



Increasing Physical Activity and Decreasing Sedentary Behaviour in the Workplace

Summary 2: Information and Counselling

September 2015

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INFORMATION AND COUNSELLING

The articles from the systematic review (refer to the Executive Summary) were summarized into four distinct, yet interrelated, groups based on common themes. The second of four summaries explores Information and Counselling.

It is important that workplaces support employees with knowledge and skills to comfortably begin and maintain positive health behaviours. In addition to physical activity and sedentary behaviour interventions, other methods of promoting health behaviour change within the workplace include interactive information, education and support. Some examples include:

- Providing in-person/online, individual or group counselling with an expert in the field, such as a personal trainer or health promotion facilitator.
- Providing Internet-based tools.
- Incorporating print media, such as posters and handouts that encourage healthy behaviours.

The most effective health promotion interventions are those with a multi-modal approach, such as pedometers and education, or sit-stand workstations and counselling.

Effectiveness and Quality of the Information and Counselling Studies		
Outcome	Effectiveness of Intervention	Quality of Studies
Increased Physical Activity	<p>54% of the studies reported an increase in physical activity (19/35 studies found significance)</p>	<p>★☆☆ (Mean: 0.46; Range: -4 to 6)*</p>
Decreased Sedentary Behaviour	<p>50% of the studies reported a decrease in sedentary behaviour (5/10 studies found significance)</p>	<p>★★★☆☆ (Mean: 2.30; Range: 0 to 6)*</p>

*Quality of studies: scores and associated stars are based on the average risk of bias assessment for the studies. The risk of bias is considered high in studies that do not randomly assign participants to the intervention, do not blind participants and personnel to the intervention, have incomplete data, have selective reporting, or have other potential threats to the validity of the findings. Studies with a lower risk of bias are considered of higher quality. Studies conducted in a naturalistic setting, such as workplaces, generally have a higher degree of bias..

- ★☆☆ : Poor Quality Studies (scored -7 to 0);
- ★★☆☆ : Moderate Quality Studies (scored 1 to 4);
- ★★★☆☆ : High Quality Studies (scored 5 to 7).

DESCRIPTION OF EFFECTIVE INFORMATION AND COUNSELLING

Recommendations from the Literature

AWARENESS INTERVENTIONS

Motivational Signs, Posters or Stair Stickers

Intervention

Strategically place motivational signs around the workplace to increase awareness and encourage employees to move more and sit less, such as:

- Placing posters in the elevator, by the elevator buttons or near the stairwell doors to encourage employees to take the stairs.
- Utilizing stair stickers to increase exposure to health promotion messages (see UWALK.ca for examples).



General Services Building, University of Alberta

Intervention Level

- Individual level: employees choose to participate or not.
- Population level: modifications are made to the environment or setting to encourage moving more and sitting less.

Appearance

Make the signs relevant and visually appealing, such as red stop signs, yellow yield signs or brightly coloured stair stickers.

Messages

Use a combination of health promotion and deterrent posters and banners, such as:

- Health promotion: "Walking up the stairs burns almost 5 TIMES more calories than riding the elevator." or "10 minutes of stair climbing a day protects your heart."
- Deterrent: "Please limit escalator use to those individuals unable to use the stairs." Or "Reduce your carbon footprint, take the stairs."

Organizational Support

Provide employees with proof that management supports healthy behaviours within the workplace, such as enhancing stairwells with artwork or music that encourage stair use.

Encourage workplace leaders to be role models by climbing the stairs regularly.

Summary

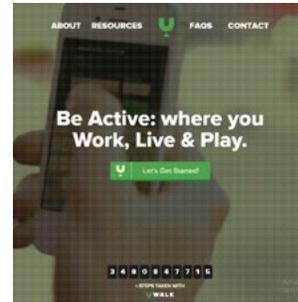
Benefit: Motivational signs, posters and stair stickers are cost-effective methods of increasing physical activity.

Challenge: Measuring the impact of motivational signs is difficult to assess, as data collection methods are often observational and individuals are not approached to explain why they choose the stairs or elevators.

LIFESTYLE CHANGE INTERVENTIONS

“E-ventions” (Websites and Emails)

The application of “e-ventions” (websites and emails) to educate and motivate physical activity participation and reduce sitting time at the workplace is a common strategy for targeting employees of a workplace.



Intervention Level

- Send employees weekly emails about the benefits and risks of being physically active.
- Provide tips on how to move more and sit less.
- Tailor messages to the individual and their workplace.
- Provide employees with links to websites with more information about being physically active and reducing sedentary behaviour, such as www.participaction.com or uwalk.ca.

