







Tobacco Cessation Toolkit

Summary of Tobacco Cessation Pharmacology - NRT

This resource includes summary charts for use in providing Nicotine Replacement Therapy (NRT) for smokeless tobacco and smoking cessation, and providing combination therapy.

Prescribing NRT for Smokeless Tobacco

Tins Per Week	NRT Type	Dose
Two or fewer	 Patch	14 mg for four weeks; 7 mg for four weeks <i>Comment:</i> Adjust starting dose to 14 mg (14 mg for four weeks; 7 mg for four weeks).
	 Gum or Lozenge	*8-12 4 mg pieces per day for eight weeks (maximum 24 pieces per day) <i>Comment:</i> Increase starting dosage to 21 mg patch.
Three to five	 Patch	21 mg plus gum or lozenge* – 21 mg for four weeks – 14 mg for two weeks – 7 mg for two weeks – As needed, gum/lozenge*: 4 to 8 4 mg pieces per day
	 Gum or Lozenge	*12–16 4 mg pieces per day for eight weeks (maximum 24 pieces per day)
Over five	 Patch	21 mg plus 4 mg gum or lozenge (one per waking hour)
	 Gum or Lozenge	*16–20 4 mg pieces per day for eight weeks (maximum 24 pieces per day)

* For lozenges, enter first tobacco use to indicate within 30 minutes of waking.
Source: © Dr. Herb Severson, Oregon Research Institute (ORI), 2010.

Prescribing NRT for Smoking Cessation

Nicotine Patch

Cost: Average \$3 to \$5 per day		Dosage: 7 mg, 14 mg and 21 mg per 24-hours, transdermal patches
Approved Indications	Dosing	Labelled Precautions/Indications
<ul style="list-style-type: none"> As an aid to smoking cessation for partial relief of nicotine withdrawal symptoms. This treatment should be used as part of a comprehensive behavioural smoking-cessation program. Approved for use as part of a reduce-to-quit strategy. Can be used in combination with bupropion and with short-acting nicotine replacement therapy products 	<ul style="list-style-type: none"> 21 mg per day for six weeks. Patients who have successfully abstained can have their dose decreased to 14 mg per day for two weeks, followed by two weeks on 7 mg per day. May initiate treatment at 14 mg per day in patients with cardiovascular disease, who weigh less than 45 kg or who smoke less than a half-pack of cigarettes per day. Pre-Quit Dosing: Gradual reduction in the number of cigarettes smoked over two weeks leading up to your quit date while wearing the patch, 	<p>Contraindications</p> <ul style="list-style-type: none"> Previous acute hypersensitivity reaction Immediate post-myocardial infarction period Life-threatening arrhythmias Severe or worsening angina pectoris Recent cerebral vascular accident <p>Precautions</p> <ul style="list-style-type: none"> Pregnancy Nursing mothers Generalized skin disorders

	followed by 10 weeks of standard dosing.	
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Nicotine Gum

Cost: Average \$2 to \$8 per day (6–25 pieces)	Dosage: 2 mg and 4 mg; immediate release; effect within 15 minutes	
Approved Indications	Dosing	Labelled Precautions/Indications
<ul style="list-style-type: none"> As an adjunct to a smoking cessation program, can be used in the following ways: <ul style="list-style-type: none"> Abrupt cessation Gradual cessation (reduce to quit) Temporary abstinence from smoking Can be used in combination with bupropion and with other forms of NRT 	<ul style="list-style-type: none"> Use 4 mg gum for clients who are highly nicotine dependent (21 or more cigarettes per day). Recommended use is one piece every hour, as needed, or whenever there is the urge to smoke; maximum 20 pieces per day or titrated to individual effect. Number and frequency should be decreased over time. Reduce to quit: Used when craving to smoke to prolong smoke-free intervals for as long as possible, with the goal of achieving 50% reduction in daily cigarette consumption after 6 weeks to 4 months of treatment 	<p><i>Contraindications</i></p> <ul style="list-style-type: none"> Previous acute hypersensitivity reaction Immediate post-myocardial infarction period Life-threatening arrhythmias Severe or worsening angina pectoris Recent cerebral vascular accident Active temporomandibular joint disease <p><i>Precautions</i></p> <ul style="list-style-type: none"> Pregnancy Nursing mothers Active peptic ulcer disease

