

A photograph of two hikers on a mountain trail. One hiker is wearing a red jacket and a backpack, and the other is wearing a pink jacket and using trekking poles. They are walking on a rocky path with sparse vegetation. In the background, there are large, rugged mountains under a blue sky with some clouds.

FACULTY OF PHYSICAL EDUCATION AND RECREATION

*Where the Art and Science of Human Movement come Alive!*

# **ReCon III: *Breaking Out of the Box* Program**

September 5-8, 2013  
Canmore, Alberta



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# INTRODUCTION

## Message from the ReCon Co-Committee Chair

It is with great pleasure that I welcome you to ReCon III. The purpose of ReCon is to promote graduate student research, leadership and professional development, in an environment that encourages interaction amongst students, staff, and members of faculty.

ReCon, which was first held in 2011, brings together a unique combination of retreat and conference formats. It is a time to be curious, to think, to challenge the ways we think about the world, and learn from each other. The idea for an annual graduate student event was proposed by Dean Kerry Mummery and brought to fruition under the guidance of the Physical Education and Recreation Graduate Student Society (PERGSS) and Dr. Stewart Petersen, Associate Dean (Graduate). I am pleased to continue to support this annual event.

Among us are new and returning graduate students, faculty, and staff, as well as members of the wider university community. Welcome all. Please enjoy the poster and oral presentations, social events, professional development session, and time recreating together in the wonderful setting of Canmore.

Donna Goodwin  
Associate Dean (Graduate)

## Message from the PERGSS Vice President (ReCon)

Welcome to ReCon III, the Physical Education and Recreation Faculty's annual graduate student conference and retreat! This is a one of a kind event designed to showcase graduate student research, provide professional development opportunities, facilitate social interactions and networking, take in the breathtaking Rocky Mountains, and build enthusiasm for the upcoming year. I believe that ReCon is an integral part of the graduate student experience, and whether students are new to the faculty or nearing the end of their programs, attendance at ReCon is extremely valuable and a lot of fun!

The idea of a graduate student conference and retreat was introduced by Dean Kerry Mummery in 2011. He dedicated the financial resources required to sustain the event for three years, and recently committed to three more years of funding for the event.

Each year ReCon continues to grow and improve. I am very pleased by the growth in abstract submissions this year and the increasing numbers of new students and faculty who will be attending. The strong engagement and participation of students, staff, and faculty will only improve the quality of the ReCon experience, and ultimately the professional and social skills, resources, and confidence of our graduate students.

The ReCon III Organizing Committee decided to introduce a theme this year, to create an overall guiding vision for ReCon III, and to set us apart from previous years. The guiding theme for ReCon III is *Breaking Out of the Box*. We hope that this theme will encourage everyone to break out of our usual routines, try new things, explore new ideas, and discuss these ideas with students and faculty. We hope that ReCon III will challenge everyone to think critically about research from all disciplines and spark innovative and creative ways of seeking knowledge.

I would like to thank the past ReCon Organizing Committee members for their hard work and dedication to ReCon. They paved the way for us, and allowed us to improve and build upon the success of previous years. Further, I would like to thank each member of the ReCon III Organizing Committee for their contributions to ReCon III. Without the commitment of each of these members, ReCon would not be as exciting and rewarding as I know this year will be.

Thank-you for your support and I look forward to meeting and interacting with each of you this weekend!!

Jodie Stearns

## PRACTICAL INFORMATION

### Bus Information

We will be boarding the bus on Thursday, September 5<sup>th</sup> at 9:30am **behind Clare Drake Arena** by the large Zamboni doors (west side of the Van Vliet Building). We will be leaving at **9:45am SHARP!** Although there will be a 30 minute break in Red Deer, we suggest that you bring water and snacks for yourself as it will be at least a four hour bus trip to Canmore. The Canmore drop-off location is the Radisson Hotel.

The bus will return back to Edmonton on Sunday, September 8<sup>th</sup> from the Radisson Hotel. It will load at 9:30am, and will leave at **9:45am SHARP.** Again there will be a 30 minute stop in Red Deer and the drop-off location will be behind Clare Drake Ice Hockey Arena.

### Conference Hotel and Venue

Both the conference and hotel accommodation are situated within the Radisson Hotel. The hotel is centrally located within Canmore and is a short walk from an array of restaurants and shops.

Radisson Hotel contact information:     511 Bow Valley Trail  
Canmore, Alberta  
T1W 1N7  
(403) 678 3625  
[rhi\\_cnmr@radisson.com](mailto:rhi_cnmr@radisson.com)

### Registration

Delegates can register between 3:00pm and 4:00pm on Thursday, September 5<sup>th</sup>. Those who arrive late can pick up their conference bags from Annie Selzler.

The registration fee:

- Conference registration for all 3 days
- Coffee/snacks at breaks
- 2 continental hot breakfasts (Friday and Saturday)
- 2 boxed lunches (Friday and Saturday)
- Conference dinner at the Drake Pub (Friday)
- Transportation to group activities in the Canmore area.

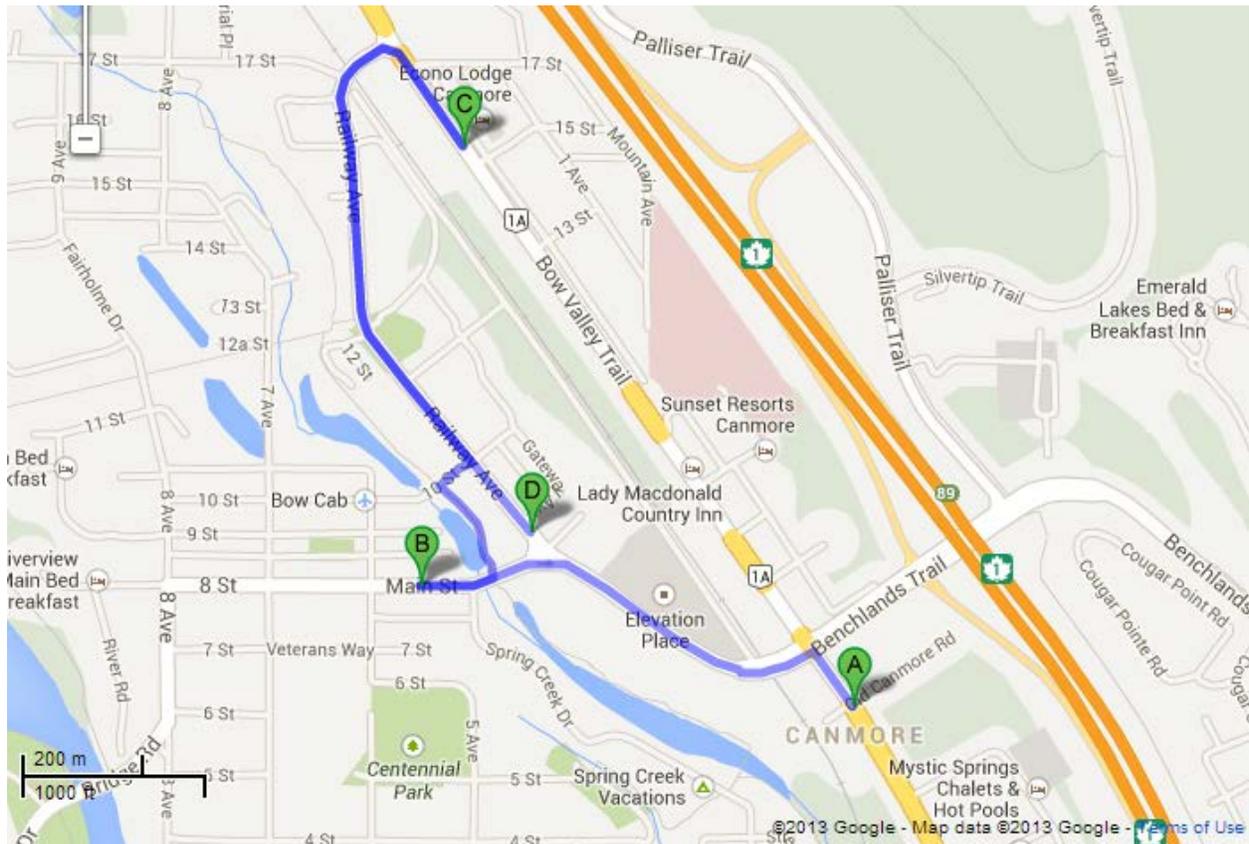
### Outdoor Activities

Weather in the mountains can be very unpredictable. Please plan to bring a water bottle, good hiking shoes or boots, a warm layer, and a wind/rain shell for the outdoor activity breaks. There is a detailed description of the activities in the full schedule of events.

## Questions

If you have a question before or during the conference please email Tara at [pergssrecon@ualberta.ca](mailto:pergssrecon@ualberta.ca). Further, if you have an emergency you can call Jodie's cell at 780-619-6123.

