

## Curriculum Vitae

Mark J. Haykowsky, PhD, FACC, FAHA, FACSM

Google Scholar h-index: 90; i-10 index 279; Citations: 28,978

### ACADEMIC QUALIFICATIONS

Institution	Specialty	Degree	Year Completed
University of Alberta, Faculty of Medicine (Cardiology)	Heart Failure: Heart-Lung Interactions	Postdoctoral Fellow	6/1/99
University of Alberta	Cardiovascular Exercise Physiology	PhD	11/19/98
University of Alberta	Exercise Physiology Geriatric Rehabilitation	MSc	6/9/94
University of Alberta	Athletic Therapy	BPE	11/23/91
Royal Alexandra Hospital School of Nursing	Geriatrics, Emergency	Nursing Diploma	1/18/90

### ACADEMIC POSITIONS

Position	University	Dates
Visiting Professor	Hochgebirgsklinik Davos, Switzerland	1/25 - Present
Professor, Research Chair in Aging and Quality of Life	College of Health Sciences, Faculty of Nursing, University of Alberta.	1/20 - Present
Associate Dean Research	College of Health Sciences, Faculty of Nursing, University of Alberta.	1/20 - 5/22
Professor, Moritz Chair in Geriatrics	College of Nursing and Health Innovation University of Texas Arlington.	8/15 - 2/19
Full Professor	Department of Physical Therapy, Faculty of Rehabilitation Medicine, University of Alberta.	7/7 - 7/15
Adjunct Professor	Division of Cardiology, Faculty of Medicine, University of Alberta.	1/10 - 7/15
Associate Professor	Department of Physical Therapy, Faculty of Rehabilitation Medicine, University of Alberta.	7/4 - 6/7
Assistant Professor	Department of Physical Therapy, Faculty of Rehabilitation Medicine, University of Alberta.	7/99 - 6/4

## **RESEARCH**

### **Director: Integrated Cardiovascular Exercise Physiology and Rehabilitation (iCARE)**

**Laboratory:** The overarching theme of my research program is to examine the biological mechanisms underpinning the decline in cardiovascular health and fitness across the healthy aging and heart failure continuum, and role of lifestyle interventions to improve cardiac, peripheral vascular and skeletal muscle function, physical function and quality of life. A second research focus is in the CardioOncology field with specific focus on the role of lifestyle interventions to prevent cardiovascular toxicity and deconditioning across the breast cancer survivorship continuum. A final focus is sport cardiology and cardiac mechanics and ventricular interaction during exercise in athletes.

## **PHILOSOPHY OF TEACHING**

My goal as a teacher is to equip students with the theoretical foundations and critical thinking skills essential for becoming lifelong learners and socially accountable healthcare professionals. I embrace a student-centered educational model, where learners actively shape their own academic journeys through collaboration and engagement. By integrating real-world, community-based experiences into my teaching, I help students connect classroom learning to the diverse needs of the populations they will serve. I emphasize interdisciplinary collaboration and reflective practice to foster the development of professional competencies required for effective team-based care. My teaching environment prioritizes cultural safety, equity, and inclusion, ensuring that every student feels respected, valued, and heard. Ultimately, I aim to guide future healthcare providers toward becoming adaptable, empathetic leaders who are deeply committed to the well-being of their communities.

## **TEACHING:**

### ***UNIVERSITY OF ALBERTA (JANUARY 2020):***

**NURS 512 - QUANTITATIVE RESEARCH:** The focus of this course is on quantitative research methods and on the nature and characteristics of the most commonly used statistical techniques in health research. Emphasis is given to the selection of appropriate methods and statistics to answer research questions; to data collection, analysis and interpretation of results; and to the appraisal of quantitative research literature. Attention is also given to knowledge synthesis, mixed method, ethics in research, and knowledge translation in advanced nursing practice.

**NURS 311 – Winter 2022 to Present: EVIDENCE INFORMED NURSING PRAC:** The course provides a hands-on approach to evidence-informed nursing practice. This includes formulating clinical questions, systematic searching of electronic databases, reading, interpreting and critically appraising health research. Emphasis is on developing thinking and information literacy skills necessary to be an astute research consumer and using evidence to inform clinical decision making.

**NURS 596 – Fall 2022 – RESEARCH FOUNDATIONS:** Explore diverse methods and approaches to formal research inquiry, including Indigenous research approaches. Compare and contrast research methods and practices, including approaches to framing of the research question, generating, and analyzing data, presenting and disseminating findings. Increase understanding of research literacy, appraisal of rigor, and roles of research team members leading and participating in research endeavors.

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**UNIVERSITY OF TEXAS ARLINGTON (August 2015 – December 2019):**

**NURS 6308. STATE OF THE SCIENCE: BACKGROUND IN RESEARCH (2019).**

Application of criteria for appraising strengths and weaknesses of published studies;  
Synthesis of research literature on a selected topic.

**NURSING 5390: HEART FAILURE PATHOPHYSIOLOGY AND EXERCISE**

**REHABILITATION (2017- 2019).** The goal of this course is to provide students with fundamental knowledge related to heart failure (HF) pathophysiology. This course will also provide students the opportunity to gain specialized knowledge regarding the physiological mechanisms responsible for the reduced exercise tolerance in HF with reduced or preserved ejection fraction (HFREF and HFPEF, respectively) and the role of exercise rehabilitation to improve overall health related physical fitness and quality of life. Lastly, the students will learn how to critically evaluate scientific literature related to HF pathophysiology and exercise rehabilitation.

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**UNIVERSITY OF ALBERTA (JUNE 1999 – JULY 2015):**

**PRIMARY INSTRUCTOR**

**PTHER 504. Clinical Exercise Physiology (2012-2015, 110 graduate physical therapy students).** This course examines the acute and chronic physiological responses to exercise and explores the use of exercise in the management of chronic diseases and disabilities.

**PTHER 395: Therapeutic exercise.** I taught this course from 2000 to 2002 and was the course coordinator in 2003 (final year the course was offered). This class included 66-72 second year PT students. The goal of this course was to introduce the theoretical basis and application of therapeutic exercise for individuals with impairments, functional limitations and disabilities. Prior to teaching this class for the first time, I re-designed the course content and added additional material that focused on: 1) the effects of bedrest / deconditioning on cardiac, skeletal, bone, ligament, and tendon morphology and function. I also discussed the role that therapeutic exercise plays in attenuating the decline in the above systems; 2) the role that aerobic, strength and hydrotherapy interventions play in improving functional capacity in individuals with impairments, functional limitations and disabilities; 3) the effect of aging on cardiovascular and musculoskeletal performance and the role of exercise rehabilitation training to improve functional capacity. As part of this course, I designed three new laboratory experiences (aerobic testing

and prescription lab, strength testing and prescription lab, and a hydrotherapy lab) that provided the students with the background knowledge and skills necessary to assess aerobic endurance and muscle strength as well as to design safe and effective exercise programs using aerobic and/or strength interventions on land or in water. Finally, to increase the clinical relevance of the laboratory experiences, I invited a number of participants from my research studies (i.e., healthy older women, post-cardiac transplant recipients or lymphedema patients) to be participants for the labs during which time the students assessed their aerobic capacity, muscular strength and endurance.

**PTHER 481-581: Cardiac (Cardiopulmonary) rehabilitation.** I developed and taught this course from 2000-2003. This class included 10 undergraduate students (4<sup>th</sup> year PT elective) and 5 graduate students. This course provided the students with a greater understanding of the beneficial role of cardiac rehabilitation in maintaining functional independence in individuals with cardiovascular disease. A secondary aim was to provide the students with a greater understanding of the major risk factors for coronary artery disease (CAD) and the role of a comprehensive cardiac rehabilitation program to modify these risk factors. In addition, the common cardiology tests used to diagnose CAD as well as the treatment of various cardiac diseases are also discussed. Finally, students were provided with the essential theoretical and clinical “hands on” experience necessary to design and implement safe and effective exercise training programs for individuals participating in a cardiac rehabilitation program.

### **TEAM TEACHING**

**PTHER 547 (Movement analysis III).** My content focused on the effect that aging has on skeletal and cardiac morphology and function and the beneficial role of therapeutic exercise to attenuate the decline in overall health related physical fitness.

**PTHER 544 (Cardiorespiratory 1).** My course content was in the area of cardiac physiology, pathophysiology of acute coronary syndromes and cardiac rehabilitation post myocardial infarction (MI). An important objective is to provide the students with background knowledge and “hands on” skills necessary to perform a basic cardiac auscultation assessment and blood pressure measurement. The initial focus is on the cardiac cycle using pressure-volume analysis which provides the students with a greater awareness of cardiac hemodynamics associated with the opening and closing of the heart valves. I also discuss the pathophysiology of acute MI and cardiac exercise rehabilitation post MI.

**PTHER 548 (Long-Term Conditions).** My content area for this course included the pathophysiology of heart failure and cardiac rehabilitation for individuals with heart failure. I also lecture about cardiac transplantation (indications, contra-indications, special considerations, post-transplant morbidity/mortality, exercise physiology post- transplant) and

the benefits of cardiac rehabilitation post cardiac transplantation.

**PTHER 536. Integrated practice III.** My content consisted of a virtual/hands on cardiovascular exercise physiology laboratory.

**PTHER 561. Physical Therapy in Long Term Conditions II.** I lectured about pathophysiology and rehabilitation of heart failure. **Secondary instructor/guest lecturer:** I have been a guest lecturer at the University of Alberta, Faculty of Rehabilitation Medicine (Rehab 380, 463, 603), and Physical Education and Recreation (PAC 390, PEDS 412, 484, 517, 610) courses. Also, I have lectured at the University of Calgary, Faculty of Medicine (MED SCI 629)

### **COURSE COORDINATOR:**

**PTHER 504: CLINICAL EXERCISE PHYSIOLOGY:** This course examines the acute and chronic physiological responses to exercise and explores the use of exercise in the management of chronic diseases and disabilities.

**PTHER 561. Physical Therapy in Long Term Conditions II.** Study of the theory and application of physical therapy in clients with selected musculoskeletal, cardiovascular, and integumentary conditions of a long-term nature.

### **ADMINISTRATION**

#### **UNIVERSITY OF ALBERTA (JAN 2020 – MAY 2022):**

**Faculty of Nursing, Associate Dean Research:** Provided strategic research leadership to support the development, capacity and excellence in achieving the Faculty of Nursing research goals, objectives, and vision. Core responsibilities included providing research leadership, research strategic direction and planning, research operations, faculty (research) development, and faculty representation at the University level, and liaise with the College of Health Sciences and Vice President Research Offices to develop Health College and inter-university interdisciplinary health research initiatives.

Research Advisory Committee – CHAIR - January 2020-May 2022).

Graduate Education Committee: January 2020-May 2022).

College of Health Sciences ADR Working Group - January 2021-May, 2022.

University Research Policy Committee – January 2020-May 2022.

University (ADR) SSHRC Committee-.

#### **Faculty of Nursing Committees:**

Deans Advisory Committee: January 2020-2024; 2025-Present.

Faculty Evaluation Committee – July 2023-2024; 2025-Present.

CRC Renewal review Committee: March 2024

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**UNIVERSITY OF TEXAS ARLINGTON (August 2015 – December 2019):**

**COLLEGE OF NURSING AND HEALTH INNOVATION COMMITTEES**

08/1/15 – 12/19/19: College of Nursing Doctoral Committee

06/1/16 to 06/1/18: Chair - Tenure Track Faculty Search Committee: 7 faculty searches, Assistant Professor to Associate Dean Graduate Studies.

09/1/16 to 12/19/19: Promotion and Tenure Committee (Graduate Nursing level & College Level).

**UNIVERSITY COMMITTEES**

09/3/2015 to 12/19/19: Institutional Review Board (IRB) committee.

03/01/2017 to 4/21/2017: Interdisciplinary Research Program (IRP) Review Committee.

03/01/2017 to 5/17/2017: Comprehensive Endowed Chair Committee.

09/23/2017 to 12/19/19: Vice President - Research Advisory Committee.

12/7/2018 to 12/19/19: College of Business Endowed Chair Committee.

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**UNIVERSITY OF ALBERTA (JUNE 1999 – JULY 2015):**

**DEPARTMENT COMMITTEES:**

1999 to 2008: MScPT (thesis based) Graduate program committee member. 1999-

2004, Member of the following committees for the MScPT (course based)

program: Curriculum development committee; Major project design committee; Block 2 committee; Block 5 (long-term conditions) committee; Course design member for PTher 459, 534, 544, 548.

2001-2002 First year coordinator (undergraduate program). 2003-

2004, PT Chair selection committee.

**FACULTY COMMITTEES:**

1999-2000, Faculty consultant for the interdepartmental (Inter-D) innovative teaching learning activity.

2000 to 2006: Library committee member.

2004: Practice Review Board committee (Faculty of Rehabilitation Medicine representative).

2007- Present: Faculty Evaluation Committee.

2008- Faculty of Rehabilitation Medicine Space Allocation Committee.

2010-

Faculty of Rehabilitation Medicine Internal Research Grant Review Committee.

2011-Deans Senior Advisory Committee.

**UNIVERSITY COMMITTEES:**

1999: University of Alberta human vascular biology research steering committee. 2000-

2001: Capital Health cardiac center of excellence research and education committee.  
2001-2002: Mazankowski Alberta Heart Institute steering committee.  
2001 to 07/31/15: Mazankowski Alberta Heart institute cardiac rehabilitation sub-committee.  
2002- 2009: Associate Mentor for the Tomorrows Research Cardiovascular Health Professionals (TORCH) program. The goal of this AHFMR/Heart and Stroke Foundation of Canada and CIHR funded strategic training program is to develop the next generation of cardiovascular health research leaders. In addition, I was the TORCH Mentor for S. Mandic.  
2006: Faculty of Physical Education Selection Committee for cardiopulmonary exercise physiologist Assistant Professor Tenure Track Faculty position.  
2007: Faculty of Physical Education Selection Committee for High Performance and Disability Sport (Academic Search) Faculty position.  
2008 –2010: Mazankowski Alberta Heart Institute Strategic Management Council member.  
2009 – 2010: Research Leadership Council for the Mazankowski Alberta Heart Institute. 2010- ABACUS Operations Committee.  
2012-Research ethics committee (Panel B)  
2013-Women and Children’s Health Research Institute (WCHRI)-Grant Reviewer and Co-chair.

***LOCAL, NATIONAL & INTERNATIONAL COMMITTEES:***

2006 - 2009: Canadian Association of Cardiac Rehabilitation (CACR): Board Member 2005 -  
2007: Scientific Review Committee Heart and Stroke Foundation of Alberta, NWT & Nunavut.  
2006 - 2008: Canadian Institutes for Health Research-Peer Review Committee - Allied Health Professionals - New Investigators (AHP).  
2010 - 2011 Heart and Stroke Foundation of Canada: Doctoral Research Awards Scientific Review Committee.  
2009 - 2011-Heart and Stroke Foundation of Alberta, NWT and Nunavut: Executive Board Member.  
2010 to 2012 - Heart and Stroke Foundation of Alberta, NWT and Nunavut: Advisory Board Member.  
2010 - 2012 Canadian Society for Cardiovascular Magnetic Resonance, Board of Trustees.  
2012 - National Heart Lung Blood Institute-National Institute of Health: Heart Failure and Exercise Working Group.  
2013 - Alberta Innovates Health Solutions ACTION committee (Vascular Risk Reduction Project).  
2017- American Heart Association (AHA) Planning Committee on the association between cardiovascular disease and HIV.

2018 - 2020 NIA/NIH Observational Study Monitoring Board (OSMB) Member- Study of Muscle, Mobility and Aging (SOMMA).

2019 – Present - Member on the AHA - CLCD Exercise, Cardiac Rehabilitation, and Secondary Prevention Committee of the Council on Clinical Cardiology.

2019 - NIA/NHLBI - A Gerocentric Approach to Heart Failure with Preserved Ejection Fraction (HFpEF) in Older Adults: Elucidating and Targeting Extra-Cardiac Mechanisms - Expert Working Group Member:

2022 – Present: Cardio-Oncology Rehabilitation and Exercise (CORE) working group on behalf of the International Cardio-Oncology Society (IC-OS), Senior Advisor.

2022 (August) – Present: Canadian Institutes of Health Research Clinical Trials Projects Review Committee.

2023 – Present: NIH, Data Safety Monitoring Board Member for Dr. Y. Reddys K23 Award (Mayo Clinic, Rochester).

2024 – Present: NIH/NHLBI, NIH, Data Safety Monitoring Board Member for Dr. J. Smith RO1 Award (Mayo Clinic, Rochester).

2026 CIHR Clinical Investigation - D: Cardiovascular Systems (CID) committee.

## **WORK EXPERIENCE**

**Clinical Exercise Physiologist (Adult Cardiology):** Department of Medicine, Division of Cardiology, University of Alberta, Edmonton, Alberta

January 1992 – 2006: Responsible for conducting graded exercise stress/VO<sub>2</sub>peak tests, maximal muscular strength assessments and exercise prescription for ongoing studies assessing the effects of exercise training on cardiorespiratory fitness and muscle strength in patients with NYHA class II - III congestive heart failure.

### **Research Associate**

Department of Medicine, Division of Cardiology, University of Alberta, Edmonton, Alberta  
May 1996 – 1998: Responsible for performing and analyzing body surface potential mapping exercise stress tests for the multi-center Simvastatin Coronary Artery Disease Trial.

### **Exercise Rehabilitation Consultant**

Division of Oncology, Cross Cancer Institute, Edmonton, Alberta

January 1993 - June 1994: Responsible for conducting graded exercise stress tests in a study that assessed the effects of various pharmacological agents on overall fitness in patients with small cell lung cancer.

### **Registered Nurse**

Emergency Department, Royal Alexandra Hospital, Edmonton, Alberta

January 1990 - June 1992: Employed as a staff nurse in an emergency/trauma center. Duties

included assessment and treatment of patients with a wide range of diseases in an acute care hospital setting.

## **GRADUATE AND POST-DOCTORAL TEACHING EXPERIENCES**

### **Sessional Instructor- Exercise Physiology**

Faculty of Physical Education and Recreation, University of Alberta, Edmonton, Alberta January 1999 - April 1999: Lectured about the physiological adaptations to the stress of exercise and training to undergraduate Physical Education students.

### **Sessional Instructor- Bioacoustics of Human Hearing**

Department of Bioacoustics, Grant MacEwan Community College, Edmonton, Alberta  
September 1996 - December 1996: Sessional instructor for bioacoustics of human hearing.

### **Lecturer- Human Physiology (Cardiovascular Physiology section)**

Faculty of Physical Education and Recreation, University of Alberta, Edmonton, Alberta January 1996 - February 1996: Taught the cardiovascular physiology section of a human physiology course to undergraduate Physical Education students.

### **Teaching Assistant- Health Education**

Faculty of Physical Education and Recreation, University of Alberta, Edmonton, Alberta January 1995 - April 1995: Taught the health education laboratory section to undergraduate Physical Education students.

### **Teaching Assistant-Exercise Physiology**

Faculty of Physical Education and Recreation, University of Alberta, Edmonton, Alberta  
September 1992 - April 1995: Taught the exercise physiology laboratory section to undergraduate Physical Education students.

### **Sessional Instructor-Anatomy**

Grant MacEwan Community College, Edmonton, Alberta  
September 1991 - December 1991: Taught the anatomy laboratory section to undergraduate Physical Education students.

### **Teaching Assistant-Anatomy**

Faculty of Physical Education and Recreation, University of Alberta, Edmonton, Alberta  
September 1991 - December 1991: Taught an anatomy laboratory section to undergraduate Physical Education students.

## **AWARDS & ACHIEVEMENTS**

### **TEACHING**

- 2000: University of Alberta, Rehabilitation Medicine Students Association- *Teacher of the year award*.
- 2002-2009: Tomorrow's Research Cardiovascular Health Professionals (TORCH) Mentor.

### **RESEARCH**

- July 2004 – June 2009: Canadian Institute of Health Research New Investigator Career Award.
- August 2015 – December 2019: Moritz (Endowed) Chair in Geriatrics, College of Nursing and Health Innovation, The University of Texas Arlington.
- May 1, 2018 – Present: Fellow of the American College of Cardiology (FACC). The Fellowship is one of the most distinguished designations the College offers its members and is the ultimate recognition of professional achievement. It is based on outstanding credentials, achievements, and community contributions to cardiovascular medicine, those who are elected to Fellowship signal to peers and patients their commitment to quality cardiovascular care through use of the FACC designation.
- September 9, 2018 – Present: Fellow of the American Heart Association.
- October 25, 2019 - Recipient of the 2019 Canadian Association of Cardiovascular Prevention and Rehabilitation 2019 Terry Kavanagh Award.
- May 10, 2023 – Present: Fellow of The American College of Sports Medicine (FACSM). FACSM is the most prestigious distinction within the College.
- July 1, 2025 – American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) – Michael L. Pollock Established Investigator Award.

### **MEMBERSHIPS**

- *College of Registered Nurses of Alberta (CRNA); American College of Cardiology; American College of Sports Medicine; American Heart Association; American Physiological Society; European Society of Cardiology.*

### **AD HOC JOURNAL REVIEWER:**

American Heart Journal; American Journal of Cardiology; American Journal of Physiology-Heart & Circulatory Physiology; American Journal of Physiology-Regulatory, Integrative and Comparative physiology; Applied Physiology, Nutrition and Metabolism; British Medical Journal; British Journal of Sports Medicine; Canadian Journal of Cardiology; Canadian Journal of Physiology and Pharmacology; CHEST: The Cardiopulmonary and Critical Care journal; Circulation; Circulation Heart Failure; European Heart Journal; European Heart Journal

Cardiovascular Imaging; European Journal of Applied Physiology; European Journal of Sports Sciences; Experimental Physiology; Experimental Gerontology; Hypertension; Journal of American Society of Echocardiography; Journal of Applied Physiology; Journal of Cardiac Failure; Journal of Clinical Hypertension. Journal of Transplantation; Journal of the American College of Cardiology (JACC); JACC: Heart Failure; JACC: Imaging; Mayo Clinic Proceedings; Medicine Science and Sports in Exercise; New England Journal of Medicine; Scandinavian Journal of Medicine and Science in Sports; Sports Medicine; The Journal of Physiology; Transplantation.

**REVIEWER (NATIONAL FUNDING AGENCIES):**

- Heart and Stroke Foundation of Canada External Reviewer.
- Scientific Review Committee Heart and Stroke Foundation of Alberta, NWT & Nunavut.
- Canadian Breast Cancer Foundation.
- CIHR Allied Health Professionals-New Investigators Peer Review Committee.
- Heart & Stroke Foundation of Canada Doctoral Research Awards Peer review Committee.
- Wake Forest Claude D. Pepper OAIC Pilot Project competition, Wake Forest School of Medicine.
- Australian Academy of Health and Medical Sciences.
- AHA - Abstract Reviewer for Scientific Sessions 2023.
- 2022 (August) – Present: Canadian Institutes of Health Research Clinical Trials Projects Review Committee.

**STUDENT SCHOLARSHIPS/AWARDS**

- Canadian Association of Cardiac Rehabilitation *PhD Scholarship*, 1997-1998.
- Heart & Stroke Foundation of Canada/National Health Research and Development Program, *PhD Studentship in cardiovascular and cerebrovascular research*, 1996-98.
- Walter H Johns *Graduate Fellowship*, University of Alberta, 1996-1998.
- Mary Louise Imrie *Graduate Student Award*, University of Alberta, 1996.
- University of Alberta *PhD Scholarship*, 1994-1996.
- Royal Alexandra School of Nursing, Eva Nowakowsky Memorial Award for Excellence in Geriatric Nursing, 1990.

**PUBLICATIONS**

**DISSERTATIONS:**

1. **Haykowsky MJ**. Effects of resistance training on left ventricular morphology. Ph.D. Thesis, University of Alberta, 1998.

2. **Haykowsky MJ**. Physiological responses to combined aerobic and resistance training in elderly sedentary males. MSc Thesis, University of Alberta, 1994.

### **EXPERT OPINION:**

1. **Haykowsky M**, Clark A, Block PC. A meta-analysis of the effect of exercise training on left ventricular remodeling in heart failure patients: The benefit depends on the type of training performed. *ACC Cardiosource Review Journal*. 2007,16(10):33-37.

### **REPORTS:**

1. Clark AM, **Haykowsky MJ**, McAlister FA. A systematic review of non-provider based secondary prevention programs for coronary heart disease. A final report for Public Health Agency Canada, March 2008.

### **BOOK CHAPTERS:**

1. Gutierrez R, **Haykowsky M**, Hill L, Cluett L, Ignaszewski A, Teo K, Humen D. Combined aerobic and strength training in congestive heart failure patients: Pilot project on safety and feasibility. In: *Mechanisms of Heart Failure*. Singal P, Dixon I, Beamish R, Dhalla N (eds.), Kluwer Academic Publishers, Boston, USA, 1995.

2. Teo KK, **Haykowsky M**, Demers C, McKelvie RS. Benefits of exercise in patients with congestive heart failure. In: Dhalla NS, Chockalingam A, Berkowitz HI, Singal PK, ed. *Frontiers in Cardiovascular Health*. Kluwer Academic Publishers, Boston 2003 Chapter 37, pg. 507-518.

3. Haennel RG, C Tomczak C, **Haykowsky M**, Cerato L, Krishnan B. Special Populations Canadian Guidelines for Cardiac Rehabilitation and Cardiovascular Disease Prevention. 2<sup>nd</sup> edition. J Stone and H Arthur Editors. *Canadian Association of Cardiac Rehabilitation* 2004. (Updated in 2008).

4. Haykowsky, MJ. Cardiac Effects of Strength Training. In Muscle Strength, Kumar, S. (ED). Chapter 4, pg. 33-44, Taylor Francis, New York, 2004.

5. **Haykowsky M**. *Cardiovascular Integration in Musculoskeletal Rehabilitation in Scientific Foundations and Principles of Practice*. D. Magee, Editor, Elsevier Science, 2007.

6. Stone J, Hauer T, **Haykowsky M**, Aggarwal S. Exercise Therapy for Heart Failure patients in Canada. *International Encyclopedia of Public Health* (2<sup>nd</sup> Edition). 2017:66-69.

7. Kitzman DW, Upadhyia B, **Haykowsky M**, Taffet G. Effects of Aging on Cardiovascular Structure and Function. In: Halter JB, Ouslander JG, Studenski S, et al. *Hazzard's, Geriatric Medicine and Gerontology*, 7th ed. New York, NY: McGraw-Hill; 2017:1129-1144.

8. **Haykowsky MJ**, Beaudry R, Tucker WJ. Exercise rehabilitation for Older Breast Cancer Survivors. In: Gatchell R, Schultz IZ, Ray CT (Editors). *Handbook of Rehabilitation in Older Adults*. Springer. 2018.371-381.

9. Eric J Stöhr, Lauren K Truby, Veli Topkara, Gordon McGregor, **Mark J Haykowsky**. Exercise Testing in Heart Failure. In Sport and Exercise Physiology Testing Guidelines.

Routledge. Davison R, Smith PM, Hopker J, Price MJ, Hettinga F, Tew G, Bottoms L. (Editors). 2022:307-316.

10. Tucker W, **Haykowsky MJ**, Kitzman DW, Angadi S. Alterations in Skeletal Muscle in Heart Failure. In *A Companion to Braunwald's Heart Disease*, 5<sup>th</sup> Edition. Mann D. (Editors). Elsevier. 2025.

#### **INVITED REVIEWS:**

1. **Haykowsky MJ**, McGavock J, Taylor D. Effects of resistance training on left ventricular morphology and systolic function. *Federacion Argentina de Cardiologia, 2<sup>nd</sup> Virtual Congress of Cardiology* (Sep 1 – Nov 30, 2001).

2. Dressendorfer R, **Haykowsky MJ**. Eves N. Exercise for Persons with COPD. *American College of Sports Medicine, Current Comment*, October, 2002.

3. **Haykowsky MJ**. Effects of Exercise Training on Left Ventricular Morphology and Systolic Function: From Athletes to Cardiac Transplant Recipients. *3<sup>rd</sup> Master Heart and Physical Exercise: Prevention and Rehabilitation*, 2003.

4. **Haykowsky M**, Tomczak C, Riess K, Warburton D. Aerobic fitness in transplant recipients: A Canadian Perspective. *Transworld: The Journal of the World Transplant Games Federation*. 2007;(1):14-15.

5. **Haykowsky M**, Pituskin E, Paterson I. Physical Health and Exercise in Cancer. <http://www.acc.org>. Aug. 31, 2016.

#### **LETTERS TO EDITOR:**

1) Pituskin E, Kirkham A, Thompson R, **Haykowsky MJ**, Paterson DI. Reply: Impact of Cardiac Rehabilitation on Cardiotoxicity Reduction. *JACC Adv*. 3(3):100848. 2024.

2) LaGerche A, Foulkes SJ, **Haykowsky MJ**. Reply: Heart Failure With Preserved Ejection Fraction: Exercise Deficiency or Ventricular Maladaptation to Metabolic Demands? *JACC: Cardiovascular Imaging*. 2023.16(9):1236-1237.

3) Samuel JT, **Haykowsky MJ**, Sarma S, Nelson MD. Diastolic stress testing: Have you considered isometric handgrip echocardiography? *JACC: Cardiovascular Imaging*. 2019.12(10):2035-2037.

4) Scott JM, Tucker WJ, **Haykowsky MJ**. Lamina Cribrosa Pore Diameter and Spaceflight-Associated Neuro-ocular Syndrome-Reply. *JAMA Ophthalmology*. 2019 Aug 29. doi: 10.1001/jamaophthalmol.2019.3322. [Epub ahead of print].

5) Kitzman DW, Upadhyia B, Brubaker P, **Haykowsky MJ**, Nelson MD. REPLY: Heart Failure with Preserve Ejection Fraction: Types 1 and 2. *JACC: Heart Failure*. 2019. 7(7):632-633.

6) Beaudry RI, **Haykowsky MJ**, Nelson MD. Reply to "Letter to the Editor: Exercise MRI in healthy individuals-will the outlier please stand up? *Am J Physiol Regul Integr Comp Physiol*. 2019 Mar 1;316(3):R300.

- 7) Kitzman D, **Haykowsky M**, Kraus W. Diet and exercise for obese patients with heart failure- In Reply. *JAMA*. 2016.315(23):2619-20.
- 8) Tomczak CR, Halle M, Nelson MD, **Haykowsky MJ**. Acute high-intensity interval training confers a short-term reduction in systemic vascular resistance and increase in ejection fraction in clinically stable systolic heart failure patients. *J Physiol*. 2016.9.
- 9) Scott JM and **Haykowsky MJ**. Can Intensive Exercise Harm the Heart? *Circulation*. Online June, 2015;131(23):e523.
- 10) Scott J and **Haykowsky M**. Cardiovascular Function and Exercise Capacity in Patients with Colorectal Cancer: Does Anti-Cancer Therapy Matter? *J Am Coll Cardiol*.2015;65(13):1380-1381.
- 11) Scott J and **Haykowsky MJ**. Exercise is still medicine: transient alterations are critical for adaptation. *J Physiol*. 2014:4-5.
- 12) Tomczak C and **Haykowsky MJ**. Discrepancy Between Cardiac and Physical Functional Reserves in Stroke. *Stroke*. 2012 Sep;43(9):e91.
- 13) Kitzman D, Morgan T, **Haykowsky M**, Brubaker P: Determinants of Exercise Intolerance in Heart Failure with Preserved Ejection Fraction: Reply. *J Am Coll Cardiol*. 2011;58:2548-2549.
- 14) Jones L, **Haykowsky M**, Swartz J, Douglas P, Mackey J. "Early Breast Cancer Therapy and Cardiovascular Injury" – Reply. *J Am Coll Cardiol* 2008;51(12):1235
- 15) **Haykowsky M**, Liang Y, Pechter D, Jones L, McAlister F, Clark A. Exercise in chronic heart failure: Does it need to be "Anti-Remodeling" – Reply. *J Am Coll Cardiol*. 2007;50(24):2356.
- 16) ALa Gerche A, Foulkes SJ, **Haykowsky MJ**. Reply: Heart Failure with Preserved Ejection Fraction: Exercise Deficiency or Ventricular Maladaptation to Metabolic Demands? *JACC Cardiovascular Imaging*. 2023. 16 (9):1236-1237.
- 17) Impact of cardiac rehabilitation on cardiotoxicity reduction: Reply. Pituskin E, Kirkham A, Thompson R, **Haykowsky M**, Paterson DI. Accepted December 22, 2023.
- 18) Thomczak CR, Skow R, Tandon P, **Haykowsky MJ**. Response to: Distinguishing pharmacological from peripheral limitation in the six-minuten walk test in cirrhosis. Liver Transplantation. Accepted June 23, 2026.

#### **INVITED EDITORIAL:**

1. Foulkes S, Nelson MD, **Haykowsky MJ**. Musclin and HFpEF: Unlocking Skeletal Muscle Potential to Improve Exercise Tolerance. *Circ Heart Fail*. 2025 May 6:e013130. doi: 10.1161/CIRCHEARTFAILURE.125.013130. Online ahead of print. PMID: 40326355
2. Tucker W, Brubaker P, **Haykowsky MJ**. Improving Exercise Capacity in Recent Heart Transplant Recipients: Can a "HIT" Result in a Home Run? *Circulation*. 2019.7;139 (19):2212-2214.
3. Halle M, **Haykowsky M**. Atrial fibrillation: A preventable lifestyle disease! *Eur J Prev Cardiol*. 2018. 25(15):1642-1645.

4. Tucker W, **Haykowsky MJ**. Predictors of Cardiorespiratory Fitness Improvements with Cardiac Rehabilitation: Lower Baseline Fitness with the Most to Gain, Gains the Most. *Can J Cardiol*. 2018. Volume 34(7):819-820.
5. Lavie CJ, **Haykowsky MJ**, Ventura HO. Rehabilitating Cardiac Rehabilitation After Heart Transplantation. *J Heart Transplant*. 2017.37(4):437-438.
6. Kitzman DW, **Haykowsky MJ**, Tomczak CR. Case for Skeletal Muscle Myopathy and Its Contribution to Exercise Intolerance in HFpEF. *Circulation Heart Failure*. 2017 Jul;10(7).pii: e004281.
7. Kitzman D, **Haykowsky MJ**. Vascular Dysfunction in heart failure with preserved ejection fraction. *J Card Fail*. 2016;22:12-6.
8. **Haykowsky MJF** and Tomczak CR. Left ventricular hypertrophy in resistance or endurance trained athletes: The Morganroth hypotheses is obsolete, most of the time. *HEART*. 2014; 100:1225–1226.
9. Kitzman D, **Haykowsky M**. Mechanisms of Exercise Training in Heart Failure with Preserved Ejection Fraction: Central limitation and peripheral promise. *Am Heart J*. 2012;164(6):807-809.
10. **Haykowsky M**. LV remodeling and the athlete's heart: revisiting the Morganroth Hypothesis. *J Physiol*. 2011; 589(Pt 24):5915.

**PEER REVIEWED MANUSCRIPTS:**

1. Murr E, Grill S, Kiechle M, Kraemer A, Madl B, Glowka S, Haller B, Fiorentini C, Adjei E, **Haykowsky MJ**, Halle M, Wernhart S. Exercise in regional breast cancer with neoadjuvant anthracycline-based chemotherapy with immune checkpoint-inhibition: study protocol for a prospective randomised controlled trial. *Front Oncol*. 2026 Jun 5;16:1742136. doi: 10.3389/fonc.2026.1742136. eCollection 2026.
2. **Haykowsky MJ**, Weeldreyer N, La Gerche A, Sarma S, Foulkes SJ. Impaired Peripheral Oxygen Diffusion is the Primary Determinant of Exercise Intolerance in High-risk Older Breast Cancer Survivors. *Am J Physiol Heart Circ Physiol*. 2026 Jun 11. doi: 10.1152/ajpheart.00324.2026.
3. Riess J, Schmidt E, Foulkes SJ, Niederseer D, **Haykowsky MJ**. Impact of Early Cardiac Rehabilitation post-Cardiac Arrest on Aerobic Fitness, Functional Recovery, Psychological Health, and Quality of Life. *J Cardiopulm Rehabil Prev*. 2026 Jul 1;46(4):E25-E27. doi: 10.1097/HCR.0000000000001042. Epub 2026 Jun 9.
4. **Haykowsky MJ**. Rethinking the Valsalva Maneuver During Resistance Exercise: Why Transmural Pressure Matters. *Circulation*. 2026 Jun 9;153(23):1792-1794. doi: 10.1161/CIRCULATIONAHA.126.079936. Epub 2026 Jun 8.
5. Wernhart S, Rattkac M, Shira Karl-Ludwig Laugwitz M, Halle M, **Haykowsky MJ**. Oxygen Utilization During Moderate-Intensity Resistance and Aerobic Exercise in Arrhythmogenic Cardiomyopathy: The Central Role of the Periphery. *ESC Heart Fail*. 2026 May 5;13(3):xvag163.
6. Hedge ET, Howden EJ, Lawley JS, Cornwell W, Haykowsky MJ, Levine BD, Sarma S. Influence of sex and heart size on cardiovascular adaptations to 2 years of endurance exercise training in sedentary middle-aged adults. *J Physiol*. 2026 May 30. doi: 10.1113/JP290689. Online ahead of print.
7. Skow RJ, Foulkes SJ, Thompson RB, Walesiak D, Weinkauff C, Niederseer D, McMurtry MS, **Haykowsky MJ**.

- Acute Aortic Wall Stress Response to Handgrip Exercise in Aneurysmal versus Non-dilated Ascending Thoracic Aortas. *Aorta*. May 25 2026;14(CP). doi: 10.1055/a-2875-3346. Online ahead of print.
8. Foulkes SJ, Anderson M, Janssens K, Beaudry R, Carey A, Mitchell A, Spencer L, Angus D, **Haykowsky MJ**, and La Gerche A. From Healthy to Heart Failure in 24 Hours: Defining the upper limit of exercise induced cardiac fatigue. *J Appl Physiol*. Accepted May 8, 2026.
9. Skow RS\* , Haykowsky MJ\*, McMurtry TJ, Cruz C, Tomczak CR, Tandon P, Physiological Responses to the Six-Minute Walk Test in Frail/Pre-Frail Patients with Cirrhosis Awaiting Transplantation. **Liver Transplantation**. Accepted May 4, 2026. **\*Contributed equally as first authors.**
10. Janssens K, Howden E, Mitchell A, Wright L, Climie R, Parr E, Haykowsky M, La Gerche A, Foulkes SJ. Absolute and Workload-indexed Exercise Blood Pressure responses: Associations with cardiac output, vascular resistance and cardiorespiratory fitness in females. *Am J Physiol: Heart Circ Physiology*. Accepted May 3, 2026.
11. Rattka M, Wernhart S, Ludwig Laugwitz K, Halle, Foulkes SJ, **Haykowsky MJ**. Ascending thoracic aortic wall Stress response during aerobic, resistance, and isometric exercise in patients with arrhythmogenic cardiomyopathy. *International Journal of Cardiology*. Published Online May 3, 2026.
12. Weeldreyer N, Shewman A, Waldron, Hewitt D, Schmid V, Weinkauff C, Pagano J, Tomczak C, Niederseer D, Vontobel J, Angadi S, Foulkes S, **Haykowsky MJ**. Exercise Limitation in Patients with a Fontan Circulation: A Systematic Review and Meta-Analysis of Peak Oxygen Uptake. *Canadian Journal of Cardiology Oediatric & Congenital Heart Disease*. Accepted April 21, 2026.
13. Wernhart S, Halle M, Haykowsky MJ, Sarma S. Borderline Arrhythmogenic Cardiomyopathy in an Athlete Exercise Testing May Support Clinical Decision-Making. *JACC: CASE REPORTS*. Online April 17, 2026.
14. Boyes N, Nelson MD, **Haykowsky MJ**, Elaschuk C, Luchkanych A, Khan MR, Karjala G, Olver TD, and Tomczak CR. Left ventricular systolic function during isometric handgrip exercise and post-exercise circulatory occlusion in healthy male and female adults. *J Appl Physiol*. Accepted April 13, 2026.
15. Wernhart S, Shir M, Federle D, Ludwig Laugwitz K, Halle M, Rattka M, **Haykowsky MJ**. Multi-site lactate kinetics during moderate intensity resistance and endurance exercise in definitive and probable arrhythmogenic cardiomyopathy. *IJC Heart & Vasculature*. Volume 64. June 2026.
16. Saner N, Foulkes SJ, Dillon HT, Burnham L, Thompson R, La Gerche A, **Haykowsky MJ**, Howden E. *Journal of Cachexia, Sarcopenia and Muscle*. 17(1):e70186 2026.
17. Wernhart S, Halle, **Haykowsky MJ**, Sarma S. A borderline case of arrhythmogenic cardiomyopathy in an athlete: Exercise testing may support clinical decision-making. *JACC: Case reports*. Accepted March 13, 2026.
18. Foulkes SJ, Pituskin E, McMurtry T, Skow RJ, Grenier J, Weeldreyer N, Tomczak C, O'Neill D, Welsh RC, Thompson RB, Haykowsky MJ. Mechanisms underlying reduced peak oxygen uptake in older long-term breast cancer survivors. *JACC: Advances*. 2026 Feb 23:102610. doi: 10.1016/j.jacadv.2026.102610.
19. Landsteiner I, Foulkes SJ, Campain J, Zlotoff DA, Lewis GD, **Haykowsky MJ**. Reduced Exercise Capacity in Breast Cancer Compared to HFpEF: Mechanistic Insights from Invasive Exercise Testing. *JACC: CardioOncology*. *JACC CardioOncol*. 2026 Jan 14:S2666-0873(25)00389-8. doi:

10.1016/j.jacc.2025.12.002. Online ahead of print. **\*Drs. Foulkes received the inaugural European Society of Cardiology's (ESC) Young Investigator Award at the inaugural ESC CardioOncology meeting held in Florence, Italy (June 2025).**

**20.** Wakeham DJ, Zamani SK, Oneglia AP, Howrey MH, Majeed S, Brazile TL, Beckma JA, MacNamara JP, **Haykowsky MJ**, Vlad G, Zaha VG, Levine BD, Hearon C, Sarma S, Nelson MD. Circumferential strain and strain rates of the descending aorta as novel measures of aortic stiffness and wall mechanics from standard cardiac MRI. *Exp Physiol*. 2026 Jan;111(1):36-42.

