Members’ Corner:

No news might be good news!! But we think there’s good news out there about our fellow ACE Atlantic Members……..

Notify Linda Sagmeister with the scoop on what’s new with you (or your friends) and we’ll put it in the newsletter!

Message from the Prez:

Hello again ACE Atlantic members! I’d like to say happy Easter to everyone and happy Spring!! For some of us who are crawling out from under mounds of snow, the idea of Spring is a long time coming now!!

In this edition of the ACE Atlantic Newsletter, we’re looking at the physiology of snowshoeing (just to acknowledge that some of us are STILL under mounds of snow even though Spring is fast approaching) as well as an update on the ACE National Conference which is happening in our region this year, and a couple of other updates on events and websites.

Have a read and join me in congratulating the conference committee for the work they’ve done so far, and for the work that continues to take place all the time to organize the 36th Annual ACE National Conference! This is a short note this month from me….there’s lots to read in this edition, so go to it!
Energy cost and physiological responses of males snowshoeing with rotating and fixed toe-cord designs in powdered snow conditions.

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The purpose of this study was to measure the energy cost and physiological responses of males while snowshoeing with two separate toe-cord designs (rotating toe-cord system vs. fixed toe-cord design) in powdered snow conditions. Eight males snowshoed at self-selected intensity for two, 1600 m trials in two snowshoes, with a rotating toe-cord system and a fixed-toe cord design. It was found that heart rate (HR) (140 vs. 134 beats min(-1)), oxygen consumption (VO(2)) (63.4 vs. 34.0 ml kg(-1)min(-1)), energy cost (56.0 vs. 52.4 kJ min(-1)), and ratings of perceived exertion (RPE) (13 vs. 12) were significantly (p < 0.05) higher while snowshoeing with the fixed toe-cord design than with the rotating toe-cord system. Snowshoeing with the rotating toe-cord system at an average speed of 3.96 km h(-1) produced mean VO(2) values that were 56% of VO(2) max, while snowshoeing with the fixed toe-cord design at 3.86 km h(-1) evoked mean VO(2) values that were 60% of VO(2) max. Mean HR while snowshoeing with the rotating toe-cord system was 70% of HR max, while the mean HR when snowshoeing with the fixed toe-cord design was 74% of HR max. These findings suggest that snowshoeing with a rotating toe-cord system results in lower cardio respiratory strain in powdered snow conditions compared to snowshoeing with a fixed toe-cord design.

Why re-invent the wheel?

As an ergonomist, I find myself involved in various business sectors dealing with a wide variety of high-risk tasks. Every so often, I am involved in a situation where there is simply no simple solution to prevent musculoskeletal injuries (MSI). I tell myself, let’s not re-invent the wheel. The following website called ‘Ergonomics ideas bank’ was created by the Washington State Department of Labor and Industries. The key features are:

- A searchable collection of ideas classified by the type of industry and/or by the type of risk factor.
- A place where you can send in ergonomics ideas, so that other workplaces can benefit from them.

Personally, I find this website particularly good for helping me in thinking outside the box. Type the following to visit the ‘Ergonomics ideas bank’.

http://www.lni.wa.gov/Safety/Topics/ReduceHazards/ErgoBank/default.asp

Submitted by Gino Thomas, P.Eng. WHSCC of New Brunswick
An update on the ACE National Conference!!  
August 15-18 2005, Halifax!

As technical chair, I have had the pleasure of reading through the numerous submissions. We have a very exciting line up of planned topics:

Confirmed keynote speakers are:

- Dr. Barbara Silverstein PhD MPH CPE, Washington State Department of Labor and Health;
- Mike Greenley MSc PMP, President of Greenley and Associates Inc.
- Chris Brooks M.D., Survival Systems Ltd.
- Dr. Jean-Pierre Brun PhD, Director of the Chair in Occupational Health and Safety Management, Laval University discussing the role of workplace stress

These excellent speakers will address the conference theme “Charting the human factor” from their varied points of view, from physical and cognitive ergonomics to design and from the role of stress to ergonomic politics.

66 submissions have been received to date describing ergonomics in healthcare, transportation, fisheries, manufacturing, aerospace, and petrochemical fields among others. Submissions cover everything from website design to cognitive ergonomics issues in hospital emergency rooms to design challenges associated with using life rafts in heavy seas. Four countries are represented: Canada, USA, France and Iran. These use applied, field and laboratory research methods. There are a good number of graduate level submissions received, although we hope to still receive more undergraduate proposals (for poster presentation) with a special extended deadline to mid-March.

Ten workshops are planned on August 15th and the afternoon of the 18th. Topics cover a wide spectrum with excellent speakers, sure to be of interest to members and non-members with an interest in Ergonomics:

1. **Designing Hospitals Ergonomic Quality** (half day)  
   Workshop Leader: Judy Village, CPE, CCPE, M.Sc.  
   Required level of knowledge – intermediate or advanced level ergonomists, or people with healthcare expertise who would like to learn more ergonomic techniques.

