

Tobacco Use Disorder

Using Counseling and Medication Treatment to Help Veterans with Tobacco Cessation

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Abbreviations

CrCl = creatinine clearance

ESRD = end-stage renal disease

GFR = glomerular filtration rate

HD = hemodialysis

mg = milligram

MH = mental health

min = minute

ml = milliliter

NRT = nicotine replacement therapy

OTC = over the counter

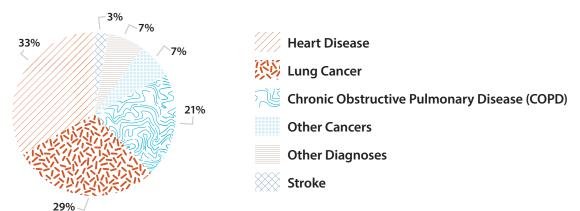
Rx = prescription medication

SR = sustained release

Fast Facts About Tobacco Use

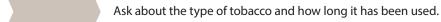
- Tobacco users die 10 years earlier than non-users. 1-3
- Tobacco users with mental illness die 25 years earlier than individuals without a mental health disorder.⁴⁻⁶
- Half of all tobacco users will die of tobacco related causes.³

U.S. Deaths Annually from Cigarette Smoking 2005–2009⁷⁻¹⁰



Brief Tobacco Cessation Counseling — the 5 As¹¹

ASK — about tobacco use at every visit.



ADVISE — the Veteran to quit.

Provide clear, strong, and personalized suggestions.

ASSESS — readiness to quit.

What changes are you willing to make in the next 30 days? (e.g., reduce amount using, ready to quit in the next 30 days, start pharmacotherapy, go to group counseling).

ASSIST — Veterans with their quit attempt.

Set quit date and provide information about strategies to help them quit, offer pharmacotherapy.

ARRANGE — follow up by phone or in clinic or refer to the VA Tobacco Quit Line (1-855-QUIT-VET).

Refer Veteran to a more structured tobacco cessation program if additional assistance is needed.

Not Ready to Quit in the Next 30 Days? — Try Using the 5 Rs to Build Motivation¹¹



Medications for Tobacco Cessation — Monotherapy Dosing^{11–13}

Generic Name	Usual Adult Dose	Starting Instructions	Comments
	Nicotine Re	eplacement Thera	npy (NRT)
Nicotine Transdermal Patch (OTC)	Smoking more than 10 cigarettes per day: 21 mg for four to eight weeks then 14 mg for two to four weeks then 7 mg for two weeks Smoking 10 or fewer cigarettes a day: 14 mg for six to eight weeks then 7 mg for two weeks	Typically start on quit day	Can be used in combination with other NRT. Can be used in combination with bupropion. Rotate application sites; if having vivid dreams, remove patch before bedtime and apply a new patch in morning. Consider longer duration of treatment if necessary.

^{*}High dependence = smoking first cigarette of the day within 30 minutes of waking; **Low dependence = smoking first cigarette of the day more than 30 minutes after waking.

Generic Name	Usual Adult Dose	Starting Instructions	Comments
	Nicotine R	eplacement Thera	apy (NRT)
Nicotine Polacrilex Gum (OTC)	High dependence*: 4 mg every one to two hours for six weeks, then every two to four hours for three weeks, then every four to eight hours for three weeks Low dependence**: 2 mg every one to two hours for six weeks, then every two to four hours for three weeks, then every four to eight hours for three weeks Maximum dose: 24 pieces in 24 hours	Typically start on quit day	Bite several times until peppery taste occurs, then "park" between cheek and gum until taste disappears. Repeat bite-and-park process for 30 minutes on each piece of gum. Avoid eating or drinking while using gum and avoid acidic drinks (e.g., coffee, juice, soda) for 15 minutes before using. Try to not swallow saliva when using nicotine gum since this nicotine in the stomach is poorly absorbed and causes stomach upset. Consider longer duration of treatment if necessary.

