Time to make a stand - about sitting at work

Being a health promoting workplace, the PRC now has a standing desk to allow staff to spend part of their working day on their feet. The PRC is not alone in its interest in standing desks; a recent issue of The Australian Financial Review ran an article on standing desks and occupational sitting in its Men’s Health section.

Why a standing desk? Emerging research suggests that time spent sitting or in sedentary behaviours like watching TV may be linked to health outcomes such as type 2 diabetes, overweight or obesity, cardiovascular disease and all-cause mortality, even after taking physical activity into account. This suggests that sitting may be a health risk independent of one’s physical activity levels.

In a set of systematic reviews, PRC researchers together with colleagues from the University of Queensland, asked two questions about occupational sitting and health:

1. Is occupational sitting associated with health risks, and
2. What are workplace interventions to reduce sitting that ‘work’?

They found mixed evidence of associations between occupational sitting and various health outcomes; e.g., there was no consistent relationship between higher BMI and sitting at work or having a sedentary job, which was unexpected. PRC researchers have published two papers on their findings (see publications list on Page 2). The researchers also found no workplace interventions that effectively reduced sitting, highlighting a large gap in the literature.

Many full-time workers spend a large proportion of their workday sitting. While the jury is still out about associations between occupational sitting and health outcomes, it may be worthwhile to consider sitting less at work and to break up prolonged periods of sitting time. Health promotion researchers and practitioners need to start developing effective interventions to reduce occupational sitting time.
From the editor

Christine Innes-Hughes

Welcome to the last PRC newsletter for 2010. It has been another productive year for the Prevention Research Collaboration and we are delighted to share some of our research through this newsletter.

Our cover story 'Time to make a stand' raises the important issue of the time we spend sitting and explores one option for reducing sitting time at work. This newsletter also highlights some recent international findings on Canadian fitness tax credits and what has changed in children's exposure to unhealthy food advertising. As well we give a round-up on recent international conferences at which PRC staff have presented their research findings. We meet and greet Sinead, one of our staff with a passion for travel, and Nick, a public health nutritionist on placement from an area health service.

It has been a pleasure to take on the role of guest editor for this edition. My personal thanks go to the editorial team, Lesley King, Rona Macniven, Patricia Gleeson and Belinda van Hofe for their support and contributions to this edition.

Your feedback on the newsletter is always welcome. You can contact us at sph.panorg@sydney.edu.au

All good wishes for the festive season and 2011.

Recent PRC publications


Healthy Living Tax Incentives: Canadian Tax Credits to Promote Physical Activity

It is always interesting to learn about international policy initiatives such as the Canadian Healthy Living Tax Incentive (HLTI) which provides a tax credit of up to $500 for each child aged 16 years or less, to assist with the costs of registering children in organised sport. These fitness tax credits were introduced by the Canadian government in January 2007.

To be eligible for the Canadian HLTI an activity must be supervised, suitable for children, be ongoing (at least one day per week for eight consecutive weeks or, for children’s camps, five consecutive days) and provide sufficient physical activity. Sufficient physical activity is defined as sustained moderate to vigorous physical activities, conducted for a minimum of 30mins for children under ten and 60mins for children aged ten years and older, that contribute to cardiorespiratory endurance, plus one or more of the following:

- muscular strength,
- muscular endurance, or
- flexibility or balance.

In March 2009 Canadian adults completed an online survey to evaluate uptake of the HLTI. The researchers found 26% of Canadian parents claimed the tax credit in 2007. Those parents in the highest household income quartile were significantly more likely to report their child involved in organised sport, to be aware of the HLTI, to have claimed the tax credit in 2007 and to be planning to claim in 2008. Only 16% of parents responded they thought claiming the tax credit had increased their child’s participation in organised sport. While parents in the lowest income quartile were more likely to agree that the tax credit had increased their child’s participation, disappointingly there was a lower uptake of the incentive by this group, mostly likely related to the upfront costs of organised sports and possibly the exclusion of those in lower income tax brackets.

Part of the recommendations from the National Preventative Health Taskforce to the Commonwealth was to “commission a review of economic policies and taxation systems, and develop methods for using taxation, grants, pricing incentives and/or subsidies to promote active living and greater levels of physical activity and decrease sedentary behaviours”. The response of government was that such a review had already been conducted and did not recommend the adoption of such tax credits. However, such tax credits were not even considered in the 2009 tax review. Doors may not be closed for business yet though, as the NSW Sport and Recreation Industry’s five year plan includes as a strategy the lobbying of government to provide tax incentives for physical activity.

This case study challenges us to consider how we might design a similar but equitable scheme for the Australian context.