## Map of Canmore



**(A) Radisson Hotel & Conference Centre Canmore**

*511 Bow Valley Trail, Canmore, AB, T1W 1N7*

**(B) The Grizzly Paw Brewing Company**

*622 8 St, Canmore, AB, T1W 2B6*

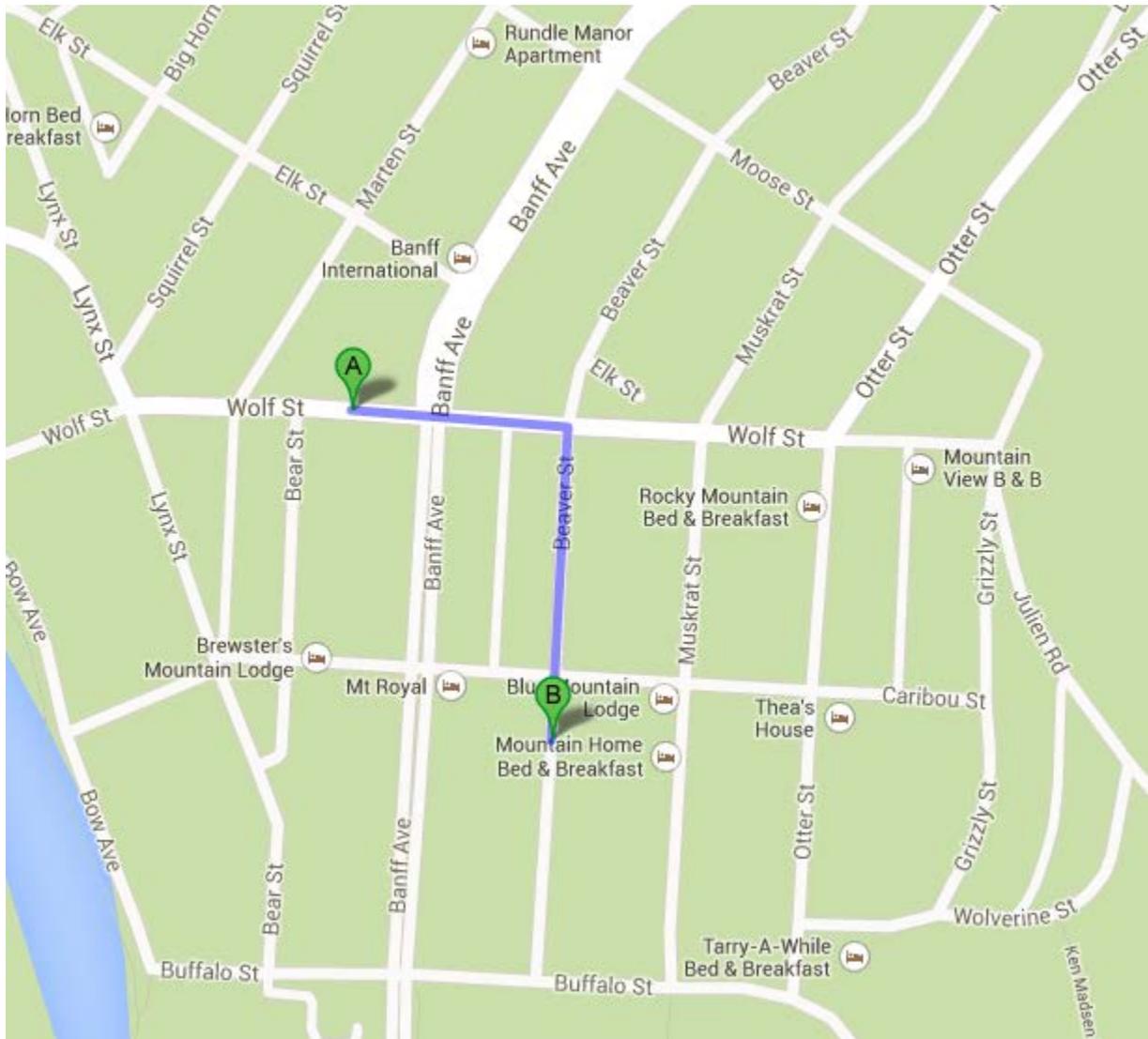
**(C) Patrinos Steak House & Pub**

*1602 Bow Valley Trail, Canmore, AB, T1W 1N5*

**(D) The Drake Pub**

*909 Railway Ave, Canmore, AB, T1W 1P3*

## Map of Banff



**(A) St James's Gate Irish Pub**  
Wolf St, Banff, AB, Canada

**(B) Bus drop off and pick up location**  
Beaver St and Caribou St

## **PROGRAM INFORMATION**

### **ReCon Organizing Committee**

Stewart Petersen (ReCon III Chair)  
Jodie Stearns (PERGSS Vice President [ReCon])  
Tara Chisholm  
Bev Ethier  
Donna Goodwin  
Ann Jordon  
Devin Phillips  
Annie Selzler  
John Spence  
Matheus Wiest

### **Best Oral and Poster Presentation**

A prize will be awarded for the best oral and poster presentations. ReCon delegates will vote at each research presentation session and award winners will be decided based on the majority vote. The awards are based on the following criteria: engagement with the audience, effective communication of ideas, and inclusion of thought provoking discussion. Keep these criteria in mind when developing your presentations.

### **Previous Winners**

#### **2012**

Oral presentation winner- Michael Chizewski  
Poster presentation winner- Liam Boyd  
Special Mention- Danielle Peers & Lindsay Eales

#### **2011**

Oral presentation winner- Vince Tedjasaputra  
Poster presentation winner- Angela Coppola

## PROGRAM IN DETAIL

Thursday, September 5, 2013

### 9:30am – 3:00pm Boarding & Bus travel from Edmonton to Canmore

The bus will load at 9:30am.  
The bus leaves at 9:45am SHARP.

### 3:00pm – 4:00pm Registration

Pick up conference bag in the foyer of the Radisson  
Restaurant sign-up for Thursday night (The Grizzly Paw or Patrino's  
Steakhouse and Pub)

### 4:00pm - 4:15pm Welcoming Comments – Crocus Ballroom

Jodie Stearns, PERGSS Vice President (ReCon)  
Dean Kerry Mummery

### 4:15pm – 5:30pm Icebreaker Activity

**Facilitators:** Jodie Stearns & Annie Selzler

### 5:45pm – 7:00pm Rod Murray Memorial Address

**Introduction:** Dr. Michelle Helstein, Department of Kinesiology & Physical  
Education, University of Lethbridge

**Speaker:** Jordan Koch

**Description:** In remembrance of Rod Murray, a former PhD student of the  
faculty, a senior student is nominated annually to deliver an inspiring and  
thought provoking address on opening night. Rod was known for his  
passionate approach to teaching, engagement with the public domain and  
love of big ideas. This talk will inspire us to think about what it means to  
be teachers, researchers, coaches and engaged, thoughtful citizens.

### 7:00pm Dinner in Canmore

Reservations have been made at two restaurants for 50 people in total.  
*Please sign-up in advance* to avoid overwhelming the restaurants.

**Option 1:** The Grizzly Paw  
622 – 8 Street  
Canmore, AB  
403-678-9983  
<http://www.thegrizzlypaw.com>  
**Leader:** Matheus Wiest

*Option 2:* Patrino's Steakhouse and Pub  
1602 Bow Valley Trail  
Canmore, AB  
403-678-4060  
<http://www.patrinoscanner.ca>  
**Leader:** Devin Phillips

*Delegates are responsible for paying for their own dinner.*

## Friday, September 6, 2013

### 7:00am – 8:00am Breakfast

A continental buffet will be served at the hotel restaurant (*included with registration*)

### 8:30am – 10:00am Research Presentations 1 – Crocus Ballroom

**Moderator:** Marianne Clark

**Session Responders:** Valerie Carson & Howie Harshaw

**Exploring physical activity commitment and lapses: A comparison of sport and exercise motives and involvement opportunities**

James R. Vallerand & Bradley W. Young

**Effects of culture and leisure participation on Japanese and Canadian university students' control**

Eiji Ito & Gordon J. Walker

**Metformin and/or lifestyle interventions for the metabolic syndrome in children and adolescents**

Nicholas Kuzik, Étienne Myette-Côté, Valerie Carson, & Normand Boulé

**Variability in performance of a work simulation test of physical fitness for firefighters**

Liam Boyd & Stewart Petersen

**Undone and overcome: Ironic depictions of heterosexual romantic relations in Aszure Barton's Over/Come**

Kelsie Acton

### 10:00am – 10:15am Break

Juice and coffee will be served.

**10:15am – 11:45am Professional Development Session 1**

**Title:** Interdisciplinary conversation in Physical Education and Recreation

**Moderator:** Tara Chisholm

**Facilitator:** Dr. Marcel Bouffard

**Description:** This session will involve discussions around interdisciplinary conversation within the Physical Education and Recreation field. Delegates will have the opportunity to communicate with one another and will be encouraged to talk with individuals in different research areas, levels of study, and from different cultures.

**11:45am – 3:45pm Grab-and-Go Lunch & Outdoor Activities**

**Lunch:** Box lunch (*included with registration*)

**Outdoor Activity 1: Ha Ling Peak**

This is a challenging 8 km mountain hike for intermediate to advanced hikers that offers breathtaking views of the mountains. **Leaders:** Devin Phillips & Michael Scarlett.

**Outdoor Activity 2: Grassy Lakes**

This is a leisurely 4 km hike. You will encounter two small lakes with beautiful turquoise water and stunning views of Ha Ling Peak. **Leaders:** Matheus Wiest & Vince Tedjasaputra.

**Transportation:**

The PERGSS bus will drive delegates to and from the activities. We will leave the Radisson at **noon SHARP**, and will head back at **3pm SHARP**. *Priority will be given to those who paid for the bus.*

**4:15pm – 5:00pm Student Video Presentation**

**Moderator:** Kelsie Acton

**New constellation: A dance-umentary**

Lindsay Eales, Danielle Peers, Justin DuVal, & Roxanne Ulanicki

**5:00pm – 7:00pm Poster Session**

**Moderator:** Jodie Stearns

**Neuromuscular physiology reveals breed specific progression in mice with amyotrophic lateral sclerosis**

Aaliya Merali, Neil Tyreman, Tessa Gordon & Kelvin Jones

**Associations between physical activity and posttraumatic growth in gynecologic cancer survivors.**

Jennifer Crawford & Kerry Cournea

**Effects of resistance training frequency on muscular strength and physical functioning in prostate cancer survivors**

Mary Norris, Gordon Bell, & Kerry Courneya

**Does the Q-angle have an effect on running kinematics during treadmill running to muscular fatigue**

Mariska Booyens & Pierre Baudin

**Longitudinal examination of exercise self-efficacy trajectories in men and women**

Anne-Marie Selzler, Wendy M. Rodgers, & Terra C. Murray

**Pubertal maturation and physical activity in adolescents**

Eun-Young Lee & John C. Spence

**Applying muscle biochemical analyses to assess the influence of cage housing environment on pectoralis major phenotype in three strains of laying hens (*Gallus gallus domesticus*)**

Katelyn M. Frizzell, Erin Lynch, Charles T. Putman, & Michelle J. Jendral

**Ventilatory responses to prolonged exercise with heavy load carriage**

Devin Phillips & Stewart Petersen

**The role of physical activity and fitness on systemic inflammation and endothelial function in asthma – Project proposal**

Linn Moore & Michael Stickland

**Repeated squat-stand cycles as a tool for demonstrating integrative cardiovascular and cerebrovascular physiology in human subjects**

Christina MacKay, Chantelle Lemieux, Karen Sheedy, Nishan Sharma, Michelle Yeo, Phil Ainslie, & Trevor Day

**Fostering global citizenship through the UNESCO world heritage education programme**

Taryn Barry & Elizabeth Halpenny

**PEDS 582 class project: Reliability and validity of physical activity and sedentary behaviour measurement using the wrist-worn ActiGraph GT3X+**

Jodie A. Stearns, Laurie de Grace, Shayna Fairbairn, Huimei Liu, Eric Mathieu, & John C. Spence

**Coalescing the theories of social learning, diffusion of innovation, and social exchange: A community tourism development analytic framework**

Baikuntha Prasad Acharya & Elizabeth Ann Halpenny

**The validation of the stair climbing feature of the Fitbit one physical activity monitor**

Shayna M. Fairbairn & Kerry Mummery

**Outcome likelihood, desirability, and control factors as they relate to exercise intentions in female and male undergraduate students**

Eric Mathieu, Lisa Cooke, Anne-Marie Selzler, Allison Devine, Tanya Berry, Craig Hall, & Wendy Rodgers

**The effects of cranial cooling during uncompensable heat stress in fire protective ensemble**

Michael P. Scarlett, Stephen S. Cheung, Michael K. Stickland, & Stewart R. Petersen

**Changes in glucose disposal after a caloric restriction-induced weight loss program in obese postmenopausal women: characteristics of positive and negative responders: A MONET study**

Étienne Myette-Côté, Éric Doucet, Denis Prud'homme, Rémi Rabasa-Lhoret, Jean-Marc Lavoie, & Martin Brochu

**7:30pm**

**Conference Dinner**

***The Drake Pub***

909 Railway Ave  
Canmore, AB  
403-678-5131  
<http://www.thedrakepub.com/>

*Included with registration:*

Burger buffet will include beef, chicken, and portabella mushroom burgers along with french fries, onion rings, salad, dessert, and soft drinks (pop/coffee/tea).

