Daniel Stevens, Ph.D. Curriculum Vitae (Short-form)



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EDUCATION & TRAINING

St. Michael's Hospital, Division of Respirology (Toronto, ON)

2010-2012

University of Toronto

Postdoctoral fellow: Study of the ventilatory mechanics of patients with lung disease during exercise; mechanisms of sleep disordered breathing; and sleeping patterns and physical activity behaviour in children.

University of Exeter (Exeter, UK)

2004-2009

Ph.D.: Children's Health and Exercise Research Centre

Dissertation: Exercise Testing and the Physiological Responses to Exercise in Young Patients with Chronic Chest Diseases.

Cardiff University (Cardiff, UK)

2002-2004

School of Sport, P.E. and Recreation **M.Sc.:** Exercise and Health Science

Thesis: Reliability and Validity of Automated Metabolic Gas Analysis Systems.

University of Wolverhampton (Wolverhampton, UK)

1998-2001

School of Sport, Performing Arts and Leisure

B.Sc. (Hons.): Exercise Science

ACADEMIC APPOINTMENTS

University Appointments:

Instructor 2013-Present

Dalhousie University, School of Health and Human Performance, Faculty of Health Professions, Halifax NS, CANADA.

Assistant Professor (Status only)

2013-Present

Dalhousie University, Department of Pediatrics, Division of Respirology, Faculty of Medicine, Halifax NS, CANADA.

Assistant Professor 2012-2013

Dalhousie University, School of Physiotherapy, Faculty of Health Professions, Halifax NS, CANADA.

Member of the Faculty of Graduate Studies

2012-Present

Dalhousie University, Faculty of Graduate Studies, Halifax NS, CANADA.

Hospital Appointments:

Research Scientist (Medical, Dental, Scientific & Affiliated Staff)

2013-Present

IWK Heath Centre, Department of Pediatrics, Division of Respirology, Halifax NS, CANADA.

Research Fellow 2004-2010

Royal Devon and Exeter Foundation NHS Trust Hospital, Department of Pediatrics, Exeter, Devon, UK.

Daniel Stevens, Ph.D.

RESEARCH OUTPUT

Papers under peer-review/ pending revisions:

1. Radtke, T., Hebestreit, H., Gallati, S., Schneiderman, J. E., **Stevens, D.**, Hulzebos, E. H. J., Takken, T., Boas, S. R., Urquhart, D. S., Lands, L. C., Tejero, S., Sovtic, A., Ratjen, F., Kriemler, S., for the CFTR-Exercise study group* Aerobic exercise capacity in cystic fibrosis – does CFTR genotype matter? (Submitted to *European Respiratory Journal*, August 2016)

Role: Co-authored, role in interpretation of data and writing for publication.

Impact factor: 8.332

2. **Stevens, D.,** Chubbock, L. V., Barker, A. R., Tomlinson, O. W., Saynor, Z., Oades, P. J., and Williams, C. A. Oxygen uptake efficiency slope is not a valid submaximal measure of aerobic capacity in paediatric cystic fibrosis patients. (Submitted to *European Journal of Applied Physiology*, September 2016)

Role: Primary role in research project planning and development, collection and interpretation of data and writing for publication.

Impact factor: 2.328

3. **Stevens, D.**, and Neyedli, F. H. Clinical model of exercise-related dyspnea in adult cystic fibrosis. (Submitted to *Journal of Cardiopulmonary Rehabilitation and Prevention*, June 2016) (Pending revisions) **Role:** Primary role in research project planning and development, collection and interpretation of data and writing for publication.

Impact factor: 1.632

Published peer-reviewed papers:

h-index (Google Scholar) 9: https://scholar.google.ca/citations?hl=en&user=-6GdfQgAAAA]

1. **Stevens, D**. (2016). Clinical value of pulmonary hyperinflation as a treatment outcome in cystic fibrosis. *Respirology*, (to be published in November 21(7) issue)).

Role: Primary role in research project planning and development, collection and interpretation of data and writing for publication.

