



Tobacco Use Disorder

A Provider's Guide to Counseling and Medication Treatment to Help Veterans with Tobacco Cessation

VA



U.S. Department of Veterans Affairs

Veterans Health Administration
PBM Academic Detailing Service

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A VA Clinician's Guide

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Key Messages

Encourage every person who uses tobacco to stop — no matter their age or current health conditions.	4
If a Veteran is interested in quitting, they should be provided brief counseling and medication or referred to a tobacco cessation program.	10
Offer combination NRT or combination bupropion/ NRT as the first-line treatment options to patients wanting to quit. Varenicline can be considered as a second-line treatment option.	16
Offer behavioral counseling and cessation medications to Veterans with mental health disorders, substance use disorders, and HIV who are interested in quitting.	22

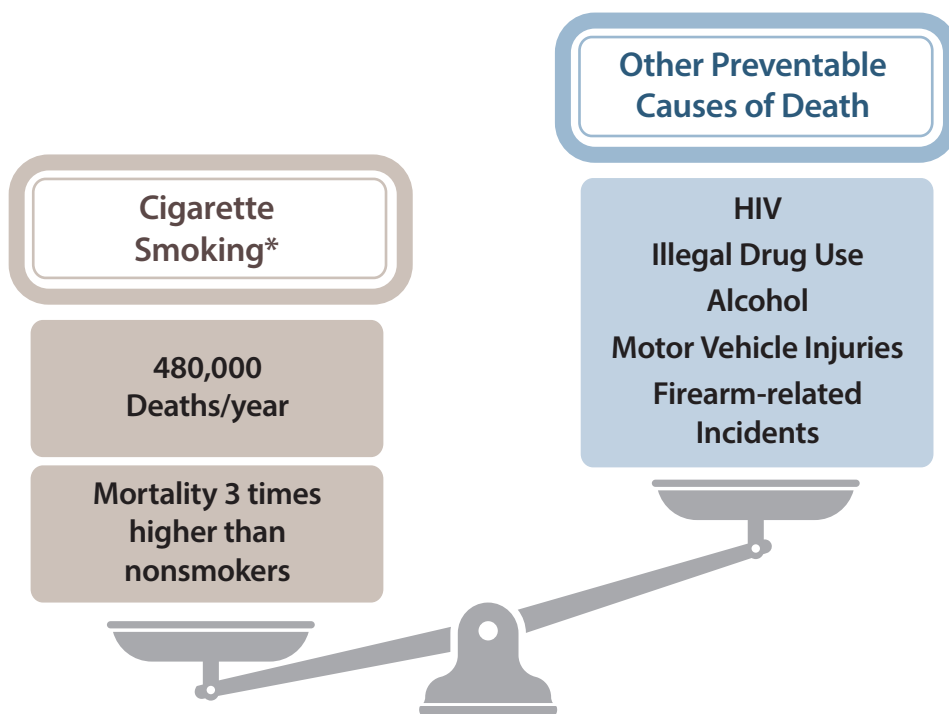
Scope of the Problem

In the United States in 2017, 34.3 million adults (14%) were cigarette smokers. When all combustible tobacco products are included, e.g., cigars, pipes, and hookahs, the rate increases to 16.7%.¹ Overall rates of tobacco use are similar in Veterans compared to the general population, but subgroups including female Veterans, Veterans with mental health disorders and/or substance use disorders, and Veterans with HIV have higher rates of tobacco use.²

On average, cigarette smokers die 10 years earlier than people who do not smoke and smoking is responsible for more deaths than opioids and alcohol combined. Up to 50% of all tobacco users will die of tobacco-related causes.³

Tobacco and the burning of tobacco products contains more than 7,000 chemicals, including hundreds of chemicals that are toxic and approximately 70 that can cause cancer.⁴

Figure 1. Cigarette Smoking is the Leading Preventable Cause of Death in the United States⁴⁻⁷

