HEALTH PROFESSIONALS TAKING ACTION AGAINST SMOKING

Chantal Lacroix, MD
Michèle Tremblay, MD
André Gervais, MD

February 2003

RÉGIE RÉGIONALE
DE LA SANTÉ ET DES
SERVICES SOCIAUX
DE MONTRÉAL-CENTRE

Direction de la santé publique

Produced by the Physical Health Unit, Tobacco control team
McGill University Health Centre, mandatary

Legal deposit: 2nd trimester 2003
Bibliothèque nationale du Québec
National Library of Canada

ISBN: 2-89494-385-7

HEALTH PROFESSIONALS TAKING ACTION AGAINST SMOKING

*Tobacco use is **THE** main cause of avoidable illness and premature death in America[1]. Health professionals have an important role to play in relation to this major public health problem since about 70% of smokers want to quit[1]. Every year, many smokers go to various points of service available through the health system to consult for a variety of health problems. Each of these visits represents an opportunity to offer smokers help to quit smoking.*

Health professionals should identify the tobacco use status of all their patients 9 years of age and over, and provide help to smokers to motivate them to quit. Several studies have demonstrated the effectiveness of counselling interventions offered by clinicians[1]. Moreover, when a patient takes smoking cessation medication, quit rates double.

The following information will make it easier to integrate efficacious cessation interventions into your daily practice.

TOBACCO USE IN QUEBEC

- Prevalence of smoking (2000-01) among people aged 12 years and over: 29.5%[2]:
  - 31% of men and 28% of women smoke;
  - There are about 1.9 million smokers in Quebec;
  - Quebec ranks high among "Canadian Smoking Champions".
- Prevalence rates (2000-01) among young people aged 15 to 19: 34%[2].
- Prevalence rates (2000) among youth in secondary school: 29%[3]:
  - 18.6% are current smokers (have smoked > 100 cigarettes in their lifetime);
    - 12.4% smoke daily;
    - 6.2% smoke occasionally;
  - 10.4% of youth are beginning smokers (have smoked < 100 cigarettes in their lifetime);
  - on average, youth smoke their first cigarette at age 12.
- The direct and indirect annual costs associated with tobacco use: $2.4 billion[4].

SMOKING AND HEALTH

- One out of two regular smokers dies from a tobacco-related disease[5]:
  - of every 1000 smokers aged 20 years who will continue to smoke, 250 will die between the ages of 35 and 69 years, losing an average of 22 years of life expectancy; 250 will die after age 70, losing an average of 8 years of life expectancy.
- About 12 000 Quebecers die each year from tobacco-related diseases[6].
- The following diseases have been attributed to smoking[7,8]:
  - 85% of lung cancers;
  - 85% of chronic obstructive pulmonary diseases;
  - 30% of all cancers;
  - 25% to 30% of cardiovascular diseases;

  ... and a list of several other diseases that is growing continually.

ENVIRONMENTAL TOBACCO SMOKE (ETS) AND HEALTH

- Smoke from a lit cigarette contains 4000 different chemicals including 50 carcinogenic compounds[9].
- Exposure to ETS is associated with an increased risk for [9]:
  - death due to ischemic heart disease;
  - lung cancer;
  - lower respiratory tract infections (bronchitis, pneumonia) and repeated otitis media among children aged 2 years or less;
  - the development of asthma and more frequent exacerbations among children under 6 years of age
  - sudden infant death syndrome.
- 29% of children under age 12 in Quebec live in a household where someone smokes regularly[10].

