

# PHYSICAL ACTIVITY & SMOKING



## Key Messages for Health Care Providers and Policy Makers

### Overview

Smoking and physical activity are 2 out of the top 3 risk factors for premature death and chronic disease that can be modified. In general, people who smoke have decreased physical activity levels, putting this population at further risk for chronic disease. 1 Physical activity may facilitate smoking cessation in many different populations.

### The Link between Smoking and Physical Activity

- The ability to engage in physical activity may be reduced in those who smoke because of decreased pulmonary function.<sup>1</sup>
- Regular physical activity in adolescence may be an important contributor for choosing and continuing to adopt non-smoking behaviour in adulthood.<sup>2</sup>
- Physical activity decreases the desire to smoke,<sup>3</sup> reduces cravings and withdrawal symptoms,<sup>2,4</sup> and positively influences factors such as perceived ability to cope and self-esteem, which in turn can protect against initiation of, or return to, smoking.<sup>2</sup> When physical activity is combined with nicotine replacement therapy, it facilitates smoking cessation<sup>5</sup> and delays weight gain in women who smoke.<sup>6</sup>
- Exercise can improve depression and anxiety symptoms, psychosocial stress, sleep patterns, cognitive functioning, and self-esteem, all of which may affect the individual's ability to initiate and maintain smoking cessation.<sup>6</sup> Alternatively, decreased levels of physical activity may lead to increased levels of depression, and may contribute to a rise in smoking levels.<sup>1</sup>
- Physical activity may provide a feasible and effective smoking cessation intervention for pregnant women<sup>7</sup> and for people living with severe mental illness.<sup>8</sup> For women of post-secondary age who quit smoking, physical activity may address weight gain, stress reduction strategies, and positive mood management.<sup>9</sup>

### Impact

- A 10% decrease in physical inactivity levels could save approximately \$150 million in Canadian direct health care costs annually.<sup>10</sup>
- A small increase in physical activity is associated with significant reduction in risk for chronic disease.<sup>11</sup>

### Actions

- Physical activity is a healthy alternative to smoking that aids smoking cessation efforts and prevents relapse, while increasing other significant health benefits.<sup>8</sup>
- When physical activity is promoted as a smoking cessation aid, it can be integrated into existing treatments to increase feelings of control and to address fears of weight gain.<sup>12</sup>
- The CAN-ADAPTT Guideline Development Group<sup>13</sup> recommends that health care providers should:
  - Ask patients about tobacco use status on a regular basis.
  - Clearly advise patients or clients to quit.
  - Assess the willingness of patients or clients to begin treatment to quit smoking.
  - Offer assistance to every tobacco user who expresses the willingness to begin treatment to quit.
  - Conduct regular follow-up to assess response, provide support and modify treatment as necessary.
  - Refer patients or clients to relevant resources as part of the treatment, where appropriate.

## Helpful Resources

- The CAMH (Center for Addiction and Mental Health) Nicotine Dependence Service <[www.camh.net](http://www.camh.net)>
- Smokers' Helpline <[www.smokershelpline.ca](http://www.smokershelpline.ca)>
- Public Health Agency of Canada. *Physical Activity Guidelines* <<http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/pa-ap/index-eng.php>>
- ParticipACTION <<http://www.participaction.com>>
- Ontario Ministry of Health Promotion and Sport <<http://www.mhp.gov.on.ca/en/active-living/physical-activity.asp>>

## References

1. Kaczynski, A. T., Manske, S. R., Mannell, R. C., & Grewal, K. (2008). Smoking and Physical Activity: A Systematic Review. *American Journal of Health Behaviour*, 32(1), 93-110.
2. Kujala, U. M., Kaprio, J., & Rose, R. J. (2007). Physical activity in adolescence and smoking in young adulthood: a prospective twin cohort study. *Addiction*, 102, 1151-1157.
3. Van Rensburg, K. J., Taylor, A., & Hodgson, T. (2009). The effects of acute exercise on attentional bias towards smoking-related stimuli during temporary abstinence from smoking. *Addiction*, 104, 1910-1917.
4. Taylor, A. H., Ussher, M. H., & Faulkner, G. (2007). The acute effects of exercise on cigarette cravings, withdrawal symptoms, affect and smoking behaviour: a systematic review. *Addiction*, 102, 534-543.
5. Williams, D. M., Dunsinger, S., Jennings, E. G., Ussher, M. H., Whitely, J. A., Albrecht, A. E., et al. (2010). Moderate Intensity Exercise as an Adjunct to Standard Smoking Cessation Treatment for Women: A Pilot Study. *Psychology of Addictive Behaviors*, 24(2), 349-354.
6. Prapavessis, H., Cameron, L., Baldi, J. C., Robinson, S., Borrie, K., Harper, T. et al. (2007). The effects of exercise and nicotine replacement therapy on smoking rates in women. *Addictive Behaviors*, 32, 1416-1432.
7. Ussher, M., Aveyard, P., Coleman, T., Straus, L., West, R., Marcus, B., Lewis, B., et al. (2008). Physical activity as an aid to smoking cessation during pregnancy: Two feasibility studies. *BMC Public Health*, 8, 328-336.
8. Faulkner, G., Taylor, A., Munro, S., Selby, P., & Gee, C. (2007). The acceptability of physical activity in programming within a smoking cessation service for individuals with severe mental illness. *Patient Education and Counseling*, 66, 123-126.
9. Nademin, M. E., Napolitano, M. A., Xanthopoulos, M. S., Fava, J. L., Richardson, E., & Marcus, B. (2010). Smoking cessation in college-aged women: A qualitative analysis of factors important to this population. *Addiction Research and Theory*, 18(6), 649-666.
10. Katzmarzyk, P., Gledhill, N., & Shephard, R. (2000). The economic burden of physical inactivity in Canada. *Canadian Medical Association Journal*, 163(11), 1435-1440.
11. Warburton, D., Nicol, C. W., & Bredin, S. (2006). Health benefits of physical activity: the evidence. *Canadian Medical Association Journal*, 174(6), 801-809.
12. Everson-Hock, E. S., Taylor, A. H., Ussher, M., & Faulkner, G. (2010). A qualitative perspective on multiple health behaviour change: Views of smoking cessation advisors who promote physical activity. *Journal of Smoking Cessation*, 5(1), 7-14.
13. CAN-ADAPTT. (2011 Jan.). *Canadian Practice-Informed Smoking Cessation Guideline: Summary Statement*. Toronto: The Canadian Action Network for the Advancement, Dissemination and Adoption of Practice-informed Tobacco Treatment, Centre for Addiction and Mental Health. Retrieved June 27, 2011 from <<http://www.can-adaptt.net/English/Guideline/Counselling%20and%20Psychosocial%20Approaches/Summary%20Statements.aspx>>