^{*}High dependence = smoking first cigarette of the day within 30 minutes of waking; **Low dependence = smoking first cigarette of the day more than 30 minutes after waking.

Generic Name	Usual Adult Dose	Starting Instructions	Comments
	Nicotine R	eplacement Thera	apy (NRT)
Nicotine Polacrilex Lozenge (OTC)	High dependence*: 4 mg every one to two hours for six weeks, then every two to four hours for three weeks, then every four to eight hours for three weeks Low dependence**: 2 mg every one to two hours for six weeks, then every two to four hours for three weeks, then every four to eight hours for three weeks Maximum dose: 20 lozenges in 24 hours	Typically start on quit day	Place between cheek and gum and dissolve slowly, shifting in mouth occasionally. Do not bite or chew. Avoid eating or drinking while using lozenge and avoid acidic drinks (e.g., coffee, juice, soda) for 15 minutes before using. Try to not swallow saliva when using nicotine lozenge since this nicotine in the stomach is poorly absorbed and causes stomach upset. Consider longer duration of treatment if necessary.

^{*}High dependence = smoking first cigarette of the day within 30 minutes of waking; **Low dependence = smoking first cigarette of the day more than 30 minutes after waking.

 $continued \ from \ page \ 5 \ (Medications \ for \ Tobacco \ Cessation \ -- \ Monotherapy \ Dosing^{11-13})$

Generic Name	Usual Adult Dose	Starting Instructions	Comments
	Nicotine Ro	eplacement Thera	apy (NRT)
Nicotine Nasal Spray (Rx)	One spray in each nostril will provide a 1 mg dose. Weeks one to eight, use one to two doses/hour, then in weeks nine to 14, gradually reduce over four to six weeks until off completely. Maximum of 40 doses per day and 5 doses per hour.	Typically start on quit day	Avoid use in patients with uncontrolled lung disease. Provides the highest plasma nicotine levels of the NRT products and most closely mimics smoking a cigarette. This may result in dependence on the nasal inhaler. Also has higher costs. Use beyond 6 months has not been studied.

^{*}High dependence = smoking first cigarette of the day within 30 minutes of waking; **Low dependence = smoking first cigarette of the day more than 30 minutes after waking.

continued from page 5 (Medications for Tobacco Cessation — Monotherapy Dosing¹¹⁻¹³)

Generic Name	Usual Adult Dose	Starting Instructions	Comments
	Nicotine Ro	eplacement Thera	apy (NRT)
Nicotine Inhaler (Rx)	10 mg cartridges deliver 4 mg of nicotine with continuous puffing for 20 minutes. Can use in five-minute increments for each craving. Nicotine is absorbed in the mouth and throat. Weeks one to 12, use six to 16 cartridges/day, then in weeks 13 to 24, gradually reduce until off.	Typically start on quit day	Mechanism of use is very similar to smoking, so it may reinforce smoking behaviors. Can be time consuming to administer a dose comparable to the nicotine gum or lozenge. Also has higher costs. Maximum of 16 cartridges/day. Use beyond 6 months has not been studied.

^{*}High dependence = smoking first cigarette of the day within 30 minutes of waking; **Low dependence = smoking first cigarette of the day more than 30 minutes after waking.

Generic Name	Usual Adult Dose	Starting Instructions	Comments
	Non-	nicotine Oral Thei	rapy
Bupropion (Rx)	150 mg SR daily for three days, then increase to 150 mg SR twice daily; Use for eight to 12 weeks or longer if necessary for complete cessation.	Start seven to 14 days before quit day.	Do not need to taper dose when stopping. Do not crush or chew tablets. If insomnia occurs, take second dose in the afternoon rather than in the evening. May use bupropion in combination therapy with NRT. Weight neutral or may cause weight loss in some patients. Avoid using in patients with a history of seizure disorder or eating disorders.
Varenicline (Rx)	0.5 mg daily for days one through three, then 0.5 mg twice daily for days four through seven, then 1 mg twice daily; Use for 12 to 24 weeks.	Start seven to 35 days before quit day.	Take with food and eight ounces of water to reduce nausea (most common side effect ~30%). Advise patients to report any mood changes, depression, and suicidal ideation.