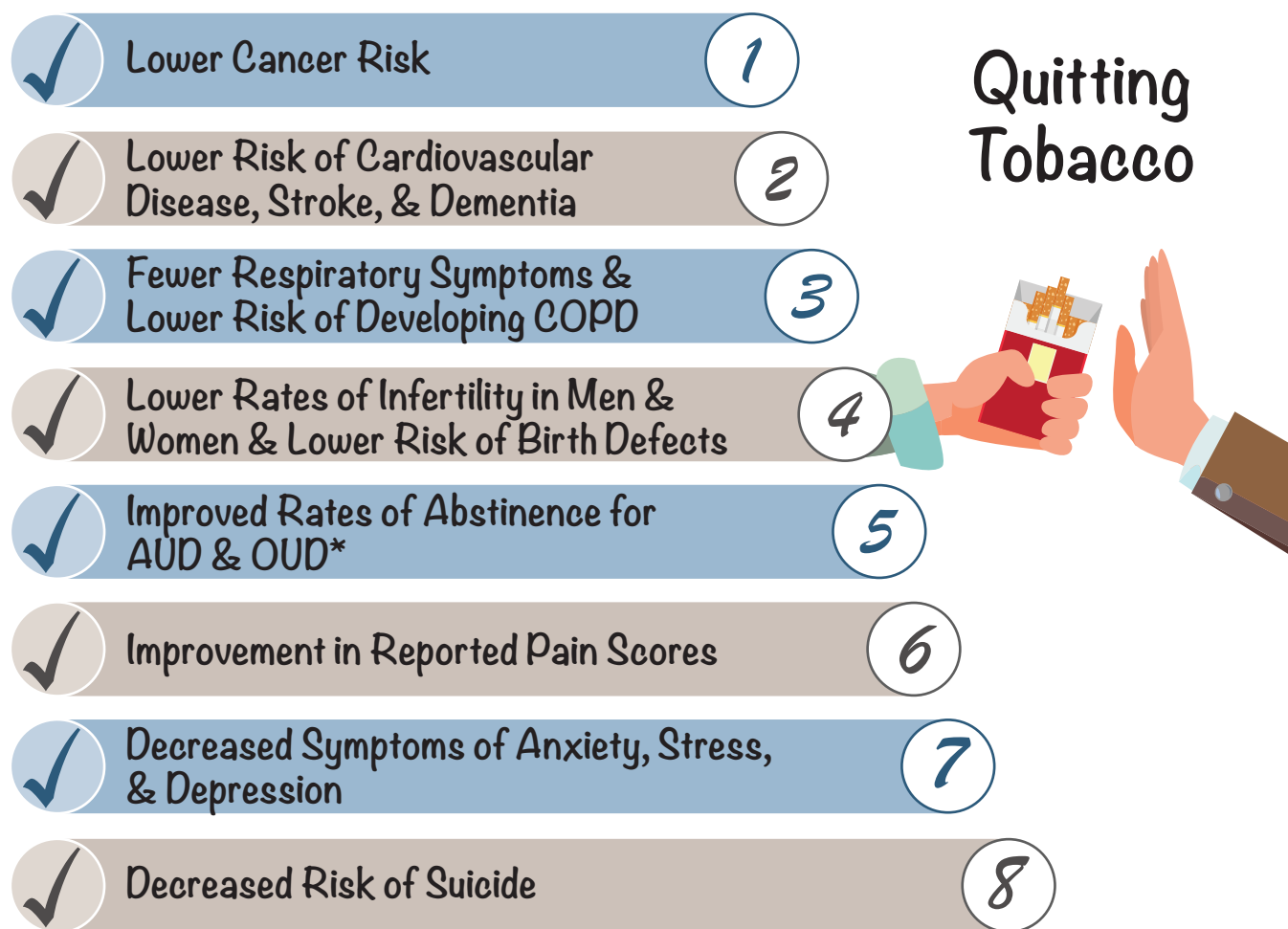


*Deaths from tobacco are specifically from cigarette smoking and secondhand smoke.



For every person who dies because of cigarette smoking, at least 30 people live with a serious smoking-related illness.⁶

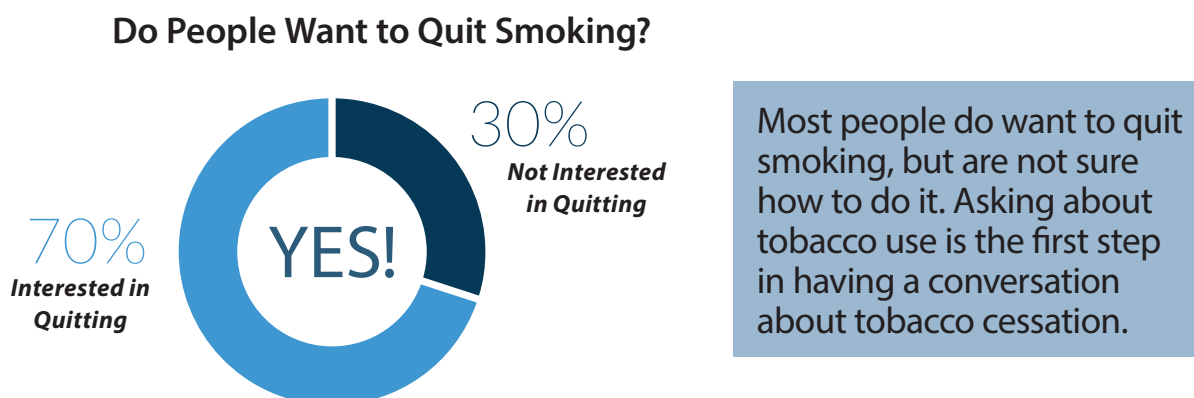
Figure 2. Benefits of Tobacco Cessation⁸⁻¹⁰



