Niels BJ Vollaard
Curriculum Vitae

ACADEMIC RECORD:

2016-present	Lecturer in Health & Exercise Science, Faculty of Health Sciences and Sport, University of Stirling, UK
2016-present	Fellow of The Higher Education Academy (HEA)
2011-2016	Lecturer in Human & Applied Physiology, Department for Health, University of Bath, UK
2003-2011	Lecturer in Exercise Physiology, School of Life Sciences, Heriot-Watt University, Edinburgh, UK
2003-2005	Post-Graduate Certificate in Academic Practice, Heriot-Watt University, Edinburgh, UK
2000-2004	PhD in Sport Science, University of Essex, Colchester, UK
1999-2000	Research Assistant, Department of Human Biology, Maastricht University, the Netherlands
1998-1999	MSc in Sports Nutrition, Aberdeen University, UK
1992-1997	MSc in Human Movement Sciences, Maastricht University, the Netherlands *(Including 6-month course in Sports Medicine, Linköping University, Sweden)*

RESEARCH:

Funding:

- *2017-2019*: Nuffield Health. *Novel wellbeing interventions for newly diagnosed cancer patients.* **Vollaard** NBJ; £32k.
- *2015-2017*: Swedish Society of Exercise and Sports Medicine. *Investigating the mechanisms of improved VO_2max with high-intensity interval training: a role for increased blood volume*? Gustafsson T & **Vollaard** NBJ; £8.5k.
- *2014-2016*: Diabetes UK. *A comparison of the effects of high-intensity interval training and moderate / vigorous intensity walking on glycaemic control in Type 2 diabetes*. **Vollaard** NBJ & Thompson D; £68k.
- *2013-2015*: Bath R&D. *A comparison of the health benefits of high-intensity interval training (HIT) and walking in men with metabolic syndrome*. **Vollaard** NBJ; £20k.

Supervision of PhD-students:

- Hongyui Ran: (second supervisor; start date: 01/2023)
- Mr Matthew Hutchinson: *Protocol optimisation of reduced-exertion high-intensity interval training* (first supervisor; start date: 09/2021)
- Mr Daniel Kinghorn: *Understanding changes in affective valence with reduced-exertion high-intensity interval training* (first supervisor; start date: 04/2021)
- Dr Preeyaphorn Songsorn: *The effects of brief supramaximal exercise on maximal aerobic capacity* (first supervisor, successfully completed in 2019)
- Dr Richard Metcalfe: *Health benefits and feasibility of novel workplace-based exercise interventions* (first supervisor, successfully completed in 2015)
- Dr Robin McGregor: *Skeletal muscle microRNAs in human cancer cachexia and type 2 diabetes* (first supervisor, successfully completed in 2009)

Editorial roles:

- Associate Editor at Frontiers in Physiology
- Editorial Board of Frontiers in Sports and Active Living

Professional affiliations:

- The Physiological Society (member)
- British Association of Sport and Exercise Science (BASES; member)

SELECTED ADMINISTRATIVE ROLES:

- *2022-present:* Programme Director of the BSc (Hons) Sport & Exercise Science, University of Stirling
- *2020-present:* Faculty Chief Examiner, University of Stirling
- *2019-2022:* Research Environment Working Group, University of Stirling
- *2016-2022*: NHS, Invasive or Clinical Research (NICR) Ethics Committee, University of Stirling
- *2016-2022*: Discipline Committee and Discipline Appeal Board, University of Stirling
- *2012-2016*: Director of Studies for the MSc in Sports Physiotherapy, University of Bath
- *2012-2016*: Line-manager of 4 members of staff, University of Bath
- *2014-2015*: Director of Studies for the MSc in Sport and Exercise Medicine, University of Bath
- *2013-2015*: External examiner for the HND in Sports Studies, University of Worcester

PUBLICATIONS:

1. **Vollaard NBJ**, Metcalfe RS, Daniel Kinghorn D, Jung ME, Little JP (2023). Percentage of peak workload is suitable for quantification of exercise intensity during high-intensity intervals: a response to Ekkekakis, Hartman, and Ladwig. *JSEP*, In press.
2. **Vollaard NBJ**, Metcalfe RS, Astorino TA (2023). Comparing unequal volumes of HIIT and MICT does not introduce bias. *Trends Endocrinol Metab*. 34(6):315-316.
3. Metcalfe RS, Gurd BJ, **Vollaard NBJ** (2023). Exploring interindividual differences in fasting and postprandial insulin sensitivity adaptations in response to sprint interval exercise training. *Eur J Sport Sci.* 23 (9): 1950-1960
4. Eur J Sport Sci. 23(9):1950-1960. Mandić M, Hansson B, Lovrić A, Sundblad P, **Vollaard NBJ**, Lundberg TR, Gustafsson T, Eric Rullman E (2022). Improvements in maximal oxygen uptake after sprint-interval training coincide with increases in central hemodynamic factors. *Med Sci Sports Exerc*. 54 (6): 944-952.
5. Metcalfe RS, Williams S, Fernandes GS, Astorino TA, Stork M, Phillips SM, Niven A, **Vollaard NBJ** (2022). Affecting effects on affect: the impact of protocol permutations on affective responses to sprint interval exercise; a systematic review and meta-analysis of individual participant data. *Front Sports Act Living*. 4: 815555.
6. Metcalfe RS, Gurd BJ, **Vollaard NBJ** (2022). Exploring individual differences in fasting and postprandial insulin sensitivity adaptations in response to sprint interval exercise training. *Eur J Appl Physiol*, ePub: 5/11/2022.
7. Virdinli SG, Kutlay E, Yuzbasioglu Y, **Vollaard NBJ,** Nalçakan GR (2022). The effect of mouth rinsing with different concentrations of caffeine solutions on reaction time. *J Sports Sci.* 40 (8): 928-933.
8. Metcalfe RS, **Vollaard NBJ** (2021). Heterogeneity and incidence of non-response for changes in cardiorespiratory fitness following time-efficient sprint interval exercise training. *Appl Physiol Nutr Metab*. 46 (7): 735-742.
9. **Vollaard NBJ**, Metcalfe RS (2021). Those Apples Don't Taste Like Oranges! Why 'Equalising' HIIT and MICT Protocols Does Not Make Sense (Letter). *Trends Endocrinol Metab*. 32 (3): 131-132
10. Metcalfe RS, Atef H, Mackintosh K, McNarry M, Ryde G; Hill DM, **Vollaard NBJ** (2020). Time-efficient and computer-guided sprint interval exercise training for improving health in the workplace: a randomised mixed-methods feasibility study in office-based employees. *BMC Public Health,* 20 (1).
11. Thomas G, Songsorn P, Gorman A, Brackenridge B, Cullen T, Ben Fitzpatrick, Metcalfe RS, **Vollaard NBJ** (2020) Reducing training frequency from 3 or 4 sessions/week to 2 sessions/week does not attenuate improvements in maximal aerobic capacity with reduced-exertion high-intensity interval training (REHIT). *Appl Physiol Nutr Metab*. 45 (6): 683-685.
12. Innes AQ, Thomson G, Cotter M, King JA, **Vollaard NBJ**, Kelly BM (2020). Evaluating differences in the clinical impact of a free online weight loss programme, a resource-intensive commercial weight loss programme and an active control condition: a parallel randomised controlled trial. *BMC Public Health,* 19 (1).
13. Songsorn P, Brick N, Fitzpatrick B, Fitzpatrick S, McDermott G, McClean C, Davison GW, **Vollaard NBJ**, Metcalfe RS (2020). Affective and Perceptual Responses during Reduced-Exertion High-Intensity Interval Training (REHIT). *Intern J Sport Exerc Psychol.* 18 (6): 717-732
14. Tabor A, **Vollaard NBJ**, Keogh E, Eccleston C (2019). Predicting the consequences of physical activity: an investigation into the relationship between anxiety sensitivity, interoceptive accuracy and action. *PLOS One*, 14 (3): e0210853.
