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Giving up smoking is the
easiest thing in the world. I
know because I've done it
thousands of times

MARK TWAIN

Evidence-Based Pharmacologic Approaches to Smoking Cessation

2025 Canadian Task Force Guidelines



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MAHC Grand Rounds
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Disclosures

Nothing to disclose with respect to this presentation

Learning Objectives

1. Outline the key recommendations from the 2025 CTFPHC smoking cessation guidelines.
2. Describe the efficacy and safety considerations of pharmacologic treatments for smoking cessation.
3. Explain the rationale behind the CTFPHC position on the use of e-cigarettes for smoking cessation.

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E-Cigarettes

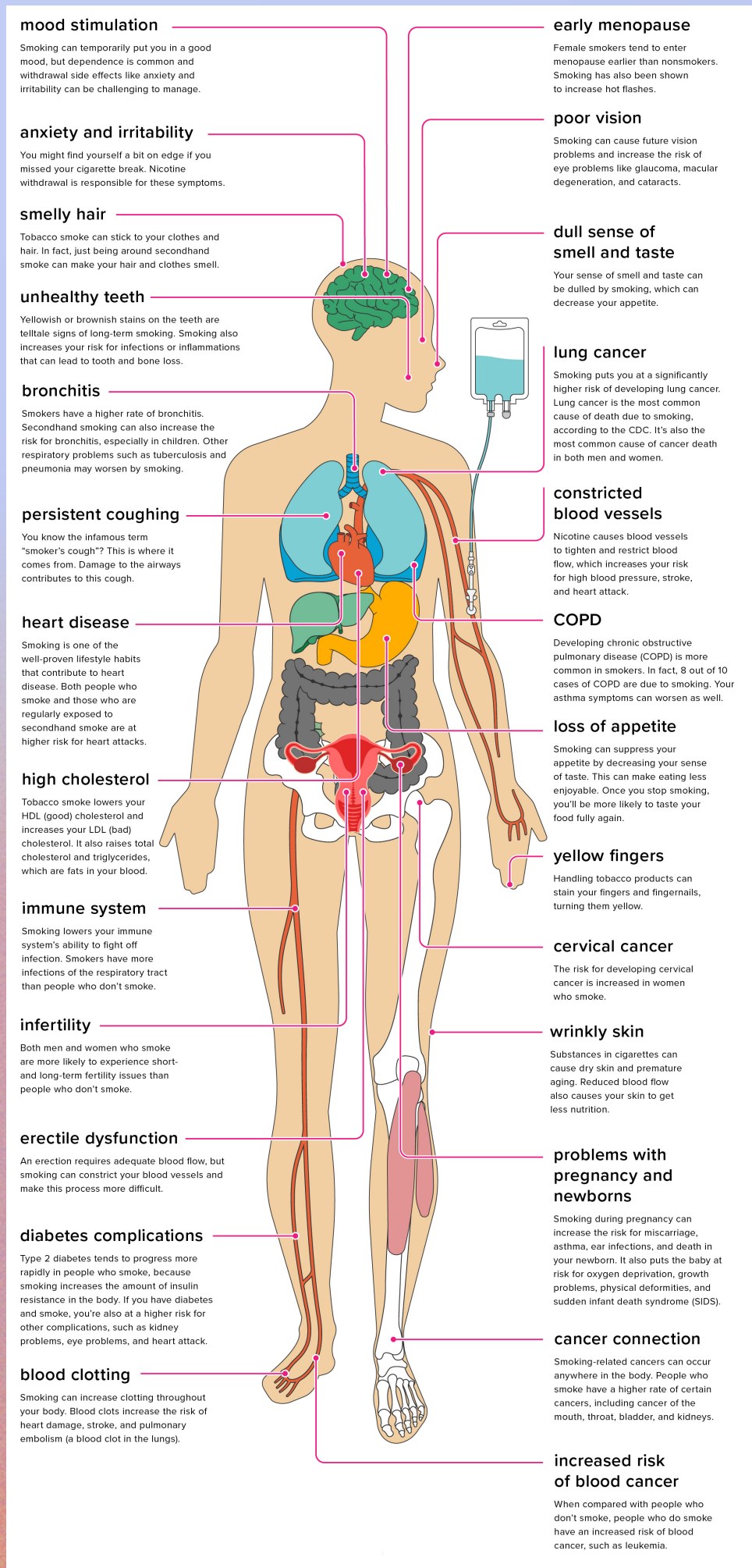
Recommendations on
e-cigarettes for
smoking cessation