*AUD = alcohol use disorder; OUD = opioid use disorder

Benefits of tobacco cessation can be noticed as early as a few days after quitting. As a person abstains from using tobacco, they continue to notice benefits in their breathing, mood, energy level, sleep, and even in their finances. Ask a Veteran who uses tobacco how much money they spend each week on their tobacco product(s). They may be pleasantly surprised by the financial benefits of quitting.

Figure 3. People Who Smoke Want to Quit! However, Many Need Help to Be Successful.¹¹



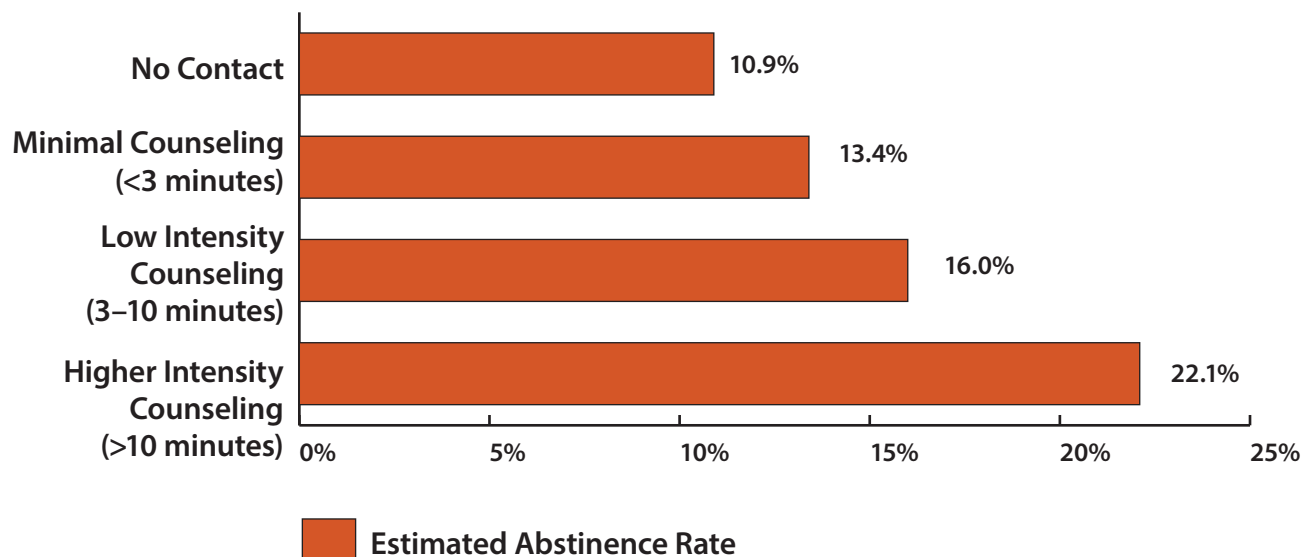
Encourage every person who uses tobacco to stop
— no matter their age or current health conditions.

Tobacco Cessation: What is Recommended?

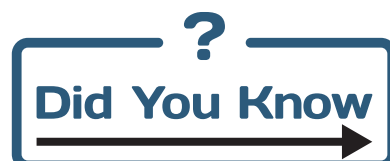
Helping Veterans quit tobacco is everyone's responsibility. No matter if the Veteran is coming to a mental health clinic, primary care clinic, to see a clinical pharmacy specialist, or to have a blood pressure check with the nurse, tobacco use should be assessed and assistance provided to Veterans who want to quit. Studies show that any clinician can provide assistance and make a difference in helping people stop tobacco use.¹²

Figure 4. Effectiveness of Tobacco Cessation Counseling and Estimated Abstinence Rates for Various Intensity Levels of Session Length (n = 43 studies).¹²

Minimal Counseling Helps People Quit Smoking and Every Additional Minute Increases Cessation Rates.



Counseling can be done in person in an individual or group setting, by telephone with the healthcare team, or using a telephone-based quitline (Level A evidence).



Brief counseling for 2–3 minutes can help a Veteran quit tobacco.

There are five elements of a brief tobacco cessation intervention:¹²

Figure 5. The 5 As



1) **ASK** about tobacco use.

- ✓ Ask about all types of tobacco and amount used each