**21.** Skow R, Foulkes SJ, Thompson RB, Grenier J, Moulson N, Niederseer D, McKinney J, Elefteriades J, McMurtry S, **Haykowsky MJ**. Acute Effects of Aerobic Exercise on Aortic Wall Stress in Thoracic Aortic Disease. *Am J Physiol Heart Circ Physiol*. 2026 Feb 1;330(2):H338-H347.

**22.** Foulkes SF, Moura-Ferreira S, Milani M, Bekhuis Y, Falter M, Delpire B, Pauwels R, Stroobants S, Jogani S, Vanhentenrijk S, Altintas S, Jasaityte R, Stassen J, Herbots L, Claessen G, **Haykowsky MJ\***, Verwerft J\*. Impact of atrial fibrillation on hemodynamics, oxygen consumption and its Fick determinants in patients with HFpEF. \* Contributed equally as senior authors. Online December 30, 2025.

**23.** Post-Exercise Muscle Oxygen Uptake Kinetics in Older Breast Cancer Survivors and Healthy Individuals: Association with Myosteatosis. Weeldreyer NR, McMurtry TJ, Foulkes SJ, Shewman A, Edith Pituskin E, Skow RJ, Thompson R, Grenier J, O'Neill DE, Welsh RC, **MJ Haykowsky\***, Tomczak C\*. Contributed equally as senior authors. *Experimental Physiology*. Accepted December 12, 2025.

**24.** McMurtry SM, Skow R, Foulkes SJ, Moulson N, McKinney J, Thompson RB. **Haykowsky MJ**. Cardiac Rehabilitation After Thoracic Aortic Surgery. *Can J Cardiol*. 2025 Dec;41(12S):S86-S94.

**25.** Foulkes S, Ferreira SM, Milani M, Bekhuis Y, Falter M, Delpire B, Pauwels R, Stroobants S, Jogani S, Vanhentenrijk S, Altintas S, Jasaityte R, Stassen J, Herbots L, Claessen G, **Haykowsky M**, Verwerft J. Mechanisms of exercise limitation in heart failure with preserved ejection fraction and obesity: A case of engine-chassis mismatch. *Am J Physiol Heart Circ Physiol*. 2025 Nov 1;329(5):H1126-H1136.

**26.** Wernhart S, Fiorentini C, Madl B, Kuehberger L, Glowka S, Murr E, Grill S, Kiechle M, Alguet H, Bassermann F, Combs, Juergen E Gschwend SE, **Haykowsky M**, Halle M. An interdisciplinary approach to ensure adherence to exercise and potentially reduce adverse cardiac events in cancer patients: Primers in Cardio-Oncology. *Frontiers in Oncology*. Accepted September 11, 2025.

**27.** Moulson N, Boroditsky N, Wiese J, Mitchell R, **Haykowsky M**, Foulkes S, Roberts J, Isserow S, Morrison B, McKinney J. Progression of Ascending Aortic Dimensions in Masters Endurance Athletes. *JACC Advances*. *JACC Adv*. 2025 Oct;4(10 Pt 2):102163. doi: 10.1016/j.jacadv.2025.102163.

**28.** Van Puyvelde T, Janssens K, Spencer L, Ray M, Foulkes, S, **Haykowsky M**, Claessen G, Willems R, La Gerche A. Balancing Exercise Benefits Against Heartbeat Consumption in Elite Cyclists. *JACC Advances*. *JACC Adv*. 2025 Oct;4(10 Pt 2):102140.

**29.** Schmid V, Paterson S, Weinkauff C, Wang J, Tomczak C, Niederseer D, Vontobel J, Nelson M, Forman D, Halle M, Foulkes S, **Haykowsky M**. Peak Oxygen Uptake in Older Adults with Heart Failure ; A Systematic Review and Meta-Analysis. *Geroscience*. Published Online July 28, 2025.

**30.** Weinhart S, Halle M, Mueller S, Schmid V, Wolf CM, Meierhofer C, Trenkwalder T, Diebold I, Herzog C, **Haykowsky MJ**, Foulkes SJ, Kastner T, Wolfarth B, Martens E, Westphal DS. Female Carriers of Duchenne Muscular Dystrophy with Cardiac Involvement: How much exercise can we recommend?

*Frontiers in Cardiovascular Medicine. Front Cardiovasc Med.* 2025 Jul 7;12:1606994. doi: 10.3389/fcvm.2025.1606994. eCollection 2025.PMID: 40693222.

**31.** Weinhart S, Karcher F, Fiorentini C, Glowka S, Madl B, Mueller S, Schmid V, Foulkes SJ, **Haykowsky MJ\***, Halle M\*. Incidence of cardiovascular risk factors and phenotyping in cardiomyopathies: One size does not fit all. *Int J Cardiol Heart Vasc.* 2025 Jun 17;59:101722.\*, Contributed equally as senior authors.

**32.** Kissell CE, Skow RJ, Wakeham DJ, Manferdelli G, Samels M, Fu Q, **Haykowsky M**, Brazile TL, MacNamara JP, Sarma S, Levine BD, Fadel PD, Hearon Jr CM. Impaired exercise hemodynamic responses in patients with HFpEF without a sympathetic vasoconstrictor reserve. *Auton Neurosci.* 2025 Aug;260:103309. doi: 10.1016/j.autneu.2025.103309. Epub 2025 Jun 10.PMID: 40561702.

**33.** Skow R, Foulkes SJ, Wang J, Walesiak D, McMurtry T, Kennedy M, Halle M, Mueller S, Fegers-Wustrow I, Edelmann F, Tomczak CR, **Haykowsky MJ**. Sex-Based Differences in Peak Oxygen Uptake Among Individuals with Heart Failure: Systematic Review and Meta-Analysis. *J Appl Physiol (1985).* 2025 Jul 1;139(1):45-57.

**34.** Damluji AA, Tomczak CR, Hiser S, O'Neill D, Goyal P, Pack QR, Foulkes S, Brown TM, **Haykowsky MJ**, Needham DM, Forman DE. Benefits of Cardiac Rehabilitation: Mechanisms to Restore Function and Clinical Impact. *Circulation Research. Circ Res.* 2025 Jul 7;137(2):255-272. doi: 10.1161/CIRCRESAHA.125.325705. Epub 2025 Jul 3.PMID: 40608851.

**35.** Petrasch G, Brito DA Silva H, Heller V, Schmidt N, Bebi G, Spormann L, Ghidoni C, Schmidt EA, Hametner G, Riess J, Vontobel J, **Haykowsky M**, Niederseer D. Definitions for hypertensive response to exercise: a systematic review. *Minerva Med.* 2025 Oct;116(5):416-426.

**36.** Wernhart S, Fiorentini C, Glowka S, Madl B, Grill S, Kiechle M, Mueller S, Schmid V, **Haykowsky MJ**, Foulkes S, Halle M. Evaluating Cardiovascular Risk Factors in Breast Cancer Survivors: The Role of Echocardiography and Cardiopulmonary Exercise Testing in the MU-COE Registry. *Int J Cardiol.* 2025 Oct 1;436:133421. doi: 10.1016/j.ijcard.2025.133421. Epub 2025 May 25.PMID: 40425074.

**37.** Mirzai S, DO, Sandesara U, Haykowsky MJ, Brubaker PH, DW, Peters AE. Aerobic, Resistance, and Specialized Exercise Training in Heart Failure with Preserved Ejection Fraction: A State-of-the-Art Review. *Heart Fail Rev.* 2025 Sep;30(5):1015-1034.

**38.** Skow R, Foulkes, Mugele H, Perkins DR, Lawley JS, Tomczak CRT, Nelson MD, La Gerche A, **Haykowsky MJ\***, Thomson RT\*. Validation of magnetic resonance imaging derived venous oxygen saturation and oxygen consumption measurements during exercise. *Am J Physiol Heart Circ Physiol.* 2025 Jun 1;328(6):H1179-H1192. \*Contributed equally as senior authors.

**39.** **Haykowsky MJ**, Skow RJ, Foulkes SJ, Grenier J, Elefteriades JA, Thompson RB, McMurtry MS. Aorta Wall Stress during Exercise in Patients with an Ascending Thoracic Aortic Aneurysm: Insights from a Case Series. *Aorta (Stamford).* 2025 Apr 8. doi: 10.1055/a-2558-4266. Online ahead of print. PMID: 40199495.

**40.** Hathorn B, **Haykowsky MJ**, Almandoz J, Pandey A, Sarma S, Hearon Jr CM, Babb TG, Balmain BN, Fu Q, Zaha VG, Levine BD, Nelson M. Insights into the role of obesity in HFpEF pathophysiology and management. *Can J Cardiol.* 2025 Sep;41(9):1764-1776.

**41.** Seth C, Schmid V, Mueller S, **Haykowsky M**, Foulkes SJ, Halle M, Wernhart S. Diabetes, obesity,

- and cardiovascular disease-what is the impact of lifestyle modification? *Herz*. 2025 Mar 14. doi: 10.1007/s00059-025-05309-x. Online ahead of print. PMID: 4008520.
- 42.** Adams SC, Rivera-Theurel F, Scott JM, Nadler MB, Foulkes SJ, Leong D, Nilsen T, Porter C, **Haykowsky M**, Abdel-Qadir H, Hull SC, Iyengar NM, Dieli-Conwright CM, Dent SF, Howden EJ. Cardio-Oncology Rehabilitation and Exercise: Evidence, Priorities, and Research Standards from the ICOS CORE Working Group. *Eur Heart J*. 2025 Feb 28: ehaf100. doi: 10.1093/eurheartj/ ehaf100. Online ahead of print. PMID: 40036781.
- 43.** Labib D, **Haykowsky M**, Sonnex E, Mackey JR, Thompson RB, Paterson DI, Pituskin E. Long-term cardiac MRI follow up of MANTICORE (Multidisciplinary Approach to Novel Therapies in Cardio-Oncology REsearch). *Cardiooncology*. 2025 Feb 8;11(1):13. doi: 10.1186/s40959-025-00313-w.PMID: 39923094
- 44.** Schmid V, Foulkes SJ, Dziano JK, Wang J, Verwerft J, Elliott AD, **Haykowsky MJ**. The impact of atrial fibrillation on oxygen uptake and haemodynamics in patients with heart failure: a systematic review and meta-analysis. *Eur Heart J Open*. 2025 Feb 4;5(1):oeaf003. doi: 10.1093/ehjopen/oeaf003. eCollection 2025 Jan.PMID: 39949421.
- 45.** Tomczak CR, Foulkes SJ, Weinkauff C, Walesiak D, Wang J, Schmid V, Paterson S, Tucker WJ, Nelson MD, Wernhart S, Vontobel J, Niederseer D, **Haykowsky MJ**. Unraveling Heart Failure Phenotypes: A Systematic Review and Meta-Analysis of Peak Oxygen Uptake and its Determinants. *Canadian Journal of Cardiology Open*. *CJC Open*. 2025 Jan 20;7(4):367-379.
- 46.** Foulkes SJ, **Haykowsky MJ**, Sherrington R, Kirkham AK, Grenier J, Seres P, Paterson DI, Thompson R. Reference Values for Water-Specific T1, Intermuscular and Intramuscular Fat in Skeletal Muscle at 2.89T. *Journal of Magnetic Resonance Imaging*. Accepted January 13, 2025.
- 47.** Pituskin E, Foulkes SJ, McMurtry T, Kruger K, Bates JE, Lamoureux D, Brandwein J, Lieu E, Zhu N, Wang P, Sawler D, Taparia M, Hamilton M, Comfort-Riddle T, Mayer T, Ganes G, Paterson DI, Prado CM, **Haykowsky MJ**, Grenier J, McNeely M, Tandon P, Thompson RB. Rationale and Design of APOLLO: a personalized rehAbilitation PrOgram in aLLOgenic bone marrow transplantation. *BMC Cancer*. *BMC Cancer*. 2025 Jan 28;25(1):163.
- 48.** Soni S, Foulkes S, Skow R, **Haykowsky MJ**, Dyck JD. Therapeutic Potential of Ketone Bodies on Exercise Intolerance in Heart Failure: Looking Beyond the Heart. *Cardiovascular research*. Accepted December 5, 2024.
- 49.** Edelmann F, Wachter R, Duvinage A, Mueller S, Fegers-Wustrow I, Schwarz S, Christle JW, Pieske-Kraigher E, Seyfarth M, Knapp M, Dörr M, Nolte K, Düngen HD, Herrmann-Lingen C, Esefeld K, Hagendorff A, **Haykowsky MJ**, Hasenfuss G, Holzendorf V, Prettin C, Mende M, Pieske B, Halle M. Combined endurance and resistance exercise training in heart failure with preserved ejection fraction: a randomized controlled trial. *Nat Med*. 2025 Jan 2. doi: 10.1038/s41591-024-03342-7. Online ahead of print. PMID: 39747684
- 50.** Dausin C, Tironi RM, Cornelissen V, Hespel P, Willems R, **Haykowsky M**, La Gerche A, Claessen G, Foulkes S. Your heart can't see what you are wearing: Exercise training load in endurance athletes is inadequately quantified in sports cardiology - A systematic review. *Can J Cardiol*. 2024 Dec 11:S0828-282X(24)01251-0. doi: 10.1016/j.cjca. 2024.12.009. Online ahead of print. PMID: 39672298.

- 51.** Foulkes SJ, Skow RJ, La Gerche A, Tymchak WJ, **Haykowsky MJ**. Insights From a 20-Year Follow-Up of the First Heart Transplant Recipient to Complete an Ironman Triathlon. *Circ Heart Fail*. 2024 Dec 9:e012027. doi: 10.1161/CIRCHEARTFAILURE.124.012027. Online ahead of print. PMID: 39648898.
- 52.** Mueller
- 53.** S, L'Hoyes W, Milani M, Spencer L, Foulkes S, Paratz E, Janssens K, Stassen J, Delpire B, Pauwels R, Moura-Ferreira S, Falter M, Bekhuis Y, Herbots L, **Haykowsky MJ**, Claessen G, La Gerche A, Verwerft J. Left Ventricular Volume as a Predictor of Exercise Capacity and Functional Independence in Individuals with Normal Ejection Fraction. *Eur J Prev Cardiol*. 2024 Nov 4:zwae363. doi: 10.1093/eurjpc/zwae363. Online ahead of print. PMID: 39489516
- 54.** Schmid V, Foulkes SJ, Walesiak D, Wang J, Tomczak CR, Tucker WJ, Angandi SS, Halle M, **Haykowsky MJ**. Impact of whole body and skeletal muscle composition on peak oxygen uptake in Heart Failure: A Systematic Review and Meta-Analysis. *Eur Heart J Open*. 2024 Sep 26;4(5):oeae082. doi: 10.1093/ehjopen/oeae082. eCollection 2024 Sep. PMID: 39464232
- 55.** Mueller S, Cervenka M, Fegers-Wustrow I, Winzer EB, Gevaert AB, Beckers P, Haller B, Edelmann F, Christle JW, **Haykowsky MJ**, Sachdev V, Kitzman DW, Linke A, Adams V, Wisloff U, Pieske B, van Craenenbroeck E, Halle M, on behalf of the OptimEx-Clin study group. Comparison of exercise training modalities and change in peak oxygen consumption in HFpEF: A secondary analysis of the OptimEx-Clin trial. *Eur J Prev Cardiol*. 2024 Oct 25:zwae332. doi: 10.1093/eurjpc/zwae332. Online ahead of print. PMID: 39453789
- 56.** Weinkoff K, Fyfe E, Hewitt D, Wang J, Kennedy M, Pituskin E, La Gerche A, Foulkes SF, **Haykowsky MJ**. Peak oxygen uptake impairment in childhood cancer survivors treated with anthracycline-based chemotherapy: A systematic review and meta-analysis. *Eur J Prev Cardiol*. 2024 Oct 4:zwae317. doi: 10.1093/eurjpc/zwae317.
- 57.** da Silva BR, Pagano AP, Kirkham AA, Gonzalez MC, **Haykowsky MJ**, Joy AA, King K, Singer P, Cereda E, Paterson I, Pituskin E, Thompson R, Prado CM. Evaluating predictive equations for energy requirements throughout breast cancer trajectory: A comparative study. *Clin Nutr*. 2024 Sep;43(9):2073-2082. doi: 10.1016/j.clnu.2024.07.032. Epub 2024 Jul 26. PMID: 39094472.
- 58.** Dillon HT, Foulkes SJ, Baik AH, Scott JM, Touyz RM, Herrmann J, **Haykowsky MJ**, LaGerche AL, Howden EJ. Cancer Therapy Associated Exercise Intolerance: The Heart is but a Part: *JACC: CardioOncology*. 6(4):496-513.
- 59.** Skow R, Sarma S, MacNamara J, Bartlett M, Wakeham D, Martin Z, Samels M, Nandadeva D, Brazile T, Ren J, Fu Q, Babb T, Balmain B, Nelson M, Hynan L, Levine B, Fadel, **Haykowsky M**, Hearon C. Identifying the mechanisms of a peripherally limited exercise phenotype in patients with heart failure with preserved ejection fraction. *Circulation Heart Failure*. *Circ Heart Fail*. 2024 Jul 25:e011693. doi: 10.1161/CIRCHEARTFAILURE.123.011693. Online ahead of print. PMID: 39051098.
- 60.** Upadhyia B, Brubaker PH, Nicklas BJ, Houston DK, **Haykowsky MJ**, Kitzman DW. Long-term adif
- 61.** and Exercise Capacity Following Calorie Restriction and Exercise Training in Older Patients with

Obesity and Heart Failure with Preserved Ejection Fraction. *Journal of Cardiac Failure*. J Card Fail. 2024 Jul 4:S1071-9164(24)00226-4. doi: 10.1016/j.cardfail. 2024.06.007. Online ahead of print. PMID: 38971299

62. Paterson DI, White JA, Beaulieu C, Sherrington R, Prado C, Puneeta T, Halloran K, Smith S, McCombe J, Ritchie B, Pituskin E, **Haykowsky M**, Richard , Emery D, Tsui AK, Wu KY, Oudit G, Ezekowitz JA, Thompson R. Rationale and Design of the Multi Organ Inflammation with Serial Testing (MOIST) study: a comprehensive assessment of functional and structural abnormalities in patients with recovered COVID-19. *Frontiers in Medicine*. Accepted July 3, 2024.

63. Foulkes SJ, **Haykowsky MJ**, Kistler P, McConell, Trappe S, Hargreaves M, Costill D, La Gerche A. Lifelong physiology of a former marathon world-record holder – the pros and cons of extreme cardiac remodeling. *J Appl Physiol* (1985). 2024 Jun 27. doi: 10.1152/jappphysiol.00070.2024. Online ahead of print. PMID: 38935800.

64. Cunningham C, Conway J, Zahoui Z, **Haykowsky M**, Scott S. Exploring Caregiver Learning and Experiences Caring for a Child with Heart Failure: A Qualitative Study. *CJC Pediatric and Congenital Heart Disease*. CJC Pediatr Congenit Heart Dis. 2024 May 28;3(4):152-160. doi: 10.1016/j.cjcpc.2024.05.003. eCollection 2024 Aug. PMID: 39493668.

65. Verwerft J, Foulkes SJ, Bekhuis Y, Moura- Ferreira S, Falter M, Hoedemakers S, Jasaityte R, Stassen J, Herbots J, LaGerche A, **Haykowsky MJ\***, Claessen G\*. "The Oxygen Cascade According to HFpEF Likelihood: A Focus on Sex Differences". *JACC Advances*. Accepted May 3, 2024.\*Contributed equally as senior authors.

66. Foulkes SJ, Wagner PD, Wang J, La Gerche A, **Haykowsky MJ**. Physiological determinants of decreased peak leg oxygen uptake in chronic disease: A systematic review and meta-analysis. *J Appl Physiol*. 2024 Jun 1;136(6):1293-1302. doi: 10.1152/jappphysiol.00918.2023. Epub 2024 Mar 14. PMID: 38482572.,

67. Foulkes SJ, Hewitt D, Skow R, Dover D, Kaul P, La Gerche A, **Haykowsky MJ**. Outrunning the grim reaper: Longevity of the first 200 sub-four-minute mile runners. *Br J Sports Med*. 2024 Jun 20;58(13):717-721. doi: 10.1136/bjsports-2024-108386. PMID: 38729629.

- **One month after publication, this paper was ranked in the top 0.15% out of 26,119,990 research outputs.**

68. Skow RJ, Foulkes SJ, Sere P, Freer MA, Mathieu ED, Raj S, Thompson, RB, **Haykowsky MJ**, Richer L. Physiological Reports. Accepted March 4, 2024. Effect of lower body negative pressure on cardiac and cerebral function in postural orthostatic tachycardia syndrome: a pilot MRI assessment. *Physiol Rep*. 12(6):e15979. 2024.

69. Foulkes SJ\*, **Haykowsky MJ\***, Li T, Wang J, Kennedy M, Kirkham, Thomson R, Paterson DI, La Gerche A, Pituskin E. Determinants of Impaired Peak Oxygen Uptake in Breast Cancer Survivors: *JACC: CardioOncology Primer*. *JACC CardioOncology*. Online December 26, 2023.\*, Contributed equally as first authors.

70. Foulkes SJ, Howden EJ, Pituskin E, Thompson RB, La Gerche A, **Haykowsky MJ**. A

Review on the Role of Exercise Training to Prevent a Decline in Cardiorespiratory Fitness and Cardiac Function in Breast Cancer Survivors. *Journal of Cardiopulmonary Rehabilitation and Prevention*. 2023; 43 (7):1-10.

**71.** Zamani S, Sarma S, Nelson. MacNamara J, Hynan L, **Haykowsky MJ**, Hearon C, Wakeman D, Brazile T, Levine B, Zaha V, Nelson M. Excess Pericardial Fat Is Related to Adverse Cardio-Mechanical Interaction in Heart Failure With Preserved Ejection Fraction. *Circulation*. 2023.148(18):1410-1412. doi: 10.1161/CIRCULATION.AHA.123.065909. Epub 2023 Oct 30.

**72.** Pituskin Em Cox-Kennett N, Foulkes S, Driga A, Dimitry R, Thompson RB, Kirkham A, Prado C, Gyenes G, **Haykowsky MJ**. Cardio-oncology and cancer rehabilitation: is an integrated approach possible? *Can J Cardiol*. 2023 Nov;39(11S):S315-S322. 2023.

**73.** Rowe SJ, Paratz ED, Foulkes SJ, Janssens K, Spencer LW, Fahey L, D'Ambrosio P, **Haykowsky MJ**, La Gerche A. Understanding Exercise Capacity – from Elite Athlete to HFpEF. *Can J Cardiol*. 2023 Nov;39(11S):S323-S334. doi: 10.1016/j.cjca.2023.08.007.

**74.** Christensen RAG, **Haykowsky MJ**, Nadler M, Prado CM, Small SD, Rickard JN, Pituskin E, Paterson DI, Mackey JR, Thompson RB, Kirkham AA. Rationale and Design of IMPACT-women: A randomized controlled trial of the effect of time restricted eating, healthy eating, and reduced sedentary behavior on metabolic health during chemotherapy for early-stage breast cancer. *Br J Nutr*. 2023. 130 (5):852-859. doi: 10.1017/S0007114522003816. Epub 2022 Dec 1. PMID: 36453589.

**75.** Foulkes SJ, Hewitt D, Peters A, Schmidt T, Reiss N, Riess K, Paterson S, La Gerche A, **Haykowsky MJ**. Effect of Exercise Training on Peak Aerobic Power Post Heart Transplant: A Brief Review. *Can J Cardiol*. 2023 Nov;39(11S):S368-S374. doi: 10.1016/j.cjca.2023.07.017. Epub 2023 Jul 21. PMID: 37480990.

**76.** McGregor G, Powell R, Begg B, Birkett ST, Nichols S, Ennis S, McGuire S, Prosser J, Fiassam O, Hee SW, Hamborg T, Banerjee P, Hartfiel N, Charles JM, Edwards RT, Drane A, Ali D, Osman F, He H, Lachlan T, **Haykowsky MJ**, Ingle L, Shave R. High- intensity interval training in cardiac rehabilitation (HIIT or MISS UK): A multi-center randomised controlled trial. *Eur J Prev Cardiol*. 2023 Jul 12;30(9):745-755. doi: 10.1093/eurjpc/zwad039. PMID: 36753063. 10.1093/eurjpc/zwad039. Online ahead of print. PMID: 36753063

**77.** Anding-Rost K, von Gersdorff G, von Korn P, Ihorst G, Josef A, Kaufmann M, Huber M, Bär T, Zeißler S, Höfling S, Breuer C, Gärtner N, **Haykowsky MJ**, Degenhardt S, Wanner C, Halle M for the DiaTT Study Group Halle M on behalf of the. Exercise During Hemodialysis in Patients with Chronic Kidney Failure. *New England Journal of Medicine Evidence*. June 9, 2023.

**78.** Kirkham AA, Mackey JR, Thompson RB, **Haykowsky MJ**, Oudit GY, McNeely M, Coulden R, Stickland M, Baracos VE, Dyck JRB, Haennel R, Pituskin E, Paterson DI. Team Intervention in cardio-oncology (TITAN): a RCT of a cardiac rehabilitation care in breast cancer. *JACC Adv*. 2023 Jul 27;2(6):100424. doi: 10.1016/j.jacadv.2023.100424. eCollection 2023 Aug. PMID: 38939428.

**79.** Bunsawat K, Clifton HL, Ratchford SM, Vranish JR, Alpenglow JK, **Haykowsky MJ**, Trinity

JD, Ryan JJ, Fadel PJ, Wray DW. Cardiovascular Responses to Static Handgrip Exercise and Post-Exercise Ischemia in Heart Failure with Preserved Ejection Fraction. *J Appl Physiol* (1985). 2023. 134(6):1508-1519.PMID: 37167264.

**80.** Dorfman TL, Archibald M, **Haykowsky M**, Scott SD. An examination of the psychosocial consequences experienced by children and adolescents living with congenital heart disease and their primary caregivers: a scoping review protocol. *Syst Rev*. 12(1):1-12. 2023. PMID: 37268979.

**81.** Da Silva BR, Kirkham AA, Ford KL, **Haykowsky MJ**, Paterson DI, Joy AA, Pituskin E, Thompson R, Prado CM. Phase Angle Is Associated with Muscle Health and Cardiorespiratory Fitness In Older Breast Cancer Survivors. *Clinical Nutrition ESPEN*. 2023.55:208-211. <https://doi.org/10.1016/j.clnesp.2023.03.019>.

**82.** Foulkes S, Howden EJ, Dillon HT, Janssens K, Beaudry R, Mitchell A, Lindqvist A, Wallace I, Wright L, Costello B, Claessen G, **Haykowsky MJ**, La Gerche A. A strong association between cardiac size and functional capacity in middle-aged women. *J Am Coll Cardiol Imaging*. JACC Cardiovasc Imaging. 2023 Jun;16(6):768-778. PMID: 36881424

**83.** Gevaert AB, Böhm B, Hartmann H, Goovaerts I, Stoop T, Van De Heyning CM, Beckers PJ, Baldassarri F, Mueller S, Oberhoffer R, Duvinage A, **Haykowsky MJ**, Wisløff U, Adams V, Pieske B, Halle M, Van Craenenbroeck EM. Effect of training on vascular function and repair in heart failure with preserved ejection fraction. *JACC Heart Fail*. 2023 Apr;11(4):454-464. PMID: 36892488.

**84.** Oneglia AP, Szczepaniak LS, Jaffery MF, Cipher D, McDonald JG, **Haykowsky MJ**, Moreau K, Clegg DJ, Zaha V, Nelson MD. Myocardial steatosis impairs left ventricular diastolic-systolic coupling in healthy humans. *J Physiol*. 2023 Apr;601(8):1371-1382. doi: 10.1113/JP284272. Epub 2023 Mar 18. PMID: 36891609.

**85.** Foulkes SJ, Howden EJ, **Haykowsky MJ**, Antill Y, Salim A, Nightingale SS, Loi S, Claus P, Janssens K, Mitchell AM, Wright L, Costello BT, Lindqvist A, Burnham L, Wallace I, Daly RM, Fraser SF, La Gerche A. Exercise for the Prevention of Anthracycline-induced Functional Disability and Cardiac Dysfunction: The BREast Cancer Randomized EXercise InTervention (BREXIT) Study. *Circulation*. 2023 Feb 14;147(7):532-545. doi: 10.1161/CIRCULATIONAHA.122.062814. Epub 2022 Nov 7.PMID: 36342348.

**86.** Kirkham AA, Ford KL, Ramos Da Silva B, Topolnyski J, Prado CM, Joy AA, Paterson DI, Boule N, Pituskin E, **Haykowsky MJ**, Thompson RB. Implementation of Weekday Time-Restricted Eating to Improve Metabolic Health in Breast Cancer Survivors with Overweight/Obesity. *Obesity*. 2023 Feb;31 Suppl 1:150-160. doi:10.1002/oby.23654. PMID: 36695128.

**87.** Da Silva BR, Kirkham AA, Ford KL, **Haykowsky MJ**, Paterson DI, Joy AA, Pituskin E, Thompson R, Prado CM. Time-Restricted Eating in Breast Cancer Survivors: Effects on Body Composition and Nutritional Status. *Nutr Cancer*. 2023 Apr 10:1-6. doi: 10.1080/01635581.2023.2195543. Online ahead of print. PMID: 37036277

**88.** Beaudry RI, Akins JD, Richey RE, Brothers RM, Nelson MD, Sarma S, Tucker WJ,

**Haykowsky MJ.** Exercise Leg Blood Flow is Preserved in Long-term Breast Cancer Survivors Previously Treated with Anthracycline Chemotherapy. *J Cardiopulm Rehabil Prev.* 2023.43(1)61-65.

**89.** Bigaran A, Howden EJ, Foulkes S, Janssens K, Beaudry RI, **Haykowsky MJ**, La Gerche A, Fraser SF, Selig SE. Prescribing Exercise in Early-Stage Breast Cancer During Chemotherapy: A Simple Periodized Approach to Align with the Cyclic Phases of Chemotherapy. *J Strength Cond Res.* 2022 Oct 1;36(10):2934-2941. doi: 10.1519/JSC.0000000000003990. Epub 2021 Feb 26. PMID: 36135037

**90.** Mueller S, Haller B, Feuerstein, A, Winzer EB, Beckers P, **Haykowsky MJ**, Gevaert AB, Hommel, J, Azevedo LF, Duvinage A, Esefeld K, Fegers-Wustrow I, Christle JW, Pieske-Kraigher E, Belyavskiy E, Morris, DA, Kropf M, Aravind-Kumar R, Edelmann F, Linke A, Adams V, Van Craenenbroeck EM, Pieske B, Halle M. Peak Oxygen Pulse is a Predictor of the Exercise Training-Induced Change in Peak Oxygen Consumption in Heart Failure with Preserved Ejection Fraction: An Analysis of the OptimEx-Clin trial. *ESC Heart Fail.* 2022 Oct;9(5):3393-3406. doi: 10.1002/ehf2.14070. Epub 2022 Jul 15.

**91.** La Gerche A, Howden EJ, **Haykowsky MJ**, Lewis GD, Levine BD, Kovacs JC. JACC Focus Seminar Series: Exercise, Cardiovascular Disease and The Athlete's Heart. Part 2 of a 4-part review series: HFpEF - an exercise deficiency syndrome? *J Am Coll Cardiol.* 2022 Sep 20;80(12):1177-1191. doi: 10.1016/j.jacc.2022.07.011. PMID: 36075837

**92.** Tucker WJ, Halle **Haykowsky MJ**, Chueng EH, Kovacs JC. JACC Focus Seminar Series: Exercise, Cardiovascular Disease and The Athlete's Heart. Part 1 of a 4-part review series: Exercise as A Primary and Secondary Prevention Therapy for Cardiovascular Disease. *J Am Coll Cardiol.* 2022 Sep 13;80(11):1091-1106. doi: 10.1016/j.jacc.2022.07.004. PMID: 36075680.

**93.** Kirkham A, Pituskin E, Mackey JR, Grenier J, D Ian Paterson, **Haykowsky MJ**, Thompson R. Longitudinal changes in skeletal muscle metabolism, oxygen uptake, and myosteatosis during cardiotoxic treatment for early-stage breast cancer. *Oncologist.* 2022 Sep 2;27(9):e748-e754. doi: 10.1093/oncolo/oyac092. PMID: 35579489.

**94.** **Haykowsky MJ**, Kirkham AA, Li T, Pituskin E, Thompson RB, Paterson DI, Foulkes SJ, Halle M, Sarma S, Howden E, Nelson MD, La Gerche A. Determinants of oxygen utilization in breast cancer: Similarities between heart failure with preserved ejection fraction. *Prog Cardiovasc Dis.* 2022 Sep-Oct;74:45-52. doi: 10.1016/j.pcad.2022. 10.005. Epub 2022 Oct 22. PMID: 36279949.

**95.** Kirkham AA, Ford KL, Topolnyski J, Ramos Da Silva B, Paterson DI, Prado CM, Joy AA, Boulé NG, Pituskin E, **Haykowsky MJ**, Thompson RB. Time-Restricted Eating to Reduce Cardiovascular Risk Among Older Breast Cancer Survivors: A Single-arm Feasibility Study. *JACC: CardioOncology.*4(2), pp. 276-278.

**96.** Anderson M, Parrott CF, **Haykowsky MJ**, Brubaker PH, Upadhyya B. Skeletal muscle abnormalities in heart failure with preserved ejection fraction. *Heart Fail Rev.* 2023 Jan;28(1):157-168. doi: 10.1007/s10741-022-10219-9. Epub 2022 Mar 30. PMID: 35353269

- 97.** Beaudry R, **Haykowsky MJ**, MacNamara JP, Tucker WJ, Rao R, Haley B, Sarma S. Cardiac Mechanisms for Low Aerobic Power in Anthracycline Treated, Older, Long-Term Breast Cancer Survivors. *Cardiooncology*. 2022 Apr 11;8(1):8. doi: 10.1186/s40959-022-00134-1.PMID: 35410444.
- 98.** Singleton MJ, Nelson MB, Samuel TJ, **Haykowsky MJ**, Upadhya B, Brubaker P, Kitzman DW, Nelson MD. Left Atrial Stiffness Index Independently Predicts Exercise Intolerance and Quality of Life in Older Patients with Obese HFpEF. *J Card Fail*. 2022 Apr;28(4):567-575. PMID: 34774747.
- 99.** Alhumaid W, Small SD, Kirkham AA, Becher H, Pituskin E, Prado CM, Thompson RB, **Haykowsky MJ**, Paterson DI. A Contemporary Review of the Effects of Exercise Training on Cardiac Structure and Function and Cardiovascular Risk Profile: Insights From Imaging. *Front Cardiovasc Med*. 2022 Feb 21;9:753652. doi: 10.3389/fcvm.2022.753652. eCollection 2022. PMID: 35265675
- 100.** Tandon P, Tomczak CRT, Kruger K, Tsien C, **Haykowsky MJ**, Thompson R. Impaired muscle oxygen extraction kinetics in cirrhosis – muscle is a major contributor to impaired whole body exercise capacity. *Liver Transpl*. 2022 Feb;28(2):321-324. doi: 10.1002/lt.26236. Epub 2021 Aug 16.
- 101.** Bonsignore A, Marwick TH, Adams SC, Thampinathan B, Somerset E, Amir E, Walker M, Abdel-Qadir H, Koch A, Woo A, Wintersperger BJ, **Haykowsky MJ**, Thavendiranathan P. Clinical, Echocardiographic, and Biomarker Associations With Impaired Cardiorespiratory Fitness Early After HER2<sup>+</sup> Breast Cancer Therapy. *JACC CardioOncol*. 2021 Nov 16;3(5):678-691. doi: 10.1016/j.jacc.2021.08.010. PMID: 34988476.
- 102.** Xu L, Pagano J, Chow K, Oudit G, **Haykowsky MJ**, Mikami Y, Howrath AG, White JE, Howlett J, Dyck JRB, Anderson TJ, Ezekowitz J, Thompson RB, Paterson DI. Cardiac remodeling predicts outcome in patients with chronic heart failure. *ESC Heart Fail*. 2021 Dec;8(6):5352-5362. doi: 10.1002/ehf2.13626. Epub 2021 Sep 26. PMID: 34569184.
- 103.** Overstreet B, Kirkman D, Koester Qualters W, Kerrigan D, **Haykowsky MJ**, Tweet MS, Christle JW, Brawner CA, Ehrman JK, Keteyian SJ. A review of patient populations who can benefit from cardiac rehabilitation. *J Cardiopulm Rehabil Prev*. 2021 Nov 1;41(6):389-399. doi: 10.1097/HCR.0000000000000654.PMID: 34727558.
- 104.** Pandey A, Shah S, Butler J, Kellogg D, Lewis GD, Forman D, Mentz R, Borlaug B, Simon M, Chirinos J, Fielding R, VOLPI E, Molina A, **Haykowsky M**, Sam F, Goodpaster B, Bertoni A, Justice J, White J, Ding J, Hummel S, LeBrasseur N, Taffet G, Pipinos I, Kitzman D. Exercise Intolerance in Older Adults with Heart Failure with Preserved Ejection Fraction: JACC State-of-the-art Review. *J Am Coll Cardiol*. 2021 Sep 14;78(11):1166-1187. doi: 10.1016/j.jacc.2021.07.014.PMID: 34503685
- 105.** Kirkham AA, **Haykowsky MJ**, Beaudry RI, Grenier JG, Mackey JR, Pituskin E, Paterson DI, Thompson RB. Cardiac and skeletal muscle predictors of impaired cardiorespiratory fitness post-anthracycline chemotherapy for breast cancer. *Sci Rep*. 2021 Jul 7;11(1):14005.

doi: 10.1038/s41598-021-93241-5

**106.** Samuel TJ, Kitzman DW, **Haykowsky MJ**, Upadhyia B, Brubaker P, Nelson MB, Hundley WG, Nelson MD. Left Ventricular Diastolic Dysfunction and Exercise Intolerance in Obese Heart Failure with Preserved Ejection Fraction. *Am J Physiol Heart Circ Physiol*. 2021 Apr 1;320(4):H1535-H1542. doi: 10.1152/ajpheart.00610.2020. Epub 2021 Feb 12. PMID: 33577436

**107.** Kirkham AA, Pituskin E, Thompson RB, Mackey JR, Koshman SL, Jassal D, Pitz M, **Haykowsky MJ**, Pagano JJ, Chow K, Tsui AK, Ezekowitz JA, Oudit GY, Paterson DI. *Eur Heart J Cardiovasc Pharmacother*. 2021 Feb 19:pva016. doi: 10.1093/ehjcvp/pva016. Online ahead of print. PMID: 33605416.