*Delegates will be responsible for alcoholic beverages and these will be pay-as-you-go.*

*Non-Delegates:*

Tickets can be purchased from Devin Phillips at registration for \$20.

## Saturday, September 7, 2013

### 7:00am – 8:00am Breakfast

A continental buffet will be served at the hotel restaurant (*included with registration*).

### 8:30am – 10:00am Research Presentations 2 – Crocus Ballroom

**Moderator:** Matheus Wiest

**Session Responders:** Valerie Carson & Howie Harshaw

**An Internet-based intervention for promoting and maintaining physical activity in Thai university-aged females**

Sonthaya Sriramatr, Tanya R. Berry, & John C. Spence

**Adolescent girls' perceptions of autonomy, competence, and relatedness in various physical activity Settings**

Kimberly McFadden, Hilary Davies, Tanya Scarapicchia, & Catherine Sabiston

**She Shoots, She Scores! The history of the first IIHF women's world ice hockey championship**

Patrick Reid

**Predicting pro-environmental behaviour in ecotourism context: An extension of the theory of planned behaviour**

Farhad Moghimehfar & Elizabeth A. Halpenny

**Effect of a dopamine-2 receptor blockade on cardiorespiratory responses to graded exercise**

Vince Tedjasaputra, Tracey L. Bryan, Stewart R. Petersen, Robert C. Welsh, & Michael K. Stickland

### 10:00am – 10:15am Break

Juice and coffee will be served.

### 10:15am – 12:00pm Professional Development Session 2

**Title:** Acknowledging common mental health challenges faced by graduate students: Moving forward in a positive direction of change

**Facilitator:** Jason Murray, Registered Psychologist

**Moderator:** Annie Selzler

**Description:** The overarching goals of the mental health session are to bring awareness and to open a dialogue about common challenges that graduate

students face, including competition, comparison, and perfectionism. In a group setting, delegates will brainstorm strategies for overcoming these challenges.

**12:00pm – 4:00pm**

**Grab-and-Go Lunch & Outdoor Activities**

**Lunch:** Box lunch (*included with registration*)

**Outdoor Activity 1: Mountain Biking**

This centre has multiple mountain biking trails with beginner, intermediate and advanced routes. To allow you to focus on having fun and avoid trying to navigate the trails, experienced leaders will take out beginner and intermediate groups. If you decide to go mountain biking, we advise that you book your bike soon. Call Trail Sports at the Nordic Centre at 403-678-6764 to book (\$18/hour). **Leaders:** Devin Phillips & Vince Tedjasaputra.

**Outdoor Activity 2: Disk Golf**

If you are looking for a fun and light activity for Saturday, disk golf is the right activity for you! This is a challenging 18-hole course through a forest terrain. Frisbees can be rented from Trail Sports at the Nordic Centre for \$5 per day. **Leaders:** Eric Mathieu & Marry Norris.

**Outdoor Activity 3: Walking Trails**

If mountain biking or disk golf do not interest you, there are many walking trails at the centre that you can explore. There will be a small group going on a leisurely walk on the 5km loop so please feel free to join! **Leader:** Tara Chisholm.

**4:00pm – 4:30pm**

**Break**

Coffee and juice will be served.

**4:30pm – 5:45pm**

**Research Presentations 3**

**Moderator:** Shayna Fairbairn

**Session Responders:** Valerie Carson & Howie Harshaw

**Perfectionism and reactions to mistakes in competitive curling**

Michael Lizmore

**Is Canadian sport under new management? Examining the role of Canadian Sport for Life and the Canadian Sport for Life leadership team**

Mathew Dowling

**Effective health communication strategy to enhance public's participation in physical activities: A test of extended parallel process model**

Lira Yun

**Leisure and natural disasters: A case study of the Great East Japan**

**Earthquake and tsunami**  
Shintaro Kono

**5:45pm – 6:30pm Professional Development Session 3**

**Title:** Organized chaos: Time management in graduate school

**Facilitators:** Annie Selzler & Jodie Stearns

**Contributors:** Vince Tedjasaputra, Mat Dowling, & Jennifer Crawford

**Description:** This session will be a fun twist on time management. Real-world graduate student experiences will guide the session and strategies to improve time management will be discussed. Each delegate will be encouraged to set an intention to try one new technique in the upcoming year

**6:30pm – 7:15pm Closing Remarks & Awards**

Oral and poster presentation awards will be presented by Dr. John Spence, Associate Dean (Research)

Closing comments from Dean Kerry Mummery and Jodie Stearns, PERGSS Vice President (ReCon)

**7:30pm – 11:30pm Free Time in Banff**

We will be heading to Banff for the evening. Delegates are free to do whatever they like, but there will be a group of students going to:

St. James Gate Pub  
207 Wolf Street  
Canmore, AB  
403-762-9355  
<http://stjamesgatebanff.com/>

**Transportation:**

The bus departs for Banff at **7:30pm SHARP**. Each delegate must pay \$10 before getting on the bus. This payment is required to cover the costs of the national park fee. The bus will return back to the hotel at **11:15pm SHARP**. The drop off and pick up location is Beaver Street & Caribou Street. *Priority will be given to those who paid for the bus.*

If there is enough interest, the bus will take a group up to the Banff Hot Springs. It will leave the Beaver Street & Caribou Street drop off location at 9:00pm and will head back at 10:30pm.

## Sunday, September 8, 2013

**7:30am – 9:30am**

**Breakfast & Check-Out**

*Delegates are responsible for their own breakfast.*

**9:30am – 2:30pm**

**Bus travel from Edmonton to Canmore**

The bus will load at 9:30am.

The bus leaves at **9:45am SHARP**.

## THANK-YOU TO OUR SPONSORS!!

University of Alberta Mental Health Centre

Physical Education and Recreation Graduate Student Society (PERGSS)



Coming Soon.....

**UWALK.CA**

UWALK aims to increase the level of physical activity among Albertans through walking!

Website Coming.....  
September 20th '13  
to a computer near you!

What's Your Next Step?

 **UNIVERSITY OF ALBERTA**  
FACULTY OF PHYSICAL  
EDUCATION AND RECREATION

## ABSTRACTS

### Research Presentations 1

Friday, September 6<sup>th</sup>, 2013

8:30 – 10:00 am

**Author Name:** James R. Vallerand

**Title:** Exploring physical activity commitment and lapses: A comparison of sport and exercise motives and involvement opportunities

**Co-Author(s):** Bradley W. Young

**Abstract:** This investigation comprising three studies, differentially examined the influences of independent motives (Study 1), the number of personally important motives (Study 2) and involvement opportunities (IOs; Study 3), on physical activity (PA) commitment and lapses, between adult sportspersons and exercisers. 252 (MAge = 47.20; range = 35-57 yrs) self-identified sportspersons (n = 108) and exercisers (n = 144) completed an online questionnaire capturing their PA motives (EMI-2; Markland & Ingledew, 1997), IOs (Young & Medic, 2011b), commitment (Scanlan et al., 1993) and lapses (Simkin & Gross, 1994). Study 1 revealed that sportspersons and exercisers alike were primarily motivated for enjoyment and health related reasons, but sportspersons attributed greater importance to competition and social motives than exercisers. Enjoyment, stress relief, and social motives predicted commitment equitably for sportspersons and exercisers, and sportspersons' commitment was additionally predicted by personal goals and challenges, and appearance motives. Only participants' stress relief motive further buffered against the odds of lapsing for both sportspersons and exercisers. Of participants attributing more importance to the health related motive, exercisers reported lower odds of lapsing, whereas sportspersons had higher odds. Study 2 demonstrated that participants who reported a greater number of personally important motives reported being more committed to their respective sport or exercise programs, regardless of what these motives represented. Chapter 4 provided support for the use of expanded IO factors, with an 11-item factor emerging for sportspersons and 7-item factor for exercisers. These IO factors equally predicted levels of commitment for sportspersons and exercisers. The overall investigation can provide valuable information to help tailor future sport and exercise programs to keep adult populations active.

**Author:** Eiji Ito

**Title:** Effects of culture and leisure participation on Japanese and Canadian university students' control

**Co-Author(s):** Gordon J. Walker

**Abstract:** This experience sampling method study examined the effects of leisure participation on Japanese and Canadian undergraduate students' primary control (i.e., changing the existing environment to align with their wishes) and two aspects of secondary control: acceptance (i.e., accepting the existing environment despite their wishes) and adjustment (i.e., adjusting oneself to fit the existing environment). Forty-one Japanese and 36 Canadian undergraduate students from the Kobe University and the University of Alberta, respectively, participated in this study. Each participant received a watch alarm that was programmed to ring randomly six times a day, every weekend (i.e., Saturday and Sunday), for four weekends. Days were divided into six 2-hour time blocks between 10 am and 10 pm, and one signal was randomly programmed per block. Hierarchical linear modeling results indicated that leisure participation significantly: (a) increased both Japanese and Canadian students' primary control; (b) decreased both Japanese and Canadian students' acceptance aspect of

secondary control, but the negative effects for Japanese students were significantly smaller than those for Canadian students; and (c) increased and decreased, respectively, the adjustment aspect of secondary control for Japanese and Canadian students. These results suggested that a fuller understanding of the effects of leisure participation can only be achieved if attention is paid to cultural contexts. Thus, future research should examine other aspects of leisure experience cross-culturally. By doing so, we believe that leisure studies has the potential to correct existing distortions of leisure and to overcome its disciplinary ethnocentrism.