Impact factor: 3.078

2. **Stevens, D.**, Oades, P. J., and Williams, C. A. (2015). Airflow limitation following cardiopulmonary exercise testing and heavy-intensity intermittent exercise in children with cystic fibrosis. *European Journal of Pediatrics*, 174(2), 251-257.

Role: Primary role in research project planning and development, collection and interpretation of data and writing for publication.

Impact factor: 1.791

3. **Stevens, D.**, Stephenson, A., Faughnan, M. E., Leek, E., and Tullis, E. (2013). Prognostic relevance of dynamic hyperinflation during cardiopulmonary exercise testing in adult patients with cystic fibrosis. *Journal of Cystic Fibrosis*, 12(6), 655-661.

Role: Primary role in research project planning and development, collection and interpretation of data and writing for publication.

Impact factor: 3.853

4. Stone, M.R., **Stevens, D.**, and Faulkner, G. (2013). Maintaining adequate sleep throughout the week is associated with increased physical activity in children. *Preventive Medicine*, 56(2), 112-117.

Role: Co-authored, role in interpretation of data and writing for publication.

Impact factor: 3.086

5. Williams, C. A. and **Stevens. D**. (2013). Physical activity and exercise training in young people with cystic fibrosis: current recommendations and evidence. *Journal of Sport and Health Science*, 2, 39-46.

Role: Joint primary role in research project planning and development, interpretation of data and writing for publication.

Impact factor: 1.685

6. Leung, R. S. T., Comondore, V. R., Ryan, C. M., and **Stevens, D**. (2012). Mechanisms of sleep disordered breathing: causes and consequences. *Pflugers Archiv: European Journal of Physiology*, 463(1), 213-30.

Role: Joint primary role in the planning and development of the manuscript, interpretation of data and writing for publication.

Impact factor: 4.101

7. **Stevens, D.**, Oades, P. J., Armstrong, N., and Williams, C. A. (2011). Exercise metabolism during moderate intensity exercise in children with cystic fibrosis following heavy intensity exercise. *Applied Physiology, Nutrition, and Metabolism,* 36, 920-927.

Role: Primary role in research project planning and development, collection and interpretation of data and writing for publication.

Impact factor: 1.910

8. Williams C. A., Benden, C., **Stevens, D**., and Radtke, T. (2010). Exercise training in children and adolescents with cystic fibrosis: theory into practise. *International Journal of Pediatrics*, 10, 1-7.

Role: Co-authored, role in interpretation of data and writing for publication.

Impact factor: 1.640

9. **Stevens, D.**, Oades, P. J., Williams, C. A., and Armstrong, N. (2010). A survey of exercise testing and training in U.K. cystic fibrosis clinics. *Journal of Cystic Fibrosis*, 9, 302-306.

Role: Primary role in research project planning and development, collection and interpretation of data and writing for publication.

Impact factor: 3.853

10. Radtke, T., **Stevens, D.**, Benden, C., and Williams C. A. (2009). Clinical exercise testing in children and adolescents with cystic fibrosis. *Pediatric Physical Therapy*, 21(3), 275-281.

Role: Co-authored, role in interpretation of data and writing for publication.

Impact factor: 1.101

11. **Stevens, D.**, Oades, P. J., Armstrong, N., and Williams, C. A. (2009). Early oxygen uptake recovery following exercise in children with chronic chest diseases. *Pediatric Pulmonology*, 44, 480-488. **Role:** Primary role in research project planning and development, collection and interpretation of data and writing for publication.

Impact factor: 2.850

12. **Stevens, D.**, and Williams, C. A. (2007). Exercise testing and training with young cystic fibrosis patients. *Journal of Sports Science and Medicine*, 6(3), 286-291.

Role: Primary role in research project planning and development, collection and interpretation of data and writing for publication.

Impact factor: 2.100

Published peer-reviewed abstracts:

- 1. **Stevens, D.**, Stephenson, A., Faughnan, M. E., Leek, E., and Tullis, E. Dynamic hyperinflation during cardiopulmonary exercise testing in cystic fibrosis. North American Cystic Fibrosis Conference, October 2012, Orlando, Florida, USA; *Pediatric Pulmonology* (2012), Supplement 47(S35). **Role:** Primary role in research project planning and development, collection and interpretation of data and writing for publication.
- 2. **Stevens, D.**, Oades P. J., Armstrong, N., and Williams, C. A. Mathematical modelling of oxygen uptake during recovery from exercise. 32nd European Cystic Fibrosis Conference, June 2009, Brest, FRANCE; *Journal of Cystic Fibrosis* (2009), Supplement 8(2).