15. Nalçakan GR, Songsorn P, Fitzpatrick BL, Yüzbasioglu Y, Brick NE, Metcalfe RS, **Vollaard NBJ** (2018). Decreasing sprint duration from 20 to 10 s during reduced-exertion high-intensity interval training (REHIT) attenuates the increase in maximal aerobic capacity but has no effect on affective and perceptual responses. *Appl Physiol Nutr Metab*. 4 (4): 338-344.
16. MacLean C, Dillon J, Babraj JA, **Vollaard NBJ** (2018). The effect of low volume sprint interval training in patients with non-alcoholic fatty liver disease. *Phys Sportsmed*. 46 (1): 87-92.
17. Pietrzak M, **Vollaard NBJ** (2018). Effects of a novel neurodynamic tension technique on muscle extensibility and stretch tolerance: a counterbalanced crossover study. *J Sport Rehabil.* 27 (1): 55-65.
18. Phillips B, Kelly B, Lilja M, Ponce-González JG, Brogan R, Morris D, Gustafsson T, Kraus WE, Atherton PJ, **Vollaard NBJ,** Rooyackers O & Timmons JA (2017) A Practical and Time-Efficient High-Intensity Interval Training Program Modifies Cardio-Metabolic Risk Factors in Adults with Risk Factors for Type II Diabetes, Frontiers in Endocrinology, 8: 229.
19. Nightingale TE, Metcalfe RS, **Vollaard NBJ**, Bilzon JL (2017). Exercise Guidelines to Promote Cardiometabolic Health in Spinal Cord Injured Humans: Time to Raise the Intensity? *Arch Phys Med Rehabil*. 98 (8): 1693-1704.
20. **Vollaard NBJ**, Metcalfe RS, Williams S. (2017). Effect of Number of Sprints in an SIT Session on Change in VO2max: A Meta-analysis. *Med Sci Sports Exerc*. 49 (6): 1147-1156.
21. Songsorn P, Ruffino J, **Vollaard NBJ** (2017). No effect of acute and chronic supramaximal exercise on circulating levels of the myokine SPARC. *Eur J Sport Sci.*17 (4): 447-452.
22. **Vollaard NBJ**, Metcalfe RS (2017). Research into the Health Benefits of Sprint Interval Training Should Focus on Protocols with Fewer and Shorter Sprints. *Sports Med*. 47 (12): 2443-2451.
23. Ruffino JS, Songsorn P, Haggett M, Edmonds D, Robinson T, Thompson D, **Vollaard NBJ** (2016). A comparison of the health benefits of reduced-exertion high-intensity interval training (REHIT) and moderate-intensity walking in Type 2 diabetes patients. *Appl Physiol Nutr Metab,* 42 (2): 202-208.
24. Metcalfe RS, Tardif N, Thompson D, **Vollaard NBJ** (2016). Changes in aerobic capacity and glycaemic control in response to reduced-exertion high-intensity interval training (REHIT) are not different between sedentary men and women. *Appl Physiol Nutr Metab*, 41 (11): 1117-1123.
25. Songsorn P, Lambeth-Mansell A, Mair J, Haggett M, Fitzpatrick BL, Ruffino J, Holliday A, Metcalfe RS, **Vollaard NBJ** (2016). Exercise training comprising of single 20-s cycle sprints does not provide a sufficient stimulus for improving maximal aerobic capacity in sedentary individuals. *Eur J Appl Physiol*, 116 (8): 1511-7.
26. Metcalfe R, Fawkner S, **Vollaard NBJ** (2016). No Acute Effect of Reduced-exertion High-intensity Interval Training (REHIT) on Insulin Sensitivity. *Int J Sports Med*, 37 (5): 354-8.
27. Metcalfe RS, Koumanov F, Ruffino JS, Holman GD, Thompson D, **Vollaard NBJ** (2015). Physiological and molecular responses to an acute bout of reduced-exertion high-intensity interval training (REHIT). *Eur J Appl Physiol*, 115 (11): 2321-34.
28. Gustafsson T, Lundberg T, **Vollaard NBJ** (2015). Intensiva intervaller en hit för konditionen. *Svensk idrottsforsk.*, 4: 8-11.