BENEFITS OF SMOKING CESSATION [7,11,12]

- Smoking cessation provides immediate health benefits to men and women of all ages, whether or not they suffer from tobacco-related diseases.
- The mortality rate for ex-smokers is lower than that of smokers of the same age.
- Overall, the risks of developing diseases associated with smoking decrease as soon as tobacco use is stopped and continue to fall as long as the person abstains:
  - relative risk of lung cancer:
    - among people who have never smoked: RR=1;
    - among smokers: RR=16;
    - among ex-smokers who have quit for 15 years: RR=2 - 3.
  - relative risk of myocardial infarction:
    - among people who have never smoked: RR=1;
    - among smokers: RR=3 - 4;
    - among ex-smokers who have quit for 5 to 10 years: RR=1,2.
  - relative risk of stroke:
    - among people who have never smoked: RR=1;
    - among smokers: RR=3 – 4;
    - among ex-smokers who have quit for 5 to 10 years: RR=1,4.
  - relative risk of having a low birth weight baby (< 2500 g):
    - among pregnant women who do not smoke: RR=1;
    - among pregnant women who smoke: RR=2;
    - among pregnant women who stop smoking before the 16th week of pregnancy: RR=1.

BRIEF SMOKING CESSATION COUNSELLING: HOW? (1,13,14)

- Identify the tobacco use status of all patients 9 years of age and over, and note it in the file:

  - Does the patient smoke?
    - no, has never smoked: has never smoked;
    - no, has quit smoking: ex-smoker;
    - yes, smokes "x" cigarettes/day: smoker.

- Assess the smoker's stage of change, i.e. his or her situation in relation to smoking:

  - Is the person thinking about quitting smoking?
    - no, not within the next 6 months: precontemplation
    - yes, within 6 months: contemplation
    - yes, during the next month: preparation
    - stopped less than 6 months ago: action
    - stopped over 6 months ago: maintenance
    - has started again lately relapse

- Intervention adapted to stage of change:

  - precontemplation / contemplation: help the person start thinking about his or her smoking and the importance of quitting soon;
  - preparation: help the person prepare to quit smoking;
  - action / maintenance: help the person remain a non-smoker;
  - relapse: help the smoker get rid of guilt and encourage him or her to stop smoking again soon.

BRIEF SMOKING CESSATION COUNSELLING: HOW? (1,13,14)

DOES THE PERSON SMOKE?

Yes	No	No	Has started again
	Has never smoked / quit > 1 year		
___ cigarettes / day Has smoked for _____ years Has quit (>24h) ____ times	Offer congratulations	Has quit for < 1 year	Started again __weeks ago

IS THE PERSON THINKING ABOUT QUITTING DURING THE NEXT MONTH?

No	Yes		
Ask ❑ What do you like about smoking? ❑ What do you dislike about smoking? ❑ What would you like about quitting smoking? ❑ What worries you when you think about quitting smoking? **Discuss** ❑ Your concern about smoking, in relation to the person's history and risk factors ❑ The advantages of quitting smoking and the fact that the person should think about quitting in the near future ❑ The various choices available to help people quit smoking: - medications - your support - the help of friends - telephone help lines - leaflets - smoking cessation groups **Give:** ❑ Smoking cessation material such as "Freedom" (15) ❑ A list of smoking cessation resources such as "Breathe free for life" (16) ❑ A follow-up appointment, as needed	**Ask** ❑ On what date are you thinking of quitting? ❑ Do you have any concerns or questions about quitting smoking? **Discuss** ❑ The concerns and questions raised ❑ The importance for the person to think about what makes him or her want to smoke and what he or she can do instead (this can be related to previous attempts to quit) ❑ Withdrawal symptoms ❑ Smoking cessation medications ❑ Stress management ❑ Weight gain ❑ Support that family and friends can provide **Give:** ❑ A prescription for a smoking cessation medication, if there are no contraindications ❑ Smoking cessation material such as "Freedom" ❑ A list of smoking cessation resources such as "Breathe free for life" ❑ An appointment one to two weeks following the anticipated quit date ❑ A referral, as needed	**Ask** ❑ What do you like about having quit smoking? ❑ Are you having any specific problems? ❑ Do you smoke once in a while? **Discuss** ❑ The problems raised ❑ The importance of avoiding the occasional cigarette ❑ The urge to smoke, which can last a very long time and therefore requires the person to remain vigilant **Give:** ❑ Encouragement and congratulations ❑ A prescription for a smoking cessation medication or adjust pharmacotherapy as necessary; ❑ A follow-up appointment as needed	**Ask** ❑ What made you start smoking again? ❑ What were the reasons that had motivated you to quit smoking? **Discuss** ❑ The fact that most smokers have to make several attempts before they succeed in quitting for good ❑ The importance of quitting again soon ❑ Possible strategies to resist the urge to smoke, in relation to the reasons that led to relapse **Give:** ❑ A prescription for a smoking cessation medication if the person wants to quit soon and if there are no contraindications ❑ Smoking cessation material such as "Freedom" ❑ A list of smoking cessation resources such as "Breathe free for life" ❑ An appointment, as needed ❑ A referral, as needed