^{*}High dependence = smoking first cigarette of the day within 30 minutes of waking; **Low dependence = smoking first cigarette of the day more than 30 minutes after waking.

Medications for Tobacco Cessation — Combination Therapy Dosing^{11,13}

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Medication	Starting Instructions
	Combination NRT
Nicotine Patch + Nicotine Lozenge	Smoking 10 cigarettes or more per day: On quit day: 21 mg patch daily and use 2 mg nicotine lozenge as needed for tobacco cravings (up to 10 lozenges a day). After at least four weeks and once use of lozenge is one or two pieces per day, reduce nicotine patch to 14 mg for two to four weeks, then to 7 mg for two to four weeks, then stop. Nicotine lozenge can be used as needed for tobacco cravings for six to 12 months if necessary to assist the Veteran in remaining abstinent.
	Smoking less than 10 cigarettes per day: On quit day: 14 mg patch daily and use 2 mg nicotine lozenge as needed for tobacco cravings (up to 10 lozenges a day). After at least six weeks and once use of lozenge is one or two pieces per day, reduce nicotine patch to 7 mg for two to four weeks, then stop. Nicotine lozenge can be used as needed for tobacco cravings for six to 12 months if necessary to assist the Veteran in remaining abstinent. May use picotine 4 mg lozenge if Veteran has higher dependence, particularly with dual use of
	May use nicotine 4 mg lozenge if Veteran has higher dependence, particularly with dual use of multiple tobacco/nicotine products.

Medication	Starting Instructions			
Nicotine Patch + Nicotine Gum	Similar schedule to Nicotine Patch + Nicotine Lozenge			
	Combination Bupropion/NRT			
Bupropion + Nicotine Lozenge	Seven to 14 days before quit day: Start 150 mg SR one tablet daily for three days, then increase to 150 mg SR twice daily. Continue for eight to 12 weeks; may continue longer if necessary to continue abstinence.			
	On quit day: Start nicotine lozenge 2 mg using up to 10 lozenges per day for tobacco cravings. Taper use of lozenge every one to two weeks by incorporating use of regular gum, sugar-free candy, or other substitute.			
Bupropion + Nicotine Gum	Seven to 14 days before quit day: Start 150 mg SR one tablet daily for three days, then increase to 150 mg SR twice daily. Continue for seven to 12 weeks; may continue longer if necessary to continue abstinence.			
	On quit day: Start nicotine gum 2 mg using up to 10 pieces per day for tobacco cravings. Taper use of gum every one to two weeks by incorporating use of regular gum, sugar-free candy, or other substitute.			

Medication	Starting Instructions
	Combination Bupropion/NRT
Bupropion + Nicotine Patch	Seven to 14 days before quit day: Start 150 mg SR one tablet daily for three days, then increase to 150 mg SR twice daily. Continue for eight to 12 weeks; may continue longer if necessary to continue abstinence.
	On quit day: Start nicotine patch and use based on number of cigarettes smoked per day: 21 mg patch if \geq 10 cigarettes per day or 14 mg patch if $<$ 10 cigarettes per day. Use nicotine patch in the same manner as described above for monotherapy and taper the dose as outlined. (see page 5).

Pharmacotherapy for Smokeless Tobacco — Heaviness of Smoking Index¹⁴

Use to assess for nicotine dependence in patients who use smokeless tobacco.