29. **Vollaard NBJ**, Metcalfe RS (2015). CrossTalk Debate: High intensity interval training does/does not have a role in risk reduction or treatment of disease: do not write off supramaximal exercise just yet. *J Physiol*, 593 (24): 5215-7.
30. Metcalfe RS, Babraj JA, Fawkner SG, **Vollaard NBJ** (2012). Towards the minimal amount of exercise for improving metabolic health: beneficial effects of reduced-exertion high-intensity interval training. *Eur J Appl Physiol*, 112 (7): 2767-2775.
31. Keller P, **Vollaard NBJ**, Gustafsson T, Sundberg CJ, Rankinen T, Britton SL, Bouchard C, Koch LG, Timmons JA (2011). A transcriptional map of the impact of endurance exercise training on skeletal muscle phenotype. *J Appl Physiol,* 110 (1): 46-59.
32. Timmons JA, Knudsen S, Rankinen T, Koch LG, Sarzynski MA, Jensen T, Keller P, Scheele C, **Vollaard NBJ**, Nielsen S, Akerström T, Macdougald OA, Jansson E, Greenhaff PL, Tarnopolsky MA, van Loon LJ, Pedersen BK, Sundberg CJ, Wahlestedt C, Britton SL, Bouchard C (2010). Using molecular classification to predict gains in maximal aerobic capacity following endurance exercise training in humans. *J Appl Physiol*, 108: 1487-1496.
33. **Vollaard NBJ**, Constantin-Teodosiu D, Fredriksson K, Rooyackers O, Jansson E, Greenhaff PL, Timmons JA, Sundberg CJ (2009). Systematic analysis of adaptations in aerobic capacity and submaximal energy metabolism provides a unique insight into determinants of human aerobic performance. *J Appl Physiol*, 106 (5): 1479-86.
34. Babraj JA, **Vollaard NBJ**, Keast C, Guppy FM, Cottrell G, Timmons JA (2009). Extremely short duration high intensity training substantially improves insulin action in young sedentary males. *BMC E Dis*, 9 (1): 3.
35. Keller P, **Vollaard NBJ**, Babraj J, Ball D, Sewell DA, Timmons JA (2007). Using systems biology to define the essential biological networks responsible for adaptation to endurance exercise training. *Biochem Soc Trans*, 35 (5), 1306-9.
36. **Vollaard NBJ**, Cooper CE, Shearman JP (2006). Exercise-induced oxidative stress in overload training and tapering. *Med Sci Sports Exerc*, 38 (7), 1335-1341.
37. **Vollaard NBJ**, Shearman JP, Cooper CE (2005). Exercise-induced oxidative stress: myths, realities and physiological relevance. *Sports Med*, 35 (12), 1045-1062.
38. **Vollaard NBJ**, Reeder BJ, Shearman JP, Menu P, Wilson MT, Cooper CE (2005). A new sensitive assay reveals that hemoglobin is oxidatively modified in vivo. *Free Rad Biol Med*, 39, 1216-1228.
39. van Marken Lichtenbelt WD, Hartgens F, **Vollaard NBJ**, Ebbing S, Kuipers H (2004). Bodybuilders' body composition: effect of nandrolone decanoate. *Med Sci Sports Exerc*, 36 (3), 484-489.
40. van Marken Lichtenbelt WD, Hartgens F, **Vollaard NBJ**, Ebbing S, Kuipers H (2004). Body composition changes in bodybuilders: a method comparison. *Med Sci Sports Exerc*, 36 (3), 490-497.
41. Cooper CE, **Vollaard NBJ**, Choueiri T, Wilson MT (2002). Exercise, free radicals and oxidative stress. *Bio Soc Trans*, 30 (2), 280-285.
42. Deurenberg P, Andreoli A, Borg P, Kukkonen-Harjula K, de Lorenzo A, van Marken Lichtenbelt WD, Testolin G, Vigano R, **Vollaard NBJ** (2001). The validity of predicted body fat percentage from body mass index and from impedance in samples of five European populations. *Eur J Clin Nutr*, 55 (11), 973-9.
43. Hartgens F, van Marken Lichtenbelt WD, Ebbing S, **Vollaard NBJ**, Rietjens G, Kuipers H (2001). Body composition and anthropometry in bodybuilders: regional changes due to nandrolone decanoate administration. *Int J Sports Med*, 22 (3), 235-41.