Role: Primary role in research project planning and development, collection and interpretation of data, and writing for publication.

3. **Stevens, D.**, Oades P. J., Armstrong, N., and Williams, C. A. Early recovery of oxygen uptake following exercise testing in children with chronic chest diseases. British Thoracic Society Winter Meeting, December 2008, London, U.K.; *Thorax* (2008), Supplement 7.

Role: Primary role in research project planning and development, collection and interpretation of data, and writing for publication.

4. **Stevens, D.**, Oades P. J., Armstrong, N., and Williams, C. A. Oxygen uptake responses in children with chronic chest diseases following simulated sporting activity. British Thoracic Society Winter Meeting, December 2008, London, U.K.; *Thorax* (2008), Supplement 7.

Role: Primary role in research project planning and development, collection and interpretation of data, and writing for publication.

5. **Stevens, D.**, Oades P. J., Armstrong, N., and Williams, C. A. Physiological responses in young patients with chronic chest diseases following exercise. 24th Pediatric Work Physiology Meeting, September 2007, Tallinn (Laulasmaa), ESTONIA; Acta Kinesiologiae Universitatis Tartuensis: Abstracts of the 24th Pediatric Work Physiology Meeting (2007), Vol. 12 Supplement.

Role: Primary role in research project planning and development, collection and interpretation of data, and writing for publication.

6. Williams, C. A., Oades P. J., Armstrong, N., and **Stevens, D**. The relationship between early oxygen uptake recovery and the Shwachman score in children with cystic fibrosis. 24th Pediatric Work Physiology Meeting, September 2007, Tallinn (Laulasmaa), ESTONIA; *Acta Kinesiologiae Universitatis Tartuensis: Abstracts of the 24th Pediatric Work Physiology Meeting* (2007), Vol. 12 Supplement.

Role: Primary role in research project planning and development, collection and interpretation of data, secondary role in writing for publication.

Conference presentations:

- 1. **Stevens, D.,** Chubbock, L. V., Barker, A. R., Tomlinson, O. W., Saynor, Z., Oades, P. J., and Williams, C. A. Oxygen uptake efficiency slope is not a valid submaximal measure of aerobic capacity in paediatric cystic fibrosis patients. UK Cystic fibrosis conference, September 2015, Manchester, UK.
- 2. **Stevens, D**. Perceived exertion (discomfort) during moderate-intensity exercise in children with cystic fibrosis following heavy-intensity exercise. May 2013; Dalhousie University Pain Day. Halifax NS, CANADA.
- 3. **Stevens, D.**, Stephenson, A., Faughnan, M. E., Leek, E., and Tullis, E. Dynamic hyperinflation during cardiopulmonary exercise testing in cystic fibrosis. October 2012; North American Cystic Fibrosis Conference. Orlando, Florida, USA.
- 4. **Stevens, D.**, Faughnan, M. E., Stephenson, A., Leek, E., and Tullis, E. Prevalence and Impact of dynamic hyperinflation during exercise testing in adult patients with mild-to-moderate cystic fibrosis. November 2011; Specialised Complex Care, St. Michael's Hospital, Toronto ON, CANADA.
- 5. **Stevens, D.**, Oades P. J., Armstrong, N., and Williams, C. A. Mathematical modelling of oxygen uptake during recovery from exercise. June 2009; 32nd European Cystic Fibrosis Conference, Brest, FRANCE.
- 6. **Stevens, D.**, Oades P. J., Armstrong, N., and Williams, C. A. Early recovery of oxygen uptake following exercise testing in children with chronic chest diseases. December 2008; British Thoracic Society, London, UK.
- 7. **Stevens, D.**, Oades P. J., Armstrong, N., and Williams, C. A. Oxygen uptake responses in children with chronic chest diseases following simulated sporting activity. December 2008; British Thoracic Society Winter Meeting, December 2008, London, UK.