Email Messages

Email content could include:

- Reminders to encourage participation and tracking of physical activity on a designated website.
- Notifications about relevant and thought-provoking educational sessions or documents.
- Encourage peer support and regular communication among employees within the workplace.
- Ideas on how employees can achieve their daily step goal or moderate-to-vigorous physical activity goals, such as:
 - o Park the car further away from their destination.
 - o Take a walk with a co-worker at lunch.
 - o Check the local newspaper for community events that support an active lifestyle.
- Discussions of potential obstacles that inhibit physical activity and how to overcome them.

Summary

Benefit:

- Emails are unobtrusive, cost-effective, immediately received, and able to reach a wide audience.

Challenge:

- Not everyone enjoys or values tracking physical activity. As such, adherence to a tracking website over long time periods may be low. Start with shorter interventions.
- “E-ventions” are not very effective for those who are less technologically savvy.
- Emails need to be inviting to all, as to encourage people of all physical activity levels to participate.

SUPPORTIVE INTERVENTIONS

Individual Counselling and Group Facilitation

Individual counselling and group facilitation can help employees:

- Incorporate physical activity into their daily routine to reduce the amount of time spent sitting.
- Set appropriate goals.
- Discuss potential barriers with an expert in an environment where people feel safe and comfortable.



Facilitator

- A health and wellness expert external to the workplace.

Modification: train a motivated individual within the workplace to be the workplace health champion.

Counselling Sessions

- For example, 1x per week for 30 minutes.
 - Either individual or group sessions, depending on the workplace environment and resources available.
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Counselling Objectives

- Motivate employees to increase their daily physical activity and reduce sedentary behaviour through behaviour change strategies, such as goalsetting, self-monitoring, problem-solving, daily health tips, organized competitions, and facilitated group discussions.
 - Maintain open communication to continuously support and encourage employees.
 - Facilitate weekly physical activity and sedentary behaviour reflection.
 - Assist employees with setting new physical activity or sedentary behaviour goals based on their weekly reflection.
 - Follow-up with employees through emails or telephone calls when possible.
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Summary

Benefit:

- Physical activity counselling has been shown to positively influence motivation and behaviour change towards daily physical activity.

Challenges:

- Positive behaviour change can decline once the counselling intervention stops.
- Counselling can be costly and time-consuming.

TOOLS FOR IMPLEMENTING INFORMATION AND COUNSELLING INTERVENTIONS

SUGGESTED FEATURES OF EFFECTIVE PHYSICAL ACTIVITY COUNSELLING STRATEGIES

The “Five A’s” of effective physical activity counselling (Goldstein, Whitlock, & DePue, 2004):

- 1) **Assess** individual physical activity levels and abilities, as well as beliefs and knowledge.
- 2) **Advise** individuals on potential health risks, the benefits of change, and the frequency and intensity of appropriate physical activity.
- 3) **Agree** on a plan of action, with specific goals based on the individual’s interest and confidence.
- 4) **Assist** in identifying personal barriers and strategies to overcome those barriers, potential opportunities to be active and with social support.
- 5) **Arrange** long-term follow-up visits, telephone calls, and email reminders to ensure behaviour change is sustained.

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This website provides evidence-based education and resources to start promoting physical activity in the workplace:

- [Physical Activity Counselling Toolkit](#): The toolkit includes handouts for practitioners, physical activity facilitators and exercise specialists to use when counselling individuals on starting and maintaining a physically active lifestyle.
- [Workplace Physical Activity Framework](#): This resource is an evidence-based audit tool that allows the workplace to evaluate their physical activity levels before, during, and after change has been implemented.

UWALK.CA

The UWALK.ca website provides multiple educational resources to encourage walking and stair climbing at the workplace, e.g., wall posters, stair stickers, how-to guides, videos, and PowerPoint presentations.

PHYSICAL ACTIVITY HOTLINE

[Physical Activity Services \(PAS\)](#):

This is a free physical activity counselling phone line where individuals can speak directly with a qualified exercise professional.

NATIONAL LEVEL PHYSICAL ACTIVITY EDUCATIONAL WEBSITES

- [Canadian Society for Exercise Physiology \(CSEP\)](#) is a voluntary organization composed of professionals interested and involved in the scientific study of exercise physiology, exercise biochemistry, fitness and health.
- [ParticipACTION](#) is the national voice of physical activity and sport participation in Canada.
- [Public Health Agency of Canada](#) is a national agency promoting the health of Canadians through the application of international research and development to Canada’s public health programs.
- [Health Canada](#) provides basic information and resources outlining the importance of daily physical activity, along with information on daily physical activity guidelines.

IMPLEMENTATION RECOMMENDATIONS

1. Obtain management support and commitment.
2. Outline the benefits of daily physical activity at work.
3. Determine what style of intervention is most suitable for your workplace (e.g., walking challenges, physical activity policy change, or sit-stand workstations).
4. Supplement the intervention with educational information or counselling.
5. Evaluate the effectiveness of the information being provided to employees and adjust where necessary to better educate employees on workplace physical activity and sedentary behaviour.



