

**Tobacco Cessation
in Primary Care
Tips, Tools & Techniques**

Session 2: Cessation Medications

Objectives

- Recognize the role addiction plays for people who use tobacco
- Recognize and list symptoms of nicotine withdrawal
- Name the medications that are used to manage tobacco cessation and explain how to use them
- List resources available to refer to for abstinence/cessation medications

Cigarette Design

Bronchodilators

Added chemicals expand the lungs' airways, making it easier for tobacco smoke to pass into the lungs.

Increased Nicotine

Tobacco companies control the delivery and amount of nicotine to ensure addiction

Flavorings

Added flavors like liquorice and chocolate mask the harshness of smoke and make products more appealing to new users, especially kids.

Tobacco-specific Nitrosamines

American-style cigarettes are made with blended tobacco that has much higher levels of cancer-causing nitrosamines.

Ammonia Compounds

Adding ammonia compounds increases the speed with which nicotine hits the brain.

Menthol

Menthol cools and numbs the throat to reduce irritation and make smoke feel smoother.

Ventilated Filters

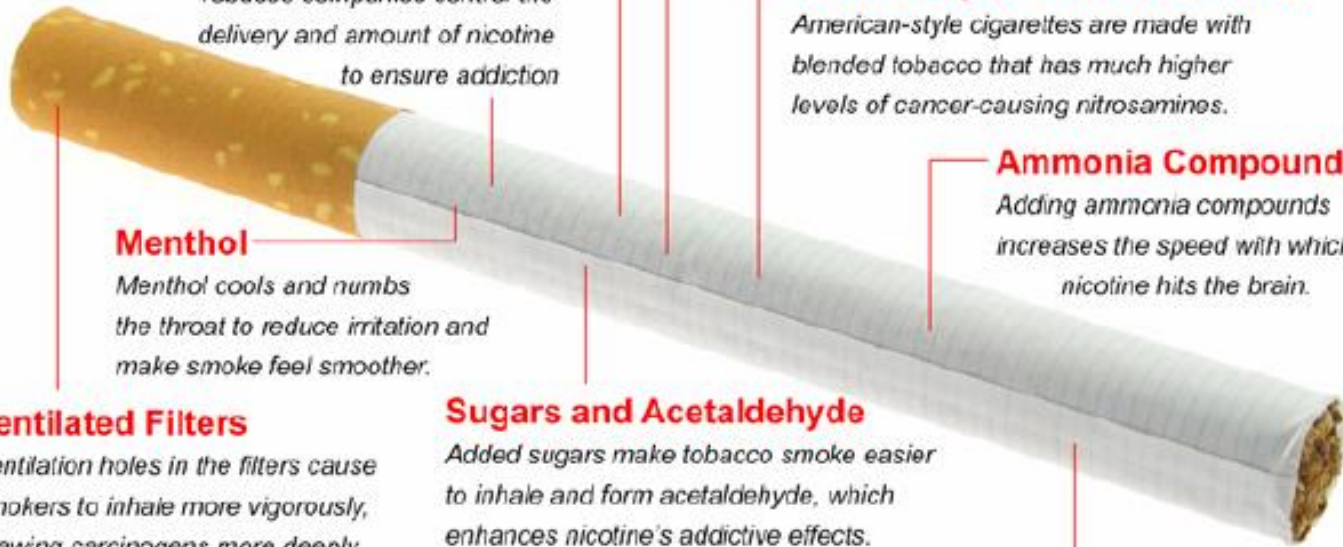
Ventilation holes in the filters cause smokers to inhale more vigorously, drawing carcinogens more deeply into the lungs.

Sugars and Acetaldehyde

Added sugars make tobacco smoke easier to inhale and form acetaldehyde, which enhances nicotine's addictive effects.

Levulinic Acid

Added organic acid salts reduce harshness of nicotine and make smoke smoother, less irritating.



How nicotine works

- Nicotine is inhaled and tobacco smoke moves from the lungs, into the bloodstream and up to the smoker's brain within 7 to 10 seconds.
- Causes chemical changes in the brain including dopamine release.



Health Canada, 2007

Effects of Nicotine

- Stimulant
 - increases heart rate & blood pressure
 - Increases metabolic rate – speeds up fat metabolism
- Provides a sense of relaxation (dopamine release)
- Enhances memory
- Faster cognitive processing
- Improves mood
- Suppresses appetite
- Skeletal muscle relaxation
- Analgesic



Withdrawal

- Abrupt cessation of tobacco use, or reduction in the amount of tobacco used, followed within 24 hours by four (or more) of the following signs or symptoms:
 - Irritability, frustration, or anger
 - Anxiety
 - Difficulty concentrating
 - Increased appetite
 - Restlessness
 - Depressed mood
 - Insomnia

Medications

First line treatments:

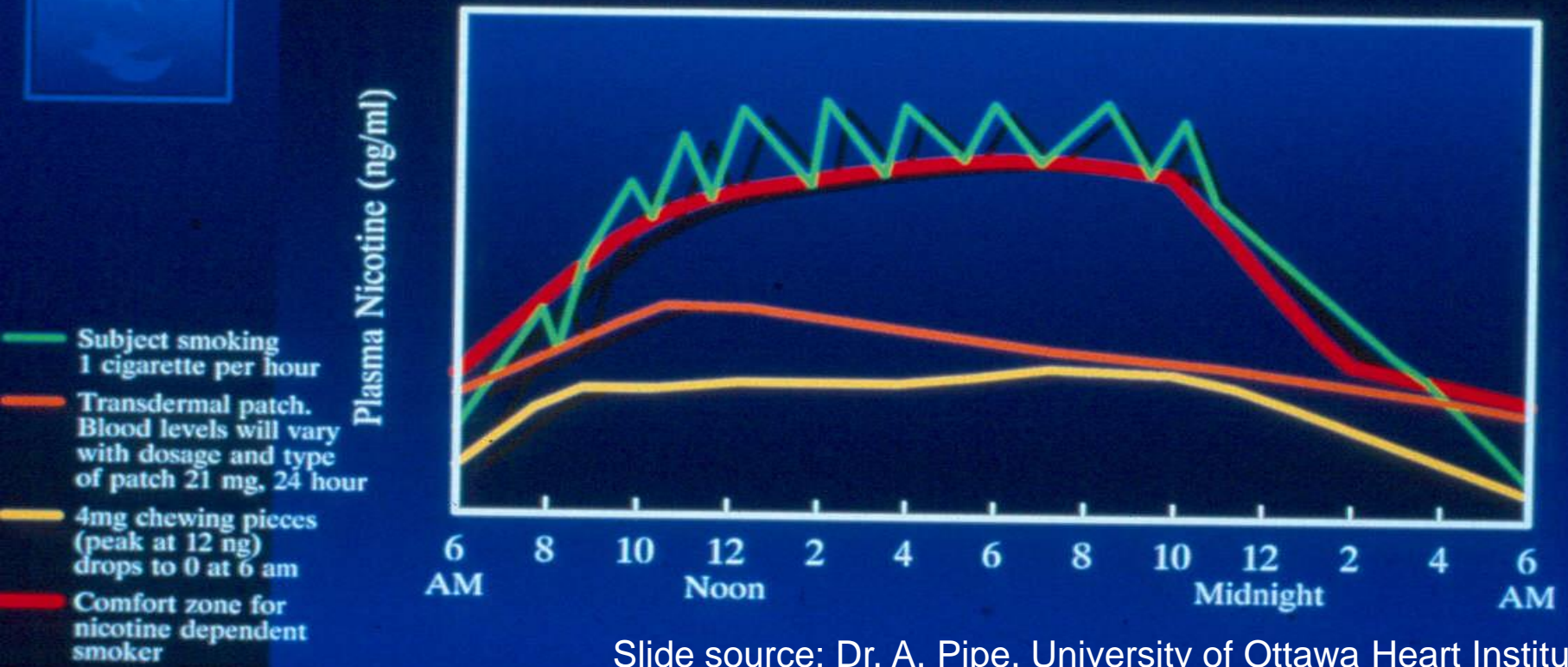
- **Nicotine Replacement Therapy (NRT)**
 - Long Acting
 - Short Acting
- **Bupropion SR (Zyban, Wellbutrin)**
- **Varenicline (Champix)**

Second line treatments:

- **Combination therapies (see handout)**

A Day in the Life of Blood Nicotine

A
SMOKE
FREE
FUTURE



Slide source: Dr. A. Pipe, University of Ottawa Heart Institute

NRT – Long Acting (Patch)

24 hour, continuous use

<10 cig/d OR < 45 kg	7 mg
10-20 cig/d	14 mg
21-30 cig/d	21 mg
31- 40 cig/d	28 mg
>40 cig/d	42 mg



NRT – Short Acting (Gum)

- Provides body with nicotine over short term (20-30 min)
- Helps with “break through” cravings
- Oral Gratification
- Potential Side Effects:
 - throat irritation
 - upset stomach
 - hiccups
- Cautions:
 - poor dentition, dentures, jaw disorders
 - acidic drinks



NRT – Short Acting (Gum)

Cigarettes/day	Monotherapy	Combination Therapy
< 20 cig/d OR <45 kg	2 mg gum one piece every 1-2 hours prn Max: 20 pieces/d)	2 mg gum one piece every 1-2 hours prn Max: 15 pieces/d
≥ 21 cig/d	4 mg gum one piece every 1-2 hours prn Max: 20 pieces/d)	

Anyone who continues to smoke is “safer” using NRT

- No CO, no oxidants
- Minimizes withdrawal, cravings
- None of the carcinogens
- Doubles quit rates



Bupropion SR (Zyban)

- Begin medication 1-2 weeks before stopping smoking
- Starting dose is 150 mg po in a.m. for 3 days. Then increase to 150 mg po bid for 7-12 weeks



Bupropion SR (Zyban)

Contraindications:

- Seizure (hx, prone to), head injury
- On MAOIs
- Hx eating disorder
- ETOH abuse
- Pregnant, breastfeeding

Side Effects:

- Dry mouth
- Dizzy, anxiety, concentration, insomnia, tremors
- Nausea, constipation
- Skin rash

Varenicline (Champix)

- Selective partial agonist of the $\alpha 4\beta 2$ nicotinic acetylcholine receptor
- Reduces cravings for, and decreases the pleasurable effects of, cigarettes and other tobacco products
- Days 1-3: 0.5 mg OD
- Days 4-7: 0.5 mg BID
- *** Day 8 is Quit Date
- Days 8 onward 1.0 mg BID
- TITRATE dose and duration prn



Varenicline (Champix)

Contraindications:

- Previous reaction to Champix
- Under 18 years
- Pregnant, breastfeeding
- Hx renal failure

Side Effects:

- Nausea, vomiting, gas, constipation
- Sleep, dreams
- Headache
- Behaviour, mood changes

Dosing & Titration Over Time

- 6 – 16 weeks of treatment depending on starting # cigarettes/day
 - See handout for detail

...Sometimes the doorway has to be opened wider and held open longer...



Resources – Primary Care

- CPG (medication section):

http://home.wrha.mb.ca/prog/pharmacy/files/Formulary_Update_Memo_February2013.pdf

- WRHA Formulary Memo:

<http://www.wrha.mb.ca/professionals/tobacco/files/06%20Medication%20Recommendations.pdf>