Reference:
Darwinians are more active than Sydney-siders

A PRC team of researchers – Adrian Bauman, Dafna Merom, Kamalesh Venugopal, Nada Curac and Carmen Cosgrove - is involved in a range of studies using the Exercise Recreation and Sport Survey (ERASS) data. One recent analysis of this data has found that, in terms of leisure time physical activity (LTPA) when adjusted for age, sex and education, Sydney is the least active city in Australia while Darwin is the most active.

ERASS collects information over the telephone each quarter from a random sample of 3,400 Australians about their participation in any physical activity undertaken for exercise, recreation or sport during the previous 12 months. While the study is about LTPA it may include some walking and cycling for transport for those who perceived it as their exercise.

Analysis of this data gives some interesting insights into differing physical activity levels between Australian cities over the last 10 years. 28.9% of Darwin residents achieved health enhancing levels of physical activity through their LTPA, compared to 23.6% of the Sydney population. After Darwin, Perth and Canberra were the next most active cities followed by Hobart, Brisbane, Melbourne, Adelaide and finally Sydney.

“Treats, sometimes foods, junk...”: Exploring ‘extra’ foods with parents of young children

A qualitative research study was undertaken by Nick Petrunoff, with colleagues from Northern Sydney and Central Coast Area Health (NSCCAH), in collaboration with the PRC, to explore parents’ understanding and approaches to the provision of ‘extra’ foods to their 3-5-year-old children. The findings of this study are likely to have implications for nutrition communications with parents in population health promotion; components of multi-strategic, multi-setting programs in obesity prevention and public health; and public health policy.

Nick says that “the parents we spoke to showed us that a large amount of time, effort and care goes into providing food for children. Parents are doing their best to balance the many influencing factors that affect the food they provide their children. Although parents feel they are ultimately responsible for limiting the provision of ‘extra’ foods, it is not surprising parents feel that some assistance in limiting these foods would be helpful.”

Driving this research is the fact that ‘extra’ foods are estimated to contribute around 41% of daily energy intake in 2-18-year-old Australian children’s diets, in 1995.1 This is more than double the recommended amount in the Dietary Guidelines for Children and Adolescents in Australia.

Parents of children aged 3-5 years were recruited through child care services from selected low and high SEIFA local government areas (LGAs) within NSCCAH. Framework analysis was used to systematically explore differences between information provided by parents from low SEIFA and high SEIFA LGAs for all the research questions. This involved charting summaries of what parents said for each of the identified themes for low SEIFA and high SEIFA groups.

Reference:
PhD Summaries

The PRC would like to congratulate Alexis St George, Shane Hearn and Margaret Thomas on recently submitting their PhDs.

Margaret Thomas

**Thesis title:** Population-wide mass media campaigns to promote physical activity – do they impact equally on all socioeconomic groups?

Margaret’s PhD in public health examined the impact of three physical activity mass media campaigns on different socio-economic groups. The campaigns studied were the Active Australia campaign (1988), the Tinman campaign (1999) and the Healthy Hawaii Initiative campaign (2007). The campaign evaluations all used a cohort design with pre and post telephone surveys to collect data on campaign recall, knowledge about physical activity, self-efficacy for physical activity, intention to be active and physical activity behaviour. Level of education was used as the measure of socioeconomic status.

There were no significant differences in campaign impact between the education groups on most measures except for higher campaign recall among the least well educated and borderline significant greater knowledge improvement among the better educated. The response of different socioeconomic groups to population-wide mass media campaigns has been seriously understudied for most health behaviours. This research, however, did concur with the evidence in the existing literature. Based on the findings of this research, and current literature, Margaret concludes that there is no substantial evidence that large-scale population-wide mass media campaigns using paid television advertising are contributing to increasing socioeconomic health inequalities. However, more needs to be known about how mass media campaigns can be designed to reduce health inequalities.

Alexis St George

**Thesis title:** Effects of a lifestyle intervention in patients with non-alcoholic fatty liver disease

Alexis’s study of 152 patients explored the effect at 3 months of a lifestyle intervention based on behaviour theory on the metabolic profile of patients characterised by elevated liver enzymes. Her research showed that moderate (6 consultations/10 weeks) and even low–intensity (3 consultations/4 weeks) lifestyle intervention is effective in improving the metabolic risk profile in people with non-alcoholic fatty liver disease (NALFD).

NALFD is the most common cause of abnormal liver tests in clinical practice. Lifestyle change is currently the first line of treatment for NAFLD, however, practical effective strategies to improve the metabolic profile of patients with NALFD had not been well characterised.