2. **Occupational Health and Safety - A Vehicle for Implementing Ergonomics** (half day)  
   Workshop leader: Charles Maxner, BSc., MEd.  
   Required level of knowledge – basic

3. **Ergonomics Applications in Lean Production** (half day)  
   Workshop leader: Stephen Bao  
   Required level of knowledge – practitioners of all experience levels

4. **Understanding Mechanisms of Musculoskeletal Injuries** (half day)  
   Workshop leader: Shrawan Kumar, Ph.D. Ph.D., D.Sc., F.R.S.C.  
   Required level of knowledge – ergonomists with basic to advanced knowledge

5. **The Art of Engagement: Communication Skills for Ergonomists** (full day)  
   Workshop leader: Selina Robinson  
   Required level of knowledge – Practitioners of any level, with English language skills

6. **The Future of m-Interaction: Thinking Out of the Box to Design Novel Interaction Techniques for Mobile Technology** (half day)  
   Workshop leader: Joanna Lumsden, Ph.D.  
   Required level of knowledge – basic

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7. An introduction to multivariate analysis for workspace design and evaluation (full day)
Workshop leader: John Kozy, Ph.D.
Required level of knowledge – introductory to moderate background in anthropology

8. Design: Creating Innovative Interventions (full day)
Workshop leader: Ron Wardell, PhD, CCPE
Required level of knowledge – practitioners or users of any experience level

9. Slips, Trips, and Falls in the Workplace: Concerns for an Aging Population (half day)
Workshop leader: William Gage, Ph.D.
Required level of knowledge: basic

10. Applying to be a Canadian Certified Professional Ergonomist (half day August 18)
Workshop leader: Ron Wardell, PhD, CCPE
Maximum number of participants: 30
Required level of knowledge – practitioners

In addition, we’re planning three panel sessions! They include one on Ergonomics Education in Canada, one on Legislation in Canada and one on Practical Application of ergonomics by non-ergonomists, all of which should incite lively debate about where we are now, versus where we need to be headed.

This is a great opportunity for us as Atlantic Canadians in the field of Ergonomics to share our knowledge and experience, and to network and learn from others. This is also an chance for ACE Atlantic to increase its profile as an important organization for all interested in Ergonomics in the Atlantic region. This includes, in addition to ergonomists, healthcare providers, human resource specialists, industrial engineers, health and safety committee members, managers in industry …
Talk about this conference to your friends and colleagues!

Please mark August 15-18 in your calendar and plan to “make waves in Halifax”. You can find out more information concerning the conference at www.aceconf.ca

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**Cre-Premus, Workshop on job rotation December 7th, 2004, University of Waterloo**

The workshop on job rotation held on December 7, 2004 at the University of Waterloo was attended by a wide range of workplace parties including managers, supervisors, JHSC representatives, consultants from the health and safety associations, ergonomists, kinesiologists, and researchers in the field of OH&S.

Four questions were used to structure the day’s exploration of job rotation for the prevention of musculoskeletal disorders:

1. What do you see as the benefits and barriers to instituting job rotation?
2. When can job rotation (for the prevention of MSDs) be used?
3. When should job rotation (for the prevention of MSDs) not be used?

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The Association promotes human factors and ergonomics in industry and provides a variety of services for its members. Being a member means belonging to, sharing and communicating with a coast to coast Canadian network of like-minded people and organizations to develop and apply human factors and ergonomics.

The Association promotes a number of scientific and technical activities (annual conference, workshops, publications) aimed at all interested people inside and outside the Association. It also promotes cooperation and exchange with other related associations such as the International Ergonomics Association (IEA).

CRE Premus Job Rotation Workshop, December 7, 2004
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4. How do you know if job rotation (for the prevention of MSDs) is working?

Messages for workplace parties thinking about introducing job rotation as part of a program to prevent musculoskeletal disorders included:
1. Job rotation is similar to job enlargement and teamwork
2. Job rotation can have both positive and negative outcomes
3. Job rotation is less effective than engineering changes to prevent musculoskeletal disorders.
4. Mixing very physically demanding and less demanding activities in a rotation schedule exposes all workers to high physical demands. This can raise the overall risk of injury for workers. It is not clear if rotating between jobs with similar demands prevents musculoskeletal disorders
5. Job rotation is problematic when workers of very different capacities (physical strength, size, skills, workers returning after injury, etc.) are mixed in a rotation sequence
6. Introduction of a rotation scheme should include a preliminary exploration stage (including fixing jobs with high physical demand), a planning stage (where training, rotation schemes and other issues are addressed), an implementation stage, and an evaluation stage.
7. Job rotation is a complex issue that does not lend itself to a cookie-cutter approach, and needs careful consideration before it is implemented.

Submitted by Vincenzo Delle Donne For more information about the Centre of Research Expertise for the Prevention of Work-Related Musculoskeletal Disorders and Disability, go to www.Cre-premus.uwaterloo.ca

Things To Do:
Volunteer to help out with the Conference Committee
Tell someone about the ACE National Conference (spread the word).