BACKGROUND

Characteristics of Studies Included in the Review

POPULATION

Healthy adults, 18 years of age or older, working in a full-time or part-time capacity:

Average # of participants = 180

Range in # of study participants = 14 to 1,566



INTERVENTIONS

Average duration = 12.5 weeks

Range in duration =
1 week to 9 months



COMPARISONS

Measured in a pre-test/
post-test format, with or
without a control group.



OUTCOMES

Primary Outcomes

- **For Physical Activity**, significantly increased daily steps, daily flights of stairs, and daily minutes of physical activity.
- **For Sedentary Behaviour**, limited significant results were found for reducing daily minutes of sedentary behaviour.



Secondary Outcomes

- Employees perceived an increase in management support and fellow employee involvement.
- Life satisfaction, work productivity, work focus, social support, and positive mood states increased; while perceived stress, depressive symptoms, body fat, and negative mood states decreased.
- Presenteeism scores indicated that employees rated their job performance as higher.
- Receipt and utilization of educational materials was high for both education groups, and a majority of employees read educational emails.
- Employees perceived themselves to be more physically active.



The following studies with information and counselling interventions were included in the systematic review:

Aittasalo, Rinne, Pasanen, Kukkonen-Harjula, & Vasankari (2012); Borg, Merom, & Rissel (2010); Carr, Walaska, & Marcu (2013); Chan, Ryan, & Tudor-Locke (2004); Cook, Billings, Hersch, Back, & Hendrickson (2007); Croteau (2004); De Cocker, De Bourdeaudhuij, & Cardon (2010); Delaney (2013); Dishman, DeJoy, Wilson, & Vandenberg (2009); Edmunds, Stephenson, & Clow (2013); Evans, Fawole, Sheriff, Dall, Grant, & Ryan (2012); Faghri, Omokaro, Parker, Nichols, Gustavesen, & Blozie (2008); Flannery, Resnick, Galik, Lipscomb, Mcphaul, & Shaughnessy (2012); Gazmararian, Elon, Newsome, Schild, & Jacobson (2013); Gilson, Faulkner, Murphy, Meyer, Washington, Ryde, Arbour-Nicitopoulos, & Dillon (2013); Gordon (2013); Haines, Davis, Rancour, Robinson, Neel-Wilson, & Wagner (2007); Healy, Eakin, Lamontagne, Owen, Winkler, Wiesner, Gunning, Neuhaus, Lawler, Fjeldsoe, & Dunstan (2013); Irvine, Philips, Seeley, Wyant, Duncan, & Moore (2011); Meyer, Kayser, Kossovsky, Sigaud, Carballo, Keller, Martin, Farpour-Lambert, Pichard, & Mach (2010); Obiaka (2014); Opdenacker & Boen (2008); Plotnikoff, McCargar, Wilson, & Loucaides (2005); Plotnikoff, Brunet, Courneya, Spence, Birkett, Marcus, & Whitele (2007); Plotnikoff, Pickering, McCargar, Loucaides, & Hugo (2010); Prestwich, Conner, Lawton, Ward, Ayres, & McEachan (2012); Purath, Miller, McCabe, & Wilbur (2004); Smith (2010); Spittaels, De Bourdeaudhuij, Brug, & Vandelanotte (2007); Swartz, Rote, Welch, Maeda, Hart, Cho, & Strath (2014); Tucker, Lanningham-Foster, Murphy, Thompson, Weymiller, Lohse, & Levine (2011); van Berkel, Boot, Proper, Bongers, & van der Beek (2014); Van Hoecke, Delecluse, Opdenacker, Lipkens, Martien, & Boen (2012); Verweij, Proper, Weel, Hulshof, & van, Mechelen (2012); Warren, Maley, Sugarwala, Wells, & Devine (2010); Webb (2013); Weiters (2009); Yap (2008).

RESOURCES

Alberta Centre for Active Living	Physical Activity Counselling Toolkit: www.centre4activeliving.ca/our-work/physical-activity-counselling-toolkit/
	Workplace Physical Activity Framework: bit.ly/1dKDaXW
Canadian Society for Exercise Physiology	www.csep.ca/english/View.asp?x=460#
Five A's of Physical Activity Counselling	www.ncbi.nlm.nih.gov/pubmed/15275675
Health Canada	www.hc-sc.gc.ca/hl-vs/physactiv/index-eng.php
ParticipACTION	www.participaction.com
Physical Activity Services	www.healthlinkbc.ca/physical-activity/
Public Health Agency of Canada	www.phac-aspc.gc.ca/index-eng.php
UWALK.ca	Resources to Promote Workplace Physical Activity uwalk.ca/resources/

ACKNOWLEDGEMENTS

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