There was improvement in all metabolic risk factors including weight, waist, liver enzymes, blood pressure, LDL cholesterol, and triglycerides in a moderate-intensity intervention group. Those in a low-intensity intervention group also achieved significant weight loss and improvement in their metabolic profile. There were no changes in weight or any metabolic variable in the control group. Participants who increased physical activity by an hour or more per week had the greatest improvements in metabolic and obesity-related variables. Alexis’ work demonstrated that lifestyle counselling can be an effective intervention to decrease metabolic risk factors in people living with NAFLD.

Shane Hearn

**Thesis title:** Adolescent Health in an Indigenous context – the potential role for resilience

Shane’s study explored the relationship of resilience to a number of variables, in Indigenous and non-Indigenous adolescents aged 13 to 17 years. The variables examined included demographic data, psychological, social and physical environment and risk behaviours such as tobacco use, alcohol consumption and physical activity, as well as issues of mental health, perception of the school environment, peer and community engagement. Shane has found his study to be a journey full of challenges and great experiences, especially travelling throughout NSW from school to school to collect the data.

In this study resilience measure summary scores were similar between Indigenous and non-Indigenous adolescents. Resilience was related to a range of demographic factors, including measures of socio-economic status (eg father’s employment status and single parent family status). Resilience was protective against hazardous alcohol use, low physical activity, increased the likelihood of sports club membership, and was related to mental health variables such as feeling lonely and low self-confidence. In the adjusted models, family communication, the school environment and community involvement were also significantly related to adolescent health behaviours and mental health. Among Indigenous adolescents, resilience was also protective against being bullied. Overall, Shane concludes that higher resilience acts as a protective factor and lowers the risk of adverse health behaviours and also potentially increases participation in school, alongside other socio-ecological variables that also contribute to adolescent health and wellbeing.
Reducing children’s exposure to unhealthy food advertising on television: Impact of government restrictions in the UK

In 2006, the United Kingdom (UK) introduced government restrictions banning all television advertising for foods and drinks high in fat, sugar and salt (HFSS) during ‘children’s airtime’ and the Office of Communications has recently released its final review of the impact of these restrictions.

This review compared the number of advertisements for HFSS foods and drinks in 2005 and 2009 (Table 1), and the change in children’s exposure to these HFSS advertisements from 2005 to 2009. The study found a 37% reduction in children’s exposure to advertisements for HFSS.

However, the overall numbers of HFSS advertising spots substantially increased from 1.7 million in 2005 to 3.2 million in 2009 (Table 1). This was due to an increase in HFSS advertisements during ‘adult airtime’ and an increase in the number of commercial digital television channels that became available to households during this period.

‘Children’s airtime’ included all children’s channels (such as Children’s BBC and Nickelodeon), and children’s programming on other channels. All other programming and channels were considered ‘adult airtime’.

This is an example of how government intervention can reduce children’s exposure to unhealthy food advertising from television. However, the increase in overall food advertising spots means that children continue to see a high volume of HFSS advertisements during ‘adult airtime’. Given the negative impact of unhealthy food advertising on children’s diets, the regulatory system and review process adopted in the UK should be considered as an option by the Australian government to protect the interests of Australian children.

Table 1: Annual number of HFSS advertisements in 2005 and 2009, during adult and children’s airtime on UK television.

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<th>2005</th>
<th>2009</th>
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<td>Overall</td>
<td>1.7m</td>
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<td>Adult time</td>
<td>1.4m</td>
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<td>&gt; 1.8m</td>
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<td>Children’s time</td>
<td>0.3m</td>
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<td>&lt; 0.3m</td>
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Global Obesity Workshop

PANORG has sponsored external participants from Area Health Services and other stakeholder agencies working in health promotion and obesity prevention to participate in Global Obesity Workshops in 2009 and 2010. The two-day workshops are run in the second semester of each year as part of the University of Sydney’s Master of Public Health program and are delivered by experts from PRC. The workshop content covers the assessment of obesity rates in populations and international comparisons, the causes of obesity and energy imbalance from a multi-sectoral perspective, a description of current obesity prevention efforts, together with an exploration of policy-based approaches to reducing obesity.

PANORG evaluated the usefulness of the 2010 workshop to external attendees. Twelve external participants attended the workshop in 2010 and ten responded to the online evaluation survey (83%). Participants were from rural (3/12) and urban area health services (4/12) as well as non-government organisations or other agencies (5/12). Most (50%) participants had been working in health promotion or obesity prevention for between 3 and 5 years. Generally, participants attended for professional development reasons. Many said that the workshop had influenced their work, or was likely to in the future, and most (88%) said that they would share their learnings from the workshop.

There was interest in a future workshop which offered time for discussion around practical examples of work in the Australian context and the opportunity to brainstorm implementation issues.