1. How soon after you wake up do you place your first dip?	
☐ Within 5 minutes 3 points	
☐ 6–30 minutes 2 points	
☐ 31–60 minutes 1 point	
☐ After 60 minutes 0 points	
2.How many cans/pouches per week do you use?	
☐ More than 3 2 points	
□ 2–3 1 point	
☐ 1 0 points	

SCORING
Total:
5 High Dependence
3–4 Moderate Dependence
1–2 Low Dependence

Level of Dependence	Medication	Dosing	
Combination NRT			
Moderate to high dependence or using one can every three days	Nicotine patch 21 mg and nicotine gum or lozenge 2 mg*	 One patch every 24 hours for at least four to six weeks** Six to 10 lozenges or pieces of gum per day as needed for breakthrough cravings Reduce patch to 14 mg once use of the lozenge or gum is down to one or two a day. Use 14 mg patch for at least two weeks and once use of the lozenge or gum is down to one or two a day, start the 7 mg patch and use for at least two weeks before stopping. 	
Low dependence	Nicotine patch 14 mg and nicotine gum or lozenge 2 mg*	 One patch every 24 hours for at least four to six weeks** Six to 10 lozenges or pieces of gum per day as needed for breakthrough cravings Reduce patch to 7 mg once use of the lozenge or gum is down to one or two a day. Use 7 mg patch for at least two weeks before stopping. 	

^{*}If the 2 mg lozenges or gum are not working, consider using the 4 mg lozenge or gum. **Treatment extending to six months or longer may be needed in some patients for long-term abstinence.

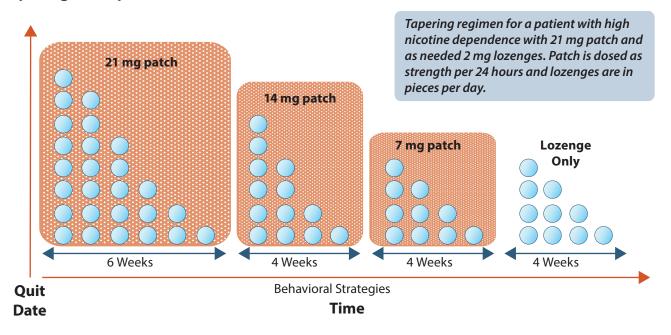
Level of Dependence	Medication	Dosing		
	Non-nicotine Oral Therapy			
Low, moderate and high dependence	Bupropion Combine with short-acting NRT for improved efficacy, using on an as-needed basis for breakthrough cravings (six to 10 times a day).	 150 mg SR once a day for three days, then increase to one tablet twice daily for seven to 12 weeks, but can extend longer (up to six months if necessary). Start one to two weeks before quit date. See information on page 12 for more details on combination bupropion/NRT. 		
Low, moderate and high dependence	Varenicline	 Start with 0.5 mg daily for three days, then increase to 0.5 mg twice a day for four days, then increase to 1 mg twice daily for 12 to 24 weeks. Reduce dose to 0.5 mg twice daily if CrCl <30 ml/min. See page 10 for more information. 		

^{*}If the 2 mg lozenges or gum are not working, consider using the 4 mg lozenge or gum. **Treatment extending to six months or longer may be needed in some patients for long-term abstinence.

Dose Adjustments in Renal or Hepatic Disease^{12,14}

Dosage Adjustments				
Generic Name	Hepatic Impairment	Renal Impairment		
	NRT			
Nicotine patch, gum, lozenge, inhaler and nasal spray	No dose adjustment needed	No dose adjustment needed		
Oral Agents				
Bupropion (Rx)	Mild impairment (Child-Pugh score 5–6): Use with caution, reduce dose and/or frequency: 150 mg SR once daily.	GFR <90 ml/min: Reduce dose and/or frequency.		
	Moderate to severe impairment (Child-Pugh score 7–15): Use with extreme caution, maximum dose 150 mg SR every other day.			
Varenicline (Rx)	No dosing adjustment necessary.	CrCl <30 ml/min: Start at 0.5 mg once daily with maximum dose 0.5 mg twice daily;		
		ESRD/HD: 0.5 mg once daily		