**108.** Mueller S, Winzer EB, Duvinage A, Gevaert AB, Edelmann F, Haller B, Pieske-Kraigher E, Beckers P, Bobenko A, Hommel J, Van de Heyning CM, Esefeld K, von Korn P, Christle JW, **Haykowsky MJ**, Linke A, Wisløff U, Adams V, Pieske B, van Craenenbroeck EM, Halle M; OptimEx-Clin Study Group. Effect of High-Intensity Interval Training, Moderate Continuous Training, or Guideline-Based Physical Activity Advice on Peak Oxygen Consumption in Patients With Heart Failure With Preserved Ejection Fraction: A Randomized Clinical Trial. *JAMA*. 2021 Feb 9;325(6):542-551. doi: 10.1001/jama.2020.26812. PMID: 3356032

**109.** Kirkham AA, Goonasekera MV, Mattiello B, Grenier JG, **Haykowsky MJ**, Thompson RB. Reliability and reproducibility of peak exercise cardiac MRI quantification of peak exercise function with long-axis views. *PLoS One*. 2021 Feb 4;16(2):e0245912. doi: 10.1371/journal.pone.0245912. PMID: 33539447; PMCID: PMC7861545.

**110.** Kirkham AA, Paterson DI, **Haykowsky MJ**, Beaudry RI, Mackey JR, Pituskin E, Grenier JG, Thompson RB. Aerobic Fitness Is Related to Myocardial Fibrosis Post-Anthracycline Therapy. *Med Sci Sports Exerc*. 2021 Feb 1;53(2):267-274. doi: 10.1249/MSS.0000000000002469. PMID: 32826630.

**111.** Auclair A, Harvey J, Leclerc J, Piché M, O'Connor K, Nadreau E, Pettigrew M, **Haykowsky MJ**, Marceau S, Biertho L, Hould F, Lebel S, Biron S, Julien F, Bouvet L, Lescelleur O, Poirier P. Determinants of Cardiorespiratory Fitness Following Bariatric Surgery: Insights from a Randomized Controlled Trial of a Supervised Training Program. *Can J Cardiol*. 2021 Feb;37(2):251-259. doi: 10.1016/j.cjca.2020.03.032. Epub 2020 Mar 30. PMID: 32738206

**112.** Sarma S, MacNamara J, Livingston S, Samels M, **Haykowsky M**, Berry J, Levine B. Impact of Severe Obesity on Exercise Performance in Heart Failure with Preserved Ejection Fraction. *Physiological Reports*. Published online Nov 18, 2020.

**113.** Howlett JG, Sharma N, Alemayehu WG, Dyck JR, Anderson TG, Fine N, Becker H, White JA, Paterson I, Thompson RB, Oudit G, **Haykowsky MJ**, Ezekowitz JA. Circulating troponin and further improvement in patients with previously recovered left ventricular ejection fraction. *ESC Heart Fail*. 2020 Oct;7(5):2725-2733. doi: 10.1002/ehf2.12863. Epub 2020 Jun 27. PMID: 32592541.

**114.** Xu L, Pagano JJ, **Haykowsky M**, Ezekowitz JA, Oudit GY; Mikami Y, Howarth AG, White JA; Dyck JRB; Anderson T, Paterson ID, Thompson RB. Layer-Specific Strain in Patients with Heart Failure using Cardiac MRI: Not All Layers are the Same.

*J Cardiovasc Magn Reson.* 2020. 22(1):81. doi: 10.1186/s12968-020-00680-6. PMID: 33267877; PMCID: PMC7713324.

**115.** Foulkes SJ, Howden EJ, Antill Y, Loi S, Salim A, **Haykowsky MJ**, Daly RM, Fraser SF, La Gerche A. Exercise as a diagnostic and therapeutic tool for preventing cardiovascular morbidity in breast cancer patients– The BREast cancer EXercise

InTervention (BREXIT) Trial Protocol. *BMC Cancer.* 2020 Jul 14;20(1):655. doi: 10.1186/s12885-020-07123-6.

**116.** Beaudry RI, Kirkham AA, Thompson RB, Grenier JG, Mackey JR, **Haykowsky MJ**. Exercise Intolerance in Anthracycline-Treated Breast Cancer Survivors: The Role of Skeletal Muscle Bioenergetics, Oxygenation, and Composition. *Oncologist.* 2020. 25(5):e852-e860. doi: 10.1634/theoncologist.2019-0777. PMID: 31951302.

**117.** Brubaker PH, Tucker WJ, **Haykowsky MJ**. Clinical Considerations and Exercise Responses of Patients with Heart Failure and Preserved Ejection Fraction: What Have We Learned in 20 Years? *Journal of Clinical Exercise Physiology.* 2020. 9(1):17-28.

**118.** Tucker WJ, Rosenberry R, Trojacek D, Sanchez B, Bentley R, **Haykowsky M**, Tian F, Nelson MD. Near-infrared diffuse correlation spectroscopy tracks changes in oxygen delivery and utilization during exercise with and without isolated arterial compression. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology.* 2020.318(1):R81-R88.

**119.** Tucker WJ, Angadi SS, **Haykowsky MJ**, Nelson MD, Sarma S, Tomczak CR. Pathophysiology of Exercise intolerance and Its treatment with exercise-based cardiac rehabilitation in heart failure with preserved ejection fraction: A review. *Journal of Cardiopulmonary Rehabilitation and Prevention.* 2020. 40(1):9-16.

**120.** Costello B, Roberts T, Howden E, Bigaran A, Foulkes S, Beaudry R, Janssens K, **Haykowsky MJ**, Antil Y, Nightengale S, Loi S, La Gerche A. Exercise Attenuates Cardiotoxicity of Anthracycline Chemotherapy Measured by Global Longitudinal Strain. *J Am Coll Cardiol CardioOnc.* 2019.1(2) 298-301.

**121.** Vaduganathan M, Hirji SA, Qamar A, Bajaj N, Gupta A, Zaha V, Chandra A, **Haykowsky M**, Ky B, Mosehi J, Nohria A, Butler J, Pandey A. Efficacy of Neurohormonal Therapies in Preventing Cardiotoxicity in Patients with Cancer Undergoing Chemotherapy: A Meta-Analysis. *J Am Coll Cardiol CardioOnc* 2019.1(1):54–65.

**122.** Brubaker P, Jensen A, Jordan J, Lamar Z, Mihalko S, **Haykowsky M**, Jones L, D Agostino R Jr, Kitzman D, Reding K, Hundley WG. Exercise Capacity Is Reduced in Cancer Survivors Previously Treated with Anthracycline-Based Chemotherapy Despite a Preserved Cardiac Output Response. *JACC Cardiovasc Imaging.* 2019. 12:2267- 2269.

**123.** Foulkes S, Howden EJ, Bigaran A, Janssens K, Antill Y, Loi S, **Haykowsky MJ**, Daly RM Fraser SF, La Gerche A. Persistent impairment in cardiopulmonary fitness following breast cancer chemotherapy. *Med Sci Sports Exerc.* 2019.51(8):1573-1581.

**124.** Rosenberry R, Tucker WJ, **Haykowsky MJ**, Trojacek D, Chamseddine HH, Arena-

Marshall CA, Zhu Y, Wang J, Kellawan JM, Tian F, Nelson MD. Determinants of skeletal muscle oxygen consumption assessed by near-infrared diffuse correlation spectroscopy during incremental handgrip exercise. *J Appl Physiol*. 2019.127(3):698-706.

**125.** Thompson RB, Chow K, Pagano JJ, Sekowski V, Michelakis ED, Tymchak W,

**Haykowsky MJ**, Ezekowitz JA, Oudit GY, Dyck JRB, Kaul P, Savu A, Paterson DI.

Quantification of lung water in heart failure using cardiovascular magnetic resonance imaging. *J Cardiovasc Magn Reson*. 2019 Sep 12;21(1):58

**126.** Scott JM, Tucker WJ, Martin D, Crowell JB, Goetchius E, Ozgur O, Hamilton S, Otto C, Gonzales R, Ritter M, Newby N, DeWitt J, Stenger MB, Ploutz-Snyder R, Ploutz- Snyder L, Morgan WH, **Haykowsky MJ**. Modulation of Cerebral-Ocular Hemodynamics and Pressures in a Model of Spaceflight Associated Neuro-Ocular Syndrome. *JAMA Ophthalmology*. 2019 Jun 1;137(6):652-659.

**127.** Tucker WJ, Rosenberry R, Trojacek D, Chamseddine HH, Arena-Marshall CA, Zhu Y, Wang J, Kellawan JM, **Haykowsky M**, Tian F, Nelson M. Studies into the determinants of skeletal muscle oxygen consumption: Novel insight from Near-infrared diffuse correlation spectroscopy. *J Physiol*. 2019 Jun;597(11):2887-2901.

**128.** Bobenko A, Schönrrath F, Knierim J, Friede T, Verheyen N, Mehra NR, **Haykowsky M**, Herrmann-Lingen C, Duvinage A, Pieske-Kraigher E, Halle M, Falk V, Pieske B, Edelmann F. Exercise training in patients with a left ventricular assist device (Ex-VAD): rationale and design of a multicentre, prospective, assessor-blinded, randomized, controlled trial. *European Heart Journal. Eur J Heart Fail*. 2019. 2019 Sep;21(9):1152- 1159.

**129.** Boyes, NG, Eckstein J, Pylypchuk S, Marciniuk DD, Butcher SJ, Lahti, Dewa DMK, **Haykowsky MJ**, Wells CR, Tomczak CR. Effects of Heavy-Intensity Priming Exercise on Pulmonary Oxygen Uptake Kinetics and Muscle Oxygenation in Heart Failure with Preserved Ejection Fraction. *Am J Physiol Regul Integr Comp Physiol* 2019.316:R199– R209.

**130.** Howden EJ, Bigaran A, Beaudry R, Fraser S, Selig S, Foulkes S, Antill Y, Nightingale S, Loi S, **Haykowsky MJ**, La Gerche A. Exercise as a diagnostic and therapeutic tool for the prevention of cardiovascular dysfunction in breast cancer patients. *Eur J Prev Cardiol*. 2019 Feb;26(3):305-315.

**131.** Beaudry R, Howden EJ, Foulkes S, Bigaran A, **Haykowsky MJ**, La Gerche A. Determinants of exercise intolerance in breast cancer patients prior to anthracycline chemotherapy. *Physiological Reports*. *Physiol Rep*, 7(1), 2019, e13971, <https://doi.org/10.14814/phy2.13971>.

**132.** Kirkham AA, Beaudry RI, Paterson DI, Mackey JR, **Haykowsky MJ**. Curing Breast Cancer and Killing the Heart: A Novel Model to Explain Elevated Cardiovascular Disease and Mortality Risk Among Women with Early Stage Breast Cancer. *Progress in Cardiovascular Disease*. 2019. 62(2):116-126.

**133.** Tucker W, Beaudry RI, Liang Y, Clark AM, Tomczak CR, Nelson MD, Ellingsen O, **Haykowsky M**. Meta-Analysis of Exercise Training on Left Ventricular Ejection Fraction in Heart Failure with Reduced Ejection Fraction: A 10-year update. *Prog Cardiovasc Dis*. 2019.62(2):163-

171.

- 134.** Tucker W, **Haykowsky MJ**, Seo Y, Stehling E, Forman DE. Impaired exercise tolerance in heart failure: Role of skeletal muscle morphology and function. *Current Heart Failure Reports*. 2018.15:323-231.
- 135.** Samuel, TJ, Beaudry R, Sarma S, Zaha V, **Haykowsky MJ**, Nelson MD. Diastolic Stress Testing Along the Heart Failure Continuum. *Current Heart Failure Reports*. 2018. 15:332-339.
- 136.** Pandey A, Patel KV, MD, Sarma S, **Haykowsky M**, Berry J, Lavie C. Physical Activity, Cardiorespiratory Fitness, and Obesity in Heart Failure with Preserved Ejection Fraction. *JACC: Heart Failure*. 2018.6(12):975-982.
- 137.** Esefeld K, Fricke H, **Haykowsky M**, Halle M. Ultra-endurance Exercise in a Heart Transplant Athlete: Influence on myocardial function and biomarkers. *Eur J Prev Cardiol*. 2018. Nov 5:2047487318808636. doi: 10.1177/2047487318808636. [Epub ahead of print]
- 138.** Tandon P, Ismond KP, Riess K, Duarte-Rojo A, Al-Judaibi B, Dunn MA, Holman J, Howes N, **Haykowsky MJ**, Josbeno DA, McNeely M. Exercise in Cirrhosis: Translating evidence and experience to practice. *J Hepatol*. 2018. 69(5):1164-1177.
- 139.** Beaudry R, Samuel J, Wang J, Tucker W, **Haykowsky MJ**, Nelson MD. Exercise Cardiac Magnetic Resonance Imaging: A feasibility study and Meta-Analysis. *Am J Physiol Regul Integr Comp Physiol*. 2018.315(4):R638-R645.
- 140.** **Haykowsky MJ**, Samuel TJ, Nelson MD, La Gerche A. Athlete's heart: is the Morganroth Hypothesis Obsolete? *Heart Lung Circ*. 2018. 27(9):1037-1041.
- 141.** Samuel J, Beaudry R, **Haykowsky MJ**, Sarma S, Nelson MD. Diastolic Stress Testing: Similarities and Differences between Isometric Handgrip and Cycle Echocardiography. *J Appl Physiol (1985)*. 2018.125(2):529-535.
- 142.** **Haykowsky MJ**, Nicklas BJ, Brubaker PH, Hundley HG, Brinkley TE, Upadhyya B, Becton TJ, Nelson MD, Chen H, Kitzman DW. Regional Adipose Distribution and Its Relationship to Exercise Intolerance in Older Obese HFpEF Patients. *JACC: Heart Failure*. 2018.6(8):640-649.
- 143.** Boyes NG, Stickland MK, Fusnik S, Hogeweide E, Fries JTJ, **Haykowsky MJ**, Runalls S, Kakadekar A, Pharis S, Pockett C, Bradley TJ, Wright KD, Erlandson M, Tomczak CR. Activity modulates arterial stiffness in children with congenital heart disease: A champs cohort study. *Congenit Heart Dis*. 2018.13(4):578-583.
- 144.** Tucker WJ, Beaudry R, Samuel TJ, Nelson MD, Halle M, Baggish AL, **Haykowsky MJ**. Performance Limitations in Heart Transplant Recipients. *Exerc Sport Sci Rev*. 2018 Jul;46(3):144-151.
- 145.** Upadhyya B, **Haykowsky MJ**, Kitzman DW. Therapy For Heart Failure with Preserved Ejection Fraction: Current Status, Unique Challenges, and Future Directions. *Heart Fail Rev*. 2018 Jun 7. doi: 10.1007/s10741-018-9714-z.
- 146.** Beaudry R, Liang Y, Boyton ST, Tucker WJ, RM Brothers, Daniel KM, Rao R, **Haykowsky MJ**. Meta-Analysis of Exercise Training on Vascular Endothelial Function in Cancer Survivors. *Integr Cancer Ther*. 2018 Jun;17(2):192-199.

147. Omar W, Pandey A, **Haykowsky MJ**, Berry JD, Lavie CJ. The Evolving Role of Cardiorespiratory Fitness and Exercise in Prevention and Management of Heart Failure. *Curr Heart Fail Rep*. 2018;15(2):75-80.
148. **Haykowsky MJ**, Halle M, Baggish A. Upper Limits of Aerobic Power and Performance in Heart Transplant Recipients: Legacy Effect of Prior Endurance Training. *Circulation*. 2018;137:650-652.
149. Selig S, Foulkes S, **Haykowsky M**. Improvements in exercise capacity following cardiac transplantation in a patient born with double inlet left ventricle. *BMJ Case Rep*. Feb 5;2018. pii: bcr-2017-223169.
150. Pandey A, Khera R, Park B, **Haykowsky M**, Borlaug BA, Lewis GD, Kitzman DW, Butler J, Berry J. Relative Impairments in Hemodynamic Exercise Reserve Parameters in Heart Failure with Preserved Ejection Fraction: A Study-level Pooled Analysis. *JACC Heart Fail*. 2018;6:117–26.
151. Chung S, Rosenberry R, Ryan TE, Munson M, Dombrosky T, Park S, Nasirian A, **Haykowsky MJ**, Nelson MD. Near-infrared spectroscopy detects age-related differences in skeletal muscle oxidative function: promising implications for geroscience. *Physiol Rep*. 2018.6(3). doi: 10.14814/phy2.13588.
152. Reddy YNV, Obokata M, **Haykowsky MJ**, Borlaug BA. Skeletal Muscle Compensation for Cardiac Muscle Insufficiency in Heart Failure and Reduced Ejection Fraction. *Circ Heart Fail*. 2018.11(1):e004714.
153. Kruger C, McNeely M, Bailey R, Yavari M, Abrales J, Carbonneau M, Newnham K, DenHeyer V, Ma M, Thompson R, Paterson I, **Haykowsky M\***, Tandon P\*. Home Exercise Training Improves Exercise Capacity in Cirrhosis Patients: Role of Exercise Adherence. *Sci Rep*. 2018.8;8(1):9.\*, Contributed equally as senior authors.
154. Samuel J, Beaudry R, **Haykowsky MJ**, Sarma S, Park S, Dombrowsky T, Bhella PS, Nelson MD. Isometric hand-grip echocardiography: A noninvasive stress test to assess left ventricular diastolic function. *Clin Cardiol*. 2017.40(12):1247-1255.
155. Rosenberry R, Munson M, Chung S, Samuel TJ, Patik JC, Tucker WJ, **Haykowsky M**, Nelson MD. Age-related microvascular dysfunction: Novel insight from near-infrared spectroscopy. *Exp Physiol*. 2018;103(2):190-200
156. Poole DC, Richardson RR, **Haykowsky MJ**, Hirai DM, Musch TI. Exercise Limitations in Heart Failure with Reduced and Preserved Ejection Fraction. *J Appl Physiol*. 2018;124(1):208-224.
157. Yavari M, **Haykowsky MJF**, Savu A, Kaul, P, Dyck JRB, Haennel RG. Volume and Patterns of Physical Activity Across the Health and Heart Failure Continuum. *Can J Cardiol*. 2017.33(11):1465-147.
158. Thompson R, Pagano J, Chow K, Sekowski V, Paterson I, Ezekowitz J, Anderson T, Dyck J, **Haykowsky MJ**. Sub-Clinical Pulmonary Edema is Associated with Reduced Exercise Capacity in Heart Failure with Preserved or Reduced Ejection Fraction. *J Am Coll Cardiol*. 2017.70(14):1827-28.

- 159.** Nanayakkara S, **Haykowsky M**, Mariani J, Van Empel V, Maeder MT, Vizi D, Kaye DM. Hemodynamic profile of patients with heart failure and preserved ejection fraction vary by age. *J Am Heart Assoc.* 2017.6(9):1-6.
- 160.** Pandey A, Park B, Martens S, Ayers C, Neeland I, **Haykowsky MJ**, Nelson MD, Sarma S, Berry JD. Relationship of cardiorespiratory fitness and adiposity with left ventricular strain in middle-aged adults (from the Dallas Heart Study). *Am J Cardiol.* 2017.120(8):1405-1409.
- 161.** Tucker W, Lijauco C, Hearon CM, Angadi SS, Nelson MD, Sarma S, Nanayakkara S, La Gerche A, **Haykowsky MJ**. Mechanisms of the improvement in peak VO<sub>2</sub> with exercise training in heart failure with reduced or preserved ejection fraction. *Heart, Lung Circ.* 2018;27(1):9-21.
- 162.** Kondamudi N, **Haykowsky M**, Forman DE, Berry J, Pandey A. Exercise Training for Prevention and Treatment of Heart Failure. *Prog Cardiovasc Dis.* 2017. 60(1):167-77.
- 163.** **Haykowsky MJ**, Scott JM, Hudson K, Denduluri N. Lifestyle Interventions to Improve Cardiorespiratory Fitness and Reduce Breast Cancer Recurrence. *Am Soc Clin Oncol Educ Book.* 2017;37:57-64.
- 164.** Coats AJS, Forman DE, **Haykowsky M**, Kitzman DW, McNeil A, Campbell TS, Arena R, Physical Function, Physical Activity and Exercise Training in the Older Patient with Heart Failure. *Nat Rev Cardiol.* 2017.14(9):550-559.
- 165.** Karlsen T, Aamot I, **Haykowsky M**, Rognmo O. High intensity interval training for maximizing health outcomes. *Progress in Cardiovascular Disease.* 2017.60(1):67-77.
- 166.** Ney M, Gramlich L, Mathiesen V, Bailey RJ, **Haykowsky M**, Ma M, Abrales JG, Tandon P. Patient-perceived barriers to lifestyle interventions in cirrhosis. *Saudi J Gastroenterol.* 2017;23(2):97-104.
- 167.** Pandey A, Kitzman DW, Brubaker P, **Haykowsky MJ**, Morgan T, Becton JT, Berry JD. Response to Endurance Exercise Training in Older Adults with Heart Failure with Preserved or Reduced Ejection Fraction. *J Am Geriatr Soc.* 2017.65(8):1698-1704.
- 168.** Foreman D, Arena R, Boxer R, Dolansky M, Eng J, Fleg J, **Haykowsky M**, Jahangir A, Kaminsky L, Kitzman D, Lewis E, Myers J, Reeves G, Shen W. Prioritizing Functional Capacity as a Principal End Point for Therapies Oriented to Older Adults with Cardiovascular Disease. A Scientific Statement for Healthcare Professionals from the American Heart Association. *Circulation.* 2017.135(16):e894-e918.
- 169.** Kearney M, Gallop-Evans E, Cockcroft J, Stohr E, Lee E, Backx K, **Haykowsky M**, Yousef Z, Shave R. Cardiac dysfunction in cancer survivors unmasked during exercise. *Eur J Clin Invest.* 2017;47(3):213-220.
- 170.** Pituskin E, Mackey JR, Koshman S, Jassal D, Pitz M, **Haykowsky MJ**, Pagano JJ, Chow K, Thompson RB, Oudit GY, Ezekowitz JA, Paterson DI. Multidisciplinary Approach to Novel Therapies in Cardio-Oncology Research: (MANTICORE 101– Breast): a Randomized Trial for the Prevention of Trastuzumab Associated Cardiotoxicity. *J Clin Oncology.* 2017. 35(8):870-877.
- 171.** Tucker WJ, Nelson MD, Beaudry RI, Halle M, Sarma S, Kitzman DW, LaGerche A,

- Haykowsky MJ.** The impact of exercise training on peak oxygen uptake and its determinants in heart failure and preserved ejection fraction. *Cardiac Failure Review*. 2016(2)2:95-101.
- 172.** McGregor G, Nichols S, Hamborg T, Bryning L, Tudor-Edwards R, Markland D, Mercer J, Birkett S, Ennis S, Powell R, Begg B, **Haykowsky M**, Banerjee P, Ingle L, Shave R, Backx K. High intensity interval training versus moderate intensity steady state training in UK Cardiac Rehabilitation programs (HIIT or MISS UK): study protocol for a multicentre randomised control trial and economic evaluation. *BMJ Open*. 2016. 6(11):e012843. doi: 10.1136/bmjopen-2016-012843.
- 173.** **Haykowsky MJ**, Beaudry R, Brothers RM, Nelosn MD, Sarma S, La Gerche A. Pathophysiology of exercise intolerance in breast cancer survivors with preserved ejection fraction. *Clin Sci*. 2016.130(24):2239-2244.
- 174.** Thompson RB, Pagano, JJ, Mathewson KW, Paterson DI, Dyck J, Kitzman DW, **Haykowsky MJ**. Differential responses of post-exercise recovery muscle blood flow, and oxygen uptake kinetics in HFpEF versus HFREF. *Plos One*. 2016. 11(10):e0163513. doi: 10.1371/journal.pone.0163513.
- 175.** Beaudry R, **Haykowsky MJ**, Baggish AL, La Gerche A. A modern definition of the athlete's heart-for research and the clinic. *Cardiol Clin*.2016;34(4):507-51.
- 176.** Thompson R, Tomczak C, **Haykowsky MJ**. Evaluation of cardiac, vascular and skeletal muscle morphology and function with MRI: potential end-points in cardiac rehabilitation research. *Can J Cardiol*. 2016. 32(10S2):S388-S396.
- 177.** **Haykowsky MJ**, Daniel K, Bhella P, Sarma S, Kitzman D. Heart failure exercise based cardiac rehabilitation: Who, when and how intense. *Can J Cardiol*. 2016.32(10S2):S382-S387.
- 178.** Pituskin E, **Haykowsky MJ**, McNeely M, Mackey J, Chua N, Paterson I. Rationale and design of the multidisciplinary team InterventIion in cArديو-oNcology study (TITAN). *BMC Cancer*. 2016;16(1):733. doi: 10.1186/s12885-016-2761-8.
- 179.** Thompson S, Klarenbach S, Molzahn A, Lloyd A, Gabrys I, **Haykowsky M**, Tonelli M. Randomised factorial mixed method pilot study of aerobic and resistance exercise in haemodialysis patients: DIALY-SIZE! *BMJ Open*. 2016;6:9 e012085 doi:10.1136/bmjopen-2016-012085.
- 180.** Ney M, **Haykowsky MJ**, Vandermeer B, Shah A, Tandon P. Systematic review: Pre- and post-operative prognostic value of cardiopulmonary exercise testing (CPET) in liver transplant candidates. *Aliment Pharmacol Ther*. 2016;44(8):796-806.
- 181.** Molina AJ, Bharadwaj M, Van Horn C, Nicklas BJ, Lyles MF, Eggebeen J, **Haykowsky MJ**, Brubaker PH, Kitzman DW. Skeletal Muscle Mitochondrial Content, Oxidative Capacity, and Mfn2 Expression are reduced in older patients with heart failure and preserved ejection fraction and are related to exercise intolerance. *JACC Heart Fail*. 2016;4(8):636-645.
- 182.** Eggebeen J, Kim-Shapiro DB, **Haykowsky MJ**, Morgan TM, Basu S, Brubaker P, Rejeski J, Kitzman DW. One Week of Daily Dosing with Beetroot Juice Improves Submaximal Endurance and Blood Pressure in Older Patients with Heart Failure and Preserved Ejection Fraction. *JACC Heart Fail*. 2016;4(6):428-437.

- 183.** Kaneko S, Tham EB, **Haykowsky MJ**, Spavor M, Khoo NS, Mackie AS, Smallhorn JF, Thompson RB, Nelson MD. Impaired Left Ventricular Reserve in Childhood Cancer Survivors Treated With Anthracycline Therapy. *Pediatr Blood Cancer*. 2016;63:1086-90.
- 184.** Kitzman D, Brubaker P, Morgan T, **Haykowsky M**, Hundley G, Kraus WE, Eggenbeen J, Nicklas BJ. Effect of Caloric Restriction or Aerobic Exercise Training on Peak Oxygen Consumption and Quality of Life in Obese Older Patients With Heart Failure With Preserved Ejection Fraction: A Randomized Clinical Trial. *JAMA*. 2016;315 (1):36-46
- 185.** Upadhyia B, **Haykowsky MJ**, Eggebeen J, Kitzman DW. Exercise intolerance in heart failure with preserved ejection fraction. More than a heart problem. *J Geriatr Cardiol*.2015;12(3):294-304.
- 186.** Butler C, Savu A, Bakal JA, Toma M, Thompson R, Chow K, Wang H, Kim DH, Mengel, **Haykowsky MJ**, Pearson GJ, Kaul P, Paterson I. Correlation of cardiovascular magnetic resonance imaging findings and endomyocardial biopsy results in patients undergoing screening for heart transplant rejection. *J Heart Lung Transplant*. 2015;34(5)643-650.
- 187.** McNeely M, Cournyea K, **Haykowsky M**, Parliament M, Marseh J, Magee D. Sustainability of Outcomes following a Randomized Crossover Trial of Resistance Exercise for Shoulder Dysfunction in Head and Neck Cancer Survivors. *Physiother Canada*. 2015;67(1):85-93.
- 188.** **Haykowsky MJ**, Tomczak CR, Scott JM, Paterson ID, Kitzman DW. Determinants of exercise intolerance in patients with heart failure and reduced or preserved ejection fraction. *J Appl Physiol*. 2015.15;119(6):739-44.
- 189.** Upadhyia B, **Haykowsky MJ**, Eggebeen J, Kitzman DW. Sarcopenic obesity and the pathogenesis of exercise intolerance in heart failure with preserved ejection fraction. *Curr Heart Fail Rep*. 2015;12(3):205-214.
- 190.** **Haykowsky MJ**, Riess KJ, Schneider C. Ironman Triathlon Performance Pre and Post Heart Transplant. *J Heart Lung Transplant*.2015;43(5):756.
- 191.** Edgell H, McMurtry MS, **Haykowsky MJ**, Paterson I, Ezekowitz JA, Dyck JRB, Michael K. Stickland MK. Peripheral chemoreceptor control of cardiovascular function at rest and during exercise in heart failure patients. *J Appl Physiol*.2015;118(7):839-844.
- 192.** Fleg J, Cooper L, Borlaug B, **Haykowsky M**, Kraus W, Levine B, Pfeffer M, Piña I, Poole D, Reeves G, Whellan D, Kitzman D. Exercise Training as Therapy for Heart Failure: Current Status and Future Directions. *Circ Heart Fail*. 2015;8:209-220.
- 193.** Mathewson K, **Haykowsky MJ**, Thompson R. Feasibility and Reproducibility of Measurement of Whole Muscle Blood Flow, Oxygen Extraction and VO<sub>2</sub> with Dynamic Exercise Using MRI. *Magn Reson Med*. 2015;74(6):1640-1651.
- 194.** Beaudry R, Kruger K, Liang Y, Parliament M, **Haykowsky M**, McNeely. Beaudry R, Kruger K, **Haykowsky M**, McNeely. Effect of supervised exercise on aerobic capacity in cancer survivors. Adherence and workload predict variance of effect. *World J Meta- Anal*. 2015.26;3(1): 43-53.
- 195.** Stone JA, Hauer T, **Haykowsky MJ**, Aggarwal S. Exercise therapy for heart failure

patients in Canada. *Heart Fail Clin*. 2015;35(1):83-88.

**196.** Myers J, Brawner C, **Haykowsky MJF**, Taylor R. Prognosis: Does exercise training reduce adverse events in heart failure. *Heart Fail Clin*. 2015;11(1):59-72.

**197.** Ramadi A, Haennel RG, Stone JA, Arena R, Threlfall TG, Hitt E, Aggarwal SG, Austford LD, **Haykowsky M**, Martin B. The sustainability of exercise capacity changes in home versus center-based cardiac rehabilitation. *J Cardiopulm Rehabil Prev*. 2015;35(1):21-28.

**198.** Smirl J. **Haykowsky M**, Nelson M, Tzeng Y, Marsden K, Jones H, Ainslie P. Relationship between cerebral blood flow and blood pressure in long-term heart transplant recipients. *Hypertension*. 2014; 64: 1314-1320.

**199.** Arbab-Zedah A, Perhonen M, Peschock R, Zhang R, **Haykowsky MJ**, Levine BD The elaboration of the athletes heart: Cardiac remodeling in response to one year of endurance training. *Circulation*. 2014.130:2152-2161.

**200.** Colbert J, Martin BJ, **Haykowsky MJ**, Hauer T, Austford L, Arena R, Knudtson M, Meldrum D, Aggarwal SG, Stone JA. Cardiac rehabilitation referral, attendance and mortality in women. *Eur J Prevent Cardiol*. 22(8):979-986.

**201.** **Haykowsky MJ**, Riess K, Baggish A. Heart Transplant Recipient Finishes the 118th Boston Marathon 27 Years Post Surgery. *J Heart Lung Transplant*.2014.1197.

**202.** Angadi S, Mookadam F, Lee C, Tucker W, **Haykowsky MJ**, Gaesser G. High- intensity interval training vs. moderate-intensity continuous exercise training in heart failure with preserved ejection fraction: A pilot study. *J Appl Physiol*.2015;119(6):753-8.

**203.** Mathur S, Janaudis-Ferreira T, Wickerson L, Singer L, Patcai J, Rozenberg D, Blydt-Hansen, T, Hartmann E, **Haykowsky M**, Helm D, High K, Howes N, Kamath B, Lands L, Marzolini S, Sonnenday C. Meeting Report: Consensus Recommendations for a Research Agenda in Exercise in Solid Organ Transplantation. *Am J Transplant*. 2014;14(10):2235-2245.

**204.** Butler C, Kim D, Toma M, Thompson R, Chow K, **Haykowsky M**, Pearson G, Paterson I. Cardiovascular magnetic resonance imaging predicts five year adverse clinical outcomes in heart transplant recipients. *Am J Transplant*. 2014;14(9):2055-2061.

**205.** **Haykowsky MJ** and Kitzman DW. Exercise Physiology in heart failure and preserved ejection fraction. *Heart Failure Clinics*. 2014:445-452.

**206.** Ezekowitz JA, Becher H, Clark AM, Duff H, Friedrich M, **Haykowsky MJ**, Howlett J, Kaul P, Kassiri Z, Kaul P, Kim D, Knudtson M, Light PE, Lopaschuk GD, McAlister FA, Noga ML, Oudit GY, Paterson DI, Quan H, Schultz R, Thompson RB, Weeks SG, Anderson TJ, Dyck JR. The Alberta Heart Failure Etiology and Analysis Research Team (HEART) study. *BMC Cardiovasc Disord*. 2014.14:91.

**207.** Zenith L, Meena N, Yavari M, Harvey A, Carbonneau M, Ma M, Abraldes J, Paterson I, **Haykowsky M\***, Tadon P\*. Eight weeks of aerobic exercise training improves aerobic capacity, muscle mass, and symptoms of fatigue in patients with Child-Pugh class A and B cirrhosis. *Clin Gastroenterol Hepatol*. 2014.12(11):1920– 1926.\*Both authors contributed equally as senior authors.

**208.** Riess K, **Haykowsky M**, Lawrence R, Tomczak C, Weslh R, Lewanczuk R, Tymchak W,

- Haennel R, Giurishankar S. Combined Endurance and Strength Training Improves Exercise Capacity, Cardiac Function, Muscle Strength and Quality of Life in Renal Transplant Recipients. *Appl. Physiol. Nutr. Metab.* 2014. 39:566–571.
- 209.** Kitzman, DW, Nicklas B, Kraus W, Eggebeen J, **Haykowsky MJ**. Skeletal muscle abnormalities and exercise intolerance in heart failure patients with preserved ejection fraction. *Am J Physiol Heart Circ Physiol.* 2014. 306(9):H1364–H1370.
- 210.** **Haykowsky M**, Kuba B, Brubaker P, Nicklas B, Eggebeen J, Kitzman D. Skeletal Muscle Composition and Its Relationship to Exercise Intolerance in Older Patients with Heart Failure and Preserved Ejection Fraction. *Am J Cardiol.* 2014;113(7):1211-1216.
- 211.** Tomczak C, Tymchak W, **Haykowsky MJ**. Exercise Training Improves Pulmonary Oxygen Uptake Kinetics in Heart Transplant Recipients. *Am J Cardiol.* 2013;112:1489-92
- 212.** Tham E, **Haykowsky M**, Chow K, Spavor M, Kaneko S, Khoo N, Pagano J, Mackie A, Thompson R. MRI myocardial tissue characterization by T1-mapping and exercise capacity in children with subclinical anthracycline cardiotoxicity. *J Magnetic Resonance Imaging.* Published online May, 2013;15:48.
- 213.** Dolinsky V, Rogan K, **Haykowsky M**, Young ME, Jones LW, Dyck J. Exercise Training and Resveratrol Supplementation Attenuates Doxorubicin-Induced Cardiovascular Injury in Mice. *Am J Physiol Endocrinol Metab.* 2013;305(2):E243-253.
- 214.** Kitzman D, Brubaker P, Herrington DM, Morgan TM, Stewart K, Hundley G, Abdelhamed A, **Haykowsky M**. Effect of Endurance Exercise Training on Endothelial function and Arterial Stiffness in Older Patients with Heart Failure and Preserved Ejection Fraction. *J Am Coll Cardiol.* 2013;62(7):584-92.
- 215.** Martin BJ, Arena R, **Haykowsky MJ**, Hauer T, Austford L, Knuttdson M, Aggarwal S, Stone J. Cardiovascular fitness and mortality following contemporary cardiac rehabilitation. *Mayo Clin Proc.* 2013 May;88(5):455-463.
- 216.** McLean BA, Zhabyeyev P, Pituskin E, Paterson I, **Haykowsky MJ**, Oudit GY. PI3K Inhibitors as novel cancer therapies: Implications for cardiovascular medicine. *J Card Fail.* 2013.19(4):268-282.
- 217.** **Haykowsky M**, Brubaker P, Morgan TM, Stephen Kritchevsky S, Eggebeen J, Kitzman D. Impaired Aerobic Capacity and Physical Functional Performance in Older Heart Failure Patients with Preserved Ejection Fraction: Role of Lean Body Mass. *J Gerontol A Biol Sci Med Sci.* 2013. 68(8):968-975.
- 218.** **Haykowsky MJ**, Timmons MP, Krueger C, McNeely M, Taylor D, Clark AM. Meta-analysis of aerobic interval training on exercise capacity and systolic function in patients with heart failure and reduced ejection fraction. *Am J Cardiol.* 2013.15;111(10):1466-9.
- 219.** McClure T, **Haykowsky M**, Schopflocher D, Hsu Z, Clark A. Home based secondary prevention for patients with coronary artery disease: A Meta-analysis of effects on anxiety. *J Cardiopulm Rehabil Prev.* 2013;33(2):59-67.
- 220.** Butler C, Kumar A, Toma M, Thompson R, Chow K, Isaac D, Kim D, **Haykowsky M**, Friedrich M, Paterson I. Late Gadolinium Enhancement in Cardiac Transplant Patients is

Associated with Adverse Ventricular Functional Parameters and Clinical Outcomes. *Can J Cardiol*. 2013;29(9):1076-1083.

**221.** Scott JM, Lakoski S, Mackey JR, Douglas PS, **Haykowsky MJ**, Jones LW. The potential role of aerobic exercise to modulate cardiotoxicity of molecularly targeted cancer therapeutics. *Oncologist*. 2013;18(2):221-231.

**222.** Clark AM, Flynn R, Hsu Z, **Haykowsky M**. Heart Failure with Preserved Ejection Fraction: Health services implications of a stealth syndrome. *Eur J Cardiovasc Nurs*. 2013;12(4):316-317.

**223.** Altamirano-Diaz L, Nelson M, West L, Khoo N, Rebeyka I, **Haykowsky M**. Left ventricular distensibility does not explain impaired exercise capacity in pediatric heart transplant recipients. *J Heart Lung Transplant* 2013;32:63–69.

**224.** Kitzman D, Herrington D, Brubaker P, Moore B, Eggebeen J, **Haykowsky M**. Carotid Arterial Stiffness and Its Relationship to Exercise Intolerance in Older Patients with Heart Failure and Preserved Ejection Fraction. *Hypertension*. 2013;61(1):112-119.

**225.** Gayda M, Normandin E, Meyer P, Juneau M, **Haykowsky M**, Nigam A. Central hemodynamic responses during acute high-intensity interval exercise and moderate continuous exercise in patients with heart failure. *Appl Physiol Nutr Metab*. 2012;37(6):1171–1178.

**226.** Scott JM, **Haykowsky MJ**, Eggebeen J, Morgan T, Brubaker P, Kitzman D. Reliability of Peak Exercise Testing in Patients with Heart Failure with Preserved Ejection Fraction. *Am J Cardiol*. 2012;110(12):1809–1813.

**227.** **Haykowsky M**, Brubaker P, Stewart K, Morgan TM, Eggebeen J, Kitzman D. Effect of Endurance Training on the Determinants of Peak Exercise Oxygen Consumption in Elderly Patients with Heart Failure and Preserved Ejection Fraction. *J Am Coll Cardiol*. 2012;60(2):120-128.