WITHDRAWAL SYMPTOMS[17]

About 80% of people who quit smoking have withdrawal symptoms. Symptoms usually appear a few hours following the last cigarette and reach a maximum level after 48 hours. Their intensity then lessens gradually over a period of 2 to 5 weeks. Withdrawal symptoms include:

- anxiety, irritability, impatience and nervousness;
- difficulty concentrating;
- fatigue;
- dizziness;
- tremors and increased sweating;
- headaches;
- sleep disturbances;
- constipation;
- increased appetite;
- intense urge to smoke.

It is helpful for patients to know that most people do not experience all the withdrawal symptoms and that symptoms are transitory. Nicotine replacement therapy and bupropion help relieve these symptoms.

SMOKING CESSATION PHARMACOTHERAPY [1,18,19,20]

- The efficacy of smoking cessation medications such as nicotine replacement therapy (NRT: patches and gums) and bupropion has been well documented.
- In general, smokers who use NRT or bupropion to quit smoking double their chances of succeeding.
- Smoking cessation medications are indicated for all smokers who want to quit smoking and for whom there are no contraindications.
- Choice of medication should be guided by the following key factors: contraindications to certain medications, patient's preference, patient's past experience with certain medications, and patient's personal characteristics.

- **NICOTINE REPLACEMENT THERAPY (NRT):**

  - Contraindicated in the following cases:
    - Allergy to adhesive bandage (for patches);
    - Generalised skin disease (for patches);
    - Severe dental problems (for gums).

  - Other contraindications:
    - myocardial infarction during the 2 preceding weeks;
    - unstable or severe angina;
    - severe arrhythmia;
    - recent stroke;
    - pregnancy or breastfeeding;
    - under age 18.

  - For other contraindications, the following facts should be considered:
    - it has been clearly demonstrated that the use of nicotine patches or gums does not increase cardiovascular risks.
    - nicotine from cigarettes, nicotine patches or gums can harm the foetus. Pregnant or breastfeeding women should be given significant support to help them quit smoking without medications. Women who are unable to stop smoking should be encouraged to use patches or gums since they do not contain the toxic elements found in cigarettes and facilitate cessation. However, it is very important to ensure that women's nicotine intake is not higher than when they smoked. Therefore, insist on the importance of not smoking; personalise the treatment while keeping in mind that during pregnancy, nicotine intake should stop as soon as possible, ideally during the first trimester; recommend that these women use nicotine gums; and if patches are used, they should be removed at night.

SMOKING CESSATION PHARMACOTHERAPY [1,18,19,20]

- Smoking cessation medications are not recommended for people under 18 years of age because the safety and effectiveness of these therapies have not been studied among youth. However, patches or gums can be recommended to adolescents who wish to quit smoking but are unable to because of their addiction to nicotine.