- 8. **Stevens, D.**, Oades P. J., Armstrong, N., and Williams, C. A. Physiological responses in young patients with chronic chest diseases following exercise. September 2007; 24th Pediatric Work Physiology Meeting, Tallinn (Laulasmaa), ESTONIA.
- 9. Williams, C. A., Oades P. J., Armstrong, N., and **Stevens, D**. The relationship between early oxygen uptake recovery and the Shwachman score in children with cystic fibrosis. September 2007; 24th Pediatric Work Physiology Meeting, Tallinn (Laulasmaa), ESTONIA.

CURRENT RESEARCH ACTIVITY

Project title: Physical activity behaviour of children with cystic fibrosis: relationships with disease severity, health outcomes and patient prognosis.

Investigators: Daniel Stevens (Principal Investigator) Ph.D., Dan Hughes M.D., Dimas Mateos-Corral M.D., Robert Chen M.D., and Michelle Stone Ph.D.

Project aims: I am currently the principal investigator of a research project being conducted in the Department of Pediatrics, Divisions of Respirology and Cardiology at the IWK Health Centre. The project is investigating the physical activity behaviour of children with chronic lung disease and relationships with disease specific health outcomes. The research project has the potential to transition into other chronic childhood diseases.

Project title: Genotype and exercise tolerance in children and adults with cystic fibrosis.

Investigators: Thomas Radtke Ph.D., Daniel Stevens Ph.D., Don Urquhart M.D., Larry Lands M.D., Alexander Moeller M.D., Steven Boas M.D., Helge Hebestreit M.D., Tim Takken Ph.D., Jane Schneideman Ph.D. and Susi Kriemler M.D.

Project aims: I am currently part of an international collaborative research project working with fellow investigators from Switzerland, the Netherlands, the UK, Germany, Canada and the United States. The objective of the project is to investigate relationships between cystic fibrosis genotypes and exercise related phenotypes.

Project title: A survey on the use of evidenced-based guidelines for the prevention, screening, assessment, and treatment of sleep disturbances in adults with cancer.

Investigators: Daniel Stevens (Principal Investigator) Ph.D., Melanie Keats Ph.D., Michelle Stone Ph.D., and Doris Howell RN, Ph.D.

Project aims: I am currently the principal investigator of a study designed to determine the awareness, use (implementation) and importance assigned to evidenced-based guidelines for the prevention, screening, assessment, and treatment of sleep disturbances in adults with cancer by Canadian oncology healthcare professionals.

Project title: RISE@Work: The Piloting of a Web-based Workplace Intervention for <u>Reducing Sitting Everyday</u>

Investigators: Michelle Stone Ph.D., Guy Faulkner Ph.D., Kelly Arbour-Nicitopoulos Ph.D., Anne Fenety Ph.D., Melanie Keats Ph.D., and **Daniel Stevens** Ph.D.

Project aims: I am currently involved as a co-investigator in a research project designed to reduce occupational sitting time among employees. Other project objectives include: develop, test and teach employees strategies to reduce occupational sitting time; serve as a platform for coordinating future workplace intervention collaborations at a local, provincial and national level.

TEACHING & SUPERVISION EXPERIENCE

B.Sc. Physiology of Exercise (KINE2310) (Principal Instructor)

Fall 2016

School of Health and Human Performance, Dalhousie University, Halifax NS, CANADA

As principal instructor I was responsible for the planning, organization and delivery of course material, and the assessment of kinesiology students through laboratory reports and practical assessments, and written examinations. The course is designed to provide students with a systemic description of the major physiological systems of the human body and how these systems function during exercise. The laboratory component of the course is designed to provide students with knowledge related to the equipment, techniques and methods used to evaluate various aspects of human performance and health. The lab sessions involve practical, "hands-on" experiences for the students to apply the information provided in lectures.