Muskoka's Tobacco Problem

14% residents smoke cigarettes daily

22% young adults vaped in the past 30 days

3-4x risk of cigarette smoking in youth who vape



Every year in Simcoe Muskoka,
tobacco smoking leads to:

850 deaths

3 500 hospitalizations

7 000 ER visits

Recommendations on interventions for tobacco smoking cessation in adults in Canada

Brett D. Thombs, Gregory Traversy, Donna L. Reynolds, Eddy Lang, Stéphane Groulx and Brenda J. Wilson; for the Canadian Task Force on Preventive Health Care

CMAJ August 25, 2025 197 (28) E846-E861; DOI: <https://doi.org/10.1503/cmaj.241584>



**Canadian Task Force
on Preventive Health Care**

cmaj

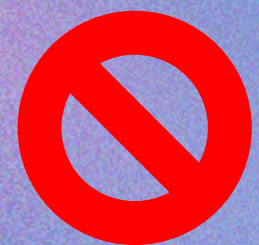
Beyond the scope...



Does not apply to pregnant or breast/chest-feeding



Does not apply to traditional/ceremonial tobacco use by Indigenous peoples



Does not address recommendations for stopping other tobacco/nicotine products



Pharmacologic Interventions

Task Force “Menu”

Varenicline (Champix)

→ **large** benefit

Cytisine (Cravv)

→ **moderate** benefit

Bupropion (Zyban)

→ **small to moderate** benefit

NRT

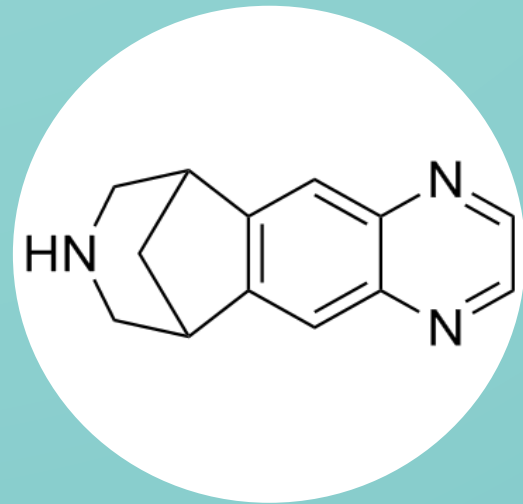
→ **moderate** benefit

Varenicline (Champix)

138 more per 1000 quit smoking

(27 RCTs, n=12 625, 95% CI: 118 to 159)

Mechanism of Action



Partial nicotinic receptor agonist

- Reduces pleasure from smoking
- Prevents withdrawal symptoms

Contraindications



No absolute contraindications

- Renal dosing

Adverse Effects



No increased psychiatric or CV risks

- Nausea
- Insomnia
- Nightmares
- Headache

Cost



Possible coverage with cessation program

- ODB: 12 weeks/year
- NIHB: 24 weeks/year
- Out of pocket: \$300 for 12 wks

Varenicline Dosing Schedule



Three-step increase in dose:



- Varenicline **0.5 mg** is a white oval tablet
- Varenicline **1 mg** is a light blue oval tablet
- Tablets to be swallowed whole with water - with or without food
- Ideally, tablets should be taken at the same time each day

Dosing timetable:

When you begin taking varenicline, set a **smoking stop day** within week 2

	Week 1							Week 2						
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	1 mg	1 mg	1 mg	1 mg	1 mg	1 mg	1 mg
	X	X	X	0.5 mg	0.5 mg	0.5 mg	0.5 mg	1 mg	1 mg	1 mg	1 mg	1 mg	1 mg	1 mg

