

# Algorithm for tailoring pharmacotherapy

**Ask** about tobacco use.  
"How many cigarettes do you smoke a day?" \_\_\_\_\_ / day

**Advise** your patient to quit.  
"I am concerned about your tobacco use and advise you to quit. Would you mind if we spend a few minutes so that I can better understand your smoking addiction?"

YES

NO

**Assess** readiness to quit on a scale of 1 - 10.  
1. Desire to quit - "How important is it for you to quit smoking?" \_\_\_\_\_ / 10  
2. Confidence - "How confident are you that you can quit smoking?" \_\_\_\_\_ / 10

Desire to quit / Confidence  $\geq 5$

Desire to quit / Confidence  $\leq 5$

## Motivational Interviewing (MI)

Explore the 5R's using reflective listening:  
**Relevance:** why is quitting relevant to health, family, social situation?  
**Rewards:** potential benefits of quitting - health, money, taste & smell  
**Risk:** Acute (shortness of breath), chronic (CVD, cancer, COPD)  
**Roadblocks:** withdrawal symptoms, fear of failure, weight gain  
**Repetition:** repeat MI every time the patient visits the clinic

**Assist** with smoking cessation.  
1. How would you like to quit: cold turkey or with assistance?  
2. Do you want to quit abruptly or gradually?  
3. What type of assistance do you need pharmacotherapy, counseling

Cold turkey

Arrange follow-up

Pharmacotherapy +/- counseling

If patient smokes >10 cigarettes/day, offer pharmacotherapy

Reduce to quit

See reverse for steps

Varenicline

Bupropion

NRT

**Arrange** follow up 1-4 weeks post quit date. Determine response to therapy.

Partial response

Full Response

Maintenance

## Combination therapy

Bupropion SR + Varenicline Varenicline - same dosing as above Bupropion - same dosing as above <i>*limited data on safety</i>	Varenicline + NRT Patch (different doses over 12 weeks) Varenicline - same dosing as above
Bupropion SR + NRT Bupropion + Patch Bupropion + Gum	Two forms of NRT Patch (14mg) + Gum (2mg) Patch + Inhaler or Spray or Lozenge

Assess med adherence  
Adjust dose  
Increase counseling

Partial response

## NRT Dosing

<10 CPD  
"Light" Smoker

10 - 29 CPD  
"Moderate" Smoker

30+ CPD  
"Heavy" Smoker

Start with:

14mg patch x 1-4 weeks

21mg patch x 1-4 weeks

28mg patch (21+7) x 1-4 weeks

+ Choose **one** short-acting NRT (gum, lozenge, mouth spray or inhaler) for breakthrough cravings as needed

Follow up 1-4 weeks post quit date and assess smoking

If smoking 0 CPD

Continue on current dose

If still smoking

**10+ CPD:** Add a 21mg patch to current dose  
**6-9 CPD:** Add a 14mg patch to current dose  
**1-5 CPD:** Add a 7mg patch to current dose

+ Choose **one** short-acting NRT for breakthrough cravings as needed

Continue with the above guidelines (adding patches if necessary).  
NOTE: Maximum is 84mg (4 x21mg)

# Additional information:

First line pharmacotherapy			
Therapy should be tailored to individual's needs and preferences			
	Varenicline (Champix®)	Nicotine Replacement Therapy (NRT)	Bupropion (Wellbutrin SR®, Zyban®)
Advantages	Most effective - highest quit rates. No drug interactions except with NRT (may increase risk of adverse events.)	Safe in stable cardiac disease. Patch is the most effective form of NRT.	Minimal weight gain, helps depression, can use with NRT, as effective as NRT.
Quit Date	7-14d (up to 35) after starting	Same day up to 4 weeks after starting	7-10d after starting
Caution	Risk of increased cardiac events in patients with heart disease; Steven-Johnson Syndrome; andioedema; erythema multiforme. Reduce dose in renal disease. Avoid driving/machinery if sedated	Inhaler: still has nicotine when finished - dispose properly Patch: OK if smokes, leave patch on and try to quit again	Seizures, mood changes, suicide, drug interactions. <i>Contraindications:</i> Seizure disorders, bulimia/anorexia (recent or remote), liver failure, monoamine oxidase inhibitors
Side Effects	Nausea, nightmares, insomnia	Patch: abnormal dreams/insomnia (remove before bed) All other forms of NRT- mouth irritation, dyspepsia	Dry mouth, constipation, agitation, insomnia, headache, tremor
Dose	Day 1 - 3: 0.5mg PO once daily Day 4 - 7: 0.5mg PO BID Day 8 - onwards: 1mg PO BID x 12 - 24 weeks	Patch: different doses tapered over 12 weeks Inhaler: cartridge=10mg nicotine+1mg menthol, PRN max12/d Gum: Nicorette® (2/4mg); Thrive® (1/2mg), max 20/d Spray: 1mg per spray, 1-2 sprays q30-60m, max 4 sprays/hr Lozenges: 2mg(<25 cig/day); 4mg(>25 cig/day), max20/d	150mg SR PO qam x 3d; then BID x 7-12 weeks

