Kicking Butt:
Smoking Cessation to Help the Heart

Tobacco addiction remains the leading preventable cause of death, disease and disability. Yet, effective treatment is available. In this article, Dr. Els and Dr. Selby detail the techniques used in smoking cessation and how to ensure your patients achieve their goals.

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Why should we address tobacco addiction?

The latest Canadian Tobacco Use Monitoring Survey (CTUMS) shows a new record low for the prevalence of smoking in Canada: 18% (aged 15 and above) and 16% among teenagers aged 15 years to 19 years. Although Canada has among the lowest rates globally, smoking remains the leading preventable cause of death, disease and disability and is responsible for 80% of all drug-related deaths. Smoking not only affects those who smoke, but also others who are involuntarily exposed to second-hand smoke, costing the economy an estimated $17 billion annually.

The availability of tobacco on the market is a historical anomaly: it is so toxic that if it had to be introduced to the market today, it would never obtain legal status. Tobacco is also the only legal consumer product that will kill 50% of its regular users when using the product exactly as intended. Despite this, 4.5 million Canadians remain caught in this epidemic; one major cause of which is the tobacco addiction disease vector, namely the tobacco industry, profiting billions of dollars annually off addicted Canadians, many of whom are children.

What can be done?

Tobacco control has several cornerstones, cessation being one that can be readily integrated into daily medical practice and which should be offered to every tobacco consumer. Treatment of this chronic, relapsing brain disease requires a longitudinal approach and, as with other chronic illnesses, often requires repeated interventions. Nicotine replacement therapy (NRT) is one of the best researched drugs, with several meta-analyses and > 100 clinical trials confirming its efficacy and its safety. Currently available over-the-counter are nicotine transdermal patches (21 mg for four weeks, then 14 mg for four weeks, then 7 mg for two weeks), nicotine polacrilex gum

FAQ

Is it safe to use nicotine replacement therapy (NRT) in patients with cardiovascular pathology?

With pre-existing cardiovascular disease, the net risk of continuing to smoke far outweighs the risk of using NRT or bupropion.
(2 mg or 4 mg, using the bite-bite-park method) and the nicotine inhaler (one cartridge as needed, maximum 12 cartridges q.d.). Preparations like nicotine gel or nicotine water have not been proven to help patients quit smoking and are best avoided until safety data is made available. Although many people quit smoking without any medication, the odds ratio of quitting smoking using NRT is approximately 2:1 when using nicotine replacement therapy and it should be offered routinely to all tobacco users. The nicotine in NRT relieves the withdrawal symptoms associated with quitting smoking and helps prevent relapse. The risk of getting addicted to non-tobacco delivered nicotine is considered exceedingly low and the risks are far outweighed by the potential risks of continued smoking of tobacco. Nicotine spray and nicotine lozenges are proven to be effective, but are not yet available in Canada.

An alternative medication form, bupropion sustained release (SR), available by prescription only and also marketed as an antidepressant, is proven to be safe and effective for smoking cessation, also roughly doubling the tobacco user’s chances of successfully quitting. The side-effects are relatively benign and include:
• insomnia,
• dry mouth and
• headaches.

However, one patient in 1000 to one patient in 2000 will have a seizure, especially if the dose is exceeded. Bupropion SR is initiated one week to two weeks before the attempted quit date at 150 mg q.d. for three days, after which 300 mg is given in divided doses, at least eight hours apart and preferably not late in the day to avoid insomnia. Bupropion is best avoided in those at risk of alcohol withdrawal and in persons with a history of:
• seizures,
• brain injury, or
• eating disorders.
What is new on the horizon?

Recently introduced is varenicline, a partial agonist at the α-four β-two nicotine receptor and which has been proven to be safe and effective, yielding an odds ratio of quitting that is higher than that for bupropion. Varenicline is used as follows:

- Day one to day three: 0.5 mg q.d.
- Day four to day seven: 0.5 mg b.i.d.
- Day eight and beyond: 1 mg b.i.d. for 12 weeks

An additional course of 12 weeks of treatment is recommended to further increase the likelihood of long-term abstinence.

What is a basic approach that can be taken when helping people quit tobacco use?

The “Clinical Practice Guideline: Treating Tobacco Use and Dependence” endorses the “5-A Approach:”

- Ask: With every visit the smoking status of every patient should be determined and documented
- Advise: Using “clear, strong and personalized” language. Each smoker should be advised to quit smoking. Cutting back is not enough
- Assess every tobacco user’s willingness to make an attempt to quit
- Assist with brief interventions and medication management. Among the first steps a patient can take are:
  - setting a quit date,
  - telling others about it,
  - anticipating and preparing for challenges and
  - removing tobacco products from their surrounding environment
- Additional materials, social support and problem-solving skills should be added to the interventions
- Arrange follow-up visits as indicated, typically soon after the attempt to quit. Those who are not willing to quit should be offered brief interventions to increase their motivation to quit, among others using the 5-R approach, which includes exploring the
  - Relevance of quitting
  - Risks of continuing tobacco use
  - Rewards of quitting
  - Roadblocks to quitting
  - Through repetition, motivation is increased and barriers are identified and resolved

Take-home message

- Tobacco addiction is a prevalent, chronic, relapsing brain disorder
- It is the leading preventable cause of death, disease and disability
- Treatment is effective and safe; it is cost-effective and saves lives
- Helping smokers quit can be achieved by integrating brief interventions and medication into daily practice

FAQ

Can nicotine replacement therapies be combined with each other or with bupropion?

Nicotine replacement therapies can be effectively combined with each other or with bupropion, with ongoing screening for potential treatment-emergent hypertension.
Conclusions

The body of evidence suggests that tobacco addiction is a treatable, chronic, relapsing brain disease. Integrating smoking cessation into practice has a clinically meaningful potential of saving countless lives and substantially improving quality of life. We cannot afford to continue to neglect the most common mental disorder, the most lethal and the most treatable of all of the addictions.

References


Resources

3. Center for Addiction and Mental Health: www.camh.net
4. The Ontario Tobacco Research Unit: www.otru.org

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