- Transdermal patches (Habitrol, Nicoderm):
  - suggested use for people smoking more than 10 cigarettes/day:

Brand	Treatment	Duration of treatment
Habitrol Nicoderm	21 mg/24 hours 14 mg/24 hours 7 mg/24 hours	4 to 6 weeks 2 to 4 weeks 2 weeks

  - nicotine patch manufacturers recommend a treatment lasting 8 to 12 weeks. Clinical trials have shown that an 8-week treatment is just as effective as one lasting 12 weeks. However, if patients wish to continue the treatment, there is no danger in using the patches beyond 12 weeks;
  - if people who smoke 10 cigarettes/day or less use patches, it is preferable that they start treatment with a lower dose patch;
  - smokers who are very addicted to cigarettes (smoke more than 25 cigarettes/day or have severe withdrawal symptoms when they stop) can start the treatment using two patches, a 21 mg and a 7 mg patch. After 4 to 6 weeks, treatment can continue with the 21 mg patch;
  - the patch should be placed every morning on a hairless part of the body between the neck and the waist;
  - patients who have trouble sleeping can remove the patch before going to bed and apply a new one when they wake up in the morning;
  - the most common reported side effect related to patch use is a skin rash at the site where the patch was applied. The rash usually disappears within 48 hours when the patch is stuck on at a different site every day. If rash persists, local treatment with hydrocortisone creme is usually sufficient.

SMOKING CESSATION PHARMACOTHERAPY [1,18,19,20]

- Gums (Nicorette):
  - people smoking less than 25 cigarettes a day should use 2 mg gums whereas those smoking 25 cigarettes or more a day should use 4 mg gums;
  - to maintain optimal nicotine levels, it is preferable to follow a regular schedule, for example chew one piece of gum every hour, for a maximum of 24 pieces a day;
  - treatment lasts at least 1 to 3 months and 15% to 20% of patients are still using it after a year, which is less risky than smoking;
  - it is important to explain clearly how to use the gum:

    the gum is chewed two or three times and then parked between the cheek and the gum for 1 minute to promote absorption of the nicotine by the oral mucosa. The process must be repeated for 30 minutes. The person must not eat or drink anything but water 15 minutes before and during use in order not to interfere with nicotine absorption;
  - side effects that are often reported include sore mouth, hiccups, dyspepsia, and sore jaw. They usually disappear when the person adopts a good chewing technique.

- **BUPROPION (ZYBAN):**

  - This smoking cessation medication inhibits dopamine re-uptake and alters norepinephrine activity.

  - The risk of seizures is dose-related. The rate of seizures is about 0.1% when the dosage does not exceed 300 mg/day.

  - Contraindications to bupropion [22]:
    - seizure disorders;
    - bupropion taken as an antidepressant (Wellbutrin);
    - use of a monoamine-oxidase inhibitor or the antipsychotic drug thioridazine less than 14 days before;
    - abrupt withdrawal from alcohol;
    - abrupt withdrawal from benzodiazepines or other sedatives;
    - current or prior diagnosis of bulimia or anorexia nervosa;
    - allergy to bupropion.

SMOKING CESSATION PHARMACOTHERAPY [1,18,19,20]

- Caution:

  Certain patients may have predisposing factors to a higher risk of seizures and extreme caution is required:
  - history of head trauma or seizures;
  - central nervous system tumour;
  - serious hepatic impairment: if bupropion is administered, proceed with extreme caution and prescribe a reduced dose not exceeding 150 mg every 2 days;
  - alcohol abuse, addiction to opiates, cocaine, or other stimulants;
  - concomitant use of medications that lower seizure threshold such as antipsychotics, antidepressants, lithium, amantadine, theophylline, systemic steroids, quinolone antibiotics, and antimalarial drugs;
  - use of over-the-counter stimulants or appetite suppressants;
  - use of St. John's wort;
  - diabetes treated with insulin or oral hypoglycaemics.

- Precautions:

  Caution is recommended in the presence of the following factors.
  - pregnancy: record pregnant women taking bupropion in the register monitoring the evolution of exposed foetuses: 1-800-387-7374;
  - breastfeeding: stop breastfeeding or use of bupropion;
  - under 18 years of age: bupropion can be recommended to young people who wish to quit but are not successful because of their nicotine addiction;
  - recent history of myocardial infarction or unstable heart disease;
  - combination of bupropion and nicotine gum or patch: monitor blood pressure;
  - concomitant use of betablockers or type 1C antiarrhythmic agents: consider reducing dosage of these medications;
  - concomitant use of levodopa: use low-dose bupropion at first then gradually increase dosage;
  - renal impairment: consider reducing dosage frequency.