**228.** Smirl J, **Haykowsky M**, Marsden K, Jones H, Nelson M, Altamirano-Diaz, L, Haykowsky K, Ainslie P. Resting and exercise cerebral blood flow in long-term heart transplant recipients. *J Heart Lung Transplant*. 2012;31(8):906-908.

**229.** Jones LW, Courneya KS, Mackey JR, Muss HB, Pituskin EN, Scott JM, Hornsby WE, Coan AD, Herndon JE, Douglas PS, **Haykowsky MJ**. Cardiopulmonary function and age-related decline across the breast cancer survivorship continuum. *J Clin Oncol*. 2012;30(20):2530-2537.

**230.** Tomczak CR, Tomczak CR, Paterson I, **Haykowsky MJ**, Lawrance R, Martellotto A, Pantano A, Gulamhusein S, Haennel RG. Cardiac resynchronization therapy modulation of exercise left ventricular function and pulmonary O<sub>2</sub> uptake in heart failure. *Am J Physiol Heart Circ Physiol*. 2012;302(12):H2635-645.

**231.** **Haykowsky MJ**, Herrington DM, Brubaker P, Morgan T, Hundley WG, Kitzman D. Relationship of Flow Mediated Arterial Dilation and Exercise Capacity in Older Patients with Heart Failure and Preserved Ejection Fraction. *J Gerontol A Biol Sci Med Sci*. 2013;68(2):161-167.

- 232.** Pituskin E, Paterson I, **Haykowsky M**. The Role of Exercise Interventions in Reducing the Risk for Cardiometabolic Disease in Cancer Survivors. *Current Cardiovascular Risk Reports*. 2012;6(4):313–322.
- 233.** Dolinsky V, Jones K, Sidhu R, **Haykowsky M**, Czubryt M, Gordon T, Dyck J . Improvements in Skeletal Muscle Strength and Cardiac Function Induced by Resveratrol Contribute to Enhanced Exercise Performance in Rats. *J Physiology*. 2012;590(11): 2783-2799.
- 234.** **Haykowsky M**, Brubaker P, Kitzman D. Role of Physical training in Heart Failure with preserved ejection Fraction. *Curr Heart Fail Rep*. 2012;9(2):101-106.
- 235.** Stickland M. Fuhr D, **Haykowsky M**, Jones K, Paterson I, Ezekowitz J, McMurtry MS. Carotid chemoreceptor modulation of blood flow during exercise in healthy humans. *J Physiol*. 2011;589(Pt 24):6219-6230.
- 236.** Kaila K, **Haykowsky MJ**, Thompson RT, Paterson IP. Heart Failure with Preserved Ejection Fraction: Scope of the Problem. *Heart Fail Rev*.2012;17(4-5):555-562.
- 237.** Scott J, Khakoo, Mackey J, **Haykowsky M**, Douglas P, Jones L. Modulation of Anthracycline-Induced Cardiotoxicity by Aerobic Exercise in Breast Cancer: Current Evidence and Underlying Mechanisms. *Circulation*. 2011;124(5):642-650.
- 238.** Pituskin E, **Haykowsky MJ**, Mackey J, Thompson R, Ezekowitz J, Koshman S, Oudit G, Chow k, Pagano J, Paterson I. Rationale and design of the Multidisciplinary Approach to Novel Therapies in Cardiology Oncology Research Trial (MANTICORE 101 Breast): a randomized, placebo-controlled trial to determine if conventional heart failure pharmacotherapy can prevent trastuzumab-mediated left ventricular remodeling among women with HER2+ early breast cancer using cardiac MRI. *BMC Cancer*. 2011;11:318
- 240.** **Haykowsky M**, John J, Brubaker P, Stewart K, Morgan T, Kitzman, D. Determinants of Exercise Intolerance in Older Heart Failure Patients with Preserved Ejection Fraction. *J Am Coll Cardiol*. 2011.58(3):265-274.
- 241.** *This paper was highlighted by Associate Editors as one of the papers published in J Am Coll Cardiol in 2011 that would have the greatest impact in cardiology-Heart Failure.*
- 242.** Nelson MD, **Haykowsky MJ**, Stickland MK, Altamirano-Diaz L, Willie C, Smith K, Petersen SR, Ainslie PN. Reductions in cerebral blood flow during passive heat stress in humans: partitioning the mechanisms. *J Physiol*. 2011;589(Pt 16):4053-4064.
- 243.** Marsden K, **Haykowsky MJ**, Smirl JD, Jones H, Nelson M, Altamirano-Diaz L, Gelinas J, Tzeng Y, Smith K, Willie C, Ainslie P. Influence of aging on cerebral blood flow velocity during progressive cycling to volitional exhaustion. *AGE*. 012;34(3)725-35.
- 244.** Nelson M, Altamirano-Diaz L, Petersen, DeLorey D, Stickland M, Thompson R, **Haykowsky M**. Left ventricular systolic and diastolic function during tilt table positioning and passive heat stress in humans. *Am J Physiol Heart Circ Physiol*.2011;301(2):H599- 608.
- 245.** **Haykowsky M**, Scott, Esch B, Schopflocher D, Myers J, Paterson I, Warburton D, Jones L, Clark A. A Meta-analysis of the effects of Exercise Training on Left Ventricular Remodeling Following Myocardial Infarction: Start early and go longer for greatest exercise benefits on

remodeling. *Trials*. 2011;12:92.

- 246.** McNeely M, Parliament M, Seikaly H, Jha N, Magee D, **Haykowsky M**, Courneya K. Predictors of adherence to an exercise program for shoulder pain and dysfunction in head and neck cancer survivors. *Support Care Cancer*. 2012;20(3):515-522.
- 247.** Willie CK, Colino FL, Baily DM, Binsted G, Jones LW, **Haykowsky MJ**, Bellapart J, Ogoh S, Smith KJ, Smirl JD, Day TA, Lucas SJ, Eller LK, Ainslie PN. Utility of transcranial Doppler ultrasound for the integrative assessment of cerebrovascular function. *J Neurosci Methods*. 2011;196(2):221-237.
- 248.** Jones L, Liang Y, Battalini C, Pituskin E, **Haykowsky M**. Effect of Exercise Training on Cardiorespiratory Fitness in Patients with Cancer: A Meta-Analysis. *Oncologist*. 2011;6(1) :112-120.
- 249.** Tomczak C, Thompson R, Paterson I, Schulte F, Cheng-Baron J, Haennel R, **Haykowsky M**. Enhanced biventricular function following acute high-intensity exercise in heart failure. *J Appl Physiol*. 2011;110(2):398-406.
- 250.** Matsuura C, Gomes PS, **Haykowsky M**, Bhambhani Y. Cerebral and muscle oxygenation changes during static and dynamic knee extensions to voluntary fatigue in healthy men and women: a near infrared spectroscopy study. *Clin Physiol Funct Imaging*. 2011;31(2):114-123.
- 251.** Nelson MD, **Haykowsky MJ**, Petersen SR, DeLorey DS, Stickland MK, Cheng-Baron J, Thompson RB. Aerobic fitness does not influence the biventricular response to whole-body passive heat stress. *J Appl Physiol*. 2010;109(5):1545-1551.
- 252.** Scott J, Esch B, **Haykowsky M**, Paterson I, Warburton D, Chow K, Cheng Baron J, Lopaschuk G, Thompson R. Biventricular Dysfunction Following Brief High Intensity Exercise in Endurance Trained Individuals. *Am J Cardiol*. 2010;106(2):278-283.
- 253.** Thompson RT, Paterson I, Chow K, Cheng-Baron J, Scott J, Esch B, Ennis D. **Haykowsky M**. Characterization of the Relationship between Systolic Shear Strain and Early Diastolic Shear Strain Rates: Insights into Torsional Recoil. *Am J Physiol Heart Circ Physiol*. 2010; 299(3): H898-907.
- 254.** John J, **Haykowsky M**, Brubaker P, Stewart K, Kitzman D. Decreased left ventricular distensibility in response to posture change in elderly patients with heart failure and preserved ejection fraction. *Am J Physiol Heart Circ Physiol*. 2010;299(3):H883-889.
- 255.** Clark A, **Haykowsky M**, Kryworuchko J, Scott J, DesMeules M, Luo W, Y Liang, McAlister F. A meta-analysis of home-based secondary prevention programs on coronary artery disease. *Eur J Cardiovasc Prev Rehabil*. 2010;17(3):261-270.
- 256.** Cheng-Baron J, Chow K, Scze Khoo N, Esch B, Scott J, **Haykowsky M**, Tyberg J, Thompson R. Measurements of Changes in Left Ventricular Volume, Strain, and Twist during Isovolumic Relaxation Using MRI. *Am J Physiol Heart Circ Physiol*. 2010;298(6):H1908-1918.
- 257.** Esch BT, Scott JM, **Haykowsky MJ**, Paterson I, Warburton DE, Cheng-Baron J, Chow K, Thompson RB. Changes in ventricular twist and untwisting with orthostatic stress: endurance athletes versus normally active individuals. *J Appl Physiol*. 2010;108(5):1259-66.
- 258.** Bhambhani Y, Gross D, **Haykowsky M**, Rashid S. Effect of opioid administration on

cardiorespiratory and muscle oxygenation during lifting in chronic back pain patients. *Eur J Appl Physiol*. 2010;109(2):241-50.

**259.** Nelson M, **Haykowsky M**, Petersen SR, DeLorey DS, Cheng-Baron J, Thompson RB. Increased left ventricular twist, untwisting rate and suction maintain global diastolic function during passive heat stress in humans. *Am J Physiol Heart Circ Physiol*. 2010;298(3):H930-937.

**260.** Mayne J, **Haykowsky M**, Nelson M, Hartley T, Butcher S, Jones R, Petersen S. Effects of the self-contained breathing apparatus on left-ventricular function at rest and during graded exercise. *Appl Physiol Nutr Metab*. 2009;34(4):625-631.

**261.** **Haykowsky M**, Mackey J, Thompson R, Jones L, Paterson I. Adjuvant Trastuzumab Induces Ventricular Remodeling Despite Aerobic Exercise Training. *Clin Cancer Res*. 2009;15(15):4963-4977.

**262.** Jones LW, Eves ND, **Haykowsky M**, Freedland SJ, Mackey JR. Physiologic and molecular mechanisms of exercise intolerance in cancer and role of aerobic training to mitigate dysfunction. *Lancet Oncology*. 2009;10(6):598-605.

**263.** Jones L, Eves ND, Peddle C, **Haykowsky M**, Courneya KS, Mackey JR, Joy AA, Kumar V, Winton TW, Reiman T. Effects of Presurgical Exercise Training on Systemic Inflammatory Markers Among Patients Undergoing Thoracic Surgery for Malignant Lung Lesions. *Appl Physiol Nutr Metab*. 2009;34(2):197-202.

**264.** **Haykowsky M**, Taylor D, Kim D, Tymchak W. Exercise training improves aerobic capacity and skeletal muscle function in heart transplant recipients. *Am J Transplant*. 2009;9(4):734-739.

**265.** Esch B, Scott J, Warburton DER, Thompson R, Taylor D, Baron J, Paterson I, **Haykowsky M**. Left Ventricular Torsion and Untwisting during Exercise in Heart transplant Recipients. *J Physiol*. 2009;587(Pt 10):2375-2386.

**266.** **Haykowsky M**, Riess K, Burton I, Jones L, Tymchak W. Heart Transplant recipient completes ironman triathlon 22 years after surgery. *J Heart Lung Transplant*. 2009;28(4):415.

**267.** Butler C, Thompson R, **Haykowsky M**, Toma M, Paterson I. Cardiovascular Magnetic Resonance Imaging in the Diagnosis of Acute Heart Transplant Rejection: a Review. *J Cardiovasc Magn Reson*. 2009;11:7.

**268.** Gross D, Stephens B, Bhambhani Y, **Haykowsky M**, Bostick G, Rashid S. Opioid prescriptions in Canadian workers' compensation claimants: Prescription trends between 2000-2005 and associations between early prescription and future recovery. *Spine*. 2009;34(5):525-531.

**269.** Mandic S, Tymchak W, Kim D, Daub B, Quinney A, Taylor D, Al-Kurtas S, **Haykowsky M**. Effects of Aerobic or Aerobic and Resistance Training on Cardiorespiratory and Skeletal Muscle Function in Heart Failure: A Randomized Controlled Trial. *Clinical Rehabilitation*. 2009;23:207-216.

**270.** Scott J, Esch B, **Haykowsky M**, Warburton D, Toma M, Jelani A, Taylor D, Paterson I, Poppe D, Liang Y, Thompson R. Cardiovascular responses to incremental and sustained sub-

maximal exercise in heart transplant recipients. *Am J Physiology Heart & Circulatory Physiology*. 2009;296:H350-H358.

**271.** Nelson M, **Haykowsky M**, Mayne J, Jones R, Petersen S. Effects of self-contained breathing apparatus on ventricular function during strenuous exercise wearing firefighter protective equipment. *J Appl Physiol*. 2009;106(2):395-402.

**272.** Tomczak C, Jelani A, Haennel R, **Haykowsky M**, Welsh R, Manns T. Impaired cardiac reserve and pulmonary gas exchange kinetics in stroke patients. *Stroke*. 2008;39(11):3102-3106.

**273.** Kennedy M, Warburton D, Boliek C, Esch B, Scott J, **Haykowsky MJ**. The oxygen delivery response to acute hypoxia during incremental knee extension exercise differs in active and trained males. *Dyn Med*. 2008;7:11.

**274.** Jones L, Eves ND, **Haykowsky M**, Joy AA, Douglas P. Exercise Testing in Clinical Oncology Research: Systematic Review and Practice Recommendations. *Lancet Oncology*. 2008;9(8):757-765.

**275.** Gross D, Bhambhani Y, **Haykowsky M**, Rashid S. Acute opioid administration improves work-related exercise performance in patients with chronic back pain. *J Pain*. 2008;9(9):856-862.

**276.** McNeely M, Parliament M, Seikaly H, Jha N, Magee D, **Haykowsky M**, Courneya K. Effect of exercise on upper extremity pain and dysfunction in head and neck cancer survivors: a randomized controlled trial. *Cancer*. 2008;113(1):214-222.

**277.** Kelly M, Darrah J, Sobsey D, **Haykowsky M**, Legg D. Effects of a community-based aquatic exercise program for children with cerebral palsy: A single subject design. *Journal of Aquatic Physical Therapy*. 2009;17(2):1-11.

**278.** Jones L, Eves N, Mackey J, Peddle C, **Haykowsky M**, Joy A, Tankil K, Courneya K, Reiman T. Systemic Inflammation, Cardiorespiratory Fitness, and Quality of Life in Patients with Advanced Non-Small Cell Lung Cancer. *J Thorac Oncol*. 2008;3(2):194-195.

**279.** Tomczak C, Warburton D, Riess K, Jenzjowski N, Esch B, Haennel RG, **Haykowsky M**. Pulmonary oxygen uptake kinetics in transplant recipients during the six-minute walk test. *Transplantation*. 2008;85(1):29-35.

**280.** Tomczak C, Warburton D, Riess K, Jenzjowski N, Liang Y, Bhambhani Y, Haennel RG, **Haykowsky M**. A prediction model for estimating pulmonary oxygen uptake in organ transplant recipients. *Transplant Proc*. 2007;39(10):3313-3316.

**281.** Jones L, **Haykowsky M**, Pituskin E, Jenzjowsky N, Tomczak C, Haennel R, Mackey J. Cardiovascular Function and Risk Profile of Postmenopausal Women after Chemo-Endocrine Therapy for Hormone-Receptor Positive Operable Breast Cancer. *Oncologist*. 2007; 12(10): 1156-1164.

**282.** Jones L, **Haykowsky M**, Douglas P, Mackey J. Early-Stage Breast Cancer Therapy, Cardiovascular Injury, and the 'Multiple-Hit' Hypothesis. *J Am Coll Cardiol*. 2007;50(15):1435-1541.

**283.** Jenzjowski N, Tomczak C, Lawrance R, Taylor D, Tymchak W, Riess K, Warburton D,

- Haykowsky M.** Impaired pulmonary oxygen uptake kinetics and reduced peak aerobic power during small muscle mass exercise in heart transplant recipients. *J Appl Physiol.* 2007;103(5): 1722-1727.
- 284.** Jones L, Eves N, Peddle C, **Haykowsky M**, Courneya K, Mackey J, Joy A, Winton T, Reiman T. Effects of Presurgical Exercise Training in Patients Undergoing Pulmonary Resection. *Cancer.* 2007;110(3):590-598.
- 285.** **Haykowsky M**, Liang Y, Pechter D, Jones L, McAlister F, Clark A. A Meta-Analysis of the Effect of Exercise Training on Left Ventricular Remodeling in Heart Failure Patients: The Benefit Depends on the Type of Training Performed. *J Am Coll Cardiol.* 2007;49(24):2329-2336.
- 286.** Tomczak C, Jendzjowski N, Riess K, Tymchak W, Kim D, Haennel R, Haykowsky M. Relation of etiology of heart failure (ischemic versus nonischemic) before transplantation to delayed pulmonary oxygen uptake kinetics after heart transplantation. *Am J Cardiol.* 2007; 99(12):1745-1749.
- 287.** Jones LW, **Haykowsky M**, Peddle CJ, Joy AA, Pituskin EA, Tkachuk LM, Courneya KS, Slamon DJ, Mackey JR. Cardiovascular Risk Profile of HER2/neu Positive Breast Cancer Patients Treated with Doxorubicin and/or Trastuzumab Containing Adjuvant Chemotherapy. *Cancer Epidemiol Biomarkers Prev.* 2007;16(5):1026–1031.
- 288.** **Haykowsky M** and Tymchak W. Superior Athletic Performance Two Decades After Cardiac Transplantation. *N Engl J Medicine.* 2007;356(19):2007-2008.
- 289.** Scott J, Esch B, Goodman L, Bredin S, **Haykowsky M**, Warburton D. Cardiovascular consequences of gravitational stress: implications for effective countermeasures. *Appl Physiol, Nutr Metab.* 2007;32(2):332-339.
- 290.** Warburton DER, Taylor A, Bredin S, Esch B, Scott J, **Haykowsky M**. Central haemodynamics and peripheral muscle function during exercise in patients with heart failure. *Appl Physiol Nutr Metab.* 2007;32(2):318-331.
- 291.** Esch B, Bredin S, **Haykowsky M**, Scott J, Warburton DER. The potential role of the pericardium on diastolic filling in endurance-trained athletes under conditions of physiological stress. *Appl Physiol Nutr Metab.* 2007;32(2):311-317.
- 292.** Warburton DER, and **Haykowsky M**. The evaluation of cardiac function across the health spectrum under diverse conditions of physiological stress: Introduction. *Appl Physiol Nutr Metab.* 2007;32(2):309-310.
- 293.** duManoir GR, **Haykowsky MJ**, Syrotuik DG, Taylor DA, Bell GJ. The Effect of High Intensity Rowing and Combined Strength and Endurance Training on Left Ventricular Systolic Function and Morphology. *Int J Sports Med.* 2007;28(6):488-494.
- 294.** Esch B, Scott J, **Haykowsky M**, McKenzie D, Warburton D. Diastolic Ventricular Interactions in Endurance-Trained Athletes during Orthostatic Stress. *Am J Physiology Heart Circ Physiol.* 2007; 293(1):H409-415.
- 295.** Jones L, Eves N, Mackey J, Peddle C, **Haykowsky M**, Joy A, Courneya K, Reiman T, Safety and Feasibility of Cardiopulmonary Exercise Testing in Patients with Advanced Cancer.

*Lung Cancer*. 2007;55(2):225-232.

**296.** Scott JM, Esch B, **Haykowsky M**, Isserow S, Koehle M, Hughes B, Zbogar D, Bredin S, McKenzie S, Warburton DER. Sex differences in left ventricular function and beta-receptor responsiveness following prolonged strenuous exercise. *J Appl Physiol*. 2007;102(2):681-687.

**297.** Riess K, Gourishankar S, Dueck A, Jones L, McGavock J, Lewanczuk R, **Haykowsky M**. Impaired arterial compliance and aerobic endurance in kidney transplant recipients. *Transplantation*. 2006;82(7):920-923.

**298.** Eves ND, Petersen SR, **Haykowsky MJ**, Wong EYL, Jones RL. Helium-Hyperoxia, Exercise and Respiratory Mechanics in Chronic Obstructive Pulmonary Disease. *Am J Respir Crit Care Med*. 2006;174(7):763-771.

**299.** Kennedy M, **Haykowsky M**, Boliek C, Esch B, Scott J, Warburton D. Regional muscle oxygenation differences in vastus lateralis during different modes of incremental exercise. *Dyn Med*. 2006;5:8.

**300.** Stickland M, Welsh RC, **Haykowsky MJ**, Petersen SR, Anderson WD, Taylor DA, Bouffard M, Jones RL. Effect of Acute Increases in Pulmonary Vascular Pressures on Exercise Pulmonary Gas Exchange. *J Appl Physiol*. 2006;100(6):1910-1917.

**301.** Stickland M, Welsh RC, Petersen SR, Tyberg JV, Anderson WD, Jones RL, Taylor DA, Bouffard M, **Haykowsky MJ**. Does fitness level modulate the cardiovascular hemodynamic response to exercise? *J Appl Physiol*. 2006;100(6):1895-1901.

**302.** Mandic S, Riess K, **Haykowsky M**. Exercise training for Individuals with coronary artery disease or heart failure. *Physiotherapy Canada*. 2006;58(1):21-29.

**303.** **Haykowsky M**, Vonder Muhll I, Ezekowitz I, Armstrong P. Supervised exercise training improves aerobic capacity and muscle strength in older women with heart failure. *Can J Cardiology*. 2005;21(14):1277-1280.

**304.** Reed K, Warburton D, McGavock J, Lewanczuk R, Whitney C, Scott J, **Haykowsky M**, McKay H. Arterial compliance in young children: The role of aerobic fitness. *Eur J Cardiovasc Prev Rehabil*. 2005;12(5):492-497.

**305.** Welsh R, Warburton D, Humen D, Taylor D, McGavock J, **Haykowsky M**. Prolonged strenuous exercise alters the cardiovascular response to dobutamine stimulation. *J Physiol*. 2005. 589(Pt 1):325-330.

**306.** **Haykowsky M**, Riess K, Figgures L, Warburton D, Jones L, Tymchak W. Exercise training improves aerobic endurance and musculoskeletal fitness in female cardiac transplant recipients. *Curr Control Trials Cardiovasc Med*. 2005;6(1):10.

**307.** **Haykowsky MJ**, McGavock J, Vonder Muhll, Koller M, Mandic S, Welsh R, Taylor D. Effect of exercise training on left ventricular morphology and muscle strength in healthy older women. *J Gerontol Bio Sci Med Sci*. 2005; 60(3):307-311.

**308.** Warburton D, McKenzie D, **Haykowsky M**, Taylor A, Shoemaker P, Ignaszewski A, Chan S. The Effectiveness of High Intensity Interval Training for the Rehabilitation of Patients with Coronary Artery Disease. *Am J Cardiol*. 2005;95(9):1080-1084.

**309.** **Haykowsky M**, Eves N, Figgures L, McLean A, Koller M, Taylor D, Tymchak W Effect

of exercise training on VO<sub>2</sub>peak and left ventricular systolic function in recent cardiac transplant recipients. *Am J Cardiol.* 2005;95(8):1002-1004.

**310.** Hung C, Daub B, Black B, Welsh R, Quinney A, **Haykowsky M**. Exercise training improves overall physical fitness and quality of life in older women with coronary artery disease. *Chest.* 2004;126(4):1026-31.

**311.** Stickland M, Anderson W, **Haykowsky M**, Welsh R, Petersen S, Jones R. Effects of prolonged exercise to exhaustion on left-ventricular function and pulmonary gas exchange. *Respir Physiol Neurobiol.* 2004;142(2-3):197-209.

**312.** Stickland M, Welsh R, **Haykowsky M**, Petersen S, Anderson W, Taylor DA, Bouffard M, Jones R. Intra-Pulmonary Shunt and Pulmonary Gas Exchange During Exercise in Humans. *J Physiol.* 2004;56(Pt 1):321-329.

**313.** McNeely M, Magee D, Lees A, Bagnall K, **Haykowsky M**, Hanson J. The addition of Manual Lymph Drainage to Compression Therapy for Breast Cancer Related Lymphedema: A Randomized Controlled Trial. *Breast Cancer Res Treat.* 2004;86(2):95-106.

**314.** Warburton D, **Haykowsky MJ**, Quinney A, Blackmore D, McGavock J, Teo K, Taylor D, Humen D. Blood volume expansion and cardiorespiratory function: Effects of exercise training. *Med Sci Sports Exerc.* 2004;36(6):991-1000.

**315.** **Haykowsky MJ**, Ezekowitz JA, Armstrong PW. Therapeutic exercise in individuals with heart failure: Special attention to older women with heart failure. *J Card Fail.* 2004; 10(2):165-173.

**316.** McGavock J, Mandic S, Lewanczuk R, Vonder Muhll I, Quinney A, Koller M, Taylor D, Welsh R, **Haykowsky M**. Cardiovascular adaptations to exercise training in females with type II diabetes mellitus. *Cardiovasc Diabetol.* 2004;3:3.

**317.** McGavock J, Mandic S, Vonder Muhll I, Lewanczuk R, Quinney A, Taylor D, Welsh R, **Haykowsky M**. Low cardiorespiratory Fitness is associate with elevated C-reactive protein in older women with type 2 diabetes. *Diabetes Care.* 2004; 27(2):320-325.

**318.** McGavock J, Eves N, Mandic S, Glenn N, Quinney A, **Haykowsky MJ**. The role of exercise in the treatment of cardiovascular dysfunction associated with type II diabetes. *Sports Medicine.* 2004;34(1):27-48.

**319.** Stickland M, Petersen S, **Haykowsky MJ**, Jones R. The effects of cycle racing on pulmonary diffusion capacity and left ventricular systolic function. *Resp Physiol Neurobiol.* 2003;138(2-3):291-299.

**320.** McNeely M, Parliament M, Courneya KS, **Haykowsky MJ**. Resistance Exercise for post neck dissection shoulder pain: Three case reports. *Physiotherapy Theory and Practice.* 2004; 20(1):41-56.

**321.** Tubman L, Bell G, Kido A, James K, **Haykowsky M**, Stein R. Submaximal and maximal cardiorespiratory responses of leg wheeling and arm wheeling on a new wheelchair prototype. *Research in Sports Medicine:An International Journal.* 2004;12(2):115-133.

**322.** Stickland, MK, Jones, RL, Haykowsky, MJ, Petersen, SR. Lactate steady state and 20 km simulated cycle racing. *Research in Sports Medicine:An International Journal.* 2004;

12(1):59-70.

- 323.** Rashiq S, Koller M, **Haykowsky M**, Jamieson K. The effect of opioid analgesia on exercise test performance in chronic low back pain. *Pain*. 2003;106(1-2):119-125.
- 324.** Warburton DER, McGavock J, Welsh RC, **Haykowsky M**, Quinney A, Taylor D, Dzavik V. Late potentials in Female Triathletes Before and after Prolonged strenuous exercise. *Can J Appl Physiol*. 2004;28(2):153-164.
- 325.** Kennedy M, Humphrey R, **Haykowsky MJ**. Function, eligibility, outcomes and exercise capacity associated with left ventricular assist devices. *J Cardiopulm Rehabil*. 2003;23(3):208-217.
- 326.** Kennedy MD, **Haykowsky M**, Daub B, Van Lohuizen K, Knapik G, Black B. Effects of a comprehensive cardiac rehabilitation program on quality of life and exercise tolerance in women: A retrospective analysis. *Curr Control Trials Cardiovasc Med*. 2003;4(1):1.
- 327.** McGavock J, **Haykowsky M**, Warburton D, Taylor D, Quinney A, Welsh R. Left ventricular systolic performance during prolonged strenuous exercise in female triathletes. *Dyn Med*. 2003;2(1):2.
- 328.** **Haykowsky MJ**, Warburton DER, Eves ND, Findlay MJ. Resistance exercise, the Valsalva maneuver and cerebrovascular transmural pressure. *Med Sci Sports Exerc*. 2003;35(1), 65-68.
- 329.** Warburton DER, **Haykowsky MJ**, Quinney HA, Blackmore D, Teo KK, and Humen DP. Myocardial response to incremental exercise in endurance athletes: Influence of heart rate, contractility, and the Frank-Starling effect. *Experimental Physiology*. 2002;87(5):613-622.
- 330.** **Haykowsky MJ**, Dressendorfer R, Taylor D, Mandic S, Humen DP. Resistance Training and Cardiac Hypertrophy: Unraveling the Training Effect. *Sports Medicine* 2002;32(13):837-849.
- 331.** Vonder Muhll I, Daub B, Black B, Warburton DER, and **Haykowsky MJ**. Benefits of cardiac rehabilitation in the ninth decade of life. *Am J Cardiol*. 2002;90(6):645-648.
- 332.** Warburton, DER, Welsh, RC, **Haykowsky M**, Taylor, DA, and Humen, DP. Biochemical changes as a result of prolonged strenuous exercise. *Br J Sports Med*. 2002;36(4):301-303.
- 333.** McGavock J, Warburton D, Taylor D, Welsh R, Quinney A, **Haykowsky M**. The Effects of Prolonged Strenuous Exercise on Left Ventricular Function: A Brief Review. *Heart Lung*. 2002; 31(4):279-92.
- 334.** **Haykowsky M**, Welsh R, Humen D, Warburton D, Taylor D. Impaired left ventricular systolic function after a half-ironman race. *Can J Cardiol*. 2001;17(6):687- 690.
- 335.** **Haykowsky M**, Taylor D, Teo K, Quinney A, Humen D. Left ventricular wall stress during leg-press exercise performed with a brief valsalva maneuver. *Chest*. 2001;119(1):150-154.
- 336.** Warburton D, Welsh R, **Haykowsky M**, Taylor D, Humen D, Dzavik V. Effects of half-ironman competition on the development of late potentials. *Med Sci Sports Exerc*. 2000;32(7):1208-1213.
- 337.** **Haykowsky M**, Humen D, Teo K, Quinney A, Souster M, Bell G, Taylor D. Effects of 16

weeks of resistance training on left ventricular morphology and systolic function in healthy men >60 years of age. *Am J Cardiol.* 2000;85(8):1002-1006.

**338. Haykowsky M**, Quinney A, Gillis R, Thompson C. Left ventricular morphology in junior and master resistance trained athletes. *Med Sci Sports Exerc.* 2000;32(2):349-52.

**339. Haykowsky M**, Teo K, Quinney A, Humen D, Taylor D. Effects of long-term resistance training on left ventricular morphology. *Can J Cardiol.* 2000;16(1):35-38.

**340.** Warburton D, **Haykowsky M**, Quinney A, Humen D, Teo K. Reliability and validity of measures of cardiac output during incremental to maximal aerobic exercise. Part II: Novel techniques and new advances. *Sports Med.* 1999;27(4):241-260.

**341.** Warburton D, **Haykowsky M**, Quinney A, Humen D, Teo K. Reliability and validity of measures of cardiac output during incremental to maximal aerobic exercise. Part I: Conventional techniques. *Sports Med.* 1999;27(1):23-41.

**342. Haykowsky M**, Warburton D, Quinney A. Pain and injury associated with powerlifting training in visually impaired athletes. *Journal of Visual Impairment & Blindness.* 1999;93(4):236-241.

**343. Haykowsky M**, Gillis R, Quinney A, Ignaszewski A, Thompson C. Left ventricular morphology in elite female resistance-trained athletes. *Am J Cardiol.* 1998; 82(7):912- 914.

**344. Haykowsky M**, Smith D, Malley L, Norris S, Smith E. Effects of short-term altitude training and tapering on left ventricular morphology in elite swimmers. *Can J Cardiol.* 1998;14(5):678-681.

**345. Haykowsky M**, Chan S, Bhambhani Y, Syrotuik D, Quinney A, Bell G. Effects of combined endurance and strength training on left ventricular morphology in male and female rowers. *Can J Cardiol.* 1998;14(3):387-391.

**346.** Almahmeed W, Haykowski M, Boone J, Kavanagh-Grey D, Human D, McDonald I. Congenitally corrected transposition of the great arteries and exercise-induced ventricular tachycardia. *Can J Cardiol.* 1996;12(5):526-528.

**347.** Almahmeed W, Haykowski M, Boone J, Ling H, Allard M, Webb J, Carere R. Spontaneous coronary artery dissection in young women. *Cathet Cardiovasc Diagn.* 1996. 37(2):201-205.

**348. Haykowsky M**.J. Findlay JM, Ignaszewski AP. Aneurysmal subarachnoid hemorrhage associated with weight training: Three case reports. *Clin J Sport Med.* 1996;6(1):52-55.

## **ABSTRACTS:**

**1.** Paterson S, Weeldreyer NR, Foulkes SJ, Pituskin E, **Haykowsky MJ**. Relationship between six-minute walk test distance with submaximal and peak oxygen uptake in older breast cancer survivors. Accepted at ESC Cardio-Oncology 2026. Vienna, Austria.

**2.** Weeldreyer NR, Foulkes SJ, Paterson S, Pituskin E, **Haykowsky MJ** Framingham risk score and its relationship with cardiorespiratory fitness and physical activity levels in older breast cancer survivors. Accepted at ESC Cardio-Oncology 2026. Vienna, Austria.

3. Riess J, Alba Schmidt E, Petrasch G, Sichler S, Spormann S, Da Silva H, Senftinger J, Foulkes SJ, Vontobel J, Niederseer D, **Haykowsky MJ**. Semaglutide therapy does not impede improvements in aerobic endurance or body composition during early cardiac rehabilitation. Accepted at ESC Preventive Cardiology 2026, Ljubljana, Slovenia.
4. SJ Foulkes, Janssens K, Mitchell A, L Spencer L, Bekhuis Y, Rowe S, Claessen G, **Haykowsky M**, La Gerche A. Aortic dilation in master's endurance athletes: Prevalence and associations with cardiac physiology and training load. Accepted at ESC Preventive Cardiology 2026, Ljubljana, Slovenia.
5. In Vivo Assessment of Coronary Sinus Oxygen Saturation During Post-Exercise Cuff Occlusion and Hypercapnia Using Cardiovascular Magnetic Resonance. Presented at ISMRM. March 2026.
6. Yang H, Huang L, Hathorn B, Yang C, White K, Pan Y, Bi X, Lee H, Johnson C, Nasirian A, **Haykowsky MJ**, Thompson RB, Tomczak C, Englund EK, Howden E, Samuel TJ, Foulkes S, Wernhart S, Eddy RL, Wright SP, Nelson MD. Journal of Cardiovascular Magnetic Resonance 28 (2026) 102005. Presented at Society for Cardiovascular Magnetic Resonance in February 2026.
7. Landsteiner I, Foulkes, Lewis G, **Haykowsky**. Mechanisms of reduced exercise capacity in breast cancer survivors compared to patients with HFpEF and controls: insights from comprehensive cardiopulmonary exercise testing. Presented at the 2025 ESC Cardio Oncology Meeting in the *Young Investigator Award Clinical Cardio Oncology Competition*. June 21, 2025. Florence, Italy.  
- **Dr. Foulkes was awarded the young investigator award for this presentation.**
8. Wernhart S, Karcher F, Mueller S, **Haykowsky MJ**, Halle M. Differential exercise blood pressure response in patients with hypertrophic, non-obstructive cardiomyopathy compared to patients with heart failure and preserved ejection fraction. 2025 Sports, Medicine, and health Summit. Hamburg, Germany.
9. Foulkes SJ, McMurtry T, Skow RJ, Grenier J, O'Neil D, Welsh R, Kirkham AA, Paterson DI, Thompson RB, Pituskin E, **Haykowsky MJ**. Looking beyond LVEF: cardiac and skeletal muscle function in long-term breast cancer survivors with normal versus reduced peak oxygen uptake. Presented at the 2025 ESC Cardio Oncology Meeting, June 21, 2025. Florence, Italy.
10. McMurtry T, Tomczak C, Kruger C, Foulkes S, Landsteiner I, Haykowsky L, Walesiak D, Welsh R, **Haykowsky M**, Pituskin E. Muscle oxygen uptake and recovery kinetics during plantar flexion exercise in long-term breast cancer survivors previously treated with cardiotoxic therapy. Presented at the 2025 ESC Cardio Oncology Meeting, June 20, 2025. Florence, Italy.
11. Kruger CP, Skow R, Walesniak D, Paterson DI, **Haykowsky MJ**, Thompson RB, Kirkham AA, Pituskin E. Long-term alterations to body composition using MRI in HER2+ breast cancer survivors. Presented at the 2025 ESC Cardio Oncology Meeting, June 21, 2025. Florence, Italy.
12. Kruger CP, Griener J, **Haykowsky M**, Paterson DI, Thompson RB, Pituskin E. Baseline physiologic characteristics of participants in the APOLLO ( Personalized rehAbilitation PrOgram in aLLOgeneic Bone Marrow Transplantation) study assessed by MRI: preliminary results. Presented at the 2025 ESC Cardio Oncology Meeting, June 21, 2025. Florence, Italy.
13. Skow RJ, McMurtry TJ, Effa C, Tomczak CR, Mansour J, Meyer T, Neill D, Tandon P, Gyenes GT, **Haykowsky MJ**. Physiological Response to Six-Minute Walk Test in Patients Participating in Cardiac Rehabilitation Program. Poster. Canadian Association of Cardiovascular Prevention and Rehabilitation (Calgary AB, May 31-June 1, 2025).

14. Foulkes S, Lawley J, Thompson R, et al. Muscle Metaboreflex Modulation of Biventricular Function During Exercise. *Physiology*. 2025;40(S1):2027.
15. Skow R, Foulkes S, Walesiak D, et al. Acute Effects of Submaximal Aerobic Exercise on Aortic Wall Stress Measured by Magnetic Resonance Imaging in Patients with Thoracic Aortic Disease. *Physiology*. 2025;40(S1):0227.
16. Schmid, V; Paterson, S; Weinkauff, C; Wang, J; Tomczak, C; Niederseer, D; Vontobel, J; Nelson, M; Forman, D; Foulkes, S; **Haykowsky M**. Impaired peak oxygen uptake in older patients with heart failure: a systematic-review and meta-analysis. *European Journal of Preventive Cardiology*. 32 Supplement (1)26.2025.
17. Karcher, F; Mueller, S; Halle, M; **Haykowsky, M**; Wernhart, S; Differential exercise blood pressure response in patients with hypertrophic, non-obstructive cardiomyopathy compared to patients with heart failure and preserved ejection fraction. *European Journal of Preventive Cardiology*. 32 Supplement (1)123. 2025.
18. Foulkes, S; Moura-Ferreira, S; Milani, M; Bekhuis, Y; Falter, M; Stroobants, S; Joghani, S; Altintas, S; Jasaityte, R; Stassen, J, Herbots L, Claessen G, **Haykowsky MJ**, Verwerft J.; Exercise capacity and hemodynamics in heart failure with preserved ejection fraction patients with and without atrial fibrillation. *European Journal of Preventive Cardiology*. 32 Supplement (1)56.2025.
19. Foulkes, S; Moura-Ferreira, S; Milani, M; Bekhuis, Y; Falter, M; Stroobants, S; Joghani, S; Altintas, S; Jasaityte, R; Stassen, J et al. Exercise limitations in heart failure with preserved ejection fraction and obesity: is the issue the engine or chassis? *European Journal of Preventive Cardiology*. 32 Supplement(1)57.2025.
20. Foulkes, S; Skow, RJ; Walesiak, D; Grenier, J; Thompson, RB; Mcurmury, MS; **Haykowsky, MJ**. Decreased ventricular reserve in individuals with thoracic aortic disease *European Journal of Preventive Cardiology*. 32 Supplement(1)104.2025.
21. Skow, R; Mcurmury, T; Effa, C; Tomczak, CR; Mansour, J; Meyer, T; Gyenes, GT; O'Neill, D; Tandon, P; **Haykowsky, MJ**. Improvement in aerobic endurance and pulmonary oxygen uptake during a six-minute walk test after participating in a combined in-person and home based (My Heart Coach) cardiac rehabilitation program. *European Journal of Preventive Cardiology*.32 Supplement(1)335.2025.
22. Mueller, S; Fegers-Wustrow, I; Dinges, S; Gevaert, AB; Winzer, EB; **Haykowsky, MJ**; Wisloff, U; Wachter, R; Adams, V; Van Craenenbroeck, EM; Association between comorbidities and the effects of exercise training among patients with heart failure with preserved ejection fraction. *European Journal of Preventive Cardiology*. 32 Supplement(1) 345. 2025.
23. Milani, M; Bekhuis, Y; Falter, M; Moura-Ferreira, S; Hoedemakers, S; L Hoyes, W; Foulkes, S; **Haykowsky, M**; Stassen, J; Jasaityte, R, et al. Does oxygen pulse represent a reliable surrogate for stroke volume during exercise? Insights from cardiopulmonary exercise test combined with echocardiography or invasive measurements. *European Journal of Preventive Cardiology*. 32 Supplement(1)316.2025.