Nicotine Lozenge

Cost: Average \$4 to \$10 per day (6–15 lozenges)	Dosage: 1 mg and 2 mg nicotine bitartrate dehydrate; 2 mg and 4 mg nicotine polacrilex; immediate release; effect within 15 minutes <i>Note:</i> The above products are not considered equivalent dosages.	
Approved Indications	Dosing	Labelled Precautions/Indications
<ul style="list-style-type: none"> For the reduction of nicotine withdrawal symptoms, including cravings associated with smoking cessation. If possible, should be used in conjunction with a behavioural support program. Can be used in combination with bupropion and with other forms of NRT. 	<ul style="list-style-type: none"> For clients smoking 20 or fewer cigarettes per day, use 1 mg nicotine bitartrate dehydrate or 2 mg nicotine polacrilex For clients smoking more than 20 cigarettes per day, use 2 mg nicotine bitartrate dehydrate or 4 mg nicotine polacrilex The timing of the first cigarette may also be considered. Those having their first within 30 minutes of waking up may require higher strengths. Take one lozenge every hour, as needed; maximum 20 	<p><i>Contraindications</i></p> <ul style="list-style-type: none"> Previous acute hypersensitivity reaction Immediate post-myocardial infarction period Life-threatening arrhythmias Severe or worsening angina pectoris Recent cerebral vascular accident <p><i>Precautions</i></p> <ul style="list-style-type: none"> Pregnancy Nursing mothers Active peptic ulcer disease

	<p>lozenges per day or titrated to individual effect.</p> <ul style="list-style-type: none"> • Should dissolve within 20–30 minutes. <p>Typically down titration is achieved by increasing the interval between dosages.</p>	
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Nicotine Inhaler

Cost: Average \$6 to \$12 per day (6–12 cartridges)	Dosage: 10 mg cartridge that delivers 4 mg of nicotine through about 80 inhalations (over 20 minutes of active puffing); immediate release; effect within 15 minutes	
Approved Indications	Dosing	Labelled Precautions/Indications
<ul style="list-style-type: none"> • Indicated as an aid to smoking cessation for the relief of nicotine withdrawal symptoms. • Should be used as part of a comprehensive behavioural smoking-cessation program. • Can be used in combination with bupropion and with other forms of NRT. 	<ul style="list-style-type: none"> • Recommended use is one cartridge every 20 minutes, as needed, or titrated to individual effect; maximum 16 cartridges per day. • Should use at least six cartridges per day for the first three to six weeks of treatment. • It is recommended that the number and frequency be decreased over time after 12 weeks, stopping when reduced to one or two cartridges per day. 	<p><i>Contraindications</i></p> <ul style="list-style-type: none"> • Previous acute hypersensitivity reaction • Immediate post-myocardial infarction period • Life-threatening arrhythmias • Severe or worsening angina pectoris • Recent cerebral vascular accident <p><i>Precautions</i></p> <ul style="list-style-type: none"> • Pregnancy • Nursing mothers • Active peptic ulcer disease • Bronchospastic

Nicotine Mouth Spray

Cost: Average \$3 to \$8 per day (15–45 sprays)	Dosage: Available in a dispenser that contains 150 sprays; each spray delivers 1 mg of nicotine; immediate release; effect within 60 seconds	
Approved Indications	Dosing	Labelled Precautions/Indications
<ul style="list-style-type: none"> • An instant-release mouth spray that works within 60 seconds for fast relief of cravings. • Can be used in combination with bupropion and with other forms of NRT. 	<ul style="list-style-type: none"> • Recommended use is one or two sprays every 30 minutes, as needed, for 12 weeks and then reassess; maximum two sprays at a time, four sprays per hour and 64 sprays per day. • It is recommended that the number and frequency be decreased over time, stopping when reduced to two to four sprays per day. 	<p><i>Contraindications</i></p> <ul style="list-style-type: none"> • Previous acute hypersensitivity reaction • Immediate post-myocardial infarction period • Life-threatening arrhythmias • Severe or worsening angina pectoris • Recent cerebral vascular accident <p><i>Precautions</i></p> <ul style="list-style-type: none"> • Pregnancy • Nursing mothers • Active peptic ulcer disease

Prescribing Combined NRT Therapy for Smoking Cessation

When titrating the dose of nicotine, start with the number of cigarettes smoked daily. The amount of nicotine obtained from smoking can vary due to individual technique from 1.0 mg to 1.5 mg per cigarette. Replacement for comfort varies with product chosen. Follow up in the first week to assess response to medication and adjust NRT as necessary.

Cigarettes per day (cpd)	Strength of patch to start and one short acting NRT for break through cravings	*Short acting NRT options:
Less than 10 cpd	7 mg patch and short acting NRT*	1 mg per dose – oral spray, lozenges
10 to 19 cpd	14 mg patch and short acting NRT*	2 mg and 4 mg per dose – gum, lozenges
More than 19 cpd	21 mg patch and short acting NRT*	4 mg – inhaler depending on number of inhalations
More than 30 cpd	28 mg patch (i.e.: 21 mg + 7 mg) and short acting NRT*	

Note: When using NRT to quit tobacco, changes in metabolism are similar to those when quitting without NRT. Drug interactions with NRT can occur. Nicotine may reduce the sedative effects of benzodiazepines; decrease the subcutaneous absorption of insulin; reduce the effectiveness of beta-blockers; and lessen the effectiveness of opioid analgesia. Higher dosages may be required for patients who smoke more than 25 cigarettes per day (e.g. 21 mg per day plus 7 mg per day).