- Dosage:
  - bupropion 150 mg/day for the first three days;
  - bupropion 150 mg twice/day for 7-12 weeks, with a minimum interval of 8 hours between doses;
  - the patient should stop smoking during the second week of treatment;
  - dose tapering is not required when discontinuing treatment;
  - Health Canada has approved the use of bupropion for up to 52 weeks for smokers who are prone to mood changes or who continue to have strong urges to smoke.

- The most common adverse effects are insomnia and dry mouth. To reduce the risk of insomnia, the patient should take the second dose of bupropion a few hours before bedtime while maintaining an 8-hour interval between the two doses. If insomnia persists, the dose of bupropion can be reduced to 150 mg/day.

- The adverse effects that most often cause people to stop treatment are tremors and skin rashes.

- **MEDICATION COMBINATION:**

  - People who are very nicotine-dependent and are unable to stop smoking with the help of only one medication can be given various combinations of medications:
    - nicotine patches and gums: use of the 21 mg patches combined with chewing 2 mg gums when strong urges to smoke arise;
    - nicotine patches and gums: use of the patches first to stop smoking and then gums to help with long-term abstinence;
    - bupropion and patches: start bupropion treatment, add 21 mg patches when the patient stops smoking, reduce the dose of the patches to 14 mg at week 8, and to 7 mg at week 9. It is important to monitor the patients' blood pressure when they take this combination of medications since a slight increase in cases of high blood pressure was noted in a comparative study with a placebo group. High blood pressure disappeared when medication was stopped.

STRESS MANAGEMENT

Numerous smokers use cigarettes to better control stress. Discussing with smokers strategies, can be useful to help them control their stress once they have quit smoking.

- ***Identify main sources of stress***. Firstly, to better control stress, it is important to identify what is causing it.
- ***Avoid or change sources of stress***. Once the main sources of stress have been identified, it is possible to avoid them, for example, by stopping to see certain people; or it may be possible to modify them, for example by making changes to certain living conditions.
- ***Reduce the reaction to stress***. Some sources of stress are neither avoidable nor can they be changed. However, it is possible to reduce one's reaction to these sources of stress by deciding, for example, to be less affected by what others say and do.
- ***Use relaxation techniques***. When a person feels stressed, various relaxation techniques can be used to relax rapidly. Some of these techniques are breathing and muscle relaxation, physical exercise, music, etc.

WEIGHT CONTROL [23]

Several people who quit smoking are quite worried about gaining weight and in fact, many will gain 5 to 10 pounds. This increase in weight is due to decreased basal metabolism and increased dietary intake. Patients who wish to avoid gaining too much weight should be advised to:

- keep a food diary to identify what foods should be avoided;
- reduce intake of fatty foods and sweets;
- reduce portion sizes at mealtime;
- to satisfy cravings, drink a glass of water, chew sugarless gum, eat fruit or crudities;
- exercise moderately on a regular basis.

Nicotine gum or bupropion can also be considered since these medications help put off weight gain until the end of the treatment.

KEY ELEMENTS FOR EFFECTIVE SMOKING CESSATION COUNSELLING [24]

- Start counselling intervention with open questions as this:
  - establishes a climate of trust between the health professional and the smoker;
  - allows people to explore their feelings regarding smoking;
  - allows people to identify their reasons to quit smoking;
  - allows people to identify their strategies for success.

- Adapt the intervention to a smoker's stage of change:
  - this will help the person progress more rapidly to the status of non-smoker.

- Express your empathy and respect for patients who smoke because it is extremely difficult to stop smoking:
  - most smokers have been smoking since adolescence;
  - smoking is part of their personal identity;
  - smoking is a deeply anchored physical habit;
  - smoking provides emotional support: a cigarette is like a friend who is always there;
  - smoking is linked to a series of social behaviours;
  - nicotine creates a physical dependence as strong as the one caused by alcohol, cocaine, or heroin.

  .