24. Milani M, Bekhuis Y, Falter M, Moura-Ferreira S, Hoedemakers S, L'hoyes W, Foulkes S, **Haykowsky M**, La Gerche A, Stassen A, Jasaityte R, Hansen D, Herbots L, Claessen G, Verwerft J. Oxygen pulse during cardiopulmonary exercise testing in cardiac patients as a surrogate of stroke volume: fact or fiction? *European Heart Journal - Cardiovascular Imaging* (2025) 26 (Suppl 1).
25. Manferdelli M, Wakeham D, Leahy M, Skow, R, Kissel C, Brazile T, MacNamara J, Fadel P, Haykowsky M, Levine B, Sarma S, Hearon C. The Effect of Anemia on the Mechanisms of Exercise Intolerance in Adults with HFpEF. *Circulation*. Volume 150, Number Suppl\_1.2024.
26. Van Puyvelde, T; Bekhuis, Y; Petit, T; Claeys, M; Foulkes, S; **Haykowsky, M**; Claus, P; Bogaert, J; Willems, R; Rega, F. Exercise Intolerance After Heart Transplantation: Phenotyping Using Cardiopulmonary Exercise Testing and Invasive Exercise CMR. *Heart, Lung and Circulation*.33(S261).2024.
27. Rowe, S; L'hoyes, W; Spencer, L; Foulkes, S; Paratz, E; Janssens, K; Stassen, J; Delpire, B; Pauwels, R; Milani, M et al. Left ventricular volume as a predictor of exercise capacity and functional independence in individuals with preserved ejection fraction. *Heart, Lung and Circulation*. 33(S203-S204).2024.
28. Pituskin, E; Joseph, K; Fairchild, A; King, K; Hegadoren, K; Norris, C; Paterson, DI; **Haykowsky, M**; Singhal, SK; 306P Patient-reported symptoms in early breast cancer and future cardiovascular events: A province-wide administrative database study. *Annals of Oncology*.35 (S342-S343)2024.
29. R Skow, C Hearon, S Sarma, J MacNamara, M Samels, PJ Fadel, R Skow, C Hearon, S Sarma, J MacNamara, M Samels, PJ Fadel, Levine BD, **Haykowsky MJ**. Whole Body versus Small Muscle Mass Exercise Training in Patients with Heart Failure with Preserved Ejection Fraction: Impact on Peripheral Responses to Exercise. *Circulation*: 148 (Suppl\_1), A13736-A13736.
30. S Foulkes, E Howden, MJ Haykowsky, Y Antill, K Janssens, S Nightingale, Wright L, Costello B, La Gerche A. Exercise Hemodynamic Profiles of Resting and Exercise- Based Definitions of Cancer Therapy-Related Cardiac Dysfunction in Anthracycline- Treated Breast Cancer Survivors. *Circulation*: 148 (Suppl\_1), A14672-A14672.
31. Foulkes SJ, Paterson DI, Sherrington R, Beaulieu C, Gendron C, Seres P, Grenier J, White J, **Haykowsky MJ**, Thompson RB. Myosteatorsis Is Associated With Disease Burden and Decreased Aerobic Endurance In Adults Recovered From Covid-19. 2023 ACSM Annual Meeting, World Congress on Exercise is Medicine, and World Congress on the Basic Science of Physical Activity and Aging Biology. Denver, CO. May 30-June 2, 2023.
32. Howden EJ, Foulkes SJ, **Haykowsky MJ**, Antill Y, Nightingale S, Daly R, La Gerche A. Effects Of 12-months Of Exercise Training on Determinants of Vo2Peak In Anthracycline-treated Breast Cancer Survivors. 2023 ACSM Annual Meeting, World Congress on Exercise is Medicine, and World Congress on the Basic Science of Physical Activity and Aging Biology. Denver, CO. May 30-June 2, 2023.

33. Skow R, Martin Z, Nandadeva D, Samuel M, MacNamara J, Sarma S, Levine BD, **Haykowsky MJ**, Fadel PJ, Hearon CM. Effect of phenotype on functional sympatholysis in HFpEF. 2023 ACSM Annual Meeting, World Congress on Exercise is Medicine, and World Congress on the Basic Science of Physical Activity and Aging Biology. Denver, CO. May 30-June 2, 2023
34. Bartlett M, Canton AP, Jaffery M, Mireles J, Anderson GK, Sarma S, MacNamara J **Haykowsky MJ**, Levine Bd, Ren J, Nelson MD. Skeletal muscle oxidative capacity and muscle fat content in HFpEF. 2023 ACSM Annual Meeting, World Congress on Exercise is Medicine, and World Congress on the Basic Science of Physical Activity and Aging Biology. Denver, CO. May 30-June 2, 2023
35. Wu KY, Kirkham A, White JA, **Haykowsky MJ**, Dyck J, Ezekowitz JA, Oudit G, Kurian J, Thompson R, Pituskin E, Paterson I. 1154-009. The impact of early-stage breast cancer on cardiac structure and function. 1154 - Spotlight on Special Topics: Cardio-Oncology Digital Presentations. American College of Cardiology / World Heart Foundation Scientific Congress. New Orleans, LA. March 7, 2023.
36. Foulkes SJ, Howden EJ, **Haykowsky MJ**, Antill Y, Salim A, Nightingale SS, Loi S, Claus P, Janssens K, Mitchell AM, Wright L, Costello BT, Lindqvist A, Burnham L, Wallace I, Daly RM, Fraser SF, La Gerche A. Exercise for the Prevention of Anthracycline-induced Functional Disability and Cardiac Dysfunction: The BREast Cancer Randomized EXercise InTervention (BREXIT) Study. *Circulation*. 2022. <https://doi.org/10.1161/CIRCULATIONAHA.122.062814>.
37. Mueller, S, Cervenka, M. Winzer, E. B., Gevaert, A. B., Fegers-Wustrow, I., Haller, B., Edelmann, F., Christle, J. W., **Haykowsky, M. J.**, Linke, A., Adams, V., Pieske, B., Van Graenenbroeck, E., Halle, M. Associations between training characteristics and change in peak oxygen consumption following exercise training in patients with heart failure with preserved ejection fraction. European Society of Cardiology 2022. Barcelona, Spain.
38. Zamani, SK, Zaha, VG, Sarma, S, MacNamara, JP, Haykowsky, MJ, Jaffery, M, Ricard, MD, Levine, BD, Nelson, MD. Pericardial fat is adversely related to cardio-mechanical interaction in heart failure with preserved ejection fraction: implications for exercise intolerance. European Society of Cardiology 2022. Barcelona, Spain.
39. Skow RJ, Martin Z, Nandadeva D, Hearon CM, Samels M, MacNamara JP, **Haykowsky MJ**, Levine BD, Fadel PJ, Sarma S. Mechanisms Determining VO<sub>2</sub>peak During Single Leg Knee-Extension Exercise in Heart Failure with Preserved Ejection Fraction Patients: Peripheral vs. Central Phenotypes. *The American Physiological Society. Young Investigator Award Poster Session*. April 5, 2022. Philadelphia, Pennsylvania, USA
40. Da Silva BR, Kirkham AA, Topolnyski J, **Haykowsky MJ**, Paterson I, Joy AA, Boule N, Ford KL, Pelletier AB, Pituskin E, Thompson R, Prado CM. Time-restricted eating in breast cancer survivors: effects on energy expenditure and nutritional status. 2021/12/1. *Clinical Nutrition*

ESPEN 46, S776.

- 41.** Kirkham AA, Topolnyski J, **Haykowsky MJ**, Paterson I, Prado CM, Joy AA, Boule N, Ford KL, Pelletier A, Da Silva BR, Pituskin E, Thompson R. Weekday 16:8 Time- Restricted Eating in Breast Cancer Survivors: Feasibility, Safety, and Effects on Cardiometabolic Health. Session CO.APS.01 - Cardioprotection: In Cardio-Oncology - Novel Mechanisms II. ePosters. P393. American Heart Association 2021 Scientific Sessions (Virtual).
- 42.** Foulkes S, Ramsden G, Antill Y, Loi S, **Haykowsky M**, Daly R, Fraser S, Howden E, La Gerche A. The effects of exercise training during anthracycline chemotherapy for breast cancer on skeletal muscle composition, strength and physical function. Exercise & Sports Science Australia Biennial Conference. Research To Practice (Virtual). Page 88.
- 43.** Foulkes S, Howden E, Antill Y, **Haykowsky M**, Daly R, Fraser S, La Gerche A. Reduced End Systolic Volume is associated With Attenuated Cardiac Reserve and Lower Exercise Capacity in Women Recently Diagnosed With Breast Cancer. *Heart, Lung and Circulation*. 2020. 29 (Supplement 2):S217-S218.
- 44.** Foulkes SJ, Ramsden G, Antill Y, Loi S, **Haykowsky MJ**, Daly RM, Fraser SF, Howden EJ, La Gerche A. Effect of Exercise Training During Anthracycline Chemotherapy For Breast Cancer On Skeletal Muscle Composition, Strength And Physical Function. *Medicine & Science in Sports & Exercise*. 2020. 52(7S): 146
- 45.** Myocardial Fibrosis Impairs Exercise Capacity By Limiting Cardiac Output Among Anthracycline-treated Women With Breast Cancer. Kirkham AA, Doroshuk M, Goonasekera M, Mattiello B, **Haykowsky MJ**, Beadury RI, Mackey JR, Paterson DI, Pituskin E, Thompson RB. *Medicine & Science in Sports & Exercise*. 2020. 52(7S):331.
- 46.** Xu L, Chow K, Pagano J, Oudit GY, Dyck JR, **Haykowsky MJ**, White JA, Ezekowitz J, Thompson RB, Paterson I. Cardiac Remodeling Predicts Outcome for Patients With Stable Heart Failure: A Serial Cardiac Magnetic Resonance Imaging Study. *Circulation*. 140(Suppl 1)11659. Nov 19, 2019.
- 47.** Gebhard S, **Haykowsky M**, Esefeld K, Spanier B, Martignoni M, Halle M. 6 month life-style intervention program in breast cancer patients. *EuroPrevent 2019*. April 11, 2019. Lisbon, Portugal.
- 48.** Rosenberry R, Tucker WJ, Trojacek D, Chamseddine H, Arena-Marshall C, Tian F, **Haykowsky MJ**, Nelson MD. Novel Insight Into the Determinants of Skeletal Muscle Oxygen Consumption by Dual-Wavelength Diffuse Correlation Spectroscopy. *The FASEB Journal*. 2019. 33 (1\_supplement), 684.6-684.6.
- 49.** Boyes N, Eckstein J, Pylypchuk S, Lahti D, Butcher SJ, Marciniuk DD, Dalisizwe MK Dewa, Wells CR, **Haykowsky MJ**, Tomczak CR. Peak Exercise and Post-Exercise Recovery Oxygen Uptake and Muscle Oxygenation in Patients with Heart Failure and Preserved Ejection Fraction and Healthy Matched Adults. *The FASEB Journal*. 2-19. 33 (1\_supplement), 1b461-1b461.
- 50.** Kirkham A, Xu L, Wang H, Chow K, Pagano JJ, White J, **Haykowsky MJ**, Dyck JR, Ezekowitz JA, Oudit GY, Mackey JR, Thompson RB, Pituskin E, Paterson I. Breast cancer diagnosis is associated with relative left ventricular hypertrophy. *Cancer Res*. February 15.

2019 79 (4 Supplement) P1-03-07-P1-03-07.

**51.** Pagano J, Chow K, Paterson I, Mikami Y, Friedrich MG, **Haykowsky M**, Anderson T, White J, Oudit G, Ezekowitz J, Dyck J, Thompson R. Sex Influence on Native T1 and Extracellular Volume Fraction in Heart Failure. Society for Cardiovascular Magnetic Resonance 22<sup>nd</sup> Annual Scientific Sessions. Bellevue, WA, USA. February 7, 2019.

**52.** Jordan J, Brubaker P, Jensen A, Reding K, Lamar Z, Mihalko S, **Haykowsky M**, Jones L, D'Agostino R, Kitzman DW, Hundley WG. Exercise Capacity is Reduced in Cancer Survivors Previously Treated with Anthracycline-Based Chemotherapy Despite a Preserved Cardiac Output Response. Society for Cardiovascular Magnetic Resonance 22<sup>nd</sup> Annual Scientific Sessions. Bellevue, WA, USA. February 9, 2019.

**53.** Howden EJ, Foulkes S, Bigaran A, Fraser S, **Haykowsky M**, La Gerche A. Cardiopulmonary Fitness and Cardiac Reserve 12-Months Following the Completion of Anthracycline-Based Chemotherapy With or Without Concurrent Exercise Training. Accepted as a poster at the *American Heart Association's Scientific Sessions 2018*, Chicago, USA, November 11.

**54.** Xu L, Pagano J, **Haykowsky M**, Ezekowitz J, Dyck J, Anderson T, Oudit G, Paterson I, Thompson R. Layer-Specific Strain in Patients With Heart Failure: Not All Layers Are the Same. Accepted as a moderated digital poster at the *American Heart Association's Scientific Sessions 2018*, Chicago, USA, November 10.

**55.** Costello B, Howden E, Bigaran A, Foulkes S, Wright L, Janssens K, **Haykowsky M**, Beaudry R, Antill Y, Nightingale S, Loi S, La Gerche A. Exercise Attenuates Cardiotoxicity of Anthracycline Chemotherapy When Measured by Global Longitudinal Strain but Not Native T1 Mapping Using Cardiac Magnetic Resonance Imaging. Accepted as a poster at the *American Heart Association's Scientific Sessions 2018*, Chicago, USA, November 10.

**56.** Yavari M, **Haykowsky MJF**, Thompson RB, Dyck JRB, **Haennel RG**. S 175. Association of Daily Physical Activity and Aortic Distensibility Across the Heart Failure Continuum. Presented at 33<sup>rd</sup> Annual *American Association of Cardiovascular and Pulmonary Rehabilitation*. September 14, 2018. Louisville, KY.

**57.** Howden E, Bigaran A, Foulkes S, Beaudry R, Janssens K, Loi S, Selig S, **Haykowsky M**, Fraser S, La Gerche A. An effective exercise intervention targeting breast cancer patients at greatest risk of cardiac dysfunction. Accepted as a poster (P643) at the 2018 European Society of Cardiology Congress, Munich, Germany, August 25. *European Heart Journal*. 2018. Supplement (39):86.

**58.** Costello B, Howden E, Bigaran A, Beaudry R, Foulkes S, Wright L, Janssens K, **Haykowsky M**, Antill Y, Nightingale S, Loi S, La Gerche A. Exercise Training Attenuates Chemotherapy-Induced Systolic Dysfunction Measured by Novel Cardiac Magnetic Resonance-Derived Global Longitudinal Strain. *Heart, Lung and Circulation*. 2018. 27(2):S239.

**59.** Costello B, Howden E, Bigaran A, Beaudry R, Wright L, Foulkes S, Janssens K,

- Haykowsky M**, Antill Y, Nightingale S, Loi S, La Gerche A. Native T1 Times Increase After 3 Months of Anthracycline-Based Chemotherapy for Breast Cancer. *Heart, Lung and Circulation*. 2018. 27(2): S259.
60. Howden E, Bigaran A, Foulkes S, Beaudry R, Janssens K, Antill Y, Loi S, Selig S, **Haykowsky M**, Fraser S, La Gerche A. An Effective Exercise Intervention Targeting Breast Cancer Patients at Greatest Risk of Cardiac Dysfunction. *Heart, Lung and Circulation*. 2018. 27(2):S298.
61. Rosenberry R, Bangalore-Yagananda CG, Chung S, Munson M, Tucker W, Zhu Y, **Haykowsky MJ**, Tian F, Nelson M. Partitioning key determinants of oxygen consumption: Novel insights from dual wavelength diffuse correlation spectroscopy. *THE FASEB Journal*. 2018. 32(1):722.17
62. Samueal TJ, Beaudry R, **Haykowsky MJ**, Sarma S, Neslon MD. Isometric handgrip echocardiography is a more powerful diastolic discriminator than conventional cycle echocardiography. *THE FASEB Journal*. 2018. 32(1):854.3
63. Boyes NG, Eckstein J, Pylpchuk S, Butcher SJ, Marciniuk DD, Dewa DMK, Wells CR, **Haykowsky MJ**, Tomczak CRT. Effects of prior heavy exercise in heart failure with preserved ejection fraction on VO<sub>2</sub> kinetics. *THE FASEB Journal*. 2018. 32(1):903.3
64. Kruger C, McNeely M, Bailey R, Yavari M, Abrales J, Carbonneau M, Newnham K, Mathiesen V, Ma M, Thompson R, Paterson I, **Haykowsky M**, Tandon P. Home exercise therapy is well tolerated and improves exercise capacity in patients with child pugh A and B cirrhosis. 2018.1.Suppl 1:46-47.
65. Samuel J, Beaudry R, **Haykowsky M**, Sarma S, Nelson M. Stress Testing for Diastolic Dysfunction: An Old Approach to a New Question. *International Journal of Exercise Science: Conference Proceedings*. 2018. 2(10):23.
66. **Mr. Samuel placed 2<sup>nd</sup> overall in the Texas American College of Sports Medicine doctoral student poster competiton.**
67. Ryan R, Yogananda B, Ganesh C, Chung S, Munson M, Tucker W, Zhu Y; **Haykowsky M**, Fenghua T, Nelson M. Dual Wavelength Diffuse Correlation Spectroscopy: A Novel Tool for Identifying Determinants of Oxygen Consumption. *International Journal of Exercise Science: Conference Proceedings*: 2018. 2(10):24.
68. Kakadekar A, Boyes N, Fusnik S, **Haykowsky MJ**, Runalls S, Erlandson M, Pharis S, Pockett C, Bradley T, Tomczak CR. Relation Between Heart Rate Variability and Exercise Heart Rate in Children with Congenital Heart Disease and Healthy Controls. *Cardiology in the Young*. 27(4): S155, 2017
69. Pharis S, Fusnik S, Boyes N, **Haykowsky MJ**, Runalls S, Erlandson M, Pockett C, Kakadekar A, Bradley T, Tomczak CR. Heart Rate Pressor Response during Isometric Handgrip Exercise in Children with Congenital Heart Disease and Healthy Controls. *Cardiology in the Young*. 27(4): S179, 2017
70. Pockett C, Boyes N, Erlandson M, Fusnik S, **Haykowsky MJ**, Runalls S, Pharis S,

Kakadekar A, Bradley T, Tomczak CR. Physical Activity Modulates Arterial Stiffness in Children with Congenital Heart Disease. *Cardiology in the Young*. 27(4): S172, 2017

71. Flannery MD, Beaudry R, Prior D, Kalman J, **Haykowsky M**, Brosnan M, La Gerche

A. Global longitudinal strain does not help differentiate between athlete's heart and pathology in athletes with low LVEF. *European Heart Journal*. 38(Supplement):321. 2017.

72. Nanayakkara S, **Haykowsky MJ**, Mariai J, Van Emple V, Maeder M, Vizi D, Kaye D. Age-specific Haemodynamics features in HFpEF: Implications for therapy. *Heart, Lung and Circulation*. 26 (Supplement 2): S128, 2017.

73. Beaudry R, Liang Y, Boyton S, Tucker W, Brothers M, Daniel K, **Haykowsky M**.

Effect of exercise training on vascular function in cancer survivors: A meta-analysis. 28<sup>th</sup> International Nursing Congress. Sigma Theta Tau International Honor Society of Nursing. Dublin, Ireland. July 29, 2017.

74. Tomczak CR, **Haykowsky MJ**, Paterson I. Effect of Cardiac Resynchronization Therapy on Arterial-ventricular Coupling during Exercise in Heart Failure with Reduced Ejection Fraction. *Medicine & Science in Sports & Exercise*. 49 (5S), 728.

75. Fusnik S, Stickland MK, Boyes NG, Hogeweide E, **Haykowsky MJ**, Runalls S, Kakadekar A, Pharis S, Pockett C, Wright KD, Erlandson M, Bradley TJ, Tomczak CR. The Muscle Metaboreflex Improves Post Exercise Blood Pressure Responses in Children after the Fontan Operation. *Medicine & Science in Sports & Exerc*. 49(5S), 729.

76. Hayward S, Boyes NG, Stickland MK, Fusnik S, Hogeweide E, Fries J, **Haykowsky MJ**, Runalls S, Kakadekar A, Pharis S, Pockett C, Wright k, Bradley TJ, Erlandson M, Tomczak CR. Exploring the Relationships of Body Composition, Aerobic Fitness and Physical Activity Levels with Arterial Stiffness in Healthy Children with Children with Congenital Heart Disease. *Medicine & Science in Sports & Exercise* 49 (5S), 732.

77. Kraft R, Hamilton C, Brubaker P, W. Hogue, Linville C, Becton T, Thompson R, **Haykowsky M**, Kitzman D. Noninvasive measurement of calf muscle perfusion immediately after plantar flexion exercise in elderly patients with heart failure and preserved ejection fraction. *International Society of Magnetic Resonance in Medicine*. 25<sup>th</sup> Annual Meeting. 2017. 4991,

78. Clifton H, Ratchford S, Vranish J, Trinity J, Ryan J, Richardson R, Fadel P, Sarma S, **Haykowsky M**, Wray W. Evidence of exaggerated muscle metaboreflex response in heart failure with preserved ejection fraction. *Experimental Biology* 2017. E276 687.18.

79. Development of a left ventricular diastolic stress test. Samuel J, Beaudry R, **Haykowsky M**, Sarma S, Bhella P, Park S, Liew M, Nelson M. *Experimental Biology* 2017. E258 838.1.

80. Assessing cardiac function during simulated activities of daily living: A magnetic resonance imaging study. Beaudry R, Tucker W, Zaha V, Singhavi M, **Haykowsky M**, Nelson M. *Experimental Biology* 2017. E357 843.9.

81. Nanayakkara S, **Haykowsky M**, Mariani J, Van Empel, Maeder M, Vizi D, Kaye D. Age Specific Hemodynamic features in HFpEF: Implications for therapy. *JACC*. March 21, 2017;

69(11).895.

**82.** Park B, Khera K, Pandey A, **Haykowsky M**, Kitzman D, Berry J. Exercise hemodynamics of heart failure with preserved ejection fraction. *Circulation*. 2017. 135.AP. 172.

**83.** Xu L, Wang H, Chow K, Pagano J, Schmidt A, White J, **Haykowsky MJ**, Michelakis E, Ezekowitz J, Dyck J, Oudit G, Thompson R, Paterson I. Right Ventricular Remodeling Predicts Outcome in Patients with Symptomatic and Asymptomatic Heart Failure. 20th Annual Scientific Session for the Cardiovascular Magnetic Resonance Society, 2017. Washington, DC, USA.

**84.** Tandon P, Kruger C, **Haykowsky M**, McNeely M, Abraldas J, Carbonneau M, Newham K, Ma M, Thompson R. Home Exercise Therapy is well-tolerated and improves exercise capacity in patients with Child Pugh A and B cirrhosis. 2016, American College of Gastroenterology Annual Scientific Meeting, Las Vegas.

**85. This abstract received an American College of Gastroenterology Governors Award for Excellence in Clinical Research.**

**86.** Fries J, Erlandson M, Hogeweide E, Fusnik S, **Haykowsky MJ**, Stickland MK, Runalls S, Kakadekar A, Pharis S, Pockett C, Wright K, Tomczak CR. Reduced Aerobic Fitness Despite Healthy Body Composition in Physically Active Children with Congenital Heart Disease. *Med Sci Sports Exerc*. 2016. 48(5 Suppl 1):1015.

**87.** Fusnik S, Stickland MK, Hogeweide E, Fries J, **Haykowsky MJ**, Runalls S, Kakadekar A, Pharis S, Pockett C, Wright K, Erlandson M, Tomczak CR. *Med Sci Sports Exerc*. 2016 May;48(5 Suppl 1):197.

**88.** Tomczak CR, **Haykowsky MJ**, Paterson I. Arterial-Ventricular Coupling during Moderate Intensity Exercise in Heart Failure with Reduced Ejection Fraction and Severe Exercise Intolerance. *Med Sci Sports Exerc*. 2016 May;48(5 Suppl 1):48

**89.** Thompson RB, Pagano JJ, Paterson I, Dyck J, Kitzman K, **Haykowsky M**. Differential responses of post-exercise recovery leg blood flow and oxygen uptake kinetics in HFPEF versus HFREF. *Journal of Cardiovascular Magnetic Resonance*. 2016, 18(Suppl 1):O9.

**90.** Thompson R, Chow C, Sekowski V, Michelakis E, Pagano J, Tymchak W, **Haykowsky MJ**, Ezekowitz J, Oudit G, Dyck J, Paterson I. Quantification of pulmonary edema in heart failure using MRI: invasive validation and evaluation in HFpEF and HFrEF patients. *Journal of Cardiovascular Magnetic Resonance*. 2016. 18(Suppl 1):O4.

**91.** Wang H, Xu L, Chow K, Pagano JJ, Schmidt A, White JA, Michelakis E, Ezekowitz J, Dyck J, **Haykowsky MJ**, Oudit GY, Thompson RT, Paterson I. Right ventricular remodeling and dysfunction among the spectrum of heart failure phenotypes. *Journal of Cardiovascular Magnetic Resonance*. 2016.18(Suppl 1):P73.

**92.** Tomczak CR, Fusnik S, Hogeweide E, **Haykowsky MJ**, Stickland MK, Runalls S, Kakadekar A, Pharis S, Pockett C, Erlandson M. Muscle Metaboreflex Regulation of Arterial Blood Pressure in Children with Congenital Heart Defects. *Circulation*. 2016;133:AP040.

**93.** Hogeweide E, Fusnik S, Fries J, **Haykowsky MJ**, Stickland MK, Runalls

S, Kakadekar A, Pharis S, Pockett C, Erlandson M, Tomczak CRT. Impaired Autonomic Control of Heart Rate at Rest and Slower Post-exercise Heart Rate Kinetics in Children with Congenital Heart Defects. *Circulation*. 2016;133:AP041.

**94.** Pituskin E, Paterson I, Ghosh S, Mackey JR, **Haykowsky MJ**. Long term effects of trastuzumab on cardiopulmonary and left ventricular function in women with HER2 overexpressing breast cancer. Thirty-Eighth Annual CTRC-AACR San Antonio Breast Cancer Symposium. P4-10-16, *Cancer Research*, 2015.

**95.** Pituskin E, Mackey JR, Koshman S, Jassal D, Pitz M, **Haykowsky MJ**, Thompson R, Oudit G, Ezekowitz J, I Paterson. Prophylactic beta blockade preserves left ventricular ejection fraction in HER2-overexpressing breast cancer patients receiving trastuzumab: Primary results of the MANTICORE randomized controlled trial. Thirty-Eighth Annual CTRC- AACR San Antonio Breast Cancer Symposium. PD5-03, *Cancer Research*, 2015.

**96.** Hall A, Kissel C, Fung M, Pajevic M, Ramadan D, Jackson L, **Haykowsky M**, Howlett J, Dyck J. Impaired microvascular function in subjects with heart failure: Results from the Alberta heart failure etiology and Analysis Research (HEART) study. *Circulation*. 2015. Suppl 3.132:S4186.

**97.** Altamirano L, Nelson M, **Haykowsky M**, Rebeyka I, Khoo N. Young heart transplant recipients have altered untwist mechanics and those with greater reliance on active atrial contraction during preload reduction stress is associated with lower exercise tolerance. *Circulation*. 2015. Suppl 3.132:M3038.

**98.** Yavari M, Buijs D, **Haykowsky M**, Podder M, Irwin M, Dyck J, Haennel R. Volume and patterns of physical activity in heart failure patients. *Physiotherapy*, Volume 101, Supplement 1, May 2015, Page e501.

**99.** Mathewson K, **Haykowsky MJ**, Thompson R. Feasibility and Reproducibility of Measurement of Skeletal Muscle Blood Flow, Oxygen Extraction and VO<sub>2</sub> with Dynamic Exercise Using MRI. *International Society of Magnetic Resonance in Medicine*. Proc. Intl. Mag.Reson. Med. 2014.22:0830.

**100.** **\*This abstract received the ISMRM Merit Award (Summa Cum Laude) as the top 3% of all abstracts submitted to the joint ISMRM-ESMRMB international meeting.**

**101.** Smirl J, **Haykowsky M**, Marsden K, Jones H, Nelson M, Ainslie P. Dynamic cerebral pressure-flow relationships in aging and long-term heart transplant recipients. *FASEB J*.2014.28:1068.11.

**102.** duManoir G, **Haykowsky M**, Taylor D, Syrotiuk D, Bell G. Combined strength and endurance training does not improve left ventricular systolic function in response to a high-intensity exercise in females. *FASEB J*.2014.28(10):881.7.

**103.** Butler C, Kim D, Toma M, Thompson R, Chow K, **Haykowsky M**, Pearson G, Paterson I. Cardiovascular MRI Imaging Independently Predicts Adverse Cardiovascular Events in Heart Transplant Recipients. *The Journal of Heart and Lung Transplantation*.2014:33(4):S136-137.

**104.** Butler C, Preiksaitis J, Singh R, Toma M, Thompson R, Chow K, Kim D, **Haykowsky M**, Pearson G, Paterson I. Cardiac MRI of Heart Transplant Recipients With Previous CMV

Infection Demonstrates Ventricular Hypertrophy and Dysfunction. *The Journal of Heart and Lung Transplantation*.2014;33(4):S136.

**105.** Yavari M, **Haykowsky M**, Ramadi I, Dyck J, Irwin M, Haennel M. Physical activity across the heart failure continuum. *Journal of Cardiopulmonary Rehabilitation & Prevention*. 2013;33(5):341.

**106.** Ramadi A, Haennel R, **Haykowsky M**, Aggarwal S, Stone J, Hitt E, Austford E, Arena R, Martin B. Evaluating exercise sustainability in home versus center based cardiac rehabilitation. *Journal of Cardiopulmonary Rehabilitation & Prevention*. 2013;33(5):340.

**107.** Edgell H, McMurtry S, Paterson I, Ezekowitz J, **Haykowsky M**, Dyck J, Stickland M. Effect of low-dose dopamine on cardio-respiratory physiology in heart failure patients. *FASEB J April 9, 2013 27:928.6*

**108.** Altamirano-Diaz, Nelson M, **Haykowsky M**, Khoo N. Young heart transplant with a greater reliance on atrial active function during preload reduction stress is correlated with poorer exercise tolerance. *J Am Coll Cardiol*.2013;61,10S.

**109.** Colburn J, Martin B, Hauer T, **Haykowsky M**, Austford L, Arena R, Knudtson M, Aggarwal S, Meldrum D, Stone J. *J Am Coll Cardiol*.2013;61,10S. Cardiac referral and attendance in women: A high-risk population with two strikes against it. *J Am Coll Cardiol*.2013;61,10S.

**110.** Martin BJ, **Haykowsky M**, Hauer T, Southern DA, Knutsun ML, Arena R, Stone JA, Aggarwal S. Cardiac Rehabilitation in the Elderly: A under referred population that does not attend. *AHA 2012 Scientific Sessions. Circulation*.

**111.** Martin B, Hauer T, **Haykowsky M**, Knudtson M, Austford L, Stone J, Aggarwal S, Arena R. Cardiac Rehabilitation is Associated With Reduced Mortality and Hospitalization in Subjects With Congestive Heart Failure. *Canadian Journal of Cardiology*. 2012.28(5):S290-S291.

**112.** Martin B, **Haykowsky M**, Hauer T, Southern D, Knudtson M, Arena R, Aggarwal S, Stone J. Cardiac Rehabilitation in the Elderly: An Under Referred Population That Does Not Attend.*Canadian Journal of Cardiology*. 2012.28(5):S392.

**113.** Cocker M, **Haykowsky M**, Friedrich M. Can a single VO<sub>2</sub>max test induce reversible myocardial injury in healthy endurance trained men: Insights from T2-Weighted Cardiovascular magnetic Resonance Imaging. *Canadian Journal of Cardiology*, Volume 27, Issue 5, Supplement, September-October 2011, Pages S209-S210. **•Dr. Cocker was a finalist for a student award at the 2011 Canadian Cardiovascular Congress for this abstract.**

**114.** Kaneko S, Tham E, Nelson M, Koo N, Mackie A, Smallhorn, Thompson R, **Haykowsky MJ**. Impaired Diastolic Reserve During Exercise in Children After Anthracycline Therapy With Normal Left Ventricular Ejection Fraction. *American Heart Association 2011 Scientific Sessions*. Orlando, FL, Nov 12-16.

**115.** Tham E, **Haykowsky MJ**, Chow K, Kaneko S, Spavor M, Khoo N, Pagano J, Mackie A, Thompson R. Diffuse Myocardial Fibrosis Negatively Correlates with Exercise Capacity in Children with Subclinical Anthracycline Cardiotoxicity. *American Heart Association 2011*

Scientific Sessions. Orlando, FL, Nov 12-16.

**116.** Cote A, **Haykowsky M**, Riess K, Bredin S, Warburton DER. Physical activity and cardiovascular health in heart transplant recipients. Canadian Association of Cardiac Rehabilitation. 20th Annual Meeting. Vancouver, BC, October 21, 2011

**117.** Smirl J, **Haykowsky M**, Marsden K, Jones H, Nelson M, Ainslie P, Alimirano-Diaz, L. Cerebral blood flow and heart transplant recipients: rest and during exercise. Physiological Society, Oxford, UK. July 13, 2011.

**118.** Jones LW, Dolinski V, **Haykowsky MJ**, Patterson I, Douglas PD, Allen J, Scott J, Rogan K, Khouri M, West M, Hornsby W, Young M, Peppercorn J, Marcom K, Blackwell K, Kimmick Dyck JD. Effects of aerobic training to improve cardiovascular function and prevent cardiac remodeling after cytotoxic therapy in early breast cancer American Association of Cancer Research 102<sup>nd</sup> Annual Meeting.

*HIGHLY RATED POSTER: This abstract scored in the top 2% of abstracts presented in the poster sessions and was selected for special recognition at the conference.*

**119.** Clark A, Scott J, Schopflocher D, Myers J, Paterson I, Warburton D, Jones L, **Haykowsky M**. A meta-analysis of the effects of exercise training on left ventricular remodeling following myocardial infarction: start early and go longer for greatest exercise benefits on mortality. European Society of Cardiopulmonary Rehabilitation.

**120.** Altamirano L, Nelson M, **Haykowsky M**, West L, Khoo N. Effects of Postural Stress on Left Atrial Function in Healthy Subjects Using Speckle Tracking Imaging. *J Am Coll Cardiol*. 57(14):868, suppl 1. Presented at 2011 *American College of Cardiology*, 60th Annual Scientific Session.

**121.** Development of myocardial edema following acute bouts of intense physical exertion in healthy active men: A cardiovascular magnetic resonance (CMR) study. Cocker M, **Haykowsky MJ**, Friedrich MG. *Journal of Cardiovascular Magnetic Resonance* 2011,13 (Suppl 1) 0111. Presented at 2011 SCMR/Euro CMR Joint Scientific Sessions, Nice France 3-6 February, 2011.

**122.** Tham EB, Chow K, Spavor M, Pagano J, **Haykowsky M**, Thompson R. Degree of diffuse fibrosis measured by MRI correlates with LV remodeling in childhood cancer survivors after anthracycline chemotherapy. *Journal of Cardiovascular Magnetic Resonance* 2011,13 (Suppl 1) P276. Presented at 2011 SCMR/Euro CMR Joint Scientific Sessions, Nice France 3-6 February, 2011.

**123.** Pun SC, Figura M, Chow K, **Haykowsky M**, Thompson R, Paterson I. A simple method for characterizing left ventricular remodeling by cardiovascular magnetic resonance. *Journal of Cardiovascular Magnetic Resonance* 2011,13 (Suppl 1) P277. Presented at 2011 SCMR/Euro CMR Joint Scientific Sessions, Nice France 3-6 February, 2011.

**124.** Kazemian P, Baron J, Chow K, **Haykowsky M**, Thompson R, Paterson I. Triplanar estimation of atrial volume. *Journal of Cardiovascular Magnetic Resonance* 2011,13 (Suppl 1) P327. Presented at 2011 SCMR/Euro CMR Joint Scientific Sessions, Nice France 3-6 February, 2011.

- 125.** Nelson MD, **Haykowsky MJ**, Stickland MK, Smith KJ, Willie CK, Altimirano-Diaz LA, Petersen SR, Rieger MG, Ainslie PN. Cerebral blood flow velocity during passive heart stress in man: influence of stroke volume. *The FASEB Journal*. 2011;25:1053.1.
- 126.** Nelson MD, Altimirano-Diaz LA, Petersen SR, Just TP, DeLorey D, Sticklan MK, Thompson RB, **Haykowsky MJ**. Left ventricular systolic and diastolic function during orthostatic heat stress. *The FASEB Journal*. 2011;25:1053.2.
- 127.** Cote AT, **Haykowsky MJ**, Bredin SD, Phillips AA, Esch BT, Warburton DER. Baroreceptor sensitivity in active organ transplant patients. 2011 American College of Sports Medicine Annual Scientific Conference.
- 128.** Cocker M, **Haykowsky M**, Friedrich M. Increased Extent of Myocardial Edema In Endurance Athletes Following Acute High-Intensity Interval Training: A Cardiovascular Magnetic Resonance (CMR) Study. *Circulation*, 23 November 2010; 122: A21236.
- 129.** Nelson MD, **Haykowsky M**, Petersen S, DeLorey D, Stickland M, Cheng-Baron J, Thompson R. Biventricular function during passive heat stress: Influence of aerobic fitness. *Appl. Physiol. Nutr. Metab.* Vol. 35, S76, 2010
- 130.** Marsden K, **Haykowsky M**, Smirl J, Jones H, Nelson, Haykowsky K, Ainslie P. Influence of aging on cerebral blood flow velocity during progressive cycling to volitional exhaustion. *Appl. Physiol. Nutr. Metab.* Vol. 35, S64, 2010.
- 131.** Smirl J, Ainslie P, Marsden K, Jones H, Nelson M, Dolinsky V, Haykowsky K, **Haykowsky M**. Alterations in arterial-cardiac baroreflex and dynamic cerebral autoregulation following heart transplantation. *Appl. Physiol. Nutr. Metab.* Vol. 35, S95, 2010.
- 132.** Cheng-Baron, Scott J, Esch B, **Haykowsky M**, Tyberg J, Thompson R. Relationship Between Mitral Velocity and Mitral Flow Time-Profiles During Ventricular Filling. Joint Annual Meeting ISMRM-ESMRMB 2010.
- 133.** Stickland M, Schulte F, **Haykowsky M**, Paterson I, Ezekowitz, McMurtry S. Carotid chemoreceptor modulation of muscle blood flow during leg-extension exercise in healthy humans. *FASEB J.* 24: 807.7.
- 134.** Nelson M, **Haykowsky M**, Petersen S, DeLorey D, Cheng-Baron J, Thompson R. Global diastolic function is preserved during passive heat stress due to augmented left ventricular untwisting. *FASEB J.* 24: 991.20
- 135.** Scott J, Esch B, **Haykowsky M**, Paterson I, Warburton D, Chow C, Cheng-Baron J, Lopaschuk G, Thompson R. Biventricular dysfunction following brief high intensity exercise in endurance trained individuals. *Appl. Physiol. Nutr. Metab.* Vol. 34: S.83, 2009.
- 136.** Clark A, **Haykowsky M**, Kryworchuko J, Scott S, Desmeules M, Luo W, Liang G, McAlister F. A meta-analysis of randomized trials of home-based secondary prevention programs: Comparisons to usual care and hospital-based cardiac rehabilitation. *European Journal of Cardiovascular Prevention & Rehabilitation.* 2009:S117.
- 137.** Cheng Baron J, Scott J, Esch B, Chow K, Paterson I, **Haykowsky M**, Thompson R. Measuring changes in morphology, hemodynamics, and mechanical function by controlling

ventricular preload using an MRI-compatible lower body negative pressure chamber. 17<sup>th</sup> Annual Scientific Meeting of the *International Society for Magnetic Resonance in Medicine*, 2009.