**Author:** Nicholas Kuzik

**Title:** Metformin and/or lifestyle interventions for the metabolic syndrome in children and adolescents

**Co-Author(s):** Étienne Myette-Côté, Valerie Carson, Normand Boulé

**Abstract:** *Introduction:* Childhood obesity has more than doubled in the last 30 years. The metabolic syndrome, historically a problem in adults, has recently been linked to obesity in children and adolescents. Interventions targeting childhood obesity have had a poor success rate. Lifestyle changes (typically diet and physical activity) are preferentially the first interventions. If lifestyle interventions are unsuccessful, medications are increasingly considered as an option. A medication gaining popularity for a number of off-label prescriptions in children is metformin—an oral glucose lowering medication that also decreases body mass index (BMI). However, relatively little is known about the efficacy of metformin in children. *Methods:* A search of PUBMED was conducted to identify trials on the effect of metformin and/or lifestyle interventions in children and adolescents. The data extracted from the relevant articles included metabolic syndrome variables, according to the International Diabetes Federation. This data was analysed using REVMAN and SPSS. *Results:* The search yielded 946 abstracts, from which 12 articles (569 children and adolescents) were eligible. On average 69% of participants were females and the average age was 14.4 years (range:11.9-16.1). Trials compared metformin ( $1.5 \pm 0.4$ g/day) and/or a lifestyle intervention lasting an average of 6 months (range:3-12). Metformin caused a reduction in BMI ( $-1.09$ kg/m<sup>2</sup>,  $p=0.001$ ) but did not significantly affect blood glucose ( $-0.89$  mmol/L,  $p=0.38$ ), triglycerides ( $-0.15$  mmol/L,  $p=0.98$ ), high density lipoprotein ( $-0.22$ mmol/L,  $p=0.75$ ), or systolic blood pressure ( $+0.72$  mm Hg,  $p=0.61$ ). Conversely, we did find an increasing diastolic blood pressure ( $+2.33$  mm Hg  $p=0.05$ ). There was also trend of females being less responsive to metformin. *Conclusion:* Our systematic review of 12 studies was consistent with a previous smaller review, where BMI was decreased by metformin and other components of the metabolic syndrome were unaffected. However, our review is the first to observe a significant increase in diastolic blood pressure with metformin.

**Author:** Liam Boyd

**Title:** Variability in performance of a work simulation test of physical fitness for firefighters

**Co-Author(s):** Stewart Petersen

**Abstract:** Evaluation of fitness for duty in time-sensitive, emergency response occupations often involves a series of essential work-related tasks combined into a test circuit where the variable of interest is completion time. The Canadian Forces Firefighter Physical Fitness Maintenance Evaluation (FF PFME) is an example of such a test where the firefighter, in full fire protective gear including a self-contained breathing apparatus, must correctly complete 10 work-related tasks on a measured and calibrated course. Fitness for duty is inferred from completion time. Completion time may be dependent on a firefighter's pacing strategy and day-to-day fluctuations in biological function. To examine the effects of these two factors on performance, 20 females and 31 males (mean  $\pm$  SD: age,  $27.6 \pm 10.5$  yrs; height,  $176.7 \pm 8.3$  cm; mass,  $77.3 \pm 13.4$  kg) were familiarized with the FF PFME and

then completed the test six times on separate days as fast as possible each time. Pre-test behaviors (e.g., sleep, diet) and test conditions (calibration, time of day) were consistent. Repeated measures ANOVA revealed no differences in mean heart rate or perceived exertion between tests. However, there was a significant decrease in completion time between Tests 1 and 2 (8.2%) and 2 and 3 (5.1%), but not between Tests 3 and 4 (3.1%), 4 and 5 (2.4%), and 5 and 6 (1.4%). The coefficient of variation (CV) for Tests 1, 2 and 3 was 7%, which was interpreted to reflect development of optimal pacing. CV for Tests 4, 5 and 6 was 3.1%, which was interpreted as the estimate of biological variability. Based on the findings, we suggest that this type of test must be used with caution unless adequate practice is allowed. Furthermore, false-positive and false-negative decisions may result from failure to account for biological variability when test time is close to the cut-score.

**Author:** Kelsie Acton

**Title:** Undone and overcome: Ironic depictions of heterosexual romantic relations in Aszure Barton's *Over/Come*

**Co-Author(s):** n/a

**Abstract:** As an art form rooted in the body, dance is the site of fraught and complicated gender relations. Scholars such as Anne Daly, Susan Leigh Foster and Sally Banes have found dance, in particular ballet, a fruitful site for feminist inquiry because of its strongly defined gender roles and emphasis on heterosexual romantic relations. But is it possible to use dance itself to critique the strongly gendered relationships of dance? Aszure Barton's *Over/Come*, developed at the Baryshnikov Arts Centre in 2005, uses irony to produce an amusing but also brutal critique of heterosexual romantic relations. By close reading of key movement phrases and moments in Aszure Barton's *Over/Come*, I examine how Barton critiques gender relations and particularly the heterosexual romantic relations of Classical and Romantic ballet. Barton sets up two ironies within *Over/Come* that address heterosexual romantic relations – an irony between the lyrics of the Andy Williams love songs that accompany much of *Over/Come* and the movement performed by the dancers and an irony between the movement conventions of ballet and the actual movement performed by the dancers.

## Alternative Presentation

Friday, September 6<sup>th</sup>, 2013

4:15 – 5:00 pm

**Author:** Lindsay Eales

**Title:** *New constellation: A dance-umentary*

**Co-Author(s):** Danielle Peers, Justin DuVal, Roxanne Ulanicki

**Abstract:** By combining dance-on-film, rehearsal and performance footage, and dancer interviews, "*New Constellation: A Dance-umentary*" engages with a community of integrated dancers from iDANCE Edmonton Integrated Dance (iDANCE) throughout their rehearsal and performance process. This 37-minute video questions notions of disability and able-bodiedness, explores social barriers to participation in dance and life, shares the joys and challenges of performing integrated dance, and celebrates the mutual care and connection that has developed through this process. It is a collaborative creation by Justin DuVal, Lindsay Eales, Danielle Peers, and Roxanne Ulanicki, made possible by a film grant from the Alberta Foundation for the Arts. This project draws together various facets of the Faculty of Physical Education and Recreation: it is produced by two graduate students about iDANCE, which is a

program of the Steadward Centre for Personal & Physical Achievement in partnership with the Orchestis Dance Group. The proposed presentation is a preview screening of the video, followed by a question and answer period with Lindsay Eales and Danielle Peers.

## Poster Session

Friday, September 6<sup>th</sup>, 2013

5:00 – 7:00 pm

**Author:** Aaliya Merali

**Title:** Neuromuscular physiology reveals breed specific progression in mice with amyotrophic lateral sclerosis

**Co-Author(s):** Neil Tyreman, Tessa Gordon, Kelvin Jones

**Abstract:** *Purpose:* The aim of this research was to measure the progression of the neurodegenerative disease, Amyotrophic lateral sclerosis (ALS), in three groups of mice. The progression of the disease was inferred from measures of lifespan, body mass, and neuromuscular physiology. *Significance and Hypotheses:* ALS is a rapidly progressing neurodegenerative disease characterized by muscle atrophy, weakness, and difficulty swallowing, speaking, and breathing. Half of the mice with an ALS genetic mutation die within the first 145 days of life compared to a normal lifespan of more than 2 years. The disease progresses more quickly in fast-twitch muscles and certain breeds of mice. We hypothesize that the onset of symptoms will be later in the breed with the longer lifespan. *Methods and Results:* The three groups were measured groups at 40, 60, 90 and 120 days of age on the tibialis anterior (TA), medial gastrocnemius (MG), and soleus (SOL). Analysis between the two breeds revealed that the onset of symptoms was later in the breed with a shorter lifespan. *Conclusion:* Contrary to our hypothesis, symptom onset began earlier in the breed that had the longer lifespan. This was evident by the maintenance of muscular strength for longer in the breed with a shorted lifespan. Therefore, intervention studies should consider breed specific disease progression when in the design phase of their study.

**Author:** Jennifer Crawford

**Title:** Associations between physical activity and posttraumatic growth in gynecologic cancer survivors

**Co-Author(s):** Kerry Cournea

**Abstract:** *Background:* Physical activity (PA) may assist to facilitate posttraumatic growth (PTG) in gynecologic cancer survivors (GCS). The purpose of this study will be to conduct a provincial, population-based survey study examining the association between various aspects of PA (frequency, intensity, duration, and type) and various indicators of PTG in GCS. *Research Design and Methods:* This will use a cross sectional design of GCS from the Alberta Cancer Registry. GCS (n=2000) who meet the eligibility criteria will be contacted to participate in the survey. Eligibility will include: a) between the ages of 18 to 80 years of age, histologically confirmed gynecologic cancer (cervical, endometrial or ovarian; Stage I-IIIa) but are now cured or in remission; b) ability and willingness to complete all questionnaires involved in the study in English. The survey will assess demographic and medical information, self reported physical activity (Godin Leisure Time Exercise Questionnaire) and posttraumatic growth (Benefit Finding Scale, Impact of Cancer Scale, Post Traumatic Growth Inventory) information. *Conclusion:* This survey will allow us to explore which aspects of PA (e.g., type, volume, risk, novelty) are associated with which dimensions of PTG (i.e., appreciation for life, better interpersonal relationships, personal strength, recognition of

new possibilities, spiritual development). This information will be used to inform a randomized controlled trial on this question.

**Author:** Mary Norris

**Title:** Effects of resistance training frequency on muscular strength and physical functioning in prostate cancer survivors

**Co-Author(s):** Gordon Bell, Kerry Courneya

**Abstract:** *Background:* Research has shown that resistance training (RT) improves clinical health outcomes in individuals that have prostate cancer, however, whether or not traditional RT prescriptions are optimal in this population has not been elucidated. One potentially important component of the RT prescription is the frequency of sessions per week. Several RT studies in prostate cancer patients have used twice/week interventions whereas other have trained 3 times a week but no study has directly compared different RT frequencies to determine differences in any clinical benefit. The purpose of this study will be to examine the effects of a 2 versus 3 RT sessions per week to determine if there are any significant differences in muscular strength between the groups and any improvements in clinical health outcomes such as physical functioning and fatigue. *Methods/Design:* Prostate cancer survivors will be recruited through the Alberta Cancer Registry and randomly assigned to either a 2 day a week or 3 day a week RT group. Both groups will complete the same set of exercises, and at the same intensity. The independent variable will be the number of days per week they exercise. The primary outcome measurements will be muscular strength and changes in physical functioning. In addition, secondary outcomes will include fatigue, health related quality of life, depression, nausea, psycho-social functioning and aerobic fitness. *Discussion:* The main outcome of this study will be to determine if there is any greater gain in muscular strength with an added day of RT and if there is any differential effect of frequency of training on improvements in physical functioning along with other clinical outcomes. The findings from this study will provide added knowledge in the area of resistance training and prostate cancer, specifically in the area of the exercise prescription in this type of clinical population.

**Author:** Mariska Booyens

**Title:** Does the Q-angle have an effect on running kinematics during treadmill running to muscular fatigue

**Co-Author(s):** Pierre Baudin

**Abstract:** The Q-angle has been used in a clinical setting to analyze the forces produced by the quadriceps and how they affect the patellofemoral joint. The object of this study was to analyze the relationship between the recorded Q-angles and the running kinematics of each subject when completing a treadmill protocol to muscular fatigue. It was hypothesized that larger Q-angles would result in a greater degradation in running mechanics, resulting in increased lateral and medial deviation of the hip joint. The Q-angle is the theoretical angle described by a line drawn from the anterior superior iliac spine (ASIS) through the centre of the patella and a line drawn from the tibial tuberosity to the centre of the patella (Stensdotter et al, 2009). This measure was taken before every subject's treadmill protocol, using a standardized universal goniometer protocol. The standing and running Q-angle and hip adduction angle was recorded through the use of the Qaulisys Track Manager (2) system. Results showed that analyzing the Q-angle during running is not scientifically significant, because larger deviations within the femur, patella and tibia are needed to change the magnitude of the Q-angle. It was evident that all subjects showed larger lateral and medial deviation when comparing their first twenty strides to their last twenty strides. The subject with the largest Q-angle showed the greatest magnitude of lateral and medial deviation. Although this finding supported the hypothesis, a larger

research population is needed to prove that a larger Q-angle cause greater degradation in running mechanics, resulting in an inefficient running gait. Ongoing research in this area of study could possibly look at how hip strengthening could improve weaknesses of the hip musculature and prevent loss of control in the frontal and transverse planes of motion (Earl et al, 2011).