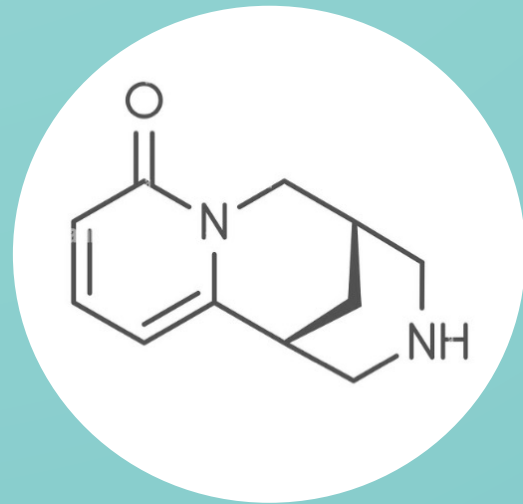
..... Patient repeats for **weeks 3-12**

Cytisine (Cravv)

64 more per 1000 quit smoking

(2 RCTs, n=937, 95% CI: 22 to 147)

Mechanism of Action



Partial nicotinic receptor agonist

- Reduces pleasure from smoking
- Prevents withdrawal symptoms

Contraindications



No absolute contraindications

- Recent MI
- Severe CAD
- Arrhythmias
- Uncontrolled HTN

Adverse Effects



No serious adverse effects

- Nausea
- Dry mouth
- Nightmares
- Headache

Cost



No coverage

- OTC
- Available in some pharmacies
- Purchase online
- ~\$90 for 25-day course

Cytisine Dosing Schedule

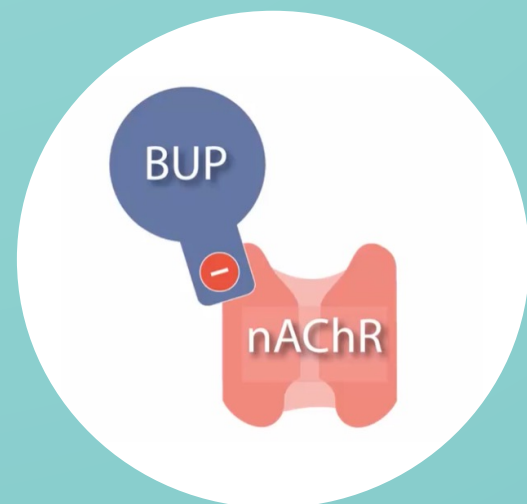
Days 1 to 3 1 tablet every 2 hours (Daily: 6 tablets max)	Days 4 to 12 1 tablet every 2.5 hours (Daily: 5 tablets max)	
Days 13 to 16 1 tablet every 3 hours (Daily: 4 tablets max)	Days 17 to 20 1 tablet every 5 hours (Daily: 3 tablets max)	Days 21 to 25 1–2 tablets a day (Daily: 2 tablets max)

Bupropion (Zyban)

128 more per 1000 quit smoking

(4 RCTs, n=404, 95% CI: 38 to 268)

Mechanism of Action



NE-DA reuptake Inhibitor & Nicotinic receptor antagonist

- Reduce withdrawal symptoms
- Reduces pleasure from smoking

Contraindications



- Seizure disorder
- Abrupt discontinuation of ETOH, benzos, barbiturates
- MAOi, Linezolid, methylene blue
- Anorexia or bulimia nervosa
- Renal dosing

Adverse Effects



- Seizure
- Suicidal ideation (ages 18-24)
- Insomnia
- Agitation
- Anxiety
- Constipation
- Nausea

Cost



Possible coverage with cessation program

- ODB: Zyban 12 weeks/year
- NIHB: 24 weeks/year
- Generic ~\$50/12 weeks

Bupropion Dosing Schedule

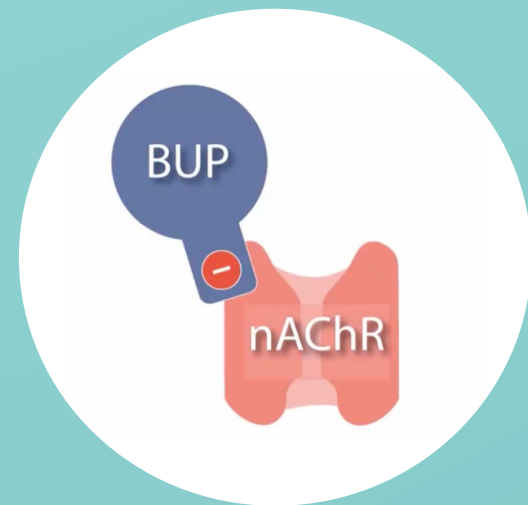


NRT

44 more per 1000 quit smoking

(8 RCTs, n=3081, 95% CI: 22 to 73)