Tapering Examples for Combination NRT^{2,4}



Smoking and Drug Interactions^{15–19}

Drug	Effect from Smoking*	Recommendations After Quitting Smoking
Alprazolam	May decrease plasma concentrations up to 50%.	Monitor patient; may need dose reduction.
Caffeine	May increase clearance by 56%.	Decrease intake by 50%; note that caffeine is a trigger for tobacco use.
Chlorpromazine	Decreases concentration by 24%; patients who smoke may need a higher dose.	Monitor patient; may need dose reduction.
Clozapine	Decreases concentration up to 30–40%; patients who smoke may need a higher dose.	Monitor patient; may need a dose reduction of 30–40%.
Fluvoxamine	Decreases plasma concentration by 32%.	Dose reductions may not be needed; monitor patient for adverse effects.
Haloperidol	Decreases serum concentrations up to 70%; patients who smoke may need a higher dose.	Monitor patient; may need to reduce dose.
Olanzapine	Decreases serum concentrations by 10–30%; patients who smoke may need a higher dose.	Monitor patient; may need to reduce dose.

^{*}Polyaromatic hydrocarbons in tobacco smoke cause induction of CYP1A2 enzymes. Nicotine is not involved in causing the drug interactions. Enzyme activity returns to normal after smoking cessation. Note: Tobacco that is not burned and smoked (e.g., smokeless tobacco) does not cause induction of CYP1A2 enzymes. Nicotine replacement therapy does not influence CYP1A2 enzyme.

Additional Resources

■ VA Tobacco Quit Line — 1-855-QUIT-VET (1-855-784-8838)

A proactive, smoking cessation national quit line with counselors available Monday – Friday

- Information for Veterans and providers: http://www.mentalhealth.va.gov/quit-tobacco/
- Information is available in English and Spanish.
- For Veterans who are in crisis, a warm transfer is made by the counselor to the Veterans Crisis Line.



SmokefreeVET

A mobile text message smoking cessation service for Veterans



- Assist Veterans in signing up at their visit–it takes only a few minutes!
- Text the word VET to 47848.
- For more information: www.smokefree.gov/VET
- SmokefreeVET en Español: www.smokefree.gov/VETespanol

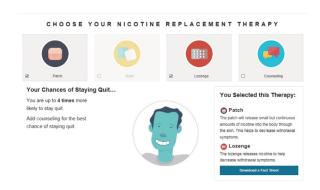
smokefreeVET en Español

- Stay Quit Coach Mobile Application https://mobile.va.gov/app/stay-quit-coach
 - Download from iTunes or Android App Stores.
 - Includes tools to control cravings and triggers.
 - Discusses benefits of quitting and the risks of smoking.
 - Tips and motivation
 - Tracks progress, including quit dates, money saved and health benefits
 - Assist Veterans in signing up at their visit–it takes only a few minutes!



- Quit for Good with Nicotine Replacement Therapy Interactive webpage for Veterans including:
 - A selection tool to choose over-the counter, evidence-based, tobacco cessation treatment
 - Tailored quit tips and downloadable fact sheets for the therapy chosen
 - Short videos that portray correct use of NRT
 - A nicotine dosage calculator for cigarette smokers and smokeless tobacco users
 - Facts about nicotine