- Avoid arguments and confrontations that:
  - usually provoke resistance;
  - hinder a patient's progression to the status of non-smoker.

- Use communication techniques that reduce resistance, encourage constructive discussion, and motivate the patient to stop smoking:
  - active listening;
  - summarising;
  - reframing;
  - emphasising the freedom to choose.

CONCLUSION

Because of the numerous harmful effects associated with smoking, it is important that health professionals identify the smoking status of all their patients aged 9 years and over, and help the smokers stop smoking. We know that when clinicians intervene with their patients who smoke, it helps them to quit. Health professionals should realise that if they do not discuss smoking with their patients who smoke, they may believe that they are not personally exposed to the harmful effects of tobacco.

BIBLIOGRAPHY

1. Fiore MC, Bailey WC, Cohen SJ, et al. Treating tobacco Use and Dependence Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. June 2000. http://www.ahrq.gov/
2. Statistics Canada. National Population Health Survey. 2000-2001.
3. Loiselle Jacinthe. Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000-volume 1. Québec, Institut de la statistique du Québec, 2001.
4. Single Eric, et al. The costs of substance abuse in Canada. Canadian Centre on substance abuse.1995.
5. Peto R. Smoking and death: the past 40 years and the next 40. BMJ 1994; 309:937-939.
6. Ellison LF, Mao Y, Gibbons L. Projected smoking-attribuable mortality in Canada, 1991-2000. Chronic diseases in Canada, 1995; 16(2): 84-89.
7. Fiore MC. Cigarette smoking: a clinical guide to assessment and treatment. The medical clinics of North America, vol 76, #2, march 1992.
8. Mitchell BE, Sobel HL et al. The adverse health effects of tobacco and tobacco-related products. Primary care vol 26 #3 sept 1999.
9. Gervais A et Tremblay M. Chronique PPM: fumée secondaire du tabac: désagréable ou dangereuse. 2003. http://www.santepub-mtl.qc.ca/mdprevention/chronique/2003/20012003.html
10. Canadian Tobacco Use Monitoring Survey. Environmental Tobacco Smoke: At Home, at Work, and in Public Places. Health Canada, February to December 2001.
11. Lightwood JM, Glantz SA. Short term economic and health benefits of smoking cessation Myocardial infarction and stroke. Circulation 1997; 96: 1089-1096.
12. McArthur C, Knox EG. Smoking in pregnancy: effects of stopping at different stages. British journal of obstetrics and gynecology. June 1988;95:551-55.
13. Canadian Council on Smoking and Health. Guide Your Patients to a Smoke-Free Future. 1992.
14. Prochaska JO, Di Clemente CC, et al. In search of how people change: applications to addictive behaviors. American Psychologist, September 1992; 47 (9).
15. Régie régionale de la santé et des services sociaux de Montréal-Centre. Direction de santé publique, 1999. Freedom. Bibliothèque nationale du Québec, ISBN: 2-89494-231-1.
16. Régie régionale de la santé et des services sociaux de Montréal-Centre. Breathe free for life, list of Montreal's cessation resources. 1999.
17. Geller A. Common addictions. Clinical symposia 1996; 48(3): 25-32.
18. Association des pharmaciens du Canada. CPS, trente-septième édition, 2002.
19. Rethinking stop-smoking medications. Myths and facts. Ontario Medical Association. June 1999. http://www.oma.org/phealth/stopsmoke.htm
20. Kahan M, Wilson L. Managing alcohol, tobacco and other drug problems: a pocket guide for physicians and nurses. Centre for addiction and mental health. 2002.
21. Warrer KE, Slade J, Sweanor DT. The emerging market for long-term nicotine maintenance. JAMA 1997;278(3):1087-92.
22. GlaxoSmithKline. Lettre à l'intention des professionnels de la santé. Juin 2002.
23. Fiore MC. Cigarette smoking: a clinical guide to assessment and treatment. The medical clinics of North America. March 1992; 76(2).
24. Miller WR, Rollnick S. Motivational interviewing: preparing people to change addictive behaviors. New York: Guilford Press. 1991.