Forms



- Spray → 5-10 min
- Pouch → 5-10 min
- Inhaler → 10-15 min
- Lozenge → 15-30 min
- Gum → 20-30 min
- Patch → 1-2 hr

Contraindications



No absolute contraindications

- Recent MI (≤ 2 weeks)
- Unstable angina
- Arrhythmias

Adverse Effects



- Palpitations
- Chest pain
- Hiccups
- Nausea
- Skin irritation
- Throat irritation
- Runny nose

Cost



Possible coverage

- Free trials through various programs
- NIHB: 252 patches/year + 1 PRN product

NRT Dosing Guide

Rule of Thumb – Replace each cigarette with 1 mg NRT

<1/2 PPD → short-acting NRT PRN

>1/2 PPD → patch qdaily + short-acting NRT PRN

Wait until 6 weeks smoke-free then decrease dose by 7mg q2weeks

IF YOU SMOKE YOUR FIRST CIGARETTE:



AFTER 30 MINUTES of waking up | USE 2mg GUM

WITHIN 30 MINUTES of waking up | USE 4mg GUM

→ or 1-2mg lozenge

→ or 2-4mg lozenge or 4mg pouch



E-Cigarettes for Smoking Cessation?

Nicotine vs Non-Nicotine E-Cigarettes

Low certainty evidence

Non-nicotine e-cigarettes

Possible **small** smoking cessation benefit with **nicotine patch + behavioural** interventions

(1 RCT, n=624, 16 more per 1000 quit, 95% CI 12 fewer to 109 more)

Nicotine e-cigarettes

Possible **small to moderate** smoking cessation benefit **compared to non-nicotine** e-cigarettes with **nicotine patch + behavioural** interventions

With behavioural → 32 more per 1000 quit (1 RCT, n=674, 95% CI 19 fewer to 196 more)

With behavioural + nicotine patch → 46 more per 1000 quit (1 RCT, n=999, 95% CI 2 fewer to 200 more)

70% of people who tried e-cigarettes for smoking cessation continued vaping beyond 6 months

It Depends...

Task Force **conditionally recommends against** e-cigarettes for smoking cessation

Consider use of e-cigarettes (with or without nicotine) if patient:

- Unsuccessfully attempted other interventions
- Strong preference for e-cigarettes / unwilling to try other interventions

Inform patients of risks / uncertainties:

- No approved therapeutic e-cigarettes with consistent formulations
- Lack of long-term safety data
- Ongoing use of e-cigarettes with nicotine does not address **nicotine addiction**

Pharmacologic + Behavioural

Task Force strongly recommends use of **combined therapies**

71 more per 1000 quit smoking

(52 RCTs, n=19 488, 95% CI: 58 to 84)

Proven for NRT and bupropion



Behavioural Interventions

Task Force strongly recommends:

Group counselling → 108 more per 1000 quit

(9 RCTs, n=1089, 95% CI: 54 to 186)

Individual counselling → 40 more per 1000 quit

(27 RCTs, n=11 100, 95% CI: 28 to 54)

Text messaging service → 37 more per 1000 quit

(12 RCTs, n=11 885, 95% CI: 26 to 50)

Brief advice from HCP → 36 more per 1000 quit

(26 RCTs, n=22 239, 95% CI: 28 to 46)

Self-help materials → 10 more per 1000 quit

(11 RCTs, n=13 241, 95% CI: 2 to 19)



What about other interventions?