**Author:** Anne-Marie Selzler

**Title:** Longitudinal examination of exercise self-efficacy trajectories in men and women

**Co-Author(s):** Wendy M. Rodgers, Terra C. Murray

**Abstract:** Abundant research suggests that exercise self-efficacy is a critical determinant of behaviour and a multidimensional construct. The purpose of this study was to examine the trajectories of task, coping, and scheduling self-efficacy over a six month exercise program in men and women. Forty men (Mage = 43, SD = 10) and sixty women (Mage = 44, SD = 11) completed assessments of self-efficacy at baseline, 7, 12, and 24 weeks of the exercise program. The self-efficacy sub-types exhibited invariance over time and by gender. Latent growth curve models revealed individual differences in initial levels of task, coping, and scheduling self-efficacy and rates of change for coping and scheduling self-efficacy. Task self-efficacy did not change over time. For coping and scheduling self-efficacy, the functional form of change was quadratic, such that self-efficacy levels increased from baseline to 7 weeks, and then decreased at 12 and 24 weeks. Women's scheduling self-efficacy decreased more rapidly and deviated more from linearity than men's. Given that at 7 weeks exercise supervision ceased, support beyond 7 weeks may be needed to instill resilient coping and scheduling self-efficacy beliefs. Women may require additional support to develop their scheduling self-efficacy beliefs over and above that required by men.

**Author:** Eun-Young Lee

**Title:** Pubertal maturation and physical activity in Adolescents

**Co-Author(s):** John C. Spence

**Abstract:** Despite the numerous health benefits of physical activity, considerable evidence documents that the rate of participation in physical activity among adolescents is low in most developed countries. According to Malina (2008), "children and adolescents can be considered in neither an exclusively biological nor an exclusively cultural manner". Because children and adolescents grow, mature, and develop within the complex interrelated domains of individual, family, and culture, it is important to consider cultural factors (e.g., meanings, perceptions, values, and sanctions of physical activity) inclusively as well as biological, psychological, social and environmental factors in the study of children and adolescents. Low level of physical activity and high sedentary time were also observed in Korean adolescents however associated factors are unknown. Therefore, the goals of the study are to identify the association between biological maturation and physical activity among South Korean adolescents, and to identify factors linking biological maturation and physical activity in adolescent girls with the hypothetical mediated effects model of the relationship between biological maturation and physical activity in girls. It is important to examine South Korean adolescents' physical activity on the basis of a biocultural perspective—such a perspective would offer a picture of the South Korean context that not only accounts for biological and psychological aspects of adolescents but for cultural and environmental aspects unique to South Korea as well. Results and conclusion will be discussed at the conference.

**Author:** Katelyn M. Frizzell

**Title:** Applying muscle biochemical analyses to assess the influence of cage housing environment on pectoralis major phenotype in three strains of laying hens (*Gallus gallus domesticus*)

**Co-Author(s):** Erin Lynch, Charles T. Putman, Michelle J. Jendral

**Abstract:** Biochemical analyses traditionally used to characterize human muscle phenotype were applied to evaluate the impact of stress and physical activity on laying hen Pectoralis major (Pma) muscle. Since layer housing environments that permit bone-loading activity and structural bone preservation may reduce hen bone fragility and affect muscle phenotype, the influence of cage environment and layer strain on Pma traits was assessed for Lohmann Brown (LB), Lohmann Lite (LW) and Shaver White (SH) hens housed in Furnished Cages (FC) (240cm X 110cm) (40 hens/cage; n=4 cages/strain) and Conventional Cages (CC) (60cm X 55cm) (5 hens/cage; n=24 cages/strain) (18-80 weeks). Hens each had 660cm<sup>2</sup> floor space and in FC, could access a nestbox, perches and dustbath. Hens were electrically-stunned at 80 weeks. Pma samples were collected at 17 minutes and 24 hours post mortem (PM) to assess 17 minute PM initial pH, colour, glycolytic potential, glycogen and heme content, and myofiber types, and 24 hour PM ultimate pH and tenderness. Preliminary color findings of elevated lightness values (L\*) for all housing treatments and strains, despite high initial pH values, suggest that environmental stressors negatively impacted muscle characteristics for all hens. However, the observed decline in ultimate pH values suggests that muscle glycolysis still occurred PM. Additionally, strain differences in color redness (a\*) and tenderness values point to muscle phenotypic differences that may have affected muscle glycolytic potential at slaughter. Ongoing analyses of muscle glycogen and heme content, glycolytic potential and myofiber composition will further clarify the contribution of housing environment and layer genotype to Pma muscle traits.

**Author:** Devin Phillips

**Title:** Ventilatory responses to prolonged exercise with heavy load carriage

**Co-Author(s):** Stewart Petersen

**Abstract:** The purpose of this investigation will be to study breathing pattern, operational lung volume and respiratory muscle strength during 45 minutes of exercise with a heavy backpack (25 kg) and at the same intensity in an unloaded condition. Fifteen males will complete graded exercise tests on a treadmill to determine ventilatory threshold (TV) and VO<sub>2</sub>peak with and without a 25 kg pack. Subsequently, each subject will complete two exercise challenges (one loaded and one unloaded, in random order) that consist of 45 minutes of walking at a constant speed (1.5 m·s<sup>-1</sup>) and grade approximately 2% below the grade that elicited TV. Results of pilot work have shown that, during exercise with the pack, tidal volume (VT) and end-inspiratory lung volume (EILV) were reduced by 20.3 and 6.6% respectively, while breathing frequency (BF) and ventilation (VE) increased by 28.1 and 14.5% respectively (n=2). After exercise with the pack, maximal inspiratory pressure (MIP) decreased by 8.4% with no change in maximal expiratory pressure (MEP), compared to the unloaded condition. Although aerobic demand was matched between conditions, exercise stress, leg fatigue and breathing stress were always perceived to be higher in the loaded condition. In summary, during 45 minutes of exercise with a heavy pack (25 kg), breathing patterns are altered in order to maintain alveolar ventilation. The results indicate that subjects started to breathe more rapid and shallow, resulting in increased dead space and minute ventilation. The decrease in MIP suggests that respiratory muscle fatigue may occur, however, further investigation is required.

**Author:** Linn Moore

**Title:** The role of physical activity and fitness on systemic inflammation and endothelial function in asthma – Project proposal

**Co-Author(s):** Michael Stickland

**Abstract:** *Background:* Asthma is a chronic inflammatory disease characterized by episodes of bronchoconstriction and wheezing. Previous studies have shown that people with asthma are at increased risk of cardiovascular disease (CVD) (Iribarren et al. 2012), while the reason(s) for this remains unknown. Impaired endothelial function is an early marker of CVD and has previously been shown to be reduced in asthma (Yildiz et al. 2004). While physical activity can reduce systemic inflammation and improve endothelial function (DeSouza et al. 2000, Dod et al. 2010), asthmatics are generally more inactive than non-asthmatics (Teramoto and Moonie 2011). The purpose of the proposed study is to assess whether physical activity and/or fitness influence vascular health in asthma. *Methods:* Asthmatics, n=20, will be recruited from the University of Alberta Asthma Clinic, and activity and age-matched healthy controls will be recruited from the general population. Venous blood will be collected for analysis of systemic inflammatory markers (e.g. IL-6, TNF $\alpha$ , and CRP) and endothelial function will be assessed by flow-mediated dilation analysis. A graded cardio-pulmonary exercise test will then be performed to determine peak oxygen consumption, and physical activity levels will be recorded over 3 days using activity monitors. *Anticipated Results:* While previously studies have shown that endothelial dysfunction and systemic inflammation is present in asthmatics, the relationship between the two has never been established in asthma. We anticipate there will be a correlation between markers of systemic inflammation and endothelial dysfunction in asthma. By stratifying our subjects into groups based on physical activity and fitness-levels, we aim to evaluate if low activity levels and/or fitness in asthma are responsible for the increased risk of CVD, or if the adverse cardiovascular consequences are due to the asthmatic disease independently of physical activity levels and/or cardio-pulmonary fitness.

**Author:** Christina MacKay

**Title:** Repeated squat-stand cycles as a tool for demonstrating integrative cardiovascular and cerebrovascular physiology in human subjects

**Co-Author(s):** Christina MacKay, Chantelle Lemieux , Karen Sheedy, Nishan Sharma , Michelle Yeo, Phil Ainslie, & Trevor Day

**Abstract:** *Background:* Laboratory demonstrations are useful tools to enhance the understanding of complex mechanisms involved in integrative cardiovascular and cerebrovascular human physiological responses. Many demonstrations require sophisticated equipment, which are not always available in undergraduate or graduate physiology teaching environment. We aim to provide a simple yet effective visual demonstration that could be adopted in undergraduate laboratory settings to enhance the understanding of integrative human physiology. Here we focus on the regulation of cerebral blood flow (CBF) in response to dynamic changes in mean arterial pressure (MAP). *Laboratory Demonstration:* A simple, repeated squat-stand manoeuvre drives dynamic changes in MAP and CBF. Subjects were instrumented for continuous measurement of instantaneous heart rate (IHR; ECG), MAP (finometer) and velocity in the middle cerebral artery (MCAv; transcranial Doppler ultrasound) during repeated 10 sec squat-stand cycles using LabChart software. *Discussion:* During the squat-stand demonstration, immediate changes are observed in MAP. With each squat, the skeletal muscle pump increases venous return, cardiac output (i.e., Starling mechanism) and MAP. With each subsequent stand, venous return is reduced due to gravity-dependent blood pooling in the lower extremities, and cardiac output and MAP follow. As the cerebrovasculature is a high pass filter, these high frequency oscillations in MAP are translated to changes in CBF, but are dampened to some extent by cerebral autoregulation.

Simultaneously, the arterial baroreflex is elicited with each change in MAP, and IHR counters and attenuates the pressure oscillations in a negative feedback loop. *Utility:* Raw data traces can be used to visually illustrate the integration between the cardiovascular and cerebrovascular systems. By adopting demonstrations that involve the measurement of multiple parameters within a laboratory setting, students of physiology will enhance their understanding of complex reflexes and interactions between integrated body systems.