Reference:
Recent Conferences

XI International Congress on Obesity 2010 commentary

The eleventh International Congress on Obesity (ICO) was held from 11-15 July 2010 in the beautiful city of Stockholm in Sweden. ICO brings together researchers studying obesity from different backgrounds, from molecular biology to sociology, from genetics to behavioural modification. One of the many highlights of the conference was a symposium featuring Michael Rosenbaum and Rena Wing, who presented data suggesting obesity is accompanied by physiological changes that will make it harder for people who have been previously obese to maintain a healthy weight after successful weight loss. Another highlight was the presentation from Michael Marmot on the policy options to tackle the inequity that drives obesity. Altogether this was an excellent conference, which was topped off with a reception in the beautiful town hall of Stockholm. ICO is a four-yearly conference which will take place in Kuala Lumpur in 2014.

Australian Diabetes Society

Australians with limited health literacy frequently miss opportunities for using prevention services, according to Dr Ann Albright, Director of the Division of Diabetes Translation Centres for Disease Control and Prevention (US). Dr Albright was a keynote speaker at the Australian Diabetes Society conference which was held in Sydney in September 2010. Drawing on the Australian Literacy Life Skills data collected by the Australian Bureau of Statistics she suggested that even a literate person can have limited health literacy. The strong prevention focus at this year’s conference is an acknowledgement of the high incidence of type 2 diabetes in developed countries like Australia, and the need to focus health efforts on prevention.

Public Health Association Conference

This year’s conference in Adelaide opened with an eloquent and humorous welcome by representatives of the traditional owners. The conference focused on the impact of our health on how we live, work, and play in today’s world, with Prof Fran Baum reminding us that we are not just individuals but that we also have a ‘collective life’. The relationship between climate change, the land and our health was emphasised. One highlight was the report of successful efforts by Indigenous Australians to engage in government management of land (Ngarrindjeri Sea Country Plan).

Conference resolutions included advocacy around the use of a minerals resource tax towards ‘Closing the Gap’, identification of injury prevention and oral health as priority areas for government action, and a call for changing workplace development to encourage compassionate, person-centred, and socially-aware service provision.

Australian and New Zealand Obesity Society Conference

The 20th meeting of the Australian and New Zealand Obesity Society recently took place in Sydney, bringing together expertise on obesity from basic science to health economics. One focus of the scientific program was on work detailing the pre-birth and pre-conception factors that predispose people to weight gain, especially in a high nutrition environment. The sustained successes of Australian community based interventions with children were also presented. The well attended ‘President’s Debate’ pitted Professor Boyd Swinburn and Professor Joseph Proietto against each other, arguing whether obesity is an individual level problem which needs to be addressed at a society level or a societal problem which should be managed at the individual level.
Meet and greet Nick Petrunoff

Nick is currently on a six month placement at PANORG, and seconded from his position as a senior community nutritionist with Northern Sydney Central Coast Area Health Service. Nick holds a Master of Nutrition and Dietetics from Sydney University and is close to completing a Master of Public Health degree. Nick’s professional experience includes clinical and sports nutrition, and in the past six years he has worked in health promotion and public health nutrition. He has experience in planning and implementing a broad range of nutrition and physical activity initiatives in a variety of settings and for different life stages. His current interest is nutrition in early life.

Nick’s passions include being dad to his young family, being active and growing, cooking and eating fabulous food. Nick inherited his interest in food, specifically authentic ethnic cuisine, from his grandparents. He enjoys cycling for pleasure and as a means of active transport to work and also likes the ‘waves’ and kayaking in summer.

Nick had collaborated with PANORG on research prior to his placement. He hopes that his time here will allow him to improve his existing skills in health promotion research and would like to use those skills to conduct applied research more effectively in his future public health nutrition work. In the meantime, his basketball skills are definitely improving when he finds the time to participate in the weekly PRC basketball matches.

Meet and greet Sinead Boylan

Sinead joined the PRC in February 2010. She holds a Bachelor of Science in Human Nutrition from the University of Ulster and a PhD in nutritional epidemiology from the University of Leeds. Sinead previously worked at University College London, where she investigated the dietary habits of people living in countries in transition such as the Czech Republic, Russia and Poland.

Sinead was enticed to Australia by her travelling father who had regaled her throughout childhood with stories of an outdoor lifestyle. From a professional perspective she was attracted to the PRC by the opportunity to be involved in policy relevant research.

Sinead has a passion for travelling, with the latest ‘country count’ being thirty three. She spends her free time exploring Australia, particularly through her favourite outdoor pursuits of cycling and bushwalking.

Her current work program includes analysis of the Brunei Population Health Survey, which builds on her interest in the diets of different population groups. She also has an emerging interest in sustainability of the food supply and food security.

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