https://smokefree.gov/veterans/tools-help-you-quit/quit-for-good-with-nrt



References

- 1. WHO report on the global tobacco epidemic, 2008: the MPOWER package. Geneva: World Health Organization; 2008.
- 2. Jha P, Ramasundarahettige C, Landsman V, et al. 21st Century Hazards of Smoking and Benefits of Cessation in the United States. New England Journal of Medicine 2013;368:341–50.
- 3. WHO global report: mortality attributable to tobacco. Geneva: World Health Organization; 2012.
- 4. Colton, C.W. and R. W. Manderscheid. Congruencies in Increased Mortality Rates, Years of Potential Life Lost, and Causes of Death Among Public Mental Health Clients in Eight States. Preventing Chronic Disease: Public Health Research, Practice, and Policy. April 2006 3(2): 1–14.
- 5. Druss BG, et al. Understanding Excess Mortality in Persons With Mental Illness: 17-Year Follow Up of a Nationally Representative US Survey. Medical Care 2011; 49(6), 599–604.
- 6. Glasheen C, Hedden SL, Forman-Hoffman VL, Colpe LJ. Cigarette smoking behaviors among adults with serious mental illness in a nationally representative sample. Ann Epidemiol. 2014;24(10):776–80.
- 7. Stahre M, Roeber J, Kanny D, Brewer RD, Zhang X. Contribution of Excessive Alcohol Consumption to Deaths and Years of Potential Life Lost in the United States. *Prev Chronic Dis* 2014;11:130293. DOI: http://dx.doi.org/10.5888/pcd11.130293.
- Centers for Disease Control and Prevention. QuickStats: Number of Deaths from 10 Leading Causes, by Sex National Vital Statistics System, United States, 2015. MMWR Morb Mortal Wkly Rep 2017;66:413. DOI: http://dx.doi.org/10.15585/mmwr. mm6615a8.
- 9. U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress. A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

continued from page 23 (References)

- 10. U.S. Department of Health and Human Services. A Report of the Surgeon General: How Tobacco Smoke Causes Disease: What It Means to You. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010 [accessed 2018 July 16].
- 11. Fiore, M. C., Jaén, C. R., Baker, T. B., Bailey, W. C., Benowitz, N. L., Curry, S. J., Dorfman, S. F., Froelicher, E. S., Goldstein, M. G., Healton, C. G., Henderson, P. Nez, Heyman, R. B., Koh, H. K., Kottke, T. E., Lando, H. A., Mecklenburg, R. E., Mermelstein, R. J., Mullen, P. D., Orleans, C. Tracy, Robinson, L., Stitzer, M. L., Tommasello, A. C., Villejo, L., & Wewers, M. E. (2008, May). *Treating tobacco use and dependence: 2008 update. Clinical practice guideline.* Rockville, MD: U.S. Department of Health and Human Services, Public Health Service. Retrieved from http://www.healthquality.va.gov/tuc/phs_2008_full.pdf.
- 12. Varenicline (Chantix) Prescribing Information. Pfizer Laboratories. Revised 2/2019. https://www.chantix.com/. Accessed December 2021.
- 13. Lexicomp Online Drug Information. Wolters Kluwer. www.wolterskluwercdi.com/lexicomp-online/. Accessed February 2017.
- 14. Kozlowski LT, Porter CQ, Orleans CT, Pope MA, Heatherton T. Predicting smoking cessation with self-reported measures of nicotine dependence: FTQ, FTND, and HSI. Drug Alcohol Depend. 1994 Feb;34(3):211-6. doi: 10.1016/0376-8716(94)90158-9. PMID: 8033758.
- 15. Anderson GD, Chan LN. Pharmacokinetic drug interactions with tobacco, cannabinoids, and smoking cessation products. Clinical Phamacokinetics. November 2016; 55(11):1353–1368.
- 16. Zullino DF1, Delessert D, Eap CB, et.al. Tobacco and cannabis smoking cessation can lead to intoxication with clozapine or olanzapine. Int Clin Psychopharmacol. 2002 May;17(3):141–3.
- 17. Lowe EJ1, Ackman ML. Impact of tobacco smoking cessation on stable clozapine or olanzapine treatment. Ann Pharmacother. 2010 Apr;44(4):727–32. doi: 10.1345/aph.1M398. Epub 2010 Mar 16.

continued from page 23 (References)

- 18. Benowitz NL, Peng M, Jacob P 3rd. Effects of cigarette smoking and carbon monoxide on chlorzoxazone and caffeine metabolism. Clin Pharmacol Ther. 2003;74(5):468–74.
- 19. Zevin S, Benowitz NL. Drug interactions with tobacco smoking: an update. Clin Pharmacokinet. 1999;36(6):425–38.



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This reference guide was created to be used as a tool for VA providers and is available to use from the Academic Detailing SharePoint. These are general recommendations only; specific clinical decisions should be made by the treating provider based on an individual patient's clinical condition.

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