


Strategies for Smoking Cessation


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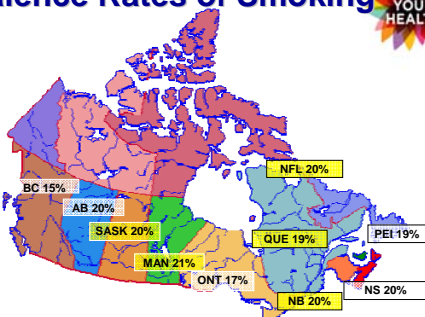
Smoking - Key Factors

- single most significant cause of preventable death and illness in Canada
- 50% of all smokers die from a smoking related illness
- most smokers lose 15 years of life
- major risk factor for cardiovascular disease


Health Canada 2009



Prevalence Rates of Smoking




Health Canada. Canadian Tobacco Use Monitoring Survey 2008, Summary of Annual Results.




Why do people smoke?

- nicotine is the addictive ingredient
- nicotine increases the levels of dopamine in the reward circuits of the brain
- dopamine acts on the brain to alter mood, alertness and appetite
- the dopamine decrease between cigarettes leads to withdrawal symptoms of irritability and stress




Current Opinion in Cardiology, 22:280-285. 2008



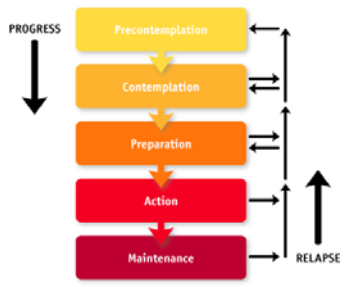
Effects of Smoking

- carbon monoxide competes successfully with oxygen to bind to hemoglobin
- carbon monoxide and toxic chemicals have a damaging effect on arterial walls

Post Graduate Medical Journal, 49: 697-706. 1973.



Stages of Change



Preparation

Develop a quit plan

- set a quit date
- review past quit attempts
- anticipate fears:
 - withdrawal symptoms
 - depression
 - fear of failure
 - lack of support
 - weight gain
 - other smokers
 - enjoyment of tobacco
 - cost of pharmaceutical treatment



Develop a quit plan – cont'd.

- identify lifestyle “triggers”
- develop coping skills to help manage these trigger situations
- anticipate and avoid temptation
- find strategies that will reduce negative moods and stress, and improve quality of life



Cutting down strategies:

- keep a journal
- smoke only half of the cigarette
- delay the time between each cigarette
- make your car and home smoke free
- buy a brand of cigarettes you dislike
- enlist the help of others
- keep busy and your hands occupied



Choosing pharmaceutical treatment

Goal: prevent and treat nicotine withdrawal symptoms

3 main options:

- nicotine replacement therapy (NRT)
- varenicline (chamfix)
- bupropion SR (zyban)



Nicotine replacement therapy (NRT)

- eliminates toxic substances from cigarettes
- slowly fills nicotine receptors – to help minimize withdrawal symptoms and cravings
- results in less desire to smoke and less pleasure if a cigarette is smoked
- doubles quit rates
- can be used to reduce smoking as well as stop



Mayo Clinic. 2004

Nicotine replacement therapy cont'd.

- nicotine patch – slow release over 24 hours (21mg., 14 mg., 7 mg.)
- nicotine gum – immediate “hit” of nicotine for 20 – 30 minutes (4mg., 2 mg.)
- nicotine lozenge – (4 mg., 2 mg.)
- nicotine inhaler

There is no time limit for length of NRT use – it is safer than smoking



Is NRT addictive?

- inhaled nicotine reaches the brain in 7 – 10 seconds.
- patch – levels peak 2-6 hours after application
- gum – levels peak in 20-30 minutes
- addictive potential tends to correlate with time to peak concentration
 - because nicotine is delivered more slowly and in lower doses in NRT – it is significantly less addictive than cigarettes



varenicline (Champix)

- stop smoking medication
- approved by Health Canada in 2007
- **Activity 1: partial agonist** – it binds to the nicotine receptor to partially stimulate dopamine release – resulting in reduced cravings and withdrawal symptoms
- **Activity 2: antagonist** - it blocks the nicotine receptors – to decrease the pleasurable effects of smoking



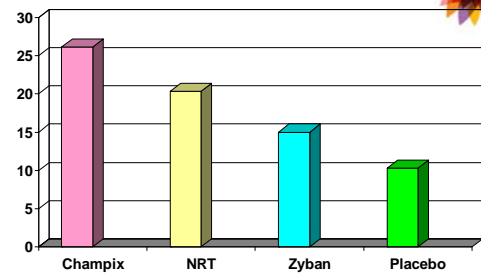
Champix Product Monograph, Pfizer Inc. 2007

bupropion SR (Zyban)

- originally designed to treat depression
- shown to increase chances of quitting smoking by 50%
- contraindications:
 - seizure history
 - eating disorder
 - MAOI (antidepressant) meds.



Confirmed Continuous Abstinence Rates – Week 52



Thorax, 63: 717-724. 2008

Jama, 296: 47-55. 2006



Relapse prevention

- “even a puff can light up the brain’s addiction pathway” – (Dr. Fred Bass)
- relapse is a process related to “urges” connected to physical withdrawal, habit and memory
- triggers that set off these urges are people, places, things, moods and stress



Mayo Clinic, 2004



In Summary:

- Cardiovascular heart disease risk is similar to that of a “never-smoker” after 15 years
- It often takes 5 or 6 quit attempts before being successful
- Stopping smoking is the single most important thing a person can do for their health





Thank-you