarship	<i>Mar 2013</i>
Lambda Sigma Honor Society “Professor of the Month”	<i>Feb 2010</i>
National Strength & Conditioning Association Master’s Student Research Grant	<i>July 2007</i>
Appalachian State University Out-of-State Tuition Scholarship	<i>Aug 2006</i>
National Strength & Conditioning Association Challenge Scholarship	<i>May 2006</i>
Aebersold Student Recreation Center “Employee of the Month”	<i>Sept 2005, Jan 2006</i>
Shelia I. Drohan Scholarship	<i>Apr 2005, 2006</i>

MEDIA

Podcast interviews

Dr. Joe Unplugged (2024)
Men are Good (2020-2024)
Mostly Man Things (2024)
Victor Dalziel Newscast (2024)
Bettina Arndt Channel (2024)
Alexandra Marshall Live (2024)
Tea with Dr. G & Coach C (2019, 2022)
NO LIFT! Powerlifting Podcast (2020, 2021)
Clinical Athlete Podcast (2020)

Essays

Medical Forum WA (2024)
Psychreg News (2024)
Reality’s Last Stand (2023, 2024)
Martin Center for Academic Renewal (2023)
Male Psychology Magazine (2022, 2023)
ACSM’s Sports Medicine Bulletin (2018)
Motor Impairment Blog (2015-2019)

ADVISORY BOARDS

Men’s Health Network (United States)	<i>Aug 2023 - present</i>
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