

# Curriculum Vitae

Nick W. Bray, PhD (c), CSEP-CEP

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**Identification**

Name Nick Bray (he/him/his)

Date of Birth December 11, 1989

Nationality Canadian

Work Address PO Box 5777, Stn B  
Site: Parkwood Institute, Main Building Room: A3-122B  
London Ontario N6A 4V2  
Canada

Current Positions PhD Candidate  
Faculty of Health Sciences, School of Kinesiology  
University of Western Ontario, London, Canada

Teaching Assistant  
Faculty of Health Sciences, School of Kinesiology  
University of Western Ontario, London, Canada

Preferred Contact Phone: (709) 330-9319  
E-mail: nbray2@uwo.ca / nick.w.bray@gmail.com

Languages English (oral and written)

**Education**

Sept 2017 – July 2021 Doctor of Philosophy  
Faculty of Health Sciences, School of Kinesiology  
University of Western Ontario, London, Canada  
Dissertation: Describing functional brain connectivity's role in the relationship of multi-domain interventions to improve cognitive and physical function in vulnerable (frailty & mild cognitive impairment) older adults  
Supervisor: Dr. Manuel Montero-Odasso

Sept 2015 – Aug 2017 Master of Science  
Faculty of Health and Social Development, School of Health and Exercise Sciences  
UBC Okanagan, Kelowna, Canada  
Thesis topic: Multi-component exercise to reverse frailty in pre-frail older females.  
Supervisors: Dr. Jennifer Jakobi and Dr. Gareth Jones

Jan 2013 – April 2015      Bachelor of Kinesiology  
Faculty of Professional Studies, Department of Kinesiology  
Acadia University, Wolfville, Canada

### **Work Experience**

Sept 2020 – Dec 2020      Teaching Assistant/Guest Lecturer\*  
Faculty of Health Sciences, School of Kinesiology  
University of Western Ontario, London, Canada

Sept 2017 – Aug 2020      Research Assistant  
Lawson Health Research Institute  
London, Canada

Sept 2018 – April 2019      Teaching Assistant/Guest Lecturer\*  
Faculty of Health Sciences, School of Kinesiology  
University of Western Ontario, London, Canada

Sept 2017 – April 2018      Teaching Assistant/Guest Lecturer\*  
Faculty of Health Sciences, School of Kinesiology  
University of Western Ontario, London, Canada

Sept 2016 – April 2017      Teaching Assistant/Lab Instructor\*  
Faculty of Health and Social Development, School of Health and  
Exercise Sciences  
UBC Okanagan, Kelowna, Canada

Sept 2015 – Aug 2016      Knowledge Broker  
HealthSteps (Public Health Agency of Canada, UBC Okanagan,  
and University of Western Ontario)  
Kelowna, Canada

Sept 2015 – April 2016      Teaching Assistant\*  
Faculty of Health and Social Development, School of Health and  
Exercise Sciences  
UBC Okanagan, Kelowna, Canada

April – June 2015          Assistant Strength & Conditioning Coach  
Acadia University, Wolfville, Canada

Sept – Dec 2014          Teaching Assistant\*  
Faculty of Professional Studies, Department of Kinesiology  
Acadia University, Wolfville, Canada

Jan – April 2014                      Teaching Assistant/Lab Instructor\*  
 Faculty of Professional Studies, Department of Kinesiology  
 Acadia University, Wolfville, Canada

\* For more details, see Teaching Dossier.

### **Research Funding & Academic Awards**

Sept 2021 – Aug 2023	Eyes High Postdoctoral Fellowship University of Calgary Funded: \$50,000.00 CAD/year
Sept 2021 – Aug 2023	Harley Hotchkiss – Samuel Weiss Postdoctoral Fellowship University of Calgary Funded: \$50,000.00 CAD/year <i>Declined award in favour of Eyes High Postdoctoral Fellowship</i>
Sept 2020 – Aug 2021	Western Graduate Research Scholarship University of Western Ontario Funded: \$9,999.99 CAD/year
April 2021	First Prize – (Virtual) Poster Category: Cognitive Vitality and Brain Health Parkwood Institute Research Day
May 2020 – April 2021	Ontario Graduate Scholarship University of Western Ontario and Province of Ontario Funded: \$15,000.00 CAD/year
Sept 2019 – Aug 2020	Western Graduate Research Scholarship University of Western Ontario Funded: \$11,213.79 CAD/year
May 2019 – April 2020	Ontario Graduate Scholarship University of Western Ontario and Province of Ontario Funded: \$15,000.00 CAD/year
Jan 2020	Society of Graduate Studies Travel Subsidy University of Western Ontario Funded: \$500.00
Dec 2019	Faculty of Health Sciences Conference Travel Award University of Western Ontario