Task Force strongly recommends against:

- Hypnosis
- Acupuncture (11 more per 1,000, 95% CI: 15 fewer to 43 more)
- Continuous auricular stimulation
- Laser therapy
- Electrostimulation
- S-adenosyl-L-methionine (SAMe)
- St John's Wort



Smoking Cessation Supports



UNIVERSITY OF OTTAWA
HEART INSTITUTE

INSTITUT DE CARDIOLOGIE
DE L'UNIVERSITÉ D'OTTAWA

Quit Smoking Program

Prevention and Wellness Centre

Phone: 613-696-7069

Free, virtual one-on-one support

- 12-week trial of NRT
- Varenicline or Bupropion
- Quit Card Program
- f/u appointments q1month x6
- Wait time for consult ~1 week

Patients can self-refer

<https://www.ottawaheart.ca/clinic/quit-smoking-program>



Youth-VAST

**ARE YOU A YOUTH (AGES 12-21)
STRUGGLING WITH:**

- vaping/nicotine use
- substance use, (e.g. cannabis), or
- excessive technology use?

YOUTH-VAST CAN HELP!



Free, virtual services:

- Assessment
- Individual treatment
- Group treatment
- Family education

Patients can self-refer

<https://www.camh.ca/en/patients-and-families/programs-and-services/youth-vast>



STOP program

- NRT, counselling supports
- Available through FHTs, Chigamik CHC, NP-led clinic in HV

STOP on the Net program

- Available to Ontarians aged 18+
- Free 6-week trial of NRT

Patients can self-refer to join STOP on the NET

<https://intrepidlab.ca/en/stop/stop-on-the-net>



**Centre de santé communautaire
CHIGAMIK
Community Health Centre**

Quit Café

- Smoking cessation support group with weekly meetings
- One-on-one support / counselling
- Free 26-week trial of NRT

Patients can self-refer

<https://www.chigamik.ca/>



Expand Project

- Free 4-week trial of NRT
- Available to queer and trans people aged 18-29

Patients can self-refer

<https://www.expandproject.ca/s/nrt-page>

smokers' helpline



Canadian Cancer Society



Online Quit Program

Build your personal Quit Plan on SHL online.

24/7 access to tailored motivational content to support you getting and staying smoke and vape-free.



Help by Phone

You want to quit and we can help!

SHL phone clients are up to 8 times more likely to be smoke-free after 6 months than quitters who go it alone.



Text Message Support

Receive support on the go while quitting smoking and/or vaping with evidence-based, supportive text messages customized to your quit date.

Everyone has different withdrawal symptoms, but it's a sign that your body is adjusting to life without nicotine. Learn more by texting **WITHDRAWAL**.

Did you know that 8 hours after quitting smoking your oxygen levels return to normal and your risk of a heart attack reduces?

Try one of the 4 D's to get over your cravings: Delay, Distract, Deep breathe, Drink water. Or text **CHAT** for more tips from our Quit Coaches!

What will you do with all the money you save? Make a list, start a money jar, and save your money up to spend on a big reward!

Smokers' Helpline & Chat hours: Mon-Thu 8am-9pm; Fri 8am-6pm; Sat/Sun 9am-5pm. Telehealth ON: 10am-10pm, Care Coach Assistants 24/7. All times Eastern.

Recommendations on interventions for tobacco smoking cessation in adults in Canada

RECOMMENDATIONS

- **Know** your patients' smoking status
- **Encourage** all patients who smoke to quit
- **Offer** 1 or more recommended smoking cessation interventions
- **Engage** in shared decision-making to determine best option(s)

Interventions

Strongly recommended

- **Behavioural**
 - Primary care advice
 - Individual or group counselling by trained cessation counsellor (in person or by telephone)
 - Text messaging interventions
 - Self-help materials
- **Pharmacotherapy**
 - Bupropion
 - Cytisine
 - Nicotine replacement therapy (patch, gum, lozenges, inhaler and/or spray)
 - Varenicline

• Combined behavioural and pharmacotherapy interventions

Conditionally recommended

- Interactive computer-based or online programs with direct behavioural support

Strongly recommended against

- Acupuncture
- Hypnotherapy
- Laser therapy
- Continuous auricular stimulation
- Electrostimulation
- St. John's Wort
- S-adenosyl-L-methionine

Conditionally recommended against

- Interactive computer-based or online programs without additional support
- E-cigarettes*

We suggest against using e-cigarettes,* except in people who:

- have unsuccessfully tried other interventions
- are unwilling to try other interventions
- express a strong preference for e-cigarettes

No e-cigarettes have been approved for smoking cessation in Canada.

*With or without nicotine.



Thanks for listening!

Questions?