B.Sc. Health and Human Performance: Introduction to Research Methods (HAHP3100) (Principal Instructor) Fall 2013-Present

School of Health and Human Performance, Dalhousie University, Halifax NS, CANADA As principal instructor I am responsible for the planning, organization and delivery of course material, and the assessment of students through term papers (literature review and research proposal), written examinations and oral presentations. The course is designed for undergraduate kinesiology, health promotion and recreation students to facilitate their understanding of the research process. The course assignments are designed to help students develop important research skills such as identifying gaps in the literature, writing a research proposal and presenting the findings of their work. Students learn the theoretical principles behind health research, measurement and ethical issues and different types of research designs and data analysis.

B.Sc. Kinesiology: Honours (KINE4900) (Coordinator) Fall 2014- Winter 2015 School of Health and Human Performance, Dalhousie University, Halifax NS, CANADA

As the Kinesiology Honours Coordinator, my aim was to guide students through the process of completing their Honours Thesis, and provide students with the necessary tools that will allow them to successfully defend their work. I was, in part with the students' supervisors, responsible for the organisation, preparation and evaluation of the students' oral thesis proposal, written thesis proposal, final oral thesis defence, and final written thesis. This also included guidance with ethics applications, research design, statistical support and presentation of final thesis.

Winter 2013

B.Sc. Health and Human Performance: Human Growth and Development (HAHP2000) (Principal Instructor) Fall 2014- Winter 2015

School of Health and Human Performance, Dalhousie University, Halifax NS, CANADA

As principal instructor I was responsible for the planning, organization and delivery of course material, and the assessment of students through research papers, written examinations and interactive tests. Human growth and development is designed to provide an overview of the human experience through the life-course through physiological, emotional, social and psychological perspectives. Students in the course are taught to describe the stages of development across the lifespan, critique the theoretical paradigms that inform these stages and interpret the meanings of growth and development.

B.Sc. Kinesiology: Principles of Measurement and Evaluation (KINE3500) (Principal Instructor)

School of Health and Human Performance, Dalhousie University, Halifax NS, CANADA

As principal instructor I was responsible for the planning, organization and delivery of course material, and the assessment of students through laboratory reports, term papers and written examinations. The course incorporated both a theory (class lectures) and practical (laboratory based sessions) component. Students were taught the concepts of reliability, objectivity and validity in measurement and evaluation for making evidence-based decisions, and to recognize and use statistical concepts and techniques to organize, analyze and evaluate data. Laboratory sessions were used to generate data, and develop clinical skills relevant to kinesiology.

M.Sc. Physiotherapy: Integrated Practice in Acute, Rehabilitation and Home/Community Setting (PHYT6108) Winter 2013

School of Physiotherapy, Dalhousie University, Halifax NS, CANADA

My responsibilities included teaching postgraduate physiotherapy students the exercise prescription/management component of the course. Through a range of teaching methods, students were taught best practice for the prescription of exercise in patients with chronic disease including both pediatric and adult populations. This included the presentation and discussion of the current evidence for the use of different exercise modalities (i.e., aerobic, resistance, or a combination of both), and the assessment of disease specific health outcomes to follow the patient and measure the efficacy of the exercise intervention.

M.Sc. Physiotherapy: Advanced Exercise Physiology (PHYT5460) (Principal Instructor)

Fall 2012

School of Physiotherapy, Dalhousie University, Halifax NS, CANADA

As principal instructor I was responsible for the planning, organization and delivery of course material, and the assessment of postgraduate physiotherapy students through laboratory reports and practical assessments, term papers and presentations, and written examinations. The course covered exercise physiology material relevant to the physiotherapy profession including exercise assessment and interpretation, evidence based exercise programing, and the physiological limitations to exercise in patients with chronic disease. The course included class lectures supported by laboratory based sessions where students were taught practical clinical skills related to physiotherapy and exercise physiology.

M.Sc. Physiotherapy: Directed Studies (PHYT5070) (Principal Instructor)

Fall 2012

School of Physiotherapy, Dalhousie University, Halifax NS, CANADA

As principal instructor I was responsible for the supervision and guidance of student work. The course included weekly or *ad libitum* meetings to discuss work developments and provide students with feedback and direction. Student projects, in this instance, were directed in the field of exercise physiology and chronic disease. Students were required to write a paper, informed by peer-reviewed scientific articles, on the physiological limitations to exercise tolerance in chronic disease.