	Funded: \$210.00 CAD
Sept 2018 – Aug 2019	Western Graduate Research Scholarship University of Western Ontario Funded: \$6,663.69 CAD/year
Aug 2019	School of Kinesiology Conference Travel Award University of Western Ontario Funded: \$334.00 CAD
May 2018 – April 2019	Ontario Graduate Scholarship University of Western Ontario and Province of Ontario Funded: \$15,000.00 CAD/year
Jan 2019	Society of Graduate Students Travel Subsidy University of Western Ontario Funded: \$263.17
Nov 2018	Faculty of Health Sciences Conference Travel Award University of Western Ontario Funded: \$125.00 CAD
Sept 2018	Student Scholarship Program – Canadian Powerlifting Union Funded: \$250.00 CAD Awarded to a registered member who demonstrates a high level of academic achievement and commitment to the sport of powerlifting.
Sept 2017 – Aug 2018	Western Graduate Research Scholarship University of Western Ontario Funded: \$13,641.38 CAD/year
June 2018	School of Kinesiology Conference Travel Award University of Western Ontario Funded: \$500.00 CAD
May 2018	First Prize – Poster Category: Prevention of Diseases and Health Conditions and Promotion of Well-being London Health Research Day Conference
Sept 2016 – Aug 2017	University Graduate Fellowship Award University of British Columbia Okanagan Funded: \$6,000.00 CAD/year
Sept 2015 – Aug 2016	University Graduate Fellowship Award University of British Columbia Okanagan Funded: \$6,000.00 CAD/year

May 2015 Canadian Council of University Physical Education and Kinesiology Administrators Leadership Award  
Acadia University  
In recognition of an exceptional graduating student who will make a difference in their chosen field.

## Academic Contributions

### A. Manuscripts

#### Submitted

1. Pieruccini-Faria F, Hassan SM, **Bray NW**, et al. Brain Cortical And Subcortical Correlates Of Adaptive Gait In Older Persons. *Journal of Gerontology: Medical Sciences*. In-Review. JGMS-2021-RES-0547.
2. O'Brien MW, Wong MYS, Sui Y, Voss ML, **Bray NW**, et al. Education and Collaboration as Strategies to Promote Physical Activity by Primary Care Providers During and Beyond the COVID-19 Pandemic. *Journal of Medical Education Research*. In-Press. Submission Number: 1894.
3. Furlano JA, Morava A, Wong MYS, **Bray NW**, et al. Exercise behaviors, perceived barriers and motivators to exercise, and use of on- and off-campus exercise resources among graduate students at a Canadian university: A cross-sectional study. *Journal of American College Health*. In-Press. JACH-2020-11-0735
4. **Bray NW**, et al. The effect of physical exercise on functional brain network connectivity in older adults with and without cognitive impairment. A systematic review. *Mechanisms of Ageing and Development*. 2021 Apr 19;111493. <https://doi.org/10.1016/j.mad.2021.111493>
5. O'Brien MW, **Bray NW**, et al. A Scoping Review of Exercise Referral Schemes Involving Qualified Exercise Professionals in Primary Health Care. *Applied Physiology, Nutrition, and Metabolism*. 2021 Apr 19. <https://doi.org/10.1139/apnm-2020-1070>
6. Titus J, **Bray NW**, et al. The Role of Physical Exercise in Modulating Peripheral Inflammatory and Neurotrophic Biomarkers in Older Adults. A Systematic Review & Meta-Analysis. *Mechanisms of Ageing and Development*. 2021 Mar 1;194:111431. <https://doi.org/10.1016/J.MAD.2021.111431>
7. Montero-Odasso M, Sarquis-Adamson Y, Nellie K, Pieruccini-Faria F, **Bray NW**, et al. Dual-task gait speed assessments with an electronic walkway and a stopwatch in older adults. A reliability study. *Experimental Gerontology*. 142 (2020) 111102. <https://doi.org/10.1016/j.exger.2020.111102>