**Author:** Taryn Barry

**Title:** Fostering Global citizenship through the UNESCO World Heritage Education Programme

**Co-Author(s):** Elizabeth Halpenny

**Abstract:** Due to the increasing threats to natural and cultural heritage worldwide, the UNESCO World Heritage Convention was formed in 1972 to protect the heritage deemed to have 'Outstanding Universal Value'. They launched the World Heritage Education Programme (WHE Programme) in 1994 to mobilize young citizens to actively participate in the protection of World Heritage. Using a range of tools including international youth forums and education resources, the WHE Programme aims to instill skills in young people that can lead to the development of global citizens, as many are transferable from one cause to another. Diverse cultural conceptualizations of global citizenship from young people are missing in current literature; therefore, this study will explore the individual perspectives from former youth delegates ( $\leq 23$  countries) of the 2008 World Heritage Youth Component to investigate if they were transformed (or not transformed) into global citizens. It is hypothesized transformation occurred, though differences between perspectives may be linked to different cultural backgrounds and societal contexts. These differences must be gathered and applied to current conceptualizations of global citizenship for it to be a more feasible concept. It is hoped the results of the study will highlight multi-centric knowledges and enhance international programs like the WHE Programme to foster global citizenship.

**Author:** Jodie A. Stearns

**Title:** PEDS 582 class project: Reliability and validity of physical activity and sedentary behaviour measurement using the wrist-worn ActiGraph GT3X+

**Co-Author(s):** Laurie de Grace, Shayna Fairbairn, Huimei Liu, Eric Mathieu, John C. Spence

**Abstract:** *Background:* Wrist-worn accelerometers have been gaining interest in recent years because of their potential to increase compliance rates. No studies have examined the reliability and validity of the wrist-worn ActiGraph GT3X+ accelerometers during free-living conditions. *Methods:* For a graduate-level course in the Physical Education and Recreation Faculty, 40 participants were recruited (Mage = 39 years; age range = 22-67 years; 63% female). Wrist-worn GT3X+ accelerometers and hip-worn SC-T2 pedometers were worn for seven consecutive days. The Godin Leisure Time Questionnaire (GTLQ) and the International Physical Activity Questionnaire (IPAQ) were completed the night before the activity monitor data collection began, and on the last day of wear. Reliability was determined via intraclass correlation coefficients (ICCs), while relational validity was examined via Spearman's Rank Order correlations. *Results:* Average scores for the accelerometer-determined measures were 163.04 (SD = 71.55) for moderate-to-vigorous physical activity (MVPA) min/day, 12551 for steps/day, and 47.59 (SD = 51.06) for sedentary min/day. The coefficient of variation was 43.89 for min of MVPA/day, 23.66 for steps/day, and 107.28 for sedentary time/day. The ICC's were .45 for min of MVPA/day, .51 for min of sedentary behaviour/day, and .42 for steps/day. Pedometer steps/day correlated moderately with MVPA/day ( $r = .55, p < .01$ ), strong with steps/day ( $r = .71, p < .01$ ), and weak with sedentary min/day ( $r = -.35, p < .01$ ). Correlations between the accelerometer measures and the GTLQ and IPAQ were very weak to weak ( $p = -.03$  to  $.27$ ). *Conclusion:* From these findings it appears that the wrist-worn GT3X+

accelerometer is a good measure of steps/day, a limited measure of min of MVPA/day and a poor measure of sedentary min/day. Future studies should extend these findings by comparing wrist- versus hip-worn accelerometers during naturalistic conditions.

**Author:** Baikuntha Prasad Acharya

**Title:** Coalescing the theories of social learning, diffusion of innovation, and social exchange: A community tourism development analytic framework

**Co-Author(s):** Elizabeth Ann Halpenny

**Abstract:** The processes of tourism-induced development are analyzed through several social theoretical lenses. Most of the theories in community tourism development studies are used either individually and/or in pairs. The main objective of this paper is to explore a framework comprised three different theories: social exchange (SE), social learning (SL), and diffusion of innovation (DoI). The framework is conceptualized to be a potential tool to look at the issues of community tourism development, specifically in developing countries. Community tourism is ideally believed to be fostered according to the roles of key community players in constant reciprocity, equitable collaboration and effective management. Nonetheless, community tourism initiatives are often observed to be failure or less productive than initially hoped for. The intricacies of social structure and heterogeneous interests of the communities have impeded many development processes. The schema of this paper brings together elements of SE, SL and DoI theories to establish a theoretical synergy to investigate, understand, and address the challenges of community tourism development. Through the synergizing of three theories into one model, it is hoped that more can be explained, than if these theories were applied separately to community tourism cases. This is a conceptual study based on extensive literature review. It will involve a critical interpretive approach analyzing the attributes of these theories and their collective strengths in explaining community tourism. Existing literature on community tourism that uses these theories will be the primary focus of this review. An inductive approach of collecting information from these materials will support or refute the utility of combining the three theories to explain community tourism development. During the process, key concepts will be coded and then categorized to reach to the themes that will identify the strengths and uses of the combined model.

**Author:** Shayna M. Fairbairn

**Title:** The validation of the stair climbing feature of the Fitbit One Physical Activity Monitor

**Co-Author(s):** Kerry Mummery

**Abstract:** *Purpose:* The purpose of this research is to validate the stair climbing function of the fitbit one (tri-axial accelerometer). Currently this is the only commercially available device that records and tracks the number of flights of stairs climbed by an individual. An objective measure of purposeful stair climbing will be a useful tool in future interventions that can focus on this behaviour. *Methods:* Participants. Sixty-six participants (n = 53 female, n = 13 male) were recruited from the University of Alberta. *Procedure.* A route was mapped out in a University of Alberta building. This route included two identical staircases each with an elevation of 20 ft. Each staircase represented two flights of stairs (based on 10 ft./flight). Participants walked up the two stair cases ten times each for a total of 20 flights of stairs. The output from the Fitbit One was recorded and compared to the actual flights climbed. *Results:* The internal consistency within the devices was high ( $\alpha = .86$ ). The percent agreement between the actual flights of stairs climbed and the number reported by the FitBit One was 92.4% with a range of values from 19-21. The absolute percent error was also calculated ( $APE = -0.23 \pm 1.37$ ) and found to be well under the acceptable level of error. *Conclusion:* The overall results of this study suggest that the Fitbit One is an accurate and reliable measure of purposeful stair climbing behaviour and is therefore

suitable for use as an objective measure for use in stair climbing interventions.

**Author:** Eric Mathieu

**Title:** Outcome likelihood, desirability, and control factors as they relate to exercise intentions in female and male undergraduate students.

**Co-Author(s):** Lisa Cooke, Anne-Marie Selzler, Allison Devine, Tanya Berry, Craig Hall, Wendy Rodgers

**Abstract:** Social cognitive theory stipulates that self-efficacy influences behavior when the necessary skills and incentives are present (Bandura, 1986). Exercise motivation research has focused on self-efficacy, with limited attention to outcome expectations. One complication of addressing outcomes stems from expectancy-value theory (cf. Petty & Cacioppo, 1986); the determination of whether likelihood or value (desirability) of expected outcomes is most strongly related to behavioural intentions. The purpose of this study was to look for outcome groupings, and to examine the distinction between likelihood and desirability of expected outcomes of exercise. A sample of 284 undergraduates (n=74 male) completed assessments of likelihood and desirability of 51 exercise outcomes; single item indicators of perceived control, perceived difficulty, and self-efficacy for exercise; and intentions to exercise in the next month. The top 10 most likely and desirable outcomes were subjected to exploratory factor analysis to look for groupings, resulting in 3 interpretable factors for desirability: physical health, mental health, and physical performance; and 2 factors for likelihood: physical health, with mental health and physical performance loading on one factor. Intentions were then regressed on these factors, along with control, difficulty, self-efficacy, and gender. Since gender yielded a significant beta value, separate follow-up regressions were conducted despite the small male sample. Results indicated that desirability of physical health outcomes along with self-efficacy were important for women ( $R^2=.39$ ), whereas only self-efficacy, and perceived difficulty predicted for men ( $R^2=.50$ ), with some mediation of the outcomes by self-efficacy apparent for both. Further work will aim to increase the number of items in each factor and determine their relationship to exercise intentions.

**Author:** Michael P. Scarlett

**Title:** The effects of cranial cooling during uncompensable heat stress in fire protective ensemble

**Co-Author(s):** Stephen S. Cheung, Michael K. Stickland, Stewart R. Petersen

**Abstract:** The purpose of this experiment was to investigate the effects of cranial cooling during recovery on physiological responses to fully-encapsulated exercise with fire protective ensemble and self-contained breathing apparatus. On two separate days, twelve males completed 2x20 minutes of treadmill exercise (EX1 and EX2) at  $65 \pm 4\%$  of  $VO_{2peak}$ , each followed by 20 minutes of seated recovery (R1 and R2). During the recovery periods, either active (AC: a close-fitting hood perfused with  $10^\circ\text{C}$  water) or passive (PC: head exposed to ambient conditions of approximately  $22^\circ\text{C}$  and 5% RH) cranial cooling was randomly assigned for each protocol. Core temperature ( $T_c$ ) increased significantly and by a similar amount from rest to the end of EX2 in both conditions (mean  $\pm$  SD  $1.8 \pm 0.5^\circ\text{C}$ ,  $p < 0.001$ ). Similar progressive increases in heart rate, minute ventilation, perceived exertion and physiological strain index were observed during both protocols. Core temperature continued to rise during early recovery following both exercise periods. Neither AC or PC was effective at preventing heat storage; however during the second half of R2, the reduction in  $T_c$  was significantly greater with AC. Individual responses in  $T_c$  during the protocol were highly variable, and the variability was not explained by either body surface area or  $VO_2$  during exercise. However, the change in  $T_c$  during both recovery periods was significantly related to absolute  $T_c$  at the start of recovery for AC (R1,  $r=-0.68$ ,  $p=0.02$ ; R2,  $r=-0.70$ ,  $p=.02$ ) but not for PC (R1,  $r=-0.41$ ,  $p=0.21$ ; R2,  $r=-0.50$ ,  $p=0.12$ ). That is, those subjects who had the greatest absolute  $T_c$  tended to have the largest drop in  $T_c$  during the AC condition. Compared to passive

exposure of the head to moderate ambient conditions, active cranial cooling may be an effective countermeasure when core temperature is high.