**138.** Cheng Baron J, Esch B, Scott J, **Haykowsky M**, Paterson I, Thompson R. Pressure gradient wave propagation in the left atrium and left ventricle during early diastole. 17<sup>th</sup> Annual Scientific Meeting of the *International Society for Magnetic Resonance in Medicine*, 2009.

**139.** Chow K, Esch B, **Haykowsky M**, Paterson I, Thompson RB. Measurement of Regional and Global Lung Ventilation Using Non-Rigid Image Registration. 17<sup>th</sup> Annual Scientific Meeting of the *International Society for Magnetic Resonance in Medicine*, 2009.

**140.** Chow K, Scott J, Esch B, **Haykowsky M**, Thompson RB, Paterson I. Quantification of Pulmonary Edema in Heart Failure Patients and Controls with B1-Field Corrected Free-Breathing MRI. 17<sup>th</sup> Annual Scientific Meeting of the *International Society for Magnetic Resonance in Medicine*, April 2009.

**141.** Thompson RB, Scott JM, Esch BT, Cheng Baron J, Chow K, Paterson I, **Haykowsky M**. Controlling Ventricular Preload using an MRI-Compatible Lower Body Negative Pressure Chamber: Measuring Changes in Volumes and Mechanical and Hemodynamic Function. *Journal of Cardiovascular Magnetic Resonance* 2009, **11**(Suppl 1):O77.

**142.** Thompson RB, Cheng Baron J, Chow K, Paterson, Scott JM, Esch BT, **Haykowsky M**, Paterson I. Comprehensive Evaluation of Diastolic Function with MRI. *Journal of Cardiovascular Magnetic Resonance* 2009, **11**(Suppl 1):O95.

**143.** Chow K, Toma M, Esch B, Scott J, **Haykowsky M**, Thompson R, Paterson I. Comparison of MRI-derived pulmonary edema measures with LVEDP and serum BNP. *Journal of Cardiovascular Magnetic Resonance* 2009, **11**(Suppl 1):P41.

**144.** Thompson R, Baron J, Chow K, Scott J, Esch B, **Haykowsky M**, Paterson I. Spatiotemporal Relationship between Ventricular Expansion and Flow Propagation during Early Filling. *Journal of Cardiovascular Magnetic Resonance*. 2009 **11**(suppl 1):091.

**145.** Tham E, Tourangeau J, Cheng Baron J, **Haykowsky M**, Thompson R. Larger Ventricular Volumes In Infants With Single Ventricle Correlate With Increased Total Pressure Gradient Measured By Cardiac MRI. *Circulation*, Oct 2008; **118**: S911.

**146.** Clark A, McAlister F, **Haykowsky M**. A meta-analysis of home based secondary prevention programs for coronary heart disease. *Can J Cardiol*, Vol 24; 194E, 2008.

**147.** Esch B, Scott J, Thompson R, Warburton D, Taylor D, Tymchak W, Paterson I, Poppe D, **Haykowsky M**. Ventricular Untwisting during Exercise in Heart Transplant Recipients. *Proceedings of the Cardiovascular Systems Dynamic Society*. No.4, 2008.

**148.** Scott J, Esch B, Warburton D, Toma M, A Jelani A, D. Taylor D, Thompson R, Paterson I, Poppe D, Liang Y, **Haykowsky M**. Ventricular-vascular coupling during peak aerobic exercise in heart transplant recipients. *Proceedings of the Cardiovascular Systems Dynamic Society*. No. 23, 2008.

149. Thompson R, Baron J, Scott J, Esch B, **Haykowsky M**, Warburton D, Paterson I. Propagation of Pressure Gradient Waves in the Left Atrium and Left Ventricle during Early Filling. *Proceedings of the Cardiovascular Systems Dynamic Society*. No. 33, 2008.
150. Tomczak C, Tomczak R, Paterson I, Martelloto A, Jelani A, Alfie A, Hruczkowski T, **Haykowsky M**, Pantano A, Gulmanhusein S, Haennel R. Applied Physiology, Nutrition, and Metabolism. *Applied Physiology Nutrition and Metabolism*. 2008. Vol 33, S102.
151. Nessim S, Scott J, Esch B, Warburton D, Jelani A, Toma M, Poppe D, Taylor D, Haennel R, **Haykowsky M**. Comparison of impedance cardiography with two-dimensional echocardiography for non-invasive measurement of stroke volume and cardiac output in heart transplant recipients and healthy individuals. *Applied Physiology Nutrition and Metabolism*. 2008. Vol 33, S70.
152. Nelson M, **Haykowsky M**, Mayne J, Jones R, Petersen S. The effects of the self-contained breathing apparatus (SCBA) on left-ventricular function during prolonged, strenuous exercise. *Applied Physiology Nutrition and Metabolism*. 2008. Vol 33, S70.
153. Hughes, J M, Petit, MA, Reed, KE, Macdonald, HM, Cousins, JM, Warburton, D ER, Lewanczurk, R Z, Scott, J M, McGavock, J M, **Haykowsky, MJ**, McKay, H A. *Journal of Bone and Mineral Research*. 2008(23): S133-S133.
154. Gross D, Stephens B, Bhambhani Y, **Haykowsky M**, Bostick G, Rashid S. Opioid prescriptions in Canadian workers' compensation claimants: Six-year trends and associations with return-to-work outcomes. 12th World Congress on Pain, 2008.
155. Cheng Baron J, Paterson I, **Haykowsky M**, Mackey J, Thompson R. Increased Diastolic Pressure Gradients are Measured During Dobutamine Stress Tests. International Society for Magnetic Resonance in Medicine 16th Scientific Meeting, 2008.
156. Tomczak C, Jelani A, Haennel R, **Haykowsky M**, Welsh R, Manns T. Impaired Exercise Cardiac Output and Prolonged Oxygen Uptake Kinetics in Patients with Prior Stroke. American Stroke Association International Stroke Conference 2008. *Stroke*. Vol 39(2):680.
157. Kennedy M, Warburton D, Boliek C, Esch B, Scott J, **Haykowsky M**. Effect of fitness on the oxygenation response to incremental exercise. *Appl. Physiol. Nutr. Metab.* Vol. 32, S50, 2007.
158. Mayne J, **Haykowsky M**, Hartley T, Butcher S, Jones R, Petersen S. Effect of the self-contained breathing apparatus on left ventricular function during stairclimbing exercise in fire protective ensemble. *Appl. Physiol. Nutr. Metab.* Vol. 32, S60, 2007.
159. Jendzjowsky N, Tomczak C, Lawrance R, Riess K, Warburton D, Tymchak W, Taylor D **Haykowsky M**. Impaired cardiovascular and gas exchange kinetics in heart transplant recipients during small muscle mass exercise. *Journal of Cardiopulmonary Rehabilitation and Prevention*. 2007;27:340.
160. Riess K, Tomczak C, Warburton D, Jendzjowsky, Haennel R, **Haykowsky M**. Impaired cardiopulmonary kinetics during the 6-minute walk test in active female kidney transplant recipients. *Journal of Cardiopulmonary Rehabilitation and Prevention*. 2007;27:344.
161. Esch B, Witt J, **Haykowsky M**, McGuire A, Gatto A, Tomczak C, Jendzjowsky,

Warburton D. Heart rate variability in cardiac and noncardiac transplant recipients. *Journal of Cardiopulmonary Rehabilitation and Prevention*. 2007;27:351.

**162.** Jendzjowsky N, Tomczak C, Lawrance R, Riess K, Taylor D, Warburton D, Tymchak W, **Haykowsky M**. Impaired exercise capacity in heart transplant recipients during aerobic exercise involving a small muscle mass. *The FASEB Journal*. 2007;21:614.27.

**163.** Riess k, Warburton D, Tomczak C, Esch B, Liang Y, Gatto S, McGuire A, Lewanczuk R, **Haykowsky M**. Reduced Arterial Compliance in Transplant Recipients. *European Journal of Cardiovascular Prevention & Rehabilitation*. 14 Supplement 1: S85:222. April 2007.

**164.** Tomczak C, Riess k, Warburton D, Jendzjowsky N, Liang Y, Esch B, Haennel R, Bhambhani B, **Haykowsky M**. Predicting Pulmonary Oxygen Uptake during the 6- Minute Walk Test in Transplant Recipients. *European Journal of Cardiovascular Prevention & Rehabilitation*. 14 Supplement 1:S38:223. April 2007.

**165.** Tomczak C, Warburton D, Jendzjowsky N, Riess K, Liang Y, Esch B, Haennel R, Bhambhani B, **Haykowsky M**. Impaired Pulmonary Oxygen Uptake and Heart Rate Kinetics during the 6-Minute Walk Test in Transplant Recipients. *European Journal of Cardiovascular Prevention & Rehabilitation*. 14 Supplement 1:S38:224. April 2007.

**166.** Bhambhani Y, Mandic S, Tymchak W, Kim D, Taylor D, Quinney A, **Haykowsky M**. Peak Oxygen Uptake is Limited by Oxygen Transport and not Peripheral Extraction in Congestive Heart Failure Patients. *Medicine & Science in Sports & Exercise*. 39(5) Supplement:S33, May 2007.

**167.** Tomczak C, Riess K, Jendzjowsky N, Tymchak W, Kim D, **Haykowsky M**. Exercise Training Improves Pulmonary Oxygen Uptake Kinetics In Heart Transplant Recipients. *Medicine & Science in Sports & Exercise*. 39(5) Supplement:S282, May 2007.

**168.** Matsuura C, Gomes P, **Haykowsky M**, Bhambhani Y. Cardiorespiratory responses to resistance exercise under hypoxia in healthy subjects. *Medicine & Science in Sports & Exercise*. 39(5) Supplement:S93, May 2007.

**169.** Tomczak CR , Warburton DER, Bhambhani Y, Jendzjowsky N, Riess K, Haennel R, Esch B, Pechter D, **Haykowsky M**. Cardiopulmonary responses during the 6-minute walk test in transplant recipients: Role of physical fitness. *Physiotherapy*. 93 (Suppl 1): S245, 2007.

**170.** Mandic S, Kim D, Tymchak W, Taylor D, Quinney HA, Riess K, **Haykowsky M**. Peripheral vascular endothelial function remains impaired in heart transplant recipients. *Circulation*. 114 (18): 852-852 Suppl. S OCT 31 2006.

**171.** Esch, B.T.A., Scott, J.M., **Haykowsky, M**, Warburton, D.E.R. (2006). Impaired left ventricular compliance following prolonged strenuous exercise. *Applied Physiology, Nutrition and Metabolism* 31:S23.

**172.** Gatto, S. Zbogor D, Scott, J.M., Esch, B.T.A., Koehle, M.S., Bredin, S.S.D., **Haykowsky, M**, Warburton, D.E.R. (2006). Comparison of photoelectric plethysmography-derived vascular assessments to applanation tonometry. *Applied Physiology, Nutrition and Metabolism* 31:S30.

- 173. Haykowsky M**, Jones L, Pituskin E, Jendzjowsky N, Tomczak C, Haennel R, Mackey J. Cardiac function and cardiovascular risk profile of postmenopausal women after chemo-endocrine therapy for hormone-receptor positive operable breast cancer. 29th Annual San Antonio Breast Cancer Symposium, 2006.
- 174. Riess K, Gourishanker S, Lewanczuk R, Dueck A, Jones L, McGavock, Haykowsky M**. Aerobic endurance and arterial compliance in kidney transplant recipients. *J Cardiopulmonary Rehabilitation*, 2006;278.
- 175. Mandic S, Tymchak W, Kim D, Daub B, Taylor D, O’Rielly K, Quinney HA, AlKurtass S, Haykowsky M**. Reduced exercise capacity is related to impaired left ventricular systolic function and lower extremity muscle strength in heart failure patients. *EUROPEAN HEART JOURNAL* 27: 479-479 Suppl. 1 AUG 2006.
- 176. Jones LW, Eves N, Mackey J, Peddle C, Haykowsky M, Joy A, Courneyea C, Reiman T**. Relationship between cardiorespiratory fitness and quality of life in individuals with advanced breast and small-small cell lung cancer. 9<sup>th</sup> International conference of behavioral Med 2006.
- 177. Peddle CJ, Eves ND, Courneyea K, Haykowsky M, Mackey J, Joy A, Reiman T, Winton T, Jones L**. Effects of presurgical exercise training on exercise capacity in operable lung cancer: A pilot study. *Journal of Clinical Oncology*. Vol 24, No 18S (June 20 Supplement), 2006: 17047.
- 178. Jones LW, Haykowsky M, Peddle CJ, Joy AA, Pituskin EA, Tkachuk LM, Courneyea KS, Slamon DJ, Mackey JR**. Cardiovascular risk profile of breast cancer patients treated with anthracycline-taxane containing adjuvant chemotherapy and/or trastuzumab. *Journal of Clinical Oncology*. Vol 24, No 18S (June 20 Supplement), 2006: 666.
- 179. Scott JM, Esch B, Zbogar D, Koehle M, Bredin S, Haykowsky M, McKenzie D, Warburton D**. Effects of Prolonged Strenuous Exercise on Left Ventricular Diastolic Filling in Male and Female Triathletes. *Med Sci Sports Exerc*. 2006 May;38(5 Suppl):S325.
- 180. Esch BT, Scott JM, Haykowsky MJ, McKenzie DC, Warburton DER**. Diastolic ventricular interactions in endurance athletes during lower body positive and negative pressure. *Med Sci Sports Exerc*. 2006 May;38(5 Suppl):S18.
- 181. Mandic S, Tymchak W, Kim D, Taylor D, Quinney HA, Haykowsky M**. Impaired peripheral vascular function contributes impaired muscular endurance in heart failure. *Med Sci Sports Exerc*. 2006 May;38(5 Suppl):S74.
- 182. Tomczak C, Jendzjowsky NG, Kim D, Tymchak W, Haennel RG, Haykowsky M**. Ischemic Heart failure Etiology Affects Phase II VO<sub>2</sub> Kinetics in Heart Transplant Recipients. *Med Sci Sports Exerc*. 2006 May;38(5 Suppl):S359.
- 183. Zbogar D, Esch B, Scott J, Koehle M, Huges B, Isserow S, Bredin S, Haykowsky M, McKenzie D, Warburton D**. Arterial Compliance: Acute Effects of Prolonged Strenuous Exercise in Endurance-Trained Athletes. *Canadian Journal of Applied Physiology*, S 88, 2005.
- 184. Scott J, Esch B, Zbogar D, Koele M, Huges B, Bredin S, Isserow S, Haykowsky M**,

- Mckenzie D, Warburton D. Effects of Prolonged Strenuous Exercise on Left Ventricular Function During Dobutamine Stress in Male and Female Triathletes. Canadian Journal of Applied Physiology, S 72, 2005.
- 185.** Esch B, Scott J, Zbgoar D, Koehle M, Huges B, Isserow S, Bredin S, **Haykowsky M**, Mckenzie D, Warburton D. Effects of a Half-Ironman Triathlon on Myocardial Efficiency and Oxygen Consumption in Males and Females. Canadian Journal of Applied Physiology, S 25, 2005.
- 186.** Mandic S, Tymchak W, Kim D, Quinney HA, **Haykowsky MJ**. Exercise Training Improves Brachial But Not Posterior Tibial Endothelial Function In Heart Failure Patients. 2006, Canadian Journal of Applied Physiology, S 51, 2005.
- 187.** Mandic S, Tymchak W, Kim D, Quinney HA, **Haykowsky MJ**. Acute exercise responses and quality of life in individuals with heart failure: Does heart failure etiology label the outcomes? Journal of Cardiopulmonary Rehabilitation. 25(5):311, 2005.
- 188.** Kennedy MD, Esch, B, Scott JM, **Haykowsky MJ**, Sheel W, Boliek C, Warburton D. Proximal versus distal tissue oxygenation in vastus lateralis during incremental cycling. Medicine & Science in Sports & Exercise. 37(5) Supplement:S361, May 2005
- 189.** Mandic S, Tymchak W, Kim D, Daub B, Taylor D, Jendzjowsky N, O’Rielly K, Quinney A, **Haykowsky M**. Improvement in Exercise Capacity and Peripheral Vascular Endothelial Function with Exercise Training in Heart Failure: Does Etiology of Heart Failure matter? Clin Invest Med.28(2):87-88, April, 2005.
- 190.** Stickland M, Welsh RC, Petersen SR, Tyberg JV, Anderson WD, Jones RL, Taylor DA, Bouffard M, **Haykowsky MJ**. Effect of Aerobic Fitness on Left-Ventricular Filling Dynamics During Incremental Exercise. FASEB JOURNAL 19 (4): A129 Part 1 Suppl. S MAR 4 2005.
- 191.** McGavock, J, McGuire A, Torrance, McKnight C, **Haykowsky M**, Wozny P, Jones L, Lewanczuk R. The impact of smoking on determinants of health in children. Diabetes and Vascular Disease Research, 2004.
- 192.** McGavock, J, McGuire A, Torrance, McKnight C, **Haykowsky M**, Wozny P, Jones L, Lewanczuk R. Gender differences in insulin sensitivity from 5-55 yrs. Diabetes and Vascular Disease Research, 2004.
- 193.** McGavock JM, McKnight C, **Haykowsky MJ**, Lewanczuk RZ. The impact of low cardiorespiratory fitness on conduit and resistant artery stiffness in men. Journal of Cardiopulmonary Rehabilitation. 24361, 2004.
- 194.** Eves ND, Petersen SR, **Haykowsky MJ**, Wong E and Jones RL. Helium and
- 195.** Hyperoxia improve exercise tolerance and ventilatory mechanics in Chronic Obstructive Pulmonary Disease. Canadian Journal of Applied Physiology. S45, 2004.
- 196.** McGavock J, Mandic S, VonderMuhll I, Koller M, Quinney A, Taylor D, **Haykowsky MJ**. Left ventricular adaptations to aerobic and strength training in post menopausal women. Canadian Journal of Applied Physiology. S66, 2004.
- 197.** McGavock J, McNight C, Dueck A, Mcguire A, **Haykowsky M**, Wozny P, Lewanczuk R.

The impact of overweight and obesity on determinants of cardiovascular and metabolic health in children and adolescents. *Canadian Journal of Applied*

*Physiology*. S67, 2004.

**198.** Reed K, Warburton D, McGavock J, Lewanczuk R, Whitney C, Scott J, **Haykowsky M**, McKay H. Arterial compliance and its relationship with aerobic fitness in children. *Canadian Journal of Applied Physiology*. S75, 2004.

**199.** Stickland M, Welsh R, **Haykowsky M**, Petersen S, Anderson W, Taylor D, Bouffard M, Jones R. The effect of lower body positive pressure on pulmonary gas exchange and intrapulmonary shunt during exercise. *Canadian Journal of Applied Physiology*. S85, 2004.

**200.** Stickland M, **Haykowsky M**, Petersen S, Jones R, Anderson W, Taylor D, Bouffard M, Welsh R. Cardiovascular responses to lower body positive pressure during exercise. *Canadian Journal of Applied Physiology*. S85, 2004.

**201.** Stickland MK, Welsh RC, **Haykowsky MJ**, Petersen SR, Anderson WD, Taylor DA, Bouffard M, Jones RL. Exercise-induced arterial hypoxemia is related to pulmonary shunt. *FASEB JOURNAL*. 18 (5): A1275-A1275 Suppl. S, 2004.

**202.** Riess K, Figgures L, Dueck A, Kennedy M, Jones L, Tymchak W, **Haykowsky M**. Exercise training improves leg press strength and distance walked in six minutes in cardiac transplant recipients. *European Journal of Cardiovascular Prevention & Rehabilitation*. Volume 11, Supplement 1. O-83.

**203.** Eves N, Figgures L, Tymchak W, **Haykowsky M**. Ventilatory efficiency is improved in cardiac transplant recipients following 12 weeks of combined aerobic and strength training. *The Journal of Heart and Lung Transplantation*. Volume 23(2):S96, 2004.

**204.** McGavock JM, Mandic S, Lewanczuk RZ, Koller M, Welsh RC, Quinney HA, **Haykowsky MJ**. Exercise training improves maximal aerobic capacity and endothelial function in women with type 2 diabetes mellitus. *J Cardiopulmonary Rehabilitation*. 23(5):387-389, 2003.

**205.** Stickland M, Anderson W, Welsh R, Petersen S, Jones R, **Haykowsky M**. Ventriculoarterial coupling during prolonged exercise in endurance athletes. *Medicine Science in Sports and Exercise*. Vol 35(5), S120, 2003.

**206.** Warburton D, McKenzie D, Shoemaker P, **Haykowsky M**, Ignaszewski A, Chan S. A novel intervention for the rehabilitation with coronary artery disease. *Medicine Science in Sports and Exercise*. Vol 35(5), S176, 2003.

**207.** Koller M, Rashedi S, Jamieson K, **Haykowsky M**. Effects of opioid analgesia on lumbar extensor endurance in chronic low back pain. *Medicine Science in Sports and Exercise*. Vol 35(5), S242, 2003.

**208.** **Haykowsky M**, Eves N, Figgures L, Koller M, Burton J, Tymchak J. Early initiation of aerobic and resistance training improves peak aerobic power, leg-press maximal strength and distance walked in six minutes in recent cardiac transplant recipients. *The Journal of Heart and Lung Transplantation*. Volume 22, S179, 2003.

**209.** **Haykowsky MJ**, Vonder Muhill I, McGavock J, Ezekowitz J, Welsh R, Armstrong

P. Peak aerobic power is severely reduced in older women with congestive heart failure.

*Can J Cardiol*, Vol 18, 451, 2002.

**210.** McGavock J, Mandic S, Vonder Muhill, Lewanczuk RZ, Quinney A, Taylor D, Welsh R, **Haykowsky MJ**. Cardiovascular Adaptations to exercise training in post menopausal women with type II diabetes. *Can J Cardiol*, Vol 18, 166, 2002.

**211.** Stickland M, Anderson W, Welsh R, Petersen S, Jones R, **Haykowsky MJ**. Absence of LV systolic dysfunction during prolonged strenuous exercise. *Can J Cardiol*, Vol 18, 449, 2002.

**212.** duManoir G, **Haykowsky MJ**, Syrotuik D, Taylor D, Bell G. The effect of 10 weeks of combined aerobic and strength training on left ventricular morphology in rowers. *Canadian Journal of Applied Physiology*. Vol 27, S15, 2002.

**213.** Vonder Muhll I, Black B, Daub B, Warburton D, **Haykowsky MJ**. Cardiac rehabilitation in the ninth decade of life. *Circulation* Vol 104, No. 17, II-799, 2001.

**214.** Kennedy M, **Haykowsky MJ**, Daub, B, Van Louizen K, Knapick G, Black B. Impact of cardiac rehabilitation on quality of life measures in older women. *Circulation* Vol 104, No. 17, II-799-800, 2001.

**215.** McGavock JM, Eves N, Burton J, Tymchak W, **Haykowsky MJ**. Ventilatory response to exercise in cardiac transplant candidates. *Can J Appl Physiol* Vol 2b, No. 5, 498, 2001.

**216.** Stickland M, Petersen S, **Haykowsky MJ**, Taylor DA, Jones RL. The effect of 20 km simulated cycle racing on pulmonary diffusion capacity and left ventricular systolic function. *Can J Appl Physiol* Vol 2b, No. 5, 515-516, 2001.

**217.** Stickland M, Petersen S, **Haykowsky MJ**, Jones RL. Do elite cyclists self-select maximal lactate steady state (MLSS) during a simulated 20 Km time trial (TT)? *Can J Appl Physiol* Vol 2b, No. 5, 516, 2001.

**218.** Warburton D, **Haykowsky MJ**, Quinney A, Blackmore D, Teo K, Humen D. Myocardial oxygen consumption in the supine and upright positions in endurance athletes. *Can J Appl Physiol* Vol 2b, No.5, 521-522, 2001.

**219.** Eves N, Burton J, Tymchak J, McGavock J, **Haykowsky M**. Stroke volume plateau is not related to the ventilatory threshold in heart failure patients assessed for a heart transplant. *Can J Cardiol*. Vol 17 Suppl C, 196c, 2001.

**220.** McGavock J, **Haykowsky M**, Eves N, Tymchak W, Burton J. The ventilatory response to exercise in patients assessed for cardiac transplantation. *JCR*. Vol 21, No. 5, 327, 2001.

**221.** Warburton D, **Haykowsky M**, Quinney A, Blackmore D, Teo K, Humen D. Influence of postural position on cardiac output during incremental exercise in endurance-trained athletes. *Med Sci Sports Exerc* Vol 33, No. 5, S18, 2001.

**222.** McGavock J, **Haykowsky MJ**, Warburton D, Taylor D, Quinney HA, Welsh R. Effects of prolonged strenuous exercise on left ventricular systolic function in female athletes. *Can J Cardiol*. Vol 16(Suppl F): 218F, 2000.

**223.** Warburton D, **Haykowsky MJ**, Blackmore D, Quinney A, Teo KK, Taylor D, Humen D. Optimal aerobic training for congestive heart failure patients. *JCR*. Vol 20, No.5:306, 2000.

- 224.** McGavock J, **Haykowsky MJ**, Warburton D, Quinney HA, Taylor T, Welsh R. Left ventricular filling parameters following prolonged exercise. *Can J Appl Physiol* Vol 25, No.5, 391, 2000.
- 225.** McGavock J, **Haykowsky MJ**, Warburton D, Quinney HA, Taylor T, Welsh R. Left ventricular systolic function during prolonged exercise in females. *Can J Appl Physiol*. Vol 25, No. 5, 392, 2000.
- 226.** Warburton D, McGavock J, Quinney HA, **Haykowsky MJ**, Blackmore D, Teo K, Taylor T, Loitz C, Humen DP. Continuous vs. Interval training: Effects on volume regulatory hormones. *Can J Appl Physiol*. Vol 25, No. 5, 410, 2000.
- 227.** Warburton D, Quinney A, **Haykowsky MJ**, Blackmore D, Teo K, Taylor T, Humen D. New thinking for the rehabilitation of congestive heart failure patients. *Can J Appl Physiol*. Vol 25, No. 5, 410, 2000.
- 228.** Warburton D, McGavock J, Welsh RC, **Haykowsky MJ**, Quinney A, Taylor D, Dzavik V. Effects of prolonged strenuous exercise on the development of late potentials in female triathletes. *Can J Appl Physiol*. Vol 25, No. 5, 411, 2000.
- 229.** Warburton D, **Haykowsky MJ**, Quinney HA, Blackmore, Teo K, Taylor D, Loitz C, Humen D. Resting diastolic function and aerobic training. *Can J Appl Physiol*. Vol 25, No. 5, 411, 2000.
- 230.** Warburton D, Blackmore D, **Haykowsky MJ**, Frost G, Quinney A, Teo KK, Taylor D, Loitz C, Hornby C, Humen D. Effects of continuous versus intermittent training on blood volume, aerobic power and ventricular morphology. *Med Sci Sports Exerc* Vol 32, No. 5, S803, 2000.
- 231.** McGavock J, Warburton D, Blackmore D, **Haykowsky MJ**, Quinney A, Teo KK, Taylor D, Loitz C, Hornby C, Humen D. Effects of continuous versus interval exercise on the ventilation threshold. *Med Sci Sports Exerc*. Vol. 32, No. 5: S1569, 2000.
- 232.** Man HJ, **Haykowsky M**, Teo K, Lee J, Humen D. Plateau in exercise stroke volume is not related to the anaerobic threshold in congestive heart failure patients. *Canadian Academy of Sport Medicine Proceedings*, P. 34, 2000.
- 233.** Lee J, **Haykowsky M**, Humen D, Man J, Teo K. Predictors of the 6-minute walk test in individuals with congestive heart failure. *Canadian Academy of Sport Medicine Proceedings*, P.33, 2000.
- 234.** **Haykowsky MJ**, Taylor DA, Teo K, Humen DP, Quinney HA, Thompson CR. Effects of prolonged resistance training on left ventricular morphology and systolic function in elite athletes. *Proceedings for the Irish Cardiac Society 50<sup>th</sup> Annual General Meeting*. P. 43, 1999.
- 235.** Warburton DER, Welsh RC, **Haykowsky MJ**, Taylor DA, Humen DP, Dzavik V. Effects of the half ironman triathlon on the development of late potentials in elite athletes. *Proceedings for the Irish Cardiac Society 50<sup>th</sup> Annual General Meeting*. P. 57, 1999.
- 236.** **Haykowsky MJ**, Teo KK, McKelvie RS, Humen DP. Determinants of peak aerobic power in individuals with congestive heart failure. *Can J Cardiol* Vol 15 (Suppl D), 229D-230D, 1999.
- 237.** Welsh RC, **Haykowsky MJ**, Humen DP, Armstrong PW, Taylor DA. Prolonged

strenuous exercise alters cardiovascular response to dobutamine stimulation. *Can J Cardiol.* Vol 15 (Suppl D), 118D, 1999.

**238.** Welsh RC, Warburton DER, **Haykowsky MJ**, Taylor DA, Humen DP. Hematological response to the half-ironman triathlon. *Med Sci Sports Exerc.* Vol 31, No. 5, S63,1999.

**239.** Warburton DER, Welsh RC, **Haykowsky MJ**, Taylor DA, Humen DP, Dzavik V. Effects of dobutamine infusion and prolonged strenuous exercise on late potentials in athletes. *Med Sci Sports Exerc.* Vol 31, No. 5, S151, 1999.

**240.** Cumming D, **Haykowsky M**, Souster M, Bell G. Acute hormonal response to acute strength exercise in strength trained and untrained men. *Med Sci Sports Exerc.* Vol 31, No. 5, S378, 1999.

**241.** **Haykowsky MJ**, Welsh RC, Humen DP, Armstrong PW, Warburton DER, Taylor DA. Impaired systolic function associated with a half-ironman. *JACC.* Vol 33:2(Suppl A),1999.

**242.** Warburton DER, **Haykowsky MJ**, Quinney HA, Teo K, Blackmore D, Humen DP. Left ventricular Function in Elite Cyclists during incremental exercise in the supine position. *Can J Appl Physiol* 24:5, 487, 1999.

**243.** **Haykowsky MJ**, Quinney, HA, Souster M, Webster, T, Warburton DER. Incidence of injuries in world class bench press athletes. *Can J Appl Physiol.* Vol 23. No.5, 484,1998.

**244.** Souster M, **Haykowsky M**, Harber, V, Cumming D, Bell G. Hormonal response to resistance training in elderly men. *Can J Appl Physiol.* Vol 23, No. 5, 509,1998.

**245.** Warburton DER, Quinney HA and **Haykowsky MJ**. Injuries associated with elite powerlifting training. *Med Sci Sports Exerc.* Vol 30, No.5, S52, 1998.

**246.** **Haykowsky M**, Taylor D, Quinney A, Teo K, Humen D. Left ventricular wall stress during leg press resistance exercise. *Can J Appl Physiol.* Vol 22(Suppl), 26, 1997.

**247.** Quinney, HA, Warburton, DER, Webster A, Calvert R, **Haykowsky, MJ**. Pain and injuries associated with elite powerlifting: A Canadian perspective. *Can J Appl Physiol.* Vol 22 (Suppl), 49,1997.

**248.** **Haykowsky MJ**, Dewart R, Quinney A, Taylor D. Absence of left ventricular hypertrophy with long-term powerlifting training. *Physiologist.* Vol 39, No. 5, 37A,1996.

**249.** **Haykowsky MJ**, Chan S, Bell GJ, Taylor D, Bhambhani Y, Syrotuik D, Quinney HA. Effects of combined aerobic and strength training on left ventricular morphology in rowers. *Can J Appl Physiol.* Vol 20(Suppl), 22,1995.

**250.** Ignaszewski AP, Murray CA, **Haykowsky MJ**, Humen DP. Regulations for performance of exercise tolerance testing in Canada. *Med Sci Sports Exerc.* Vol 27, No.5, S47, 1995.

**251.** **Haykowsky MJ**, Quinney HA. Powerlifting related injuries in elite blind powerlifters: A Canadian Perspective. *Clin J Sport Med.* Vol 5, No. 4, 272,1995.

**252.** **Haykowsky MJ**, Ignaszewski, AP, Norris SR, Williams R, Taylor D. Safety and utility of transesophageal echocardiography during leg press weight lifting. *Clin J Sport Med.* Vol 5, No. 4, 279,1995.

**253.** **Haykowsky MJ**, Ignaszewski AP, Norris SR, Williams R, Taylor D. Safety and utility of

transesophageal echocardiography during submaximal and maximal aerobic exercise. *Clin J Sport Med*. Vol 5, No. 4, 279,1995.

**254. Haykowsky MJ**, Almahmeed W, Ling H, Allard M, Ignaszewski AP, Carere R. Spontaneous coronary artery dissection associated with aerobic exercise. *Clin J Sport Med*. Vol 5, No. 4, 279,1995.

**255.** Ignaszewski AP, Murray CN, **Haykowsky MJ**, Hann RH, Teo KK, Humen DP. Is rate of angina and silent myocardial ischemia during exercise testing different between young and elderly populations? *JACC (Special Issue)* 484A, 1994.

**256.** Ignaszewski AP, **Haykowsky MJ**, Murray CN, Hann RH, Teo KK, Humen DP. Hemodynamic and ischemic responses during exercise testing: Gender differences. *JACC (Special Issue)*, 447A, 1994.

**257. Haykowsky MJ**, Ignaszewski AP, Bell GJ, Quinney HA, Mohler J, Petruk KC, McElgunn DM. Subarachnoid hemorrhage associated with leg press resistance training. *Med Sci Sports Exerc*. Vol 26, No.5, 830,1994.

**258.** Gupta IP, Teo KK, Ignaszewski AP, Catellier D, Hann RH, **Haykowsky MJ**, Murray CA, Humen DP. Predictive value of stress double product for coronary artery disease in patients with resting bundle branch block during exercise stress testing. *Circulation*. Vol. 90, No.4 (Part 2), 1-329,1994.

**259. Haykowsky MJ**, Ignaszewski AP, Teo KK, Stickel A, Murray C, Humen DP. Safety and utility of exercise testing in the ninth and tenth decade of life. *Circulation*. Vol. 90, No. 4 (Part 2), 1-272,1994.

**260.** Ignaszewski AP, Cluett LX, **Haykowsky MJ**, Gutierrez R, Hill L, Stickel A, Teo KK, Humen DP. Effects of strength training on ventricular function in CHF patients. *Can J Cardiol*. Vol 10 (Suppl A), 79A, 1994.

**261.** Gutierrez RG, Hill LC, Ignaszewski AP, **Haykowsky MJ**, McCormick L, Teo KK, Humen, DP. Strength training in CHF patients: Safe and feasible. *Can J Cardiol* Volume 10 (SupplA), 76A,1994.

**262. Haykowsky MJ**, Ignaszewski AP, Stickel A, Murray CA, Teo KK, Humen DP. Exercise tolerance testing in the tenth decade of life. *JCR*. Vol 14, No.5, 348,1994

**263.** Ignaszewski AP, **Haykowsky MJ**, Norris SR, Gutierrez R, Hill L, Teo KK, Humen DP. Safety and hemodynamic responses to isokinetic dynamometer testing in congestive heart failure. *Med Sci Sports Exerc*. Vol. 25, No. 5, S38,1993.

**264.** Ikuta R, Teo KK, **Haykowsky MJ**. The detection of occult coronary artery disease in low-risk elderly males by maximal exercise testing. *Clinical and Investigative Medicine*. Vol 16, No. 3, 58,1993.

**265.** Ignaszewski AP, **Haykowsky MJ**, Gutierrez R, Hill L, Schault B, Kemp M, McCormick L, Teo KK, Humen DP. Enrollment in exercise trial improves quality of life for patients with significant congestive heart failure. *JCR*. Vol 13, No. 5, 357, 1993.

## **INVITED PRESENTATIONS**

1. Aorta in Sports Cardiology. European Association of Preventive Cardiology: Sports Cardiology Course 2026. Munich Germany. September 1, 2026
2. Aortic Aneurysms and Exercise. Aortic Athletes. Aortic health YouTube Channel. January 21, 2026 (Virtual)
3. Accelerated Aging in Breast Patients Receiving Breast Cancer Therapy. Canadian Cardiac Oncology Network Symposium. November 21, 2025.
4. Evaluation Exercise Limitations Along the Oxygen cascade: Role of Exercise MRI. Centre for heart Lung Innovation. UBC - St. Pauls Hospital, Vancouver, Canada. November 15, 2025.
5. The Athletes Paradox: can you run your heart into Failure? College of kinesiology, University of Saskatchewan. Saskatoon, Saskatchewan. October 31, 2025.
6. Exercise Oxygen Uptake and Recovery Kinetics. Hochgebrinksklinik Cardiac rehabilitation Rounds. Davos, Switzerland, September 19, 2025.
7. Exercise and Thoracic Aortopathy: When Might an Aneurysm Go Pop?". UBC Cardiology Grand Rounds. Vancouver, Canada. May 29, 2025.
8. Exercise limits in a patient with aortic disease. 2025 European Society of Preventive Cardiology Congress. Milan, Italy. April 5, 2025.
9. Adipose tissue deposits: What do they tell us about heart failure outcome? 2025 European Society of Preventive Cardiology Congress. Milan, Italy. April 4, 2025.
10. Aortic Wall Stress and Remodeling: From Healthy Aging to Athletic Adaptation and Pathological Dilatation. Moritz Speaker Series. College of Nursing and Health Innovation, University of Texas Arlington. Arlington, Texas. March 26, 2025.
11. Mechanisms of exercise intolerance in breast cancer: Similarities between HFpEF. Barbara Ell Seminar. Victor Chang Research Institute. Sydney Australia. March 14, 2025.
12. Under Pressure: Impact of Exercise on Cardiac Function and Aortic Wall Stress in Thoracic Aortic Disease. Baker Heart & Diabetes Institute. Melbourne Australia. March 12, 2025.
13. Exercise, will the dilated aorta 'Go Pop'? In the session titled "Kick to kick – sports med and sports cardiol". Sports and Cardiac Arrest Australia 2025 Symposium. Mantra Lorne, Australia. March 8, 2025.
14. Rewinding the clock with Exercise: Never too late to modify your biological age. College of Health Sciences, Research and Innovation Advisory Council Meeting. Edmonton, AB. March 4, 2025.
15. Vigorous exercise is safe in patients with genetic aortopathy (Debate). 2025 Rare Cardiac Conditions Conference, Ottawa Heart Institute. February 28, 2025. Virtual Conference.
16. Under Pressure: The Impact of Exercise on Cardiac Function and Aorta Wall Stress in Thoracic Aorta Disease. Aortic Institute Rounds. Yale University School of Medicine. (Virtual). January 13, 2025.
17. Under Pressure: The Impact of Exercise on Cardiac Function and Aorta Wall Stress in Thoracic Aorta Disease. Institut universitaire de cardiologie et de pneumologie de Québec University of Laval. Quebec City, Canada. January 9, 2025.