## Reduce to quit protocol

### Step 1: (0-6 weeks)

Set target no. of cigarettes per day to cut down (recommended at least 50%) and a date to achieve it by. Use gum to manage cravings.

### Step 2: (6 weeks - 6 months)

Continue to cut down cigarettes using gum. Goal should be complete stop by 6 months. Seek advice from HCP if smoking has not stopped within 9 months.

### Step 3: (within 9 months)

Stop all cigarettes and continues to use gum to relieve cravings.

### Step 4: (within 12 months)

Cut down the amount of gum used, then stop gum use completely (within 3 months of stopping smoking).

## Glossary

**BID:** twice a day

**COPD:** chronic obstructive pulmonary disease

**d:** days

**lbs:** pounds

**LU:** limited use

**NRT:** nicotine replacement therapy

**MAOI:** monoamine oxidase inhibitor

**Max:** maximum

**ODB:** Ontario drug benefit

**OTC:** over-the-counter / no prescription needed

**PRN:** as needed

**qam:** every morning

**Px:** requires subscription

**SR:** slow release

**Wt:** weight

## References

Information provided is evidence-based but may not be approved for use in certain regions. Refer to your local regulatory authority for approved indications, guidelines, and updated safety information.

## CAN-ADAPTT Summary Statements Counseling & Psychosocial Approaches

1. **Combining counseling and smoking cessation medication** is more effective than either alone, therefore both should be provided to patients/clients trying to stop smoking where feasible. **(1A)**

## CAN-ADAPTT Pharmacotherapy Guidelines - Updated

1. **Offer efficacious pharmacotherapy** to every patient who smokes 10 or more cigarettes daily and is willing to make a quit attempt. **(1A)**
2. Healthcare providers should **tailor smoking cessation pharmacotherapy** to the patient's clinical needs and preferences. **(1C)**
3. **Varenicline** improves smoking cessation rates at 6 and 12 months compared to placebo. **(1A)**
4. **Varenicline** is more efficacious at improving smoking cessation rates at 6 months compared to bupropion. **(1A)**
5. **Varenicline** is more efficacious at improving smoking cessation rates at 6 months compared to NRT. **(1B)**
6. **Bupropion** improves smoking cessation rates at 6 and 12 months compared to placebo. **(1A)**
7. **Nicotine replacement therapy** in any commercially available form (transdermal patch, gum, lozenge, nasal spray, oral inhaler, sublingual tablet) improve smoking cessation rates at 6 and 12 months. **(1A)**
8. 8 weeks of NRT patch therapy is as effective as longer course of therapy for smoking cessation at 6 months. **(1A)**
9. Higher NRT gum dose of 4 mg (vs. 2 mg) is more efficacious for smoking cessation rates at 6 months for high dependency smokers or those who have relapsed with 2 mg. **(1A)**
10. **Combining NRT patch** with other forms of NRT yields higher efficacy for smoking cessation rates at 6 months compared to patch alone, especially where immediate/fast effects are desired. **(2A)**
11. NRT patch high dose (44/42 mg) has a very small or borderline benefit than standard dose (22/21 mg) for smoking cessation rates at 6 months. **(2A)**
12. **Cytisine** may improve smoking cessation rates at 6 and 12 months compared to placebo. **(2C)**
13. **Nortriptyline** may improve smoking cessation rates at 6 and 12 months compared to placebo. **(2C)**
14. There is insufficient evidence to make a recommendation regarding the use of **clonidine** for smoking cessation. **(C)**