**Author:** Étienne Myette-Côté

**Title:** Changes in glucose disposal after a caloric restriction-induced weight loss program in obese postmenopausal women: characteristics of positive and negative responders: A MONET study

**Co-Author(s):** Éric Doucet, Denis Prud'homme, Rémi Rabasa-Lhoret, Jean-Marc Lavoie, Martin Brochu

**Abstract:** *Background:* The beneficial effects of caloric restriction-induced weight loss program on glucose disposal are well documented. However, a considerable heterogeneity in individual glucose disposal responsiveness to weight loss is often observed. The biological and physiological bases for this heterogeneity remain to be explored. *Objective:* To investigate individual characteristics that may explain interindividual variations in glucose disposal in response to a 6-month weight loss program. *Methods:* Forty-two obese postmenopausal women ( $57 \pm 4$  yrs; %body fat:  $45 \pm 4\%$ ) were studied. Outcome measures were: body weight (BW), lean body mass (LBM), LBM index [LBMI: LBM/height ( $m^2$ )], fat mass (FM), FM index [FMI: FM/height ( $m^2$ )], visceral fat (VF), subcutaneous abdominal fat (SAF), hsCRP levels, fasting blood glucose and insulin levels, and glucose disposal by hyperinsulinemic-euglycemic clamp technique. Subjects were characterized based on relative changes in glucose disposal after weight loss [negative responders:  $< -1.0$  mg/kg LBM/min ( $n= 19$ ) vs. positive responders:  $> 1.0$  mg/kg LBM/min ( $n= 23$ )]. *Results:* At baseline, positive responders had higher LBMI ( $P < 0.05$ ) and CRP ( $P < 0.01$ ) levels as well as lower glucose disposal ( $P < 0.001$ ) compared to the negative responder group. Both groups showed significant and similar decreases for total FM, FMI, % FM, VF and SAT (all  $P < 0.001$ ), as well as for fasting insulin levels ( $P = 0.005$ ) after weight loss. However, positive responders showed significant greater decreases in BW, BMI, LBM, LBMI and CRP levels compared to the negative responder group ( $P$  values between 0.01 and 0.001). *Conclusion:* Our results showed that subjects who improved glucose disposal were characterized by 1) higher LBMI and CRP levels as well as lower relative glucose disposal at baseline and 2) greater reductions in BW, BMI, LBM, LBMI and CRP levels after weight loss. Further studies are needed to validate our results.

## Research Presentations 2

Saturday, September 7<sup>th</sup>, 2013

8:30am – 10:00am

**Author:** Sonthaya Sriramatr

**Title:** An Internet-based intervention for promoting and maintaining physical activity in Thai university-aged females

**Co-Author(s):** Tanya R. Berry, John C. Spence

**Abstract:** *Introduction:* This study used social cognitive theory (SCT) and intervention mapping as theoretical frameworks in developing an Internet-based intervention designed. The main purpose of this study was to evaluate the efficacy of a SCT-based Internet intervention physical activity (PA) designed to promote and maintain leisure-time PA (LTPA) in university-aged female students in Thailand. The secondary purpose was to determine whether or not the SCT variables mediated changes in LTPA and physical fitness. *Methods:* A 3-month randomized control trial intervention was conducted employing a Solomon four-group design. Female students ( $N = 220$ ) were randomly assigned to four groups: an intervention with either pretest or no pretest and no intervention with either pretest or no pretest. A

website and e-mails were used to deliver the program for the intervention groups. The intervention ran for a period of 3 months with a follow-up 3 months later. Participants in the no intervention groups did not receive any treatments. Variables measured were weekly steps, leisure-time activity score (LTAS), the SCT variables of self-efficacy (SE), outcome expectations (OE), and self-regulation (S-R), resting heart rate (RHR) and Vo2max at pretest (only pretest groups), end of the intervention, and 3 months later as a follow-up. A true intention to treat analysis and statistical methods for the Solomon four-group design were used. *Results:* There were no pretest sensitization effects. The intervention significantly increased steps, LTAS, SCT variables and reduced RHR at the end of the intervention. With the exception of RHR, the intervention effects on these variables also remained at the follow-up. The intervention had no effects on Vo2Max at either the end of the intervention or the follow-up. The intervention effects on LTAS at the end of the intervention were partially mediated by SE and S-R. The intervention effects on steps at the end of the intervention were partially mediated by S-R.

**Author:** Kimberly McFadden

**Title:** Adolescent girls' perceptions of autonomy, competence, and relatedness in various physical activity settings

**Co-Author(s):** Hilary Davies, Tanya Scarapicchia, Catherine Sabiston

**Abstract:** Adolescent girls are at-risk for declining physical activity (PA) and increased rates of overweight and obesity (Knisel et al., 2009). Identifying factors that might explain why adolescent girls are less likely to be active compared to male peers is an important research agenda (Biddle et al., 2005). Based on the Basic Needs Theory, a sub-component of the Self-Determination Theory (Deci & Ryan, 1985), the satisfaction of the psychological needs of competence, relatedness, and autonomy results in greater intrinsic motivation for PA and subsequently higher levels of PA, more persistence and effort. To date, there is little research evidence of the contextual differences in the satisfaction of the psychological needs for PA. This study explored adolescent girls' perceptions of need satisfaction in the different PA contexts of physical education, organized sport or exercise, and leisure time. Ten girls (Aged 12 to 17 years) volunteered for individual interviews focused on understanding need satisfaction in the PA contexts. The interviews were transcribed verbatim, and were subjected to content analysis. The themes of: Activity Preference, Barriers to PA, Sedentary Activities, Social Influence, Skill Acquisition, and Control were identified. Common perceptions included a preference for all-girls physical education classes due to a difference in competitive attitude between male and female participants; a desire to have the content of structured activities pre-determined by instructors; and, a strong desire to be involved in physical activities that emphasized group cohesion. Results of this study provide insight into the intrapersonal, environmental, and social factors that influence adolescent girls' activity levels.

**Author:** Patrick Reid

**Title:** She Shoots, She Scores! The history of the first IIHF women's world ice hockey championship

**Co-Author(s):** n/a

**Abstract:** In Canada to-day women's elite ice hockey is an established sport. It has a bi-annual world championship that started in 1990. Since 1998 women's hockey has been included in the winter Olympic Games. In Canada more than 90,000 women are annually registered with Hockey Canada to play hockey. But twenty-five years ago, the women's game was quite different. There were very few women's leagues. There were very few opportunities for female players to play on boy's teams. There was an open age class in women's hockey to ensure there were enough female players to comprise teams in the available recreation leagues. So how did women's elite hockey get from there to here? One significant event, that has historical significance, is the first IIHF women's world hockey championship in 1990, an

event that was pivotal in women's hockey being added to the winter Olympic Games. This paper, based mainly on primary data, will describe for you the sequence of events that led to the successful staging of this first world championship and how this success led directly to the evolution of the women's game that we know to-day.

**Author:** Farhad Moghimehfar

**Title:** Predicting pro-environmental behaviour in ecotourism context: An extension of the theory of planned behaviour

**Co-Author(s):** Elizabeth A. Halpenny

**Abstract:** The theory of planned behavior (Ajzen, 1991) as one of the most cited theories in social sciences is one of the most highly tested theories of human behaviour prediction. The theory indicates that intention is the best predictor of human behavior and attitudes, subjective norms, and perceived behavioural control are the main factors influencing individuals' intention. Ajzen believes that the theory is open to inclusion of new variables that improve the predictability power of the model. This presentation will report on a study that aims to extend the theory of planned behavior in ecotourism context to survey mountaineers' intention to participate in pro-environmental activities. The proposed extension of the theory of planned behaviour particularly includes four new components (i.e., general knowledge of sustainability, ecotourism constraints, constraints negotiation, and past behavior) influencing behavioral intention directly or through the theory's main variables. Participants of the study are members of Isfahan (one of the major cities in Iran) mountaineering club. The main data collection method was self-reported questionnaires. Structural equation modeling and regression is currently being used to examine the relationships between general knowledge of sustainability, ecotourism constraints, constraints negotiation, and past behavior and prediction of pro-environmental intentions.

**Author:** Vince Tedjasaputra

**Title:** Effect of a dopamine-2 receptor blockade on cardiorespiratory responses to graded exercise

**Co-Author(s):** Tracey L. Bryan, Stewart R. Petersen, Robert C. Welsh, Michael K. Stickland

**Abstract:** There is evidence that dopamine (DA) may be important in cardiopulmonary regulation during exercise. Circulating DA increases with exercise intensity, and intravenous DA infusions given at rest result in lower pulmonary vascular resistance and higher cardiac output. To examine the effect of DA on the cardiorespiratory response to exercise, 13 healthy males (mean±SEM: age: 24±1 yr, height: 1.77±0.02m, weight: 78.2±4.7kg, VO<sub>2</sub>max: 52.1±2.5 ml/kg/min) completed incremental cycling exercise to exhaustion with dopamine blockade (B, metoclopramide 20mg oral) or with placebo (P), in random order on separate days. During exercise, VO<sub>2</sub>, minute ventilation (VE), end tidal CO<sub>2</sub> (PETCO<sub>2</sub>), SaO<sub>2</sub>, respiratory exchange ratio (RER), heart rate (HR), and systemic blood pressure (BP) were measured. At peak exercise, with DA blockade, we observed a 5.5% decrease in VO<sub>2</sub>max (P: 4.01±0.20 l/min, B: 3.79±0.19 l/min p=0.027), 6.8% decrease in peak power (P: 311±16 W, B: 290±15 W, p<0.001), and 2.4% decrease in HRmax (P: 184±2 bpm, B: 180±2 bpm p=0.014), with no change in SaO<sub>2</sub>, RER or BP. When matched for the same power output (280±14 W, 90% of VO<sub>2</sub>max in P condition) a 7.1% increase was seen in VE (P: 110.5±8.6 l/min, B: 118.4±9.6 l/min, p=0.029), and 5.8% decrease was seen in PETCO<sub>2</sub> with DA blockade (P: 39.1±1.3 torr, B: 36.9±1.2 torr, p=0.008), but no changes were seen in VO<sub>2</sub>, RER, HR, or BP. The decrease in VO<sub>2</sub>max and peak power suggests that circulating dopamine is important to the healthy cardiorespiratory response to exercise. The reduced VO<sub>2</sub>max appears to be explained by reduced HR (and possibly SV). The increased VE and decreased PETCO<sub>2</sub> with blockade during high intensity exercise would be consistent with previous work showing increased ventilation with acute increase in pulmonary vascular pressures. Additional research is ongoing to determine the influence of

dopamine on the control of the pulmonary vasculature during exercise.