- 18.** Under Pressure: The Impact of Exercise on Cardiac Function and Aorta Wall Stress in Thoracic Aorta Disease. Ottawa Heart Institute Weekly Research Conference (In Person & Virtual). January 6, 2025.
- 19.** Exercise limitations in breast cancer: Similarities with HFpEF. Cardiology Rounds. Hochgebirgsklinik Davos, Medicine Campus Davos, Switzerland. October 24, 2024.
- 20.** Upper limits of human performance post heart transplant. University of Innsbruck, Innsbruck Austria. October 18, 2024.
- 21.** Exercise testing, training and frailty assessment. RECOVER Congress. Hochgebirgsklinik Davos, Medicine Campus Davos, Switzerland. October 16, 2024.
- 22.** Exercise training in older heart failure patients. Bestform Congress. Technical University Munich. Munich, Germany. October 13, 2024.
- 23.** Pathophysiology of Exercise Intolerance in HF: Role of Sex, Age, Rate, and Weight. Massachusetts General Hospital Cardiology Seminar. Boston, MA. September 19, 2025.
- 24.** Pathophysiology of exercise intolerance in breast cancer: Similarities between HFpEF. Womens health Seminar. University of Calgary, October 2, 2024. Calgary, AB.
- 25.** Pathophysiology of exercise intolerance post heart transplant: From bedside to Ironman triathlon. Cardiac Rehabilitation Rounds. Hochgebirgsklinik Davos, Medicine Campus Davos, Switzerland. July 25, 2024.
- 26.** Unlocking the secrets of longevity: Can exercise outrun the grim reaper? Edmonton Rotary Club. Edmonton, AB. July 15, 2025.
- 27.** Impact of peripheral limitations to exercise in heart failure. Korean Vascular Society (KOVAS) Summer Conference. Seoul, South Korea. July 12, 2024.
- 28.** Upper limits of human performance post heart transplant: Legacy effect of prior endurance training. Texas Women's University. Houston, TX, April 23, 2024. Virtual Presentation.
- 29.** Pathophysiology of exercise intolerance in breast cancer. Cancer Care Alberta Provincial Rehabilitation Rounds April 11, 2023. Virtual Presentation.
- 30.** Keynote Speaker. Pathophysiology of exercise intolerance in older breast cancer survivors: Similarities between heart failure and preserved ejection fraction Inaugural Clinical Exercise Physiology UK Annual Conference. Manchester, UK. April 5, 2024.
- 31.** Upper limits of human performance post heart transplant: Legacy effect of prior endurance training. Department of Health & Exercise Science, Wake Forest University. Winston Salem, USA. November 9, 2023.
- 32.** Benefits of Exercise: Taking care of your heart so your heart can take care of you. Canadian Medical Hall of Fame: Discovery Days in Health Sciences: Dr. Lorne Tyrell Keynote Lecture. Edmonton, Canada. November 2, 2023.
- 33.** Ironman after heart transplantation: Is it possible? Sport Cardiology Congress. Technical University Munich (TUM), Munich, Germany. October 21, 2023.
- 34.** Exercise performance in heart transplant recipients – Legacy effect of prior endurance training – In the Mini Symposium titled 'Exercise Limitations in Heart Failure'. Hartcentrum Hasselt – University of Hasselt, Hasselt, Belgium. August 31, 2023.

- 35.** How to adapt Exercise prescription in elderly and frail patients – In the Session “How to provide personalized exercise prescription for a patient with heart failure”. European Society of Cardiology 2023. Amsterdam, Netherlands. August 27, 2023.
- 36.** Fat accumulation in the musculature in HFpEF: role for exercise intolerance. In the session titled “Weight loss as a therapeutic target in HFpEF: dawn of a new era?”
- 37.** How to adapt Exercise prescription in elderly and frail patients – In the Session “How to provide personalized exercise prescription for a patient with heart failure”. European Society of Cardiology 2023. Amsterdam, Netherlands. August 26, 2023.
- 38.** Exercise limitations in older breast cancer survivors: Similarities between HFpEF. Department of Preventative Sports Medicine & Sports cardiology Research Rounds. Technical University Munich, Munich, Germany. July 14, 2023.
- 39.** Upper limits of human performance post heart transplant. Medizinische Universität / Universitätsklinik Innere Medizin III, University of Innsbruck Innsbruck, Austria. July 13, 2023.
- 40.** Upper limits of human performance post heart transplant. Department of Preventative Sports Medicine & Sports Cardiology Research Rounds. Technical University Munich, Munich, Germany. July 3, 2023.
- 41.** Mechanisms of persistent impairment in cardiorespiratory fitness post heart transplant: Role of cardiac exercise rehabilitation to improve health related fitness and function. 3<sup>rd</sup> Jim Pattison Cardiac Rehabilitation Symposium. Banff, Canada, April 2, 2023.
- 42.** The role of exercise training to prevent cardiovascular and skeletal muscle deconditioning across the breast cancer survivorship continuum. CardioOncology Information Evening. Baker Heart and Diabetes Institute. Melbourne, AU. March 30, 2023.
- 43.** Focus on cardiac arrest: Honey, it’s not funny. International Sudden Cardiac Arrest and Sports Symposium. Lorne, AU. March 26, 2023.
- 44.** Life as a champion triathlete after cardiac arrest and transplant – physiology and psychology (keynote speaker). International Sudden Cardiac Arrest and Sports Symposium. Lorne, Au. March 24, 2023.
- 45.** Exercise limitations in breast cancer across the survivorship continuum. Camosun College, School of Health and Human Services. Faculty Development Rounds. Victoria, BC. February 17, 2023.
- 46.** Pathophysiology of exercise intolerance in breast cancer: Similarities between HFpEF; Ottawa Heart Institute. Ottawa, ON. February 8, 2023
- 47.** Taking care of your heart so your heart can take care of you. University of Alberta Alumni-Phoenix Chapter. Phoenix, AZ, February 4, 2023.
- 48.** Mechanisms of exercise intolerance in older breast cancer survivors: Similarities between HFpEF. UBC Exercise, Kinesiology & Health Seminar. Kelowna, BC. Nov 21, 2022.
- 49.** Health Benefits of Exercise. University of Alberta Alumni-Vancouver Chapter. Victoria, BC. November 19, 2022.
- 50.** Health Benefits of Exercise. University of Alberta Alumni-Victoria Chapter. Victoria, BC.

November 19, 2022.

- 51.** Exercise limitations in HFpEF and breast cancer: Central role of the periphery. Muscle Health Research Centre (MHRC) Seminar Series, York University, Virtual, Nov 11, 2022.
- 52.** The Key to Health Aging: Upper limits of human performance post heart transplant surgery. University of Alberta, Faculty of Nursing, Alumni. Edmonton, AB, Nov 1, 2022.
- 53.** Curing Cancer and killing the Heart. DR Barry McKeown Lecture, College of Nursing and Health Innovation, University of Texas Arlington. Arlington, TX, October 5<sup>th</sup>, 2022.
- 54.** Mechanisms of Exercise Intolerance in Older Women at risk for or with HFpEF. In the Session “Secondary Prevention of Diverse Women with CVD: From Challenges to Innovations”. AACVPR 37<sup>th</sup> Annual Meeting, West Palm Beach, FL. September 22, 2022.
- 55.** Is Weightlifting and Resistance Training a Treatment for HFpEF? Session LF.CVS.248 - Adiposity and Activity: Cause and Cure for HFpEF? American Heart Association 2021 Scientific Sessions (Virtual Meeting). Boston, MA, November 14, 2021.
- 56.** Pathophysiology of Exercise Intolerance in the Older Adult with HFPEF. 1<sup>st</sup> University Forum of The Americas on Health Aging (Virtual Meeting), UNINASSAU, SOBRAL, Brazil - Keynote Speaker. November 11, 2021.
- 57.** Meet the Experts – The ‘how-to’ of exercise prescription in cardiovascular disease. European Society of Cardiology Congress 2021 – The Digital Experience. August 29, 2021.
- 58.** The Importance of Skeletal Muscle in heart Failure Patients with Preserved Ejection Fraction. In the symposium titled “Cardiac Function: Beyond Cardiac Output and VO<sub>2</sub>max”. 2021 American College of Sports Medicine Annual Meeting (Virtual Meeting). June 5, 2021.
- 59.** Cardiovascular Pathophysiology in Breast Cancer Patients and Implications for Exercise. In the symposium titled “Exercise Management of Cardiovascular Risk in Cancer Populations”. 2021 American College of Sports Medicine Annual Meeting (Virtual Meeting). June 2, 2021.
- 60.** Pathophysiology of Exercise Intolerance in the Older Adult with HFpEF. University of Texas Arlington, Gero Conference: Nursing Excellence in Care of the Older Adult. A Virtual Conference in Gerontology Nursing. Arlington TX, April 10, 2021.
- 61.** Taking Care of Your Heart so Your Heart will Take Care of You. Faculty of Nursing Research Chair in Aging and Quality of Life Virtual Presentation. Edmonton, AB, December 17, 2021.
- 62.** Role of Exercise to Prevent Deconditioning during COVID-19: How to Stay Active while Social Distancing. In the University of Alberta Alumni live webinar titled “Adapting to the new normal: A practical guide for seniors. Edmonton, AB, May 12, 2020.
- 63.** The importance of skeletal muscle. In the symposium titled “Cardiac Function: Beyond Cardiac Output and VO<sub>2</sub>max”. American College of Sports Medicine. May 26, 2020. San Francisco, CA, USA. *Conference was cancelled because of COVID-19.*
- 64.** Exercise in heart failure: Benefits in the heart and beyond. European Society of Cardiology Preventative Cardiology. April 2, 2020. Malaga, Spain. *Conference was*

*cancelled because of COVID-19.*

65. Upper Limits of Aerobic Fitness and Performance in Heart Transplant Recipients. Heart Failure Rounds. Massachusetts General Hospital. February 27, 2020. Boston, MA
66. Pathophysiology of exercise intolerance in HFpEF: Central role of the periphery. Cardiology Grand Rounds, Boston University Medical Centre. February 26, 2020. Boston, MA, USA.
67. Upper limits of Human Performance in heart Transplant recipients. This is an invited talk at the 2019 Fall Canadian Association of Cardiovascular Prevention and Rehabilitation conference as the recipient of the ***Terry Kavanagh award in recognition of my achievements in the field of cardiovascular prevention and rehabilitation***. October 25, 2019, Montreal Canada.
68. Upper limits of power and performance in heart transplant triathletes. School of Kinesiology. Ball State University. October 14, 2019. Muncie, IN, USA
69. Impact of Aging Skeletal Muscle Changes on Exercise Intolerance and HFpEF. In workshop titled “A Gerocentric Approach to Heart Failure with Preserved Ejection Fraction (HFpEF) in Older Adults: Elucidating and Targeting Extra-Cardiac Mechanisms”. NIA/NHLBI - Expert Working Group Meeting. September 12-13, 2019. Bethesda, MD, USA.
70. Is a diseased and aging heart trainable? In the symposium titled “Preventative Cardiology In All Stages of Life: What do we know?” European Society of Cardiology (ESC) Congress 2019. September 3, 2019. Paris, France.
71. Heart Failure: HFpEF vs HFrEF – Differences From the Exercise Physiologist Perspective. Canadian Association of Cardiovascular Prevention and Rehabilitation Spring Annual Meeting and Symposium. June 14, 2019. Saskatoon, Saskatchewan, Canada.
72. “Determinants of exercise intolerance in HFpEF along the oxygen cascade” In the symposium titled “Role of Exercise in HFpEF: an update”. EuroPrevent. April 11, 2019. Lisbon, Portugal.
73. “Mechanisms of Exercise Intolerance in the Heart Failure Patient: Why is My Patient So Tired?” In the session titled “Exercise Training in Heart Failure: Our Call to Action”. American College of Cardiology, ACC 19. 68<sup>th</sup> Annual Scientific Session. New Orleans, LA, USA. March 16, 2019.
74. Exercise in Breast Cancer. College of Applied Health Sciences. University of Chicago Illinois. March 12, 2019.
75. Upper Limits of Human Performance in Heart Transplant Ironman Triathletes. 2018 Ironman Sports Medicine Conference. Kona, Hawaii, USA. October 7-11, 2018.
76. “Peripheral Skeletal muscle dysfunction in HFpEF” In the session titled “An Integrated Approach to Understanding Physiologic Sub phenotypes and their Impact on Functional Capacity and Outcomes in HF with Preserved Ejection Fraction” Heart Failure Society of America. Nashville, TN, USA. September 16<sup>th</sup>, 2018.
77. “Importance of exercise training to improve exercise capacity and cardiac function in heart

- failure” In the Hands-On Workshop titled “Cardiopulmonary Exercise Testing basics – Unexplained Dyspnea”. Heart Failure Society of America. Nashville, TN, USA. September 16<sup>th</sup>, 2018.
- 78.** Exercise strategies in chronic heart disease. In the session titled “Exercise therapy in internal medicine options for a multi-drug”. 17<sup>th</sup> European Congress of Internal Medicine, European Federation of Internal Medicine, Wiesbaden, Germany. August 31, 2018.
- 79.** Keynote Speaker. Upper limits of power and performance in heart transplant traithletes. European Association of Preventative Cardiology (EAPC) Sports Cardiology Course. German Hearts Centre. Munich, German. August 29-30, 2018.
- 80.** Exercise in cardio-oncology: The relationship between exercise and cancer related cardiotoxicity. Exercise is Medicine Tutorial, American College of Sports Medicine (65<sup>th</sup>) Annual Meeting. Minneapolis, Mn, USA. May 30, 2018.
- 52.** 7<sup>th</sup> Seminar on Exercise in Medicine. NTNU & CERG. “Curing breast cancer and dying of heart failure: Role of exercise to reverse cardiac dysfunction”. Trondheim, Norway. December,14-15, 2017.
- 53.** Upper limits of Human performance post heart transplant. School of Physical Therapy, Annual Research Day, Texas Womens University. Houston, Texas, USA. November 30<sup>th</sup>, 2017.
- 54.** “What is the Role of Lifestyle Modification in the Care of HFpEF Patients?” In Cardiovascular Seminar entitled “Does the Obesity Paradox in Heart Failure Really Exist?” American Heart Association Scientific Sessions 2017. Anaheim, CA. November 13, 2017.
- 55.** “Pitfalls in exercise intervention studies” (Invited international speaker and chair of the session) In the symposium “Diastolic Heart Failure: From Bench to Bedside”. Munich, Germany. September 22, 2017.
- 56.** “How does cardiac rehabilitation help? In the session titled “Cardiac Rehabilitation and Exercise Training in Patients with Heart Failure”. 21<sup>st</sup> Annual Scientific Meeting of the Heart Failure Society of America. Dallas, TX. September 17, 2017.
- 57.** Interntaionl/keynote speaker. Revisiting the Morganroth hypothesis 40 years later. The first Baker Sports cardiology conference. Baker Heart and Diabetes Institute. Melbourne, Australia. June 24, 2017.
- 58.** Interntaionl/keynote speaker. The worlds fittest heart transplant recipients. Sport Cardiology Seminar for athletes. Baker Heart and Diabetes Institute. Melbourne, Australia. June 24, 2017.
- 59.** “Exercise Physiology in Breast Cancer Patients”, and Chair of the session titled “Lifestyle Interventions to Reduce Toxicity and Breast Cancer Recurrence: What's the Evidence? American Society for Clinical Oncology Annual Scientific Meeting. Chicago, IL. June 3, 2017.
- 60.** “Pathophysiology of exercise intolerance in heart failure with preserved versus reduced ejection fraction” In symposium entitled “Exercise Limitations in Heart Failure” American

College of Sports Medicine 64<sup>th</sup> Annual Meeting. May 31, 2017, Denver, Co.

**61.** Cardiac complications of breast cancer Therapy. Science and Health Innovation: Advancing Clinical Practice Research Symposium. 2017 Nursing Research Symposium Sigma Theta Tau (Delta Theta Chapter), University of Texas Arlington, Arlington, Texas, USA. April 21, 2017.

**62.** Role of exercise to prevent cardiac dysfunction and toxicity during and after cancer therapy. University of Utah Vascular Research Laboratory's Colloquium Series. April 21, 2017, Salt Lake City, UT.

**63.** Pathophysiology of exercise intolerance in HFPEF: Central role of the periphery. Virginia Commonwealth University (VCU) Medical Centre, VCU Pauley Heart Center. Richmond, Virginia. February 28, 2017.

**64.** Benefits of Exercise: A healthy heart takes care of you. The University of Texas Retirees Club. Arlington, Texas. January 10, 2016.

**65.** Advances in exercise training for heart failure-Exercise training in HFrEF and HFpEF: similarities and differences. American Heart Association Annual Scientific Session. New Orleans, Louisiana, Nov 15 2016.

**66.** Heart transplant Ironman: Upper limits of human performance post heart transplant. The Annette Caldwell Simmons School of Education and Human Development. Southern Methodist University (SMU). Dallas, Texas, September 30, 2016.

**67.** Upper limits of Human performance post heart transplant. 14<sup>th</sup> Annual Centre for Heart Failure Research (CHFR), South-Eastern Norway Research Groups. Oslo, Norway, September 22<sup>nd</sup>, 2016.

**68.** Management of HFpEF in 2016: Surviving in a Data-Free World. Is cardiac rehab the answer? Heart Failure Society of America Annual Scientific Meeting. Orlando, Florida, September 18<sup>th</sup>, 2016.

**69.** Heart transplant Ironman: Upper limits of human performance post cardiac transplantation. 64<sup>th</sup> Annual Scientific meeting of the Cardiac Society of Australia & New Zealand. Adelaide, Australia, August 5<sup>th</sup>, 2016.

**70.** Pathophysiology of exercise intolerance in heart failure and preserved ejection fraction. 64<sup>th</sup> Annual Scientific meeting of the Cardiac Society of Australia & New Zealand. Adelaide, Australia, August 5<sup>th</sup>, 2016.

**71.** Pathophysiology of exercise intolerance in heart failure and preserved ejection fraction. Australian Cardiovascular Health and Rehabilitation Association. August 2<sup>nd</sup>, 2016. Adelaide, Australia.

**72.** Upper limits of human performance post-cardiac transplant. Australian Cardiovascular Health and Rehabilitation Association. August 2<sup>nd</sup>, 2016. Adelaide, Australia.

**73.** Exercise Rehabilitation for Heart Failure: Who, when and How intense? University of Saskatchewan, Saskatoon Saskatchewan, Canada, June 27, 2016.

- 74.** Exercise Rehabilitation for Heart Failure: Who, when and How intense? Jim Pattison Cardiac Rehabilitation Symposium-Mazankowski Alberta heart Institute. Banff, AB, Canada, April 9<sup>th</sup>, 2016.
- 75.** Pathophysiology of Exercise Intolerance in heart failure with preserved ejection fraction: is it time to focus on the periphery? Cardiology Grand Rounds. Baker IDI Heart and Diabetes Institute. Melbourne, Australia, March 1, 2016.
- 76.** Cardiac consequence of cancer therapy: Can exercise reverse dysfunction. Peter MacCullum Cancer Centre. Melbourne, Australia March 2<sup>nd</sup>, 2016.
- 77.** Cardiac consequence of cancer therapy: Can exercise reverse dysfunction. Baker IDI Heart and Diabetes Institute. Cardiooncology research seminar. Melbourne, Australia March 4<sup>th</sup>, 2016.
- 78.** Pathophysiology of exercise intolerance in heart failure with preserved ejection fraction: is it time to focus on the periphery? Kansas State University. Anatomy & Physiology Research Seminar. Manhattan Kansas, USA. February 8, 2016,
- 79.** Heart failure with preserved ejection fraction-What we know and what do we need to know? 6<sup>th</sup> Seminar on Exercise in Medicine. NTNU & CERG, Trondheim, Norway. December 17<sup>th</sup>, 2015.
- 80.** Exercise intolerance in heart failure with preserved ejection fraction: is it time to focus on the periphery? Department of Prevention, Rehabilitation and Sports Medicine, University of Munich. December 13, 2015, Munich, Germany.
- 81.** Challenges and tips for the novice grant writer. Excellence in Nursing Pre- Conference (The Honor Society of Nursing, Sigma Theta Tau International, 43<sup>rd</sup> Biennial Convention). November 6, 2015, Las Vegas, USA.
- 82.** Exercise as Medicine Across the Heart Failure Continuum. College of Nursing and Health Innovation Seminar Series. Arizona State University. Phoenix Arizona. October 22, 2015.
- 83.** Keynote speaker - Early exercise training in decompensated heart failure patients. British Association of Cardiovascular Prevention and Rehabilitation annual conference. October 1-2, 2015. Manchester, UK.
- 84.** Benefits of exercise for your heart. Edmonton Rotary club. June 8, 2015. Edmonton, AB, Canada.
- 85.** Muscle metabolic changes in heart failure with preserved (HFPEF) versus reduced (HFREF) ejection fraction. In the symposium "The Two Faces of Heart Failure: Exercise Intolerance in HFrEF vs HFpEF patients". 62<sup>nd</sup> American College of Sports Medicine Conference. May 27<sup>th</sup> 2015. San Diego, CA, USA.
- 86.** Keynote Speaker- Benefits of exercise training to prevent cardiac dysfunction in cancer patients during adjuvant therapy. British Association of Cardiovascular Prevention and Rehabilitation (BACPR) Exercise Professionals Group. Aston University, Birmingham, UK. May 15, 2015.

- 87.** Keynote Speaker- Role of cardiac (exercise) rehabilitation to prevent ventricular remodeling post myocardial infarction. British Association of Cardiovascular Prevention and Rehabilitation (BACPR) Exercise Professionals Group Annual conference. Coventry, UK. May 15, 2015.
- 88.** Pathophysiology of exercise intolerance in heart failure with preserved ejection fraction. Cardiac Exercise Research Group, Norwegian University of Science and Technology-Trondheim. April 10, 2015.
- 89.** Cardiovascular limits to Exercise Performance in heart failure with preserved or reduced ejection fraction. In the symposium "Treating cardiovascular disease with exercise: Mechanistic insight translated from animal models". Experimental Biology, 2015. Boston Massachusetts, USA. March 33, 2015.
- 90.** Ventricular-arterial coupling in heart failure with preserved and reduced ejection fraction. University of Missouri-Veterinary Sciences, Department of Biological Sciences, Seminar Series. Columbia Missouri. March 19<sup>th</sup>, 2015.
- 91.** Acute effects of aerobic and resistance exercise on intracranial and intraocular pressure: Implications for astronaut exercise training at the International Space Station. NASA. February 23, 2015. Houston, Texas.
- 92.** Determinants of exercise intolerance in heart failure and preserved ejection fraction. University of Texas at Arlington. January 20, 2015. Arlington, Texas, USA.
- 93.** Upper limits of human performance post heart transplant. Cardiac Exercise Research Group (CRG) Norwegian University of Science and Technology-Trondheim. Trondheim, Norway. January 8, 2015.
- 94.** Women's secrets? Exercise training in breast cancer survivors and heart failure with preserved ejection fraction (HFPEF) in the symposium titled "Efficacy and Adherence to Exercise Training in Heart Failure". Cardiac Exercise Research Group (CRG) Norwegian University of Science and Technology-Trondheim, and St. Olavs Hospital. Trondheim, Norway. January 6, 2015.
- 95.** Determinants of exercise intolerance in heart failure with preserved ejection fraction. Cedars Sinai Heart Institute. Las Angeles, CA, USA. November 23, 2014.
- 96.** Pathophysiology of exercise intolerance in heart failure patients with preserved ejection fraction. Montefiore Einstein Centre for Heart and Vascular Care. Faculty of Medicine (Department of Cardiology), Albert Einstein College of Medicine of Yeshiva University. Bronx, New York, October 31, 2014.
- 97.** Finding a Research Supervisor That's Right for You. Canadian Cardiovascular Society (CCS) Trainee Day. Canadian Cardiovascular Society Annual meeting. Vancouver, BC. October 25, 2014.
- 98.** Acute cardiac adjustments to high-intensity interval training in heart failure. In the symposium titled "Sprinting Towards Changes in the Heart and Blood Vessels". 61<sup>st</sup> Annual American College of Sports Medicine/5<sup>th</sup> World Congress on Exercise is Medicine/World Congress on the role of Inflammation in Exercise, Health and Disease. Orlando, FL. May 27,

2014.

**99.** Anti-remodeling benefits of high intensity Interval training for heart failure patients. Cardiff School of Sport, University of Wales Institute Cardiff, April 10, 2014, Cardiff Wales.

**100.** Cardiovascular consequences of cancer therapy and the role of exercise to prevent cardiotoxicity. Cardiff School of Sport, University of Wales Institute Cardiff, April 10, 2014, Cardiff Wales.

**101.** Benefits of marathon running on cardiovascular health across the age and fitness continuum. London Marathon Medicine Conference. April 12, 2014. London, England.

**102.** Cirrhosis: The role of exercise and nutrition. Gastrointestinal Grand Rounds, University of Alberta. Edmonton, AB, Canada. March 17, 2014.

**103.** High intensity interval training for heart failure patients. Australian Catholic University. March 6, 2014. Melbourne, Australia.

**104.** Cardiovascular consequences of cancer therapy. St. Vincent's hospital, Melbourne Australia. March 3, 2014.

**105.** High-intensity interval training for cardiac patients. Conference theme: Exercise as Medicine: Beyond Pills and Procedures. Arizona State University. February 7-8<sup>th</sup>, 2014. Tempe, Arizona.

**106.** Heart failure and preserved ejection fraction: Is it time to target the skeletal muscles? Cardiology divisional rounds, University of Alberta, Edmonton, AB. November 27, 2013.

**107.** Benefits of exercise on the heart: Take care of your heart so your heart will take care of you. University of Alberta Alumni-Victoria. Victoria, BC. November 16, 2013.

**108.** High-intensity training for the older adult. Physiotherapy Alberta conference. Edmonton, AB. October 26, 2013.

**109.** Cardiovascular Response to Exercise in Breast Cancer Patients. Cross Cancer Institute, Edmonton, AB. October 10, 2013.

**110.** Benefits of exercise on the heart: taking care of your heart so your heart will take care of you. University of Alberta Alumni Educated Luncheon. Edmonton, AB. October 9, 2013.

**111.** Cardiovascular consequences of cancer care. Canadian Cardiovascular Congress. Montreal Canada. October 18, 2013.

**112.** Acute effects of resistance exercise alone or with a Valsalva maneuver on intracranial pressure. Effects of spaceflight, measurement and countermeasures across Sensorimotor/Exercise/VIIP themes: National Space Biomedical Research Institute Conference. Houston, USA. August 29, 2013.

**113.** High-intensity interval training in heart failure: Friend or Foe? Emerging Exercise Strategies for Heart Failure Symposium, 60<sup>th</sup> Annual American College of Sports Medicine Meeting. Indianapolis, USA. May 29, 2013.

**114.** Cardiovascular responses to exercise in cancer patients. Exercise and Training in Cancer Patients: Physiological-Psychological Implications Symposium, 60<sup>th</sup> Annual American College of Sports Medicine Meeting. Indianapolis, USA. May 29, 2013.

- 115.** Benefits of Exercise Training for Heart Transplant Recipients. Exercise and Solid Organ Transplant Meeting. University of Toronto, Toronto, ON, April 19, 2013.
- 116.** Upper limits of human performance three decades post cardiac transplant. Cardiology Grand Rounds, Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA. April 10<sup>th</sup>, 2013.
- 117.** Exercise intolerance in older heart failure patients: is skeletal muscle the heart of the matter? DUKE University School of Nursing. Durham, NC, USA. March 6, 2013.
- 118.** Benefits of exercise for heart failure patients. 1<sup>st</sup> Saudi Heart Failure Group Conference. December 5-6, Riyadh, Saudi Arabia.
- 119.** Determinants of exercise intolerance in heart failure and preserved ejection fraction. Cardiology rounds, Royal Alexandra Hospital. Edmonton Alberta, October 25, 2012.
- 120.** Effects of high-intensity interval training in heart failure. Canadian Society for Exercise Physiology Annual Conference. Regina, October 11, 2012. (Session Chair “Advances in cardiac Rehabilitation”)
- 121.** CardioOncology: Role of exercise in the treatment of breast cancer. International Convention on Science, Education and Medicine in Sport (ICSEMIS) Glasgow Scotland, July 22, 2012. (Invited Keynote Speaker)
- 122.** Expectations of physical fitness after transplant. International Transplant Nurses Association. Edmonton, Alberta, June 15, 2012.
- 123.** Physical fitness after transplant. International Transplant Nurses Association. Edmonton, Alberta, June 15, 2012.
- 124.** Evolving, innovative new exercise training modalities and combinations. NHLBI Working Group: Exercise Training as Therapy for Heart Failure. National Heart, Lung and Blood Institute. Bethesda MN, June 11, 2012.
- 125.** Upper limits of human performance 3 decades post heart transplant. Veteran Affairs Palo Alto Hospital. Palo Alto, CA, June 7, 2012.
- 126.** Contribution of Cardiac and Conduit Artery Function to Exercise Capacity In Older Persons. Faculty of Medicine Grand Medical rounds. Edmonton, Alberta, April 27, 2012.
- 127.** Contribution of Cardiac and Conduit Artery Function to Exercise Capacity In Older Persons. Claude D. Pepper Older Americans Independence Centre Annual Meeting, Bethesda, MN, April 17, 2012.
- 128.** Pathophysiology of exercise intolerance post heart transplantation. Alberta Transplant Institute. University of Alberta, April 4, 2012. Edmonton, AB.
- 129.** Heart failure with preserved ejection fraction: More than a pump problem. Cardiology Divisional rounds, Montreal Heart Institute. March 22, 2012, Montreal, QC.
- 130.** Heart failure with preserved ejection fraction: More than a pump problem. Cardiology Divisional rounds, Mazankowski AB Heart Institute. February 22, 2012. Edmonton, AB.
- 131.** Cardiovascular Exercise Physiology Research Program. Mazankowski Alberta Heart

Research Symposium. December 19, 2011. Edmonton, AB.

**132.** Determinants of exercise intolerance in heart failure and preserved ejection fraction: More than a pump problem. Alberta Heart training program seminar series. December 8, 2011. Edmonton, AB.

**133.** Upper limits of human performance: 25 Years Post Heart Transplantation: Ironman Journey Begins with a Single Step. School of Nutrition and Human performance, Arizona State University. Phoenix, Arizona, USA, November 19, 2011.

**134.** Acute effects of high-intensity interval exercise on biventricular function: A view from the athletic to the failing heart. Exercise Physiology of Western Canada, Keynote speaker for August, 11, 2011. Edmonton, AB. Canada.

**135.** Pathophysiology of Exercise intolerance in heart transplant recipients: Role of high-intensity training. 16<sup>th</sup> Annual Congress of the European College of Sports Sciences, Liverpool UK, July 7<sup>th</sup>, 2011.

**136.** Update from the Inaugural Canadian Cardiac Oncology Network meeting. Cross Cancer Institute breast cancer rounds. June 8<sup>th</sup>, 2011, Edmonton, AB.

**137.** "Cancer and Heart Disease: How to Beat a Cruel Hand in the Game of Life" Quality & Cardiac Service Integration Rounds, Mazankowski Alberta Heart Institute, Alberta Health Services, University of Alberta. May 25, 2011.

**138.** Cardiotoxicity of anti-cancer therapy: Can exercise reverse dysfunction? Department of Exercise Science, Concordia University. March 17<sup>th</sup>, 2011.

**139.** Role of exercise training to prevent cardiovascular dysfunction in women with breast cancer: bench to bedside. Grand Oncology Rounds, Cross Cancer Institute, Edmonton, Alberta, Canada. February 15<sup>th</sup>, 2011.

**140.** Identifying your Tormentor. Mentoring Heart & Stroke Researchers Workshop. Jasper, AB. February 2011.

**141.** Exercise limitations and benefits for heart failure patients with preserved and reduced ejection fraction. Canadian Association of Cardiac Rehabilitation (CACR) Webinar. November 2010.

**142.** Cardiotoxicity of anti-cancer therapy: Can exercise reverse dysfunction? Seminars in Rehabilitation Science, University of Alberta

**143.** Anti-Cancer Therapy and Ventricular Remodeling: Can Exercise Reverse Dysfunction? Meet the Researchers (Focus on Heart Failure/Heart Transplantation) Mazankowski Alberta Heart Institute. Edmonton, AB, October 2010.

**144.** Cardiac Complications Associated with Biological Therapy for Breast Cancer. Cardiology Divisional Rounds, University of Alberta, Edmonton, AB, June 2010.

**145.** Pathophysiology of exercise intolerance in heart failure and benefits of cardiac exercise rehabilitation. Saskatchewan Kinesiology and Exercise Science Association Annual Meeting. Saskatoon, Saskatchewan, May 2010.

- 146.** Exercise limitations and benefits for heart failure patients with preserved or impaired ventricular function. University of Alberta, Faculty of Rehabilitation Medicine Seminars in Rehabilitation Science (Webinar). Calgary, Alberta, February 2010.
- 147.** High-intensity aerobic interval training in heart failure: Is it ready for prime time? Department of Health Sciences, Wake Forest University. Winston Salem, USA, January 2010.
- 148.** Anti-remodeling benefits of exercise training in heart Failure. CSEP Annual Scientific Congress, Vancouver, Canada. November, 2009.
- 149.** Acute Effects of High-Intensity Exercise on Biventricular Function in Endurance Athletes. XIV Congresso Nazionale della Societa Italiana di Cardiologia dello Sport, Rome Italy, September 2009.
- 150.** Cardiac function in endurance trained athletes: Can the heart fatigue with exercise. University of Rome Sapienza, September 2009. University of Rome Sapienza, Sept, 2009.
- 151.** Twist mechanics of the left ventricle in health and heart transplantation. University of Rome Sapienza, September 2009.
- 152.** Assessment of ventricular twist with echocardiography in elite athletes. Institute of Sports Medicine and Science, Italian National Olympic Committee (CONI), Rome, Italy
- 153.** Impaired cardiovascular reserve post heart transplant: Why it sucks to be in diastole. Cardiology. Vancouver Coastal Research Health Institute. Vancouver, July 2009.
- 154.** Cardiac fatigue: It sucks to be in diastole. Cardiology Rounds Dalhousie University, Halifax, Nova Scotia, July 2009.
- 155.** Impaired cardiovascular reserve post heart transplant. Transplant Research group. University of Alberta Hospital. June 2009.
- 156.** Benefits of exercise in pulmonary hypertension. University of Alberta Pulmonary Hypertension Program. Edmonton, Alberta, March 20<sup>th</sup>, 2009.
- 157.** Exercise performance post heart transplant. 2009 Canadian Association of Transplantation Scientific Congress. Banff Alberta, March 6<sup>th</sup>, 2009.
- 158.** Prolonged strenuous exercise and cardiac fatigue. Northern Alberta Institute of Technology (NAIT) Personal Trainers Program, Edmonton, Alberta, December 1<sup>st</sup>, 2008.
- 159.** Ventricular-vascular coupling during exercise post heart transplant. Cardiovascular Research Group, University of Alberta. November 20<sup>th</sup>, 2008.
- 160.** Interval training for cardiac transplant recipients. Canadian Association for Cardiac Rehabilitation Annual Scientific Session. October 26, 2008.
- 161.** Cardiac Fatigue: A historical perspective. Canadian Society for Exercise Physiology Annual Scientific Session. October 16, 2008.
- 162.** Benefits of exercise training for transplant recipients. "Living well with transplants 2<sup>nd</sup> annual patient education day" International Transplant Nurses Society, Capital Health and Good Hearts Mentoring Foundation. Edmonton, Alberta, June 20<sup>th</sup>, 2008.
- 163.** Impaired cardiovascular reserve post heart transplant: Why it sucks to be in diastole.

- Inaugural Mazankowski Alberta Heart Institute, Edmonton, Alberta, June 6<sup>th</sup>, 2008.
- 164.** ABC's of cardiac remodeling. Cardiac Magnetic Resonance Journal Club, University of Alberta Hospital, Edmonton, Alberta, April 11, 2008.
- 165.** Cardiovascular Function and Risk Post Kidney Transplant: Role of Exercise Training. 2008 Caritas Research Days, Edmonton, Alberta, January 31, 2008.
- 166.** Exercise training in heart failure and post heart transplant. Northern Alberta Institute of Technology (SPFT 324), Edmonton, Alberta, November 26, 2007.
- 167.** Ventricular remodeling and Herceptin in women with HER2+ breast cancer. Seminars in Rehabilitation Science, Faculty of Rehabilitation Medicine, University of Alberta, November 2007.
- 168.** Reverse ventricular remodeling in heart failure: Role of exercise training. University of Calgary, Division of Cardiology Rounds, Calgary, Alberta, November 2007.
- 169.** Cardiac exercise physiology. Medical Science 629, Faculty of Medicine, University of Calgary, Calgary Alberta, November 2007.
- 170.** Cardiac exercise rehabilitation in individuals with heart failure and heart transplant recipients. Department of Rehabilitation Science, Hong Kong Polytechnic University, October 2007.
- 171.** Evaluation of cardiovascular fitness and limits to exercise in health and disease. Department of Rehabilitation Science, Hong Kong Polytechnic University, October 2007.
- 172.** Meta-analysis of the effects of exercise training on left ventricular remodelling in heart failure. City wide (Edmonton) heart failure rounds, September 2007.
- 173.** Exercise in Organ Transplant recipients: The Sky is the Limit. Canadian Transplant Association, Alberta region. April, 2007.
- 174.** Effects of exercise training on ventricular remodelling in heart failure. Cardiovascular nurse research rounds. March, 2007.
- 175.** Physical fitness and vascular function in organ transplant recipients competing at the 2006 Canadian Transplant Games. University of Alberta, Transplant Nurses Research rounds, March, 2007.
- 176.** Benefits of exercise for transplant recipients. Healthy Hearts (Transplant) Mentoring Support group. January, 2007.
- 177.** Ventricular function post heart transplant. Seminars in Rehabilitation Science. Faculty of Rehabilitation Medicine, October, 2006.
- 178.** Exercise Cardiovascular Function in heart failure & Transplant. Healthy Heart Academic Rounds. St. Paul's Hospital, Vancouver, BC, February, 2006.
- 179.** Benefits of Exercise Training in heart failure. Heart Failure Awareness Week (RAH Heart Function Clinic). Edmonton, AB, February, 2006.
- 180.** Your Heart & Exercise: Taking care of your heart, so it will take care of you. University Hospital Foundation Health Talks. Edmonton, AB, October, 20<sup>th</sup>, 2005.
- 181.** Benefits of exercise training for individuals with heart failure: Does etiology matter?

- Cardiology divisional rounds. Royal Alexandra Hospital, Edmonton, AB, June, 2005.
- 182.** Fitness versus fatness: Is the current CVD epidemic due to obesity or sedentary lifestyle? Debate: Cardiology update for general practitioners & internists. Edmonton, AB, June 2005.
- 183.** Benefit of exercise training for transplant recipients. Saskatoon Organ Transplant Support Group 'Gift of Life' conference. April, 2005.
- 184.** Exercise Gerontology: Benefits of exercise training on cardiovascular function. Geriatric Grand Rounds, University of Alberta, Edmonton. March, 2005.
- 185.** Benefit of exercise training for transplant recipients. Canadian Association of Transplantation annual scientific session. March, 2005.
- 186.** Heart health benefits of exercise. Jamie Platz YMCA, Edmonton, AB. February, 2005.
- 187.** Resistance exercise, LV remodeling, blood pressure and arterial compliance. Healthy Heart Rounds, St. Paul's hospital, Vancouver, BC, February, 2005.
- 188.** Exercise training in heart failure and post cardiac transplantation: Does etiology matter? Division of Cardiology Rounds, St. Paul's Hospital, Vancouver, BC, February, 2005.
- 189.** Pathophysiology of heart failure. Northern Alberta Cardiac Rehabilitation Program. Edmonton, AB, November, 2004.
- 190.** Exercise VO<sub>2</sub>max Testing: Effects of Aging Disuse and Cardiovascular Disease. Canadian Society of Cardiology Technologists. Calgary, AB, October 24<sup>th</sup>, 2004.
- 191.** Cardiac adaptation to exercise training in individuals with heart failure and cardiac transplant recipients in the Symposium titled " Cardiac adaptation to exercise" at the 2004 Canadian Society for Exercise Physiology Annual Scientific Session, Saskatoon, Saskatchewan, October 15<sup>th</sup>, 2004.
- 192.** Effects of aging on peak aerobic power (VO<sub>2</sub>peak). Cardiac Rehabilitation Rounds, Division of Cardiology, University of Alberta, September, 2004.
- 193.** Exercise training post renal transplantation. Department of Nephrology research in progress round. July, 2004.
- 194.** Exercise training improves leg press strength and distance walked in six minutes in cardiac transplant recipients. 8<sup>th</sup> World congress of Cardiac rehabilitation and Secondary Prevention. Dublin, Ireland, May, 2004.
- 195.** VO<sub>2</sub>max testing: Why, When and How. Alberta Society of Cardiology Technicians conference. Edmonton, Alberta, May, 2004.
- 196.** Ventilatory efficiency is improved in cardiac transplant recipients following 12 weeks of combined aerobic and strength training. International Society for Heart and Lung Transplantation Annual Conference, San Francisco, California, USA. April, 2004.
- 197.** Benefits of cardiac rehabilitation: Cardiology residents core curriculum. Faculty of Medicine, University of Alberta, Edmonton, Alberta, March, 2004.
- 198.** Exercise rehabilitation for individuals with cystic fibrosis. Canadian Cystic Fibrosis Association, Alberta Chapter Annual meeting. Edmonton, March 2004.
- 199.** Exercise and heart failure: Special attention to older women. Royal Alexandra

Cardiac Science Nursing Rounds. Edmonton, Alberta, February, 2004.