8. Montero-Odasso M, Speechley M, Muir-Hunter SW, Pieruccini-Faria F, Sarquis-Adamson Y, Hachinski V, Bherer L, Borrie M, Wells J, Garg AX, Tian Q, Ferrucci L, **Bray NW**, et al. Dual Decline in Gait Speed and Cognition is associated with future dementia: evidence for a Phenotype. *Age and Ageing*. 2020;49(6):995-1002. <https://doi.org/10.1093/ageing/afaa106>
9. **Bray NW**, et al. Multi-component Exercise with High-intensity, Free-weight, Functional Resistance-training in Pre-frail Females: A Quasi-experimental, Pilot Study. *Journal of Frailty & Aging*. 2020;9(2):111-117. <https://doi.org/10.14283/jfa.2020.13>
10. **Bray NW**, et al. Practical Implications for Strength and Conditioning of Older Pre-Frail Females. *Journal of Frailty & Aging*. 2020;9(2):118-121. <https://doi.org/10.14283/jfa.2020.15>
11. Pieruccini-Faria F, Sarquis-Adamson Y, Anton I, Nogueron-Garcia A, **Bray NW**, et al. Mapping Associations between Gait Decline and Falls Risk in Mild Cognitive Impairment. *Journal of the American Geriatrics Society*. 2020 Mar;68(3):576-584. <https://doi.org/10.1111/jgs.16265>
12. Montero-Odasso M, Sarquis-Adamson Y, Song HY, **Bray NW**, et al. Polypharmacy, Gait Performance, and Falls in Community-Dwelling Older Adults. Results from the Gait and Brain Study. *Journal of the American Geriatrics Society*. 2019 Jun;67(6):1182-1188. <https://doi.org/10.1111/jgs.15774>
13. **Bray NW**, et al. The Effect of High Dose Vitamin D<sub>3</sub> on Physical Performance in Frail Older Adults. A Feasibility Study. *The Journal of Frailty & Aging*. 2018 Jul 1;7(3):155-61. <https://doi.org/10.14283/jfa.2018.18>
14. **Bray NW**, et al. Exercise Prescription to Reverse Frailty. *Applied Physiology, Nutrition, and Metabolism*. 2016 Sep 21;41(10):1112-6. <https://doi.org/10.1139/apnm-2016-0226>

### In-Progress

1. **Bray NW**, et al. Effect of a multi-domain intervention on functional cerebral network connectivity: Results from the SYNERGIC Trial.
2. **Bray NW**, et al. Chronic static stretch training increases electromechanical delay and decreases the rate of torque development during maximal voluntary contraction of the plantar flexors.

### **B. Abstracts & Presentations**

1. \***Bray NW**, et al. The effect of a multi-domain intervention on functional cerebral network connectivity in older adults with mild cognitive impairment (MCI): Results from the SYNERGIC Trial. *Canadian Geriatrics Society (CGS) Annual Scientific Meeting*. Virtual, May 2021  
Presentation Format: Virtual Poster.



2. \***Bray NW**, et al. The effect of a multi-domain intervention on functional cerebral network connectivity in older adults with mild cognitive impairment (MCI): Results from the SYNERGIC Trial. *Parkwood Institute Research Day*. Virtual, April 2021  
Presentation Format: Virtual Poster.
3. \***Bray NW**, et al. The Effect of Physical Exercise on Brain Function of Older Adults. *Canadian Consortium on Neurodegeneration in Aging Partners Forum and Science Days*. Virtual, Oct 2020.  
Presentation Format: Virtual - Poster
4. Montero Odasso M, Speechley MR, Camicioli R, Kamkar N, Tian Q, Ferrucci L, **Bray NW**, et al. Dual-Divide in Gait and Cognition is associated with future Dementia. Evidence for a Phenotype. *Gerontological Society of America*. Philadelphia, USA, Nov 2020. <https://doi.org/10.1093/geroni/igaa057>  
Presentation Format: Virtual.
5. Pieruccini-Faria F, Seyyed Mohammad H, **Bray NW**, et al. Walking Adaptability is Associated with Grey Matter Volume in “Navigation Areas” in MCI. *London Health Research Day*. London, Canada, May 2020.  
Presentation Format: Cancelled due to COVID-19.
6. Montero-Odasso M, Kamkar N, Sarquis-Adamson Y, Pieruccini-Faria F, **Bray NW**, et al. Falls Risk Stratification: When is ‘Low Risk’ not Low Risk? *American Geriatrics Society Annual General Meeting*. Long Beach, USA, May 2020. <https://doi.org/10.1111/jgs.16431>  
Presentation Format: Poster
7. \***Bray NW**, et al. The Effect of Exercise Interventions on Functional Brain Connectivity (FBC) of Older Adults with and without Cognitive Impairment: A Systematic Review. *Canadian Society for Exercise Physiology Annual General Meeting*. Kelowna, Canada, Nov 2019. <https://doi.org/10.1139/apnm-2019-0569>  
Presentation Format: Poster
8. \***Bray NW**, et al. The Effect of Physical Exercise on Functional Brain Network Connectivity in Older Adults with and without Cognitive Impairment: A Systematic Review. *Kinesiology Graduate Student Association Symposium*. London, Canada, May 2019.  
Presentation Format: Podium
9. Pieruccini-Faria F, **Bray NW**, et al. Frailty Impairs Obstacle Negotiation While Walking. Results from the Gait and Brain Study. *Canadian Geriatrics Society Annual General Meeting*. Halifax, Canada, May 2019. <http://doi.org/10.5770/cgj.22.385>  
Presentation Format: Podium
10. Montero-Odasso M, Sakurai R, **Bray NW**, et al. Dynapenia is Associated with Executive Dysfunction. Results from the Gait and Brain Study. *International Conference on Frailty and Sarcopenia Research*. Miami, USA, Feb 2019. <https://doi.org/10.14283/jfa.2019.1>  
Presentation Format: Podium

11. \***Bray NW**, et al. The Effect of High Dose Vitamin D on Physical Performance in Frail Older Adults: A Feasibility Study. *Canadian Society for Exercise Physiology Annual General Meeting*. Niagara Falls, Canada, Oct 2018. <https://doi.org/10.1139/apnm-2018-0499>  
Presentation Format: Podium
12. \***Bray NW**, et al. The Effect of High Dose Vitamin D on Physical Performance in Frail Older Adults: A Feasibility Study. *London Health Research Day*. London, Canada, May 2018.  
Presentation Format: Poster
13. \***Bray NW**, et al. Can a Multi-domain Intervention Improve Brain Health in Older Adults with Mild Cognitive Impairment? *Kinesiology Graduate Student Association Symposium*. London, Canada, May 2018.  
Presentation Format: Podium
14. \***Bray NW**, et al. Exercise to Reverse Frailty in Older Females. *Canadian Society for Exercise Physiology Annual General Meeting*. Winnipeg, Canada, Oct 2017. <https://doi.org/10.1139/apnm-2017-0432>  
Presentation Format: Poster
15. \***Bray NW**, et al. Implementation of the BC HealthSteps Program: Family Medicine Clinic Versus Community Exercise Centre. *Interdisciplinary Student Health Conference*. Kelowna, Canada, April 2017.  
Presentation Format: Poster
16. \***Bray NW**, et al. The Impact of Delivery Site on Participant Adherence to the BC HealthSteps Program. *Canadian Society for Exercise Physiology Annual General Meeting*. Victoria, Canada, Oct 2016. <https://doi.org/10.1139/apnm-2016-0366>  
Presentation Format: Poster
17. \***Bray NW**, et al. Electromechanical Delay and Rate of Force Development are Negatively Impacted by 6 weeks of Stretch Training. *European College of Sport Science Congress*. Vienna, Austria, July 2016. Available from: [http://wp1191596.server-he.de/DATA/CONGRESSES/VIENNA\\_2016/DOCUMENTS/VIENNA\\_BoA.pdf](http://wp1191596.server-he.de/DATA/CONGRESSES/VIENNA_2016/DOCUMENTS/VIENNA_BoA.pdf)  
Presentation Format: Podium

\* I presented all abstracts for which I am the first author.

### C. Reviewer

Apr 2020	Journal of Aging and Physical Activity
Nov 2019	Applied Physiology, Nutrition, and Metabolism
May 2019	Journal of Alzheimer's Disease

Mar 2019	Journal of Alzheimer's Disease
Dec 2018	Journal of Alzheimer's Disease
Oct 2018	Journal of Alzheimer's Disease

### **Memberships & Committees**

Oct 2019 – Present	Clinical Exercise Physiologist (CEP) Canadian Society for Exercise Physiology
Aug 2019 – Present	Communications Coordinator Exercise is Medicine: Canada Offered position as a result of the work completed with the University of Western Ontario committee. Duties similar to that of role with the University of Western Ontario committee but at the national level.
Aug 2018 – Present	Communications Coordinator Exercise is Medicine: University of Western Ontario London, Canada Committee aimed at helping individuals live a healthier lifestyle via exercise. Responsible for creating and posting social media content. Fostered community partnerships and recruited program donors.
Sept 2016 – Aug 2017	Student Representative Embrace Aging Committee (UBC Okanagan, Institute for Healthy Living & Chronic Disease Prevention, and Interior Health Authority) Kelowna, Canada Committee aimed at creating a month full of events that would help older adults “age in place.” Topics of events included but were not limited to pickleball, staying physically healthy, and age-related financial decisions.

### **Training**

Ongoing	Western Certificate in University Teaching and Learning University of Western Ontario Description: Enhance teaching quality by graduate students and postdoctoral scholars and prepare them for a future faculty or professional career.
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- July 2020  
 Neurohackademy  
 University of Washington eScience Institute but conducted virtually  
 Seattle, USA  
 Description: 5-day workshop devoted to hands-on lectures and  
 participant-directed activities focusing on technologies used to make  
 human neuroscience data shareable and reproducible.
- May 2019  
 CONN Toolbox for Functional Connectivity Analysis of the Human  
 Brain  
 Athinoula A. Martinos Center for Biomedical Imaging  
 Boston, USA  
 Description: 5-days of highly interactive courses that covered all  
 aspects of functional connectivity analyses in the CONN toolbox.
- Sept 2015 – Aug 2017  
 Biodex Dynamometer System 4 Pro (Biodex Medical Systems  
 Incorporated)  
 Kelowna, Canada  
 Description: A multi-mode computerized robotic instrument  
 designed to measure muscle strength; used to assess primary  
 outcome of MSc research.

### **Knowledge Translation**

- April 2020  
 CSEP Communiqué  
 Strength Training to Fight Pre-frailty in Older Females.  
 Link:  
<https://www.csep.ca/KnowledgeTranslations.asp?a=view&id=50&pageToView=1>
- April 2018 & 2019  
 Presenter  
 Talks on Fridays, Lawson Health Research Institute  
 London, Canada  
 Presentation to disseminate current research findings to community  
 members, clinicians, and other researchers.
- Jan 2018  
 Presenter  
 @ the Barre - Her First Community Event  
 London, Canada  
 A one-day workshop aimed at promoting women's physical and  
 mental health. Included interactive presentations from experts in  
 mental health, diet, and exercise.
- March 2017  
 Interviewee, Okanagan Seniors Urged to Get Active  
 Global News Okanagan, Global TV

Kelowna, Canada

Link: <https://globalnews.ca/video/3297654/okanagan-seniors-urged-to-exercise-daily-to-ensure-healthy-aging>

Sept 2016

Interviewee, Using Exercise to Fight Frailty  
UBC Okanagan News, UBC Studios Okanagan  
Kelowna, Canada

Link: <https://www.youtube.com/watch?v=v2dgRWU9kL0>

April 2016

Presenter  
Seniors Learning Retreat  
Kelowna, Canada

Informative presentation about how exercise can help keep older adults physically strong and maintain their functional independence. Presentation was based upon current findings from our research lab, as well as other groups.

Feb 2016

Presenter  
Exercise is Medicine: Seniors Health and Exercise Fair  
Kelowna, Canada

Promotional event where older adults received informative presentations, engaged in exercise, and socialized with researchers, community activists, exercise professionals, and other older adults.

## **Volunteerism**

May 2018 & 2019

Facilitator  
Discovery Day: Canadian Medical Hall of Fame  
London, Canada

A one-day event that allows secondary school students to explore various career options in medicine and health science. Led an interactive workshop that provided insight into life as a graduate student and the research conducted within our lab.

Oct 2015 – Aug 2017

Facilitator  
Youth Outreach Program: UBC Okanagan  
Kelowna, Canada

Program aimed at promoting the fields of science, technology, engineering, and mathematics (STEM) to youth ranging from elementary to secondary school. Presented research from the field of Kinesiology. Facilitated the interactive use of lab technology.