### **Research Presentations 3**

Saturday, September 7<sup>th</sup>, 2013

4:30pm – 5:45pm

**Author:** Michael Lizmore

**Title:** Perfectionism and reactions to mistakes in competitive curling

**Co-Author(s):** n/a

**Abstract:** This study investigated the role that different profiles of perfectionism can play in the emotional and cognitive responses of competitive curling athletes (199 male, 144 female; M age = 30.78 years, SD = 7.93) following failure in low- and high-criticality game situations. Perfectionism in sport was measured with the Sport-Multidimensional Perfectionism Scale-2 (Gotwals & Dunn, 2009). Negative emotional responses (i.e., anger and dejection) and positive future-oriented cognitions (i.e., optimism and self-confidence) were measured with a newly constructed Sport Emotion and Cognition Questionnaire (SECQ) that contained items from three established measures (Sport Emotion Questionnaire: Jones, Lane, Bray, Uphill, & Catlin, 2005; Competitive State Anxiety Inventory-2 Revised: Cox, Martens, & Russell, 2003; Life Orientation Test-Revised: Scheier & Carver, 1994). Exploratory factor analyses conducted on SECQ data produced two factors that were labelled Anger/Dejection and Optimism/Confidence. Cluster analyses conducted on Sport-MPS-2 data revealed three clusters/groups that closely resembled adaptive perfectionists, maladaptive perfectionists, and non-perfectionists from Stoeber and Otto's (2006) tripartite model of perfectionism. A doubly-multivariate repeated-measures MANOVA revealed a significant group/cluster main effect ( $p < .001$ ): post-hoc analyses indicated that adaptive perfectionists had lower Dejection/Anger responses ( $p < .001$ ) and higher Optimism/Confidence responses ( $p < .005$ ) following failure than maladaptive perfectionists. A significant main effect was also found for situation-criticality ( $p < .001$ ): regardless of perfectionism profiles, on average, athletes had lower Dejection/Anger ( $p < .001$ ) and higher Confidence/Optimism ( $p < .005$ ) following failure in low- as opposed to high-criticality situations. Results support the differentiation of adaptive and maladaptive perfectionism in sport.

**Author:** Mathew Dowling

**Title:** Is Canadian sport under new management? Examining the role of Canadian Sport for Life and the Canadian Sport for Life leadership team

**Co-Author(s):** n/a

**Abstract:** Is Canadian sport is under new management? A quasi-academic-practitioner interest group, the Canadian Sport for Life Leadership Team (CS4LLT), is now working in conjunction with government to promote and integrate the principles and practice of the Long Term Athlete Development Model (LTAD) into sport organizations across the nation. These changes are a part of a broader development that has collectively become known as Canadian Sport for Life (CS4L). CS4L attempts "to improve the quality of sport and physical activity in Canada" (CS4L, 2012). Yet, despite CS4L's presence and continued influence for the best part of a decade, surprisingly little is known about CS4L or its leaders. In light of this recognition, my doctoral thesis draws upon the notions of Governance Theory (Bevir & Rhodes, 2010; Grix, 2011; Rhodes, 1997) to examine the role of CS4L and analyze the extent to which it has influenced

Canadian sport. In adopting an embedded, explanatory case-based methodological approach (Yin, 1994), semi-structured interviews are being conducted with all CS4LLT members, public officials and senior employees of National Sport Organizations (NSOs). Multiple data sources are being used to supplement interview data, including documentation (i.e., CS4LLT, Federal Sport Policy, Sport Canada, NSO produced documentation), conference attendance data (2006-present), and observation of a series of workshops, conferences and meetings over a three-year period. The broader intention of this presentation is to provide a 'snap-shot' of my ongoing research project. More specifically, then, it seeks to stake out CS4L's evolution over the past 10 years, identify some of the key issues of debate and contention regarding CS4L and its leadership team, and provide some preliminary evidence regarding its role and influence. Through this endeavor, we may be better positioned to understand CS4L as a relatively new phenomenon now operating within Canadian sport.

**Author:** Lira Yun

**Title:** Effective health communication strategy to enhance public's participation in physical activities: A test of Extended Parallel Process Model

**Co-Author(s):** n/a

**Abstract:** The purpose of this study was to examine how individuals' perceived risk and efficacy level of the health message affects the message acceptance. Based upon the extended parallel process model, it was hypothesized that there would be an interaction effect between perceived risk and efficacy level on the attitude and intention to participate in physical activities. Specifically, it was predicted that, in the high-efficacy perceived group, the attitude toward and intention to participate in physical activities would increase as individuals' perceptions of risk increases; in contrast, in the low-efficacy group, attitude and intention were predicted to decrease as individuals' perceptions of risk increases. In addition, in the high-efficacy condition, protection motivation was predicted to mediate the impacts of risk perception on the two dependent variables, whereas, in the low-efficacy condition, it would be the defensive motivation that mediates the impacts of risk perceptions on the two dependent variables. To verify these hypotheses, a 2(risk)-by-2(efficacy) full factorial experiment was designed and 160 participants were randomly assigned to one of four experimental conditions. At first, they were exposed to experimental stimulus, and then perceived risk and efficacy of the message, the attitude and intention toward physical activities, protection motivation and defensive motivation were measured. The collected data were analyzed by two-way ANCOVA and Structural Equation Modeling method. The results showed that there was an interaction effect between perceived risk and efficacy level on the attitude and intention toward participation in physical activities. Under the high-efficacy condition, the attitude and intention toward physical activities was higher when perceived risk was high rather than low. However, under the low-efficacy condition, the attitude and intention were higher when perceived risk was low rather than high. Also the mediating hypotheses involving protection and defensive motivation were supported.

**Author:** Shintaro Kono

**Title:** Leisure and natural disasters: A case study of the Great East Japan Earthquake and tsunami

**Co-Author(s):** n/a

**Abstract:** The purposes of this study were to explore: (1) the potential impacts of natural disasters on survivors' leisure experiences, and (2) the psychological roles of leisure in helping survivors cope with traumatic experiences and post-disaster stressors through the case of the Great East Japan Earthquake and tsunami, which occurred on March 11, 2011. One-month public observations in Ishinomaki, Miyagi, and 21 semi-structured interviews with both disaster survivors (n=16) and volunteers (n=5) were

conducted in June of 2012. Guided by the leisure constraints theory (Crawford & Godbey, 1987), it was found that structural, interpersonal, and intrapersonal constraints were exacerbated, or alleviated, in function of life events (e.g., bereavement and displacement) caused by the disaster. On the other hand, leisure played three roles in the survivors' psychological recovery process: leisure experiences as coping strategies with post-disaster stressors, subjective meanings of leisure as a means to overcome traumatic disaster experiences, and leisure contexts to cultivate psychological resources and resilience. This finding is discussed in light of leisure stress coping (Iwasaki & Mannell, 2000), leisure and transcending negative life events (Kleiber, Hutchinson, & Williams, 2002), and leisure and coping resources (Hood & Carruthers, 2002). Furthermore, a key meaning of leisure that underlay the three roles of leisure emerged, which is leisure as a context for social interaction and enjoyable experience. The importance of dynamic nature of leisure constraints amid life transitional events is noted. It is suggested that researchers should incorporate multiple theories to understand the complex relationships among the psychological effects of leisure in post-disaster contexts. Practically, restoration of leisure facilities and programs should be integrated into a disaster reconstruction roadmap to achieve more holistic psychological recovery among survivors. Finally, the need to accelerate the research on this topic is acknowledged.

# ReCon 2013 - *Breaking Out of the Box*: Program at a Glance

Time	Thursday, September 5, 2013	Time	Friday September 6, 2013	Time	Saturday, September 7, 2013	Time	Sunday, September 8, 2013		
7:30 AM		7:30 AM	<b>Breakfast</b> <i>Continental buffet at hotel restaurant</i>	7:30 AM	<b>Breakfast</b> <i>Continental buffet at hotel restaurant</i>	7:30 AM	<b>Breakfast On Own &amp; Check-Out</b>		
8:00 AM		8:00 AM		8:00 AM		8:00 AM			
8:30 AM		8:30 AM	<b>Research Presentations 1</b> <i>(8:30 - 10:00 am)</i>	8:30 AM	<b>Research Presentations 2</b> <i>(8:30 - 10:00 am)</i>	8:30 AM			
9:00 AM		9:00 AM		9:00 AM		9:00 AM			
9:30 AM	<b>Bus Leaves Edmonton</b> <i>(Load bus at 9:30 am, leave at 9:45 am)</i>	9:30 AM	Break	9:30 AM	Break	9:30 AM	<b>Bus Leaves Canmore</b> <i>(Load bus at 9:30 am leave at 9:45 am)</i>		
10:00 AM		10:00 AM		10:00 AM		10:00 AM			
10:30 AM		10:30 AM	<b>Communication Professional Development Session</b> <i>(10:15 - 11:45 am)</i>	10:30 AM	<b>Mental Health Professional Development Session</b> <i>(10:15 am - noon)</i>	10:30 AM			
11:00 AM		11:00 AM		11:00 AM		11:00 AM			
11:30 AM		11:30 AM		11:30 AM		11:30 AM			
12:00 PM		<b>Bus Arrives in Canmore</b> <i>(3:00 pm)</i>	12:00 PM	<b>Grab-and-Go Lunch Ha-Ling Peak &amp; Grassi Lakes</b> <i>(Bus departs at 12:00 pm Bus returns at 3:00 pm)</i>	12:00 PM	<b>Grab-and-Go Lunch Nordic Center Activities</b> <i>(Bus departs at 12:15 pm Bus returns at 3:00 pm)</i>		12:00 PM	<b>Bus Arrives in Edmonton</b> <i>(3:00 pm)</i>
12:30 PM			12:30 PM		12:30 PM			12:30 PM	
1:00 PM			1:00 PM		1:00 PM			1:00 PM	
1:30 PM			1:30 PM		1:30 PM			1:30 PM	
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4:30 PM	4:30 PM		4:30 PM		4:30 PM				
5:00 PM	<b>Pick-Up Registration Packages</b> <i>(3:00 - 4:00 pm)</i>	5:00 PM	Student Video Presentation	5:00 PM	<b>Research Presentations 3</b> <i>(4:30 - 5:45 pm)</i>	5:00 PM			
5:30 PM		5:30 PM		5:30 PM		5:30 PM			
6:00 PM	<b>Welcoming Comments</b>	6:00 PM	<b>Poster Presentations</b> <i>Cash bar</i>	6:00 PM	<b>Time Management Professional Development Session</b> <i>(5:45 - 6:30 pm)</i>	6:00 PM			
6:30 PM		6:30 PM		6:30 PM		6:30 PM			
7:00 PM	<b>Icebreaker Activity</b> <i>(4:15 - 5:30 pm)</i>	7:00 PM	Conference Dinner at The Drake <i>(7:30 pm)</i>	7:00 PM	Closing Comments & Awards	7:00 PM			
7:30 PM		7:30 PM		7:30 PM		7:30 PM			
8:00 PM	<b>Rod Murray Memorial Address</b> <i>(5:45 - 7:00 pm)</i>	8:00 PM		8:00 PM		8:00 PM			
9:00 PM		9:00 PM		9:00 PM		9:00 PM			
10:00 PM		10:00 PM		10:00 PM		10:00 PM			
11:00 PM		11:00 PM		11:00 PM		11:00 PM			
7:30 PM	<b>Dinner in Canmore</b> <i>(7:30 pm) Sign-up required</i>	7:30 PM		7:30 PM	<b>Free Time in Banff</b> <i>(Bus departs at 7:30 pm Bus returns at 11:15 pm)</i>	7:30 PM			
8:00 PM		8:00 PM		8:00 PM		8:00 PM			
9:00 PM		9:00 PM		9:00 PM		9:00 PM			
10:00 PM		10:00 PM		10:00 PM		10:00 PM			
11:00 PM		11:00 PM		11:00 PM		11:00 PM			