**200.** Ventriculoarterial coupling during exercise in cardiac transplant recipients.

Cardiovascular research group, University of Calgary, Calgary Alberta, November, 2003.

**201.** Cardiac exercise physiology, Medical Science 629, Faculty of Medicine, University of Calgary, Calgary Alberta, November, 2003.

**202.** Exercise and Heart Failure. Western Canadian CHF Nurses Network, Kananaskis, AB.

**203.** Exercise in the Elderly: It's never too late. University of Alberta, Gerontology Student Association, Edmonton, Alberta, November, 2003.

**204.** Pathophysiology of heart Failure. PThER 380, Department of Physical Therapy, University of Alberta, Edmonton, 2003.

**205.** Benefits of exercise training for individuals with heart failure (Invited presentation). Canadian Cardiovascular Congress. Toronto, Ontario, Canada, October, 2003.

**206.** Effects of exercise training on LV morphology and function: From athletes to cardiac patients. II International Symposium: Trends in exercise physiology and cardiac rehabilitation. Rome, Italy, September, 2003.

**207.** Ventriculoarterial coupling during exercise in recent cardiac transplant recipients. University of Alberta, Cardiology Divisional Rounds, Edmonton, AB, 2003.

**208.** Acute and chronic effects of exercise training on cardiac performance: From athletes to cardiac transplant recipients. 2003, Pacific North West Exercise Group Annual Graduate Student Conference (Keynote Speaker), Abbotsford, BC.

**209.** Effects of exercise training for older women with cardiovascular disease. 2003, St. Paul's Hospital Healthy Heart Cardiac Rehabilitation Rounds, Vancouver, BC.

**210.** Effects of exercise training on ventricular-arterial coupling in healthy older women. 2003, Kinesiology Rounds, University of British Columbia, Vancouver, BC.

**211.** Pathophysiology of heart failure, PThER 380, Department of Physical Therapy, University of Alberta, Edmonton, 2002.

**212.** Exercise training in cardiac transplant recipients: An integrated clinical and research perspective. Sharing the care conference, Capital Health, Edmonton, 2002.

**213.** Athletes Heart: Effects of Resistance and Aerobic Training on Left ventricular Morphology and Systolic Function. PEDS 412, University of Alberta, Edmonton, 2002.

**214.** Effects of Prolonged Strenuous Exercise on Left Ventricular Systolic Function. PEDS 412, University of Alberta, Edmonton, 2002.

**215.** Benefits Of Exercise For Women: Its Never Too Late. University of Alberta Hospitals Foundation, Edmonton, 2002.

**216.** Exercise and Heart Failure: Why, When and How. Canadian Association of Cardiac Rehabilitation Annual Scientific Conference. Edmonton, 2002.

**217.** Exercise Prescription for Healthy Older Adults and Cardiac patients. PFLCA/CSEP Annual Conference. Kananaskis, 2002.

**218.** The effect of exercise training on left ventricular morphology and systolic function: From

- athletes to heart transplant recipients. 2002, IMOLA, Italy, 3<sup>rd</sup> Master Heart and Physical Exercise: Prevention and Rehabilitation.
- 219.** Exercise and chronic heart failure: Why, how and when. University of Alberta Hospitals, Health Talks. Edmonton, 2002.
- 220.** “To transplant or not to transplant: That is the heart of the question” Cardiology Divisional Rounds, University of Alberta, Edmonton, 2002.
- 221.** Athletes Heart: Do Big Hearts Win Races? Sports Medicine group, Faculty of Medicine, University of Alberta, Edmonton, 2002.
- 222.** Effects of resistance training on left ventricular morphology and systolic function.
- 223.** Federacion Argentina de Cardiologia, 2<sup>nd</sup> Virtual Congress of Cardiology (International Congress of Cardiology on the Internet, <http://www.fac.org.ar/scvc/index2.htm>), 2001.
- 224.** The role of therapeutic exercise in CHF. Recent advances in congestive heart failure 2<sup>nd</sup> biannual workshop for nurses. Edmonton, 2001.
- 225.** Exercise prescription in older individuals and cardiac patients. To boldly go...Focusing on the Future: AFLCA Trainers biennial conference. Red Deer, 2001.
- 226.** Cardiology in the classroom. As part of this lab/seminar series, I lecture to High school students about the acute cardiovascular responses during exercise. In addition, I lecture about the benefits of exercise in improving overall health and fitness. Edmonton, 2001.
- 227.** Exercise and heart failure. University of Alberta, Cardiology divisional rounds. Edmonton, 2001.
- 228.** Cardiac fatigue associated with prolonged strenuous exercise. Alberta rehabilitation continuous learning network (ARCLN). Edmonton, 2001.
- 229.** Exercise physiology and functional assessment. Core curriculum for cardiology residents. Edmonton, 2001.
- 230.** Exercise and heart failure, Canadian Cardiovascular Nurses Annual Conference. Vancouver, 2000.
- 231.** Exercise and heart failure, Canadian Society For Exercise Physiology/FACA Annual Scientific Conference, Canmore 2000.
- 232.** Does exercise (Resistance) training result in an increase in LV mass? Cardiology Regional Rounds, McMaster University (Hamilton General Hospital), 2000.
- 233.** Effects of CPAP on exercise capacity in heart failure. Resident Research Rounds.
- 234.** McMaster University (Hamilton General Hospital), 2000.
- 235.** Therapeutic exercise for individuals with heart failure. Physical Therapy Department, Royal Alexandra Hospital. Edmonton, 2000.
- 236.** Therapeutic exercise for older adults and the frail elderly. Northern Alberta Geriatric Rehabilitation “Gerontology Rounds. Edmonton, 2000.
- 237.** Pathophysiology of exercise intolerance in heart failure. Parke-Davis pharmaceutical research meeting. Denver, 1998.

- 238.** Left ventricular wall stress during exercise. St. Pauls' Hospital, Division of Cardiology rounds. Vancouver, 1998.
- 239.** Effects of resistance exercise on left ventricular systolic and diastolic function in healthy older males. St. Paul's Hospital, Healthy Heart Cardiac Rehabilitation program. Vancouver 1998.
- 240.** Cardiac function in elite athletes: University of Alberta, Division of Cardiology rounds and Grand Medical rounds. Edmonton, 1998.
- 241.** Exercise and heart failure. University of Alberta Foundation Health Talks series, Edmonton, 1998.
- 242.** Exercise and heart failure: A Canadian Perspective. Irish Cardiac Rehabilitation Society Annual meeting. Dublin 1997.
- 243.** Exercise and the elderly: It's never too late to strength train. University of Alberta Foundation Health Talks series. Edmonton 1997.
- 244.** Athlete's Heart: Big hearts win races. Canadian Sonographers Association Annual Meeting. Edmonton 1997.
- 245.** Exercise and left ventricular dysfunction. Cardiac care unit nursing research rounds. University of Calgary, Foothills Hospital. Calgary 1996.
- 246.** Exercise post heart and lung transplantation. Saskatoon transplant group. Saskatoon 1996.
- 247.** Exercise Rehabilitation Post Orthotopic Heart Transplantation. Cardiovascular Surgery/ Cardiology Research Rounds. St. Paul's Hospital/University British Columbia. Vancouver 1996.
- 248.** Left ventricular hypertrophy secondary to athletic training: Fact or fallacy? Cardiology Rounds. St. Paul's Hospital/University of British Columbia. Vancouver 1996.
- 249.** Secondary Prevention: Exercise guidelines post myocardial infarction or coronary artery bypass surgery. Heart and Stroke '95 Symposium. University of British Columbia and Heart and Stroke Foundation of B.C and Yukon. Vancouver 1995.
- 250.** Athletes Heart. Cardiology-Cardiovascular research rounds, University of British Columbia- St. Paul's Hospital. Vancouver 1994.
- 251.** Role of exercise in the reduction of cardiovascular disease. Lipid Research Group, Division of Cardiology, University of Alberta Hospital. Edmonton 1993.
- 252.** Resistance training in the elderly and patients with CHF/LV dysfunction. Cardiology Clinical Trial Research Rounds, Division of Cardiology, UAH, Edmonton 1992.

### **GRADUATE STUDENT SUPERVISION**

**University of Alberta (JANUARY 2020 – PRESENT):**

#### **Post-Doctoral Fellows (PDF):**

1. Steve Foulkes, PhD. College of Health Sciences, Faculty of Nursing, University of Alberta.
2. R. Skow, PhD. College of Health Sciences, Faculty of Nursing, University of Alberta.
3. N. Weeldreyer, PhD. College of Health Sciences, Faculty of Nursing, University of Alberta.

### **Doctoral Students:**

1. T. Dorfman, Faculty of Nursing, University of Alberta (Supervisory Committee member).
2. M. Azhda, Faculty of Rehabilitation Medicine, University of Alberta (Supervisory Committee member).
3. K. Dmytriiev. Faculty of Medicine, University of Alberta (Supervisory Committee member).

### **Master of Nursing (NP Program):**

#### **Master of Science (Medicine)**

1. Chandu Sadasivan, Department of Medicine (Cardiology), University of Alberta (Committee member).
2. Amandeep Kaur, Faculty of Nursing, University of Alberta (Supervisory).
3. Fedrica Williams, Faculty of Nursing, University of Alberta (Supervisory).
4. Sarah Kratina, Faculty of Nursing, University of Alberta (Supervisory).

### **University of Texas Arlington (August 2015 – December 2019): Post-doctoral Fellows (Completed)**

1. W. Tucker, College of Nursing and Health Innovation (Co-supervised with Dr. Nelson, Department of Kinesiology, UTA, June 2016-June 2019).
  - Dr. Tucker is an Assistant Professor, Department of Nutrition & Food Sciences. Texas Womens University, Houston, TX.

#### **Supervision of students who completed their Ph.D.**

1. R. Beaudry. Department of Kinesiology, College of Nursing and Health Innovation (Supervisor).
  - Dr. Beaudry is Project Coordinator, Cumming School of Medicine, University of Calgary.
2. J. Samuels. Department of Kinesiology, College of Nursing and Health Innovation (Committee member).
  - Dr. Samuels is a PDF at Johns Hopkins (Medicine), Baltimore, MD.

#### **Master's students (completed)**

3. S. Chung. Department of Kinesiology, College of Nursing and Health Innovation, University of Texas Arlington (Committee member).
4. S. Zamani. Department of Kinesiology, College of Nursing and Health Innovation, University of Texas (Committee member).

### **University of Alberta (JUNE 1999 – JULY 2015):**

#### **Supervision of students who completed their Ph.D.**

1. J. Pagano. MD, FRCPC, Department of Biomedical Engineering, University of Alberta

(Committee member and AIHS Co-mentor). *Dr. Pagano received a Alberta Health Sciences clinical investigator training award.*

- Dr. Pagano is an Assistant Professor in Pediatrics, Division of Pediatric cardiology at University of Alberta.

**2.** M. Yavari, Faculty of Rehabilitation Medicine (Supervisory committee member).

**3.** Stephanie Thompson, Faculty of Public Health, University of Alberta (Supervisory committee member and AIHS Co-mentor).

*-Dr. Thompson is an Assistant professor in the Division of Nephrology, Faculty of Medicine at University of Alberta.*

**4.** A. Ramadi, Faculty of Rehabilitation Medicine (Supervisory committee member).

**5.** K. Chow, Department of Biomedical Engineering, University of Alberta (Committee member).

**6.** E. Pituskin, Ph.D. Student (ANP, MScN,RN) , Faculty of Rehabilitation Medicine (Supervisor).

*-Dr Pituskin is an Associate Professor in the Faculty of Nursing, University of Alberta.*

**7.** J. Chang-Baron, Department of Biomedical Engineering, Faculty of Medicine (Supervisory committee member).

**8.** V. Kandalam, Department of Physiology, University of Alberta (Examining committee member).

**9.** R. Basu, Department of Physiology, University of Alberta (Examining committee member).

**10.** K. Riess, Ph.D. Candidate, Faculty of Rehabilitation Medicine (Supervisor).

*-Dr. Riess is an instructor in the personal trainer fitness program at Northern Alberta Institute of Technology.*

**11.** C. Tomczak, PhD student, Faculty of Rehabilitation Medicine, University of Alberta. (Supervisory committee member).

*-Dr. Tomczak is an Assistant Professor in the College of Kinesiology at the University of Saskatchewan.*

**12.** M. Nelsen, Ph.D. student, Faculty of Physical Education and Recreation (Supervisory committee member).

*Dr. Nelsen is Assistant Professor at Department of Kinesiology, UTA, Arlington, Texas, USA.*

**13.** M. Crocker, Faculty of Medicine, University of Calgary (Supervisory committee member).

**14.** B. Esch, Ph.D. student, Department of Human Kinetics, University of British Columbia, (Supervisory committee member; Supervised training while at U of A).

*-Dr. Esch graduated from the Faculty of Law at University of Alberta in 2012, and is currently Legal Council in the Office of the General Counsel at University of Alberta.*

**15.** J. Scott, Ph.D. student, Department of Human Kinetics, University of British Columbia, (Supervisory committee member; Supervised training while at U of A).

*-Dr. Scott is a Research Scientist at Memorial Sloan Kettering Cancer Centre. Dr. Scott was*

*previously a senior research scientist in the Exercise Physiology and Countermeasures NASA Johnson Space Center, Houston, Texas.*

16. M. McNeely PhD Candidate, Faculty of Physical Education and Recreation (Committee member).

*-Dr McNeely is a Professor, Department of Physical Therapy, University of Alberta.*

17. S. Butcher, Ph.D. Candidate, Faculty of Medicine (Supervisory committee member).

*-Dr. Butcher is an Associate Professor, Department of Physical therapy, University of Saskatchewan, Saskatoon, Saskatchewan.*

18. A. Lee, PhD Candidate, Faculty of Rehabilitation Medicine. (Committee member).

19. M. Kennedy, PhD Candidate, Faculty of Rehabilitation Medicine (Supervisor). Dr. Kennedy received the following awards:

*Dr. Kennedy is an Associate Professor, Faculty of Physical Education and recreation, University of Alberta.*

20. R. Kell, PhD student, Faculty of Rehabilitation Medicine (Committee member).

21. N. Eves, PhD candidate, Faculty of Physical Education and Recreation (Supervisory committee member).

*-Dr. Eves is a Professor, Faculty of Human and Social development, University of British Columbia-Okanagan.*

22. M. Stickland, PhD, Faculty of Physical Education and Recreation (Supervisory committee member). *Dr. Stickland is a Professor of Pulmonary Medicine, Department of Medicine, University of Alberta.*

23. J. McGavock, PhD, Faculty of Physical Education and Recreation (Supervisor). - *Dr. McGavock is the Robert Wallace Cameron Chair in Evidence Based Child Health.*

24. S. Manidic, PhD, Faculty of Physical Education and Recreation (Supervisor). Dr. Mandic is an Adjunct Professor at Auckland University of Technology.

25. E. Gilles, PhD candidate, Faculty of Physical Education and Recreation (Committee member).

#### **Supervision of students who completed their PhD (2000 to present)**

26. S. Zamani. Department of Kinesiology, College of Nursing and Health Innovation (Supervisory Committee member).

27. C. Cunningham, Faculty of Nursing, University of Alberta (Supervisory Committee member).

#### **Supervision of students who completed their MSc (Course Based or Thesis Based) or MN (NP Program)**

28. E. Warmington, Faculty of Nursing, University of Alberta (Supervisor).

29. K. Brown, Faculty of Nursing, University of Alberta (Supervisor).

30. L. Brugger, Faculty of Nursing, University of Alberta (Supervisor).

31. T. Li, Faculty of Nursing, University of Alberta (Supervisor).

32. C. Kruger, Faculty of Rehabilitation Medicine, University of Alberta (Supervisory

committee member).

33. A. McComb, Faculty of Rehabilitation Medicine, University of Alberta (Supervisory committee member).
34. R. Beaudry, Faculty of Rehabilitation Medicine, University of Alberta (Supervisory committee member).
35. B. McLean, Faculty of Physiology Supervisory committee member and AIHS Co-mentor.
36. N. Meena, Faculty of Rehabilitation Medicine, University of Alberta (Supervisor).
37. K. Mathewson Department of Biomedical Engineering, Faculty of Medicine, University of Alberta (supervisory committee member).
38. L. Zenith, Faculty of Medicine, University of Alberta (Co-supervisor).
39. D. Bujis. Faculty of Rehabilitation Medicine, University of Alberta (Supervisory committee member).
40. A. Ryniak (**Supervisor**). Systematic review of the role of exercise to prevent cardiac dysfunction following anti-cancer therapy.
41. K. Carter (**Supervisor**). Systematic review of the role of exercise to prevent cardiac dysfunction following anti-cancer therapy.
42. J. Barnett (**Supervisor**). Systematic review of the role of exercise to prevent cardiac dysfunction following anti-cancer therapy.
43. S. Best (**Supervisor**). Systematic review of the role of exercise to prevent cardiac dysfunction following anti-cancer therapy.
44. S. MacDonald (**Supervisor**). Systematic review of the role of exercise to prevent cardiac dysfunction following anti-cancer therapy.
45. A. Prefontaine (**Supervisor**). Systematic review of the role of exercise to prevent cardiac dysfunction following anti-cancer therapy.
46. J. Smirl, MSc student (**supervisory committee member**). Human Kinetics, University of British Columbia Okanagan. Arterial-cardiac baroreflex and dynamic cerebral autoregulation following heart transplantation.
47. T. McClure, MSc student (**supervisory committee member**). Faculty of Nursing, University of Alberta.
48. J. Mayne, Faculty of Physical Education and Recreation (**Supervisory committee member**).
49. L. Savard, Faculty of Nursing (**Supervisory committee member**).
50. H. Sawitsky (Patient education handbook for individuals post atrial septal defect repair, **Supervisor**).
51. C. Thomas (Patient education handbook for individuals post atrial septal defect repair, **Supervisor**).
52. L. Thompson (Patient education handbook for individuals post atrial septal defect repair, **Supervisor**).
53. B. Wortuing (Patient education handbook for individuals post atrial septal defect repair, **Supervisor**).

54. C. Staenes (Development of a patient Education handbook for kidney transplant recipients, **Supervisor**).
55. A. Mattson (Development of a patient Education handbook for kidney transplant recipients, **Supervisor**).
56. E. McCabe (Development of a patient Education handbook for kidney transplant recipients, **Supervisor**).
57. A. Webb (Development of a patient Education handbook for kidney transplant recipients, **Supervisor**).
58. N. Jendzjowsky, Faculty of Rehabilitation Medicine (**Supervisor**).
59. A. Kwok (Development of a patient Education handbook for Adolescents with Cystic Fibrosis, **MScPT Project Reader**).
60. M. Padilla (Development of a patient Education handbook for Adolescents with Cystic Fibrosis, **MScPT Project Reader**).
61. E. Paul (Development of a patient Education handbook for Adolescents with Cystic Fibrosis, **MScPT Project Reader**).
62. K. Oglinski (Development of a patient Education handbook for Adolescents with Cystic Fibrosis, **MScPT Project Reader**).
63. K. MacKenzie (Development of a patient Education handbook for Adolescents with Cystic Fibrosis, **MScPT Project Reader**).
64. L. Carlyle, Faculty of Physical Education and Recreation (**Committee member**).
65. S. Dhillon, Department of Physical Therapy, Faculty of Rehabilitation Medicine (**Supervisory Committee Member**).
66. J. Huang, Department of Physical Therapy (**MScPT Project Supervisor**).
67. K. Lobb, Department of Physical Therapy (**MScPT Project Supervisor**).
68. J. Carey, Department of Physical Therapy (**MScPT Project Supervisor**).
69. J. Bealer, Department of Physical Therapy (**MScPT Project Supervisor**).
70. M. Bissada, Department of Physical Therapy (**MScPT Project Supervisor**).
71. M. Jenkins, Department of Physical Therapy (**MScPT Project Supervisor**).
72. A. Olsen, Department of Physical Therapy (**MScPT Project Supervisor**).
73. A. Patil, Department of Physical Therapy (**MScPT Project Supervisor**).
74. R. Packer, Department of Physical Therapy (**MScPT Project Supervisor**).
75. B. Esch, Department of Human Kinetics, University of British Columbia, (**Supervisory committee member**).
76. J. Scott, Department of Human Kinetics, University of British Columbia, (**Supervisory committee member**).
77. A. Oreopoulos, Department of Physical Therapy, Faculty of Rehabilitation Medicine (**Supervisor**). -*Dr. Oreopoulos completed her Ph.D in Clinical Epidemiology.*
78. R. Malik, Department of Occupational Therapy, Faculty of Rehabilitation Medicine (**Committee member**).

79. M. Kelly, Department of Physical Therapy, Faculty of Rehabilitation Medicine (**Committee member**).
80. C. Hung, MSc PT, Department of Physical Therapy, Faculty of Rehabilitation Medicine (**Supervisor**).
81. G. Hansen, MSc (2001), Faculty of Physical Education and Recreation (**Committee member**).
82. L. Sim-Anderson, MSc (2000), Faculty of Physical Education and Recreation (**Committee member**).
83. M. McNeely, MSc PT, Department of Physical Therapy, Faculty of Rehabilitation Medicine (**Committee member**).
84. G. duManoir, MSc, Faculty of Physical Education and Recreation (**Committee member**).
85. K. Macfadyen, MSc, Faculty of Physical Education and Recreation. (**Committee member**).
86. D. Dibski. MSc, Faculty of Kinesiology, University of Calgary. (**Committee member**).
87. M. Pulickal, Department of Physical Therapy, Faculty of Rehabilitation Medicine (**Committee member**).

#### **External Examiner**

88. M. Black. MSc, Faculty of Kinesiology, University of Calgary.
89. F. Jalali. MSc, Faculty of Medicine, University of Calgary.
90. T. Hobson, MSc, Faculty of Medicine, University of Calgary.
91. J. Mitchell, Ph.D. Faculty of Medicine, University of Calgary.
92. M. Rakabochuk, Ph.D. Faculty of Kinesiology, McMaster University.
93. A. Spence, Ph.D. School of Sport Science, Exercise and Health. University of Western Australia. Crawley, Australia.
94. H. Ismail, Ph.D. School of Science and Technology, University of New England, Armidale, Australia.
95. J. Moreira, Ph.D. Faculty of Medicine, Norwegian University of Science and Technology.
96. S. Murch, Ph.D. Faculty of Medicine, University of Melbourne, Melbourne, Australia.
97. M. Peter Wallen, Ph.D. School of Human Movement and Nutrition Sciences University of Queensland, Brisbane, Queensland, Australia.
98. S. Bucher Sandbakk, Ph.D. Faculty of Medicine and Health Sciences, Department of Circulation and Medical Imaging, Norwegian University of Science and Technology, Trondheim, Norway.
99. M. Glibbery, MSc, Exercise Sciences, University of Toronto. Toronto, Canada.
100. M. Abdul Selam Altaha, MSc, Institute of Medical Science, University of Toronto.

101. S. Allana, Faculty of Nursing, University of Alberta (Internal Examiner).

102. J. Ariyaratnam, Ph.D. Health and Medical Sciences. University of Adelaide.

## **University of Alberta**

### **Supervision of Residents/Clinical Fellows**

1. Dr. I. Voder Muhll, MD, FRCP(C) (2001, Research Supervisor).

Dr. Vonder Muhll received the 2001 Key Pharmaceuticals University of Alberta Dr. Vonder Muhll is currently an Associate Professor of Medicine, University of Alberta and staff cardiologist at the University of Alberta Hospital.

2. Dr. L. Altamirano-Diaz. Pediatric Cardiology Fellow, Division of Pediatric Cardiology, University of Alberta (2011, Research Supervisor).

-Dr. Altamirano-Diaz is a Professor in Pediatrics (Cardiology) in the Department of Pediatrics at Western University, and Associate Scientist, Division of Children's Health & Therapeutics, Children's Health Research Institute (CHRI).

3. I. Fegers-Wustrow, MD (Senior Physician), Department of Prevention, Sports Medicine and Sports Cardiology, School of Medicine, University Hospital Klinikum rechts der Isar, Technical University Munich (PDF Mentor; TUM Mentoring Program, June 2023 – January 2024).

4. A. Peters MD, Division of Cardiology, Duke University (Exercise Physiology Advisor for K23 award submission, 2022-2023).

### **Supervision of Undergraduate Practicum. Summer. Honours Students**

1. B. Roberts. Faculty of Physical Education and Recreation. Practicum supervisor. Area of clinical interest: Exercise rehabilitation for recent cardiac transplant recipients.

2. N. Jendzjowsky. Faculty of Physical Education and Recreation. Practicum supervisor: Exercise rehabilitation for individuals with heart disease.

3. S. Nessim (Physiology student, University of Alberta). Accuracy of impedance cardiography with two-dimensional echocardiography for measuring exercise stroke volume and cardiac output in heart transplant recipients.

4. C. Krueger (Faculty of Science undergraduate student) spring/summer 2011, 2012.

5. M. Thomas. (Faculty of Science undergraduate student) spring/summer 2012.

6. B. Berger. College of Nursing and Health Innovation, University of Texas at Arlington, 2016-2017.

7. E. Fyfe. College of Health Sciences Faculty of Nursing, University of Alberta, 2022- 2023.

8. K. Weinkauff. College of Health Sciences Faculty of Nursing, University of Alberta, 2022-2023.

9. S. Paterson. Faculty of Science (Honors Physiology, Summer student), University of Alberta. 2023 & 2024.

10. D. Walesiak. Faculty of Science (Honors Physiology, Summer student), University of Alberta. 2024.

11. C. Weinkauff. College of Health Sciences, Faculty of Kinesiology, University of Alberta, 2022-2023.

12. D. Walesiak. Honors Research practicum – 09, 2024 – 04, 2025. Faculty of Science (Honors Physiology, Summer student), University of Alberta. 2025.

Heritage Youth Researcher Summer Program (HYRS)

13. H. Wong, Grade 11 student, Old Strathcona High School (Supervisor).

*-Dr. Wong completed a radiology residency at University of Alberta.*

## **RESEARCH GRANTS**

### **CURRENT**

1. Aortic Wall Stress and Remodeling: From Healthy Aging to Athletic Adaptation and Pathological Dilation. Canadian Institutes of Health Research (PI, \$634,950, 2026 -2031)

2. Influence of Aging and Physical Activity on Thoracic Aortic Wall Stress, Aortic Remodeling and Dissection. University of Alberta, Faculty of Medicine & Dentistry 2025 Transformational Medical Research Grant-River Philip Foundation (PI, 243,800, 2025-2028).

3. Understanding the Impact of Exercise on Cardiovascular Function in Patients with Aortic Disease. Heart and Stroke Foundation of Canada (PI, \$379,707 2025-2029).

4. Novel Imaging Approaches for Measuring Oxygen Utilization Across the Oxygen Cascade. American Heart Association (Co-PI, \$10,000 US, 2025-2026).

5. Phenotyping cardiotoxicity and heart failure risk in breast cancer survivors: Moving beyond resting ejection fraction. (PI, \$128,600: CIHR - \$64,000; 2024-2026)

6. Phenotyping cardiotoxicity and heart failure risk in breast cancer survivors: Moving beyond resting ejection fraction Cancer Research Society (PI, \$64,600, 2024-2026).

7. Imaging of Long-Term Tissue Damage from COVID-19 and Cardiometabolic Disease. CIHR Project Grant (Co-Investigator, \$887,400; 2024-2029).

8. Neuromuscular dysfunction in women receiving taxane-based chemotherapy. 2024 Cross Cancer Institute Investigator Initiated Trial Grant Funding Competition (CO-I, 132,792; 2024-2026).

9. Living with aortic disease. SSHRC Institutional Grants FoN, UAlberta (CO-I, \$3000, 2025-2026)

10. Cardiac, cerebral and skeletal muscle hemodynamics and oxygenation in Post-Acute COVID-19 Syndrome, Postural Orthostatic Tachycardia Syndrome and Healthy Controls. Ward Estate Chronic Fatigue Research Competition, Neuroscience and Mental Health Institute, University of Alberta (Co-PI: 150,000; 2024-2026).

11. A novel remote intervention to decelerate the age-related decline and disease development among older breast cancer survivors. Canadian Institutes of Health Research (CIHR) -

Biological and Clinical Aspects of Aging (Co-Investigator, \$895,050; 2023-2028).

**12.** Management of Impaired Functional Capacity in Older Breast Cancer Survivors. CIHR Project Grant - Biological and Clinical Aspects of Aging (PI: \$577,576; 2022-2027).

**13.** Quantitative Imaging of the Evolution of the Whole-Body Fat Profile in Breast Cancer Survivors. CIHR Project Grant (Co-PI, \$755,440; 2021-2026).

## **COMPLETED GRANTS**

**1.** APOLLO: Personalized rehAbilitation PrOgram in aLLOgeneic bone marrow transplantation Team. The Leukemia & Lymphoma Society of Canada's Blood Cancer/ The Canadian Cancer Society Quality of Life Grant Competition (Co-investigator, \$150,000, 2023-2025)

**2.** Dapagliflozin for long COVID syndrome. CIHR Bridge Grant (CO-I:\$100,000; 2024-2025).

**3.** Dapagliflozin for long COVID syndrome. Long COVID Web (CO-I: \$100,000; 2024-2025).

**4.** Utilizing Exercise Cardiovascular and Skeletal Magnetic Resonance Imaging to Evaluate Factors Associated with Cardiorespiratory Fitness in Pediatric Heart Transplant Recipients. Canadian Donation and Transplantation Research Program and Big Gifts for Little Lives (Co-Investigator: \$30,000; 2023-2025).

**5.** Impact of exercise on the heart and aorta in people with aortic dissection. Dr. Margaret "Marmie" Perkins Hess Heart Research Pilot Grant-Cardiovascular Research Institute, University of Alberta (PI: \$50,000; 2024-2025).

**6.** A novel remote intervention to decelerate the age-related decline and disease development among older breast cancer survivors. CIHR Women's Health Research - Early Career Researcher Grant - Project Grant Priority Announcement (Co-Investigator: \$100,000, 2 years).

**7.** Mechanisms of Exercise Intolerance in Heart Failure with Preserved Ejection Fraction: Precision Therapy Based on Patient Specific Pathophysiology (National Heart, Lung, and Blood Institute, National Institutes of Health (02-09, 2019 to 01- 31, 2024) total: \$11,357,558 US, Co-investigator; Program PI: B. Levine; My Role: PI, Project 2 (02-09, 2019 – 12-31-2019: \$374,628 US): *"Targeting skeletal muscle to improve exercise capacity in heart failure with preserved ejection fraction"*).

**8.** Mechanism and Modulation of Sex Differences in Myocardial Steatosis Induced Left Ventricular Dysfunction. National Heart, Lung, and Blood Institute, National Institutes of Health (Co-investigator, \$3,335,850 US).

**9.** Effect of early access cardiac rehabilitation on ventricular remodeling and exercise adherence: A pilot-feasibility study (\$120,000, Co-applicant, Saskatchewan Health Research Foundation). *This grant was ranked 1<sup>st</sup> out of 25 submitted grants.*

**10.** Preventing functional disability in breast cancer survivors – A randomised controlled exercise intervention. World Cancer Research Fund International, 2019-2022. (\$362,041. Co-investigator).

- 11.** Skeletal muscle metaboreflex as a mechanism of exercise intolerance in heart failure with preserved ejection fraction (2018-2019, AHA Postdoctoral Fellowship awarded to Dr. Wesley Tucker; Supervisors: Drs. Haykowsky and Nelson; College of Nursing & Health Innovation, UTA, fellow; \$106,532)
- 12.** Defining specific mechanisms limiting oxygen delivery and utilization in heart failure with preserved ejection fraction: Novel insight from Near-Infrared Diffuse Correlation Spectroscopy. National Heart, Lung, and Blood Institute, National Institutes of Health (Co-investigator, \$441,020 US).
- 13.** Faculty Science and Technology Acquisition and Retention (STARS) Program. The University of Texas System (PI, \$500,000 US).
- 14.** Mechanisms and management of exercise intolerance in older heart failure patients with preserved ejection fraction (HFpEF). National Institute of Health, National Institute of Nursing Research (PI, \$308,416 US).
- 15.** Stollery Single Ventricle Outcomes Team. Women and Childrens Health Research Institute (WCHRI) Clinical Research Capacity Building Award. (\$200,000, Co-Applicant- Exercise physiology team leader).
- 16.** AMAZON: Multidisciplinary support And exerciZe during Adjuvant endOcriNe therapy. Alberta Cancer Foundation (\$68,000, Co-applicant).
- 17.** CROSSFIT: CROSS sectional study of cardiovascular Function and risk profiles In BRCA muTation carriers. Women & Children's Health Research Institute (WCHRI, \$15,000. Co-Applicant).
- 18.** Influence of exercise modality on cerebral-ocular hemodynamics and pressures. NASA Johnson Space Center: Omnibus. (\$100,000, Co-investigator).
- 11.** A randomized controlled trial of twelve weeks of home-based exercise training in patients with Child Pugh class A and B cirrhosis. American College of Gastroenterology Clinical Research Award Competition (\$35,000, Co-PI).
- 12.** Identification of chemotherapy-induced cardiac damage using novel exercise magnetic resonance imaging in breast cancer patients. St. Vincent's Hospital research endowment fund (\$20,000, Co-investigator).
- 13.** Mechanisms and functional significance of enhanced carotid chemosensitivity in health and heart failure. Heart & Stroke Foundation of Canada (\$165,000, Co-applicant).
- 14.** Aerobic training in patients with cirrhosis. University of Alberta Hospitals Foundation (30,000, Co-PI).
- 15.** Cardiology Oncology Research. 2011 Mazankowski Alberta Heart Institute/University of Alberta Foundation Innovative Team Grant Competition (\$300,000, Co-applicant, *Exercise Physiology Section Leader*).
- 16.** Multidisciplinary Approach to Novel Therapies in Cardiology Oncology Research. CIHR, 2010 Breast Cancer Priority Announcement (\$336,627, *Co-applicant*).
- 17.** Multidisciplinary approach to novel therapies in cardiology-oncology research. CIHR

Strategy on Patient Oriented Research Program (\$100,000, *Co-applicant*).

**18.** Multidisciplinary Approach to Novel Therapies in Cardiology Oncology Research. Alberta Cancer Research Initiative (\$261,000, *Co-applicant*).

**19.** Imaging the Mechanisms of Diastolic Dysfunction and their Role in Cardiovascular Performance (CIHR, *Co-applicant*, \$281,097).

**20.** Imaging the mechanisms of Diastolic Dysfunction and their Role in Cardiovascular Performance. Heart and Stroke Foundation (\$171,000, *Co-applicant*).

**21.** Understanding and Treating Diastolic Heart Failure: Novel Mechanisms, Diagnostics and Potential Therapeutics. Alberta Heritage Foundation for Medical Research- Interdisciplinary Team Grant (\$5,000,000, *Co-applicant* & Exercise Physiology Section Leader).

**22.** Carotid Chemoreception and Exercise in Health and Chronic Heart Failure. Heart & Stroke Foundation (\$118,044, *co-applicant*).

**23.** Novel imaging techniques to determine the late effects of anthracycline toxicity on myocardial function in cancer survivors. Women and Children's Health Research Institute, Alberta Health Services, University of Alberta. (\$26,200, *Co-applicant*).

**24.** Acute Effects of Aerobic Interval Exercise on LV Function in Heart Failure. Faculty of Rehabilitation Medicine Small Faculties Grants Competition (\$9,300, *Primary investigator*).

**25.** Oxygen Kinetics and Cardiovascular Responses Associated with Physiological Mechanisms of Acu-TENS in Health and Patients with Cardiopulmonary Dysfunction. Hong Kong Polytechnic University-Development of Niche Areas Funding (\$72,362, *Co- applicant*).

**26.** The effects of Tai Chi training in the sitting position on indices of wellbeing in institutionalized older adults. Hong Kong Polytechnic University-Development of Niche Areas Funding (\$77,306, *Co-applicant*).

**27.** The effect of cardiac resynchronization therapy on oxygen uptake kinetics in heart failure. St. Jude Medical (\$58,000, *Co-applicant*).

**28.** Cardiovascular Fitness and Function in Kidney transplant Recipients: Role of Exercise Training. M.S.I. Foundation (\$40,000, *Primary Investigator*).

**29.** Effect of aerobic training on LV systolic function in women with HER2 positive breast cancer. Canadian Breast Cancer Research Alliance Developmental and Exploratory Grant (\$43,918, *Primary investigator*).

**30.** The influence of opioid analgesia on functional work ability. WCB Research Program (\$10,000, *Co-applicant*).

**31.** Randomized Controlled Trial of Progressive Resistance Exercise Training for Spinal Accessory Neurapraxia/Neurectomy in Head and Neck Cancer Survivors. Physiotherapy Foundation of Canada (*Co-applicant*, \$9,602).

**32.** Cardiopulmonary Responses to Exercise in Firefighters. Canadian Forces Personnel Support Agency, Department of National Defence (*Co-applicant*, \$150,000).

**33.** Determining the Feasibility of Pre-Operative Exercise Training for Patients Undergoing Surgery for Non-Small Cell Lung Cancer. Funded by the Alberta Cancer Board-Pilot Project Grant, 1 year (*Co-applicant*, \$33,956).

- 34.** Canadian Institute of Health Research New Investigator Award, 01/07/2004 - 30/06/2009. (\$295,689).
- 35.** Effects of exercise training on VO<sub>2</sub>peak, cardiovascular and musculoskeletal performance and quality of life in cardiac transplant recipients. Heart and Stroke Foundation of Alberta, NWT & Nunavut. (Primary investigator, \$147,000).
- 36.** Cardiovascular translational research center (Co-applicant). CFI: \$5,687,178; ASRIP: \$2.5 million; Alberta Heart Institute: \$2 million; U of A: \$572,518; Alberta Infrastructure: \$1.88 million; In-kind donations: \$ 1.9 million; *Total amount awarded = \$14,502,518.*
- 37.** Determining the Prognostic of symptom limited exercise testing on survival in metastatic breast cancer patients. Canadian Breast Cancer Research Alliance - Developmental and Exploratory Grants (Co-Applicant, \$45,008).
- 38.** Exercise capacity, vascular and left ventricular function in heart failure patients: Effects of cardiac rehabilitation training. University of Alberta, SAS, Small faculties Grant. (PI, \$5,000).
- 39.** Effects of 12 weeks of exercise training on cardiorespiratory fitness, muscle strength and left ventricular function in older women with congestive heart failure. 2001, University of Alberta, SAS Small Faculties Research Grants Program. (Primary investigator: \$4,966).
- 40.** Effects of 12 weeks of aerobic, resistance or combined aerobic and resistance training on maximal aerobic power, muscle strength, left ventricular morphology and systolic function in healthy older women (PI). 2001, Internal research grants competition, Faculty of Rehabilitation Medicine, University of Alberta. (Primary investigator: \$6,000).
- 41.** The effect of an exercise program on the maintenance and recovery of ability to perform activities of daily living in tetraplegia. Spinal Cord Research Foundation. (Co- applicant, \$101,605.22).
- 42.** Tomorrow's Research Cardiovascular Health Care Professionals. 2002-2008. Alberta Heritage Foundation for Medical Research; Heart and Stroke Foundation of Canada; CIHR- Institute of Circulatory and Respiratory Health and Institute of Gender and Health. (Co- investigator, \$1,266,739).
- 43.** The efficacy of manual lymph drainage in the reduction of arm volume in breast cancer related lymphedema. 2001, Canadian Breast Cancer Foundation-Alberta Chapter/Alberta Cancer Board Clinical Trials Committee grant. (Co-applicant, \$20,589).
- 44.** Differences in cardiac function between physically active and sedentary women with diabetes. 2001, University of Alberta, SAS Small Faculties Research Grants Program. (Co-applicant, \$5,000).
- 45.** Effect of an off-season training program for Edmonton rowers and its effects on cardiovascular adaptations. 2001-2002, Universiade' 83 Foundation(\$2,000, Co-applicant).
- 46.** The effects of high intensity rowing exercise combined and combined strength and

endurance training on cardiovascular responses. 2001-2002, Sports Sciences Association of Alberta. (Co-applicant, \$3,600).

**47.** Does narcotic analgesia improve exercise test performance in chronic low back pain? 1999-2000, University Hospital Foundation/Alberta Health Sciences Research Institute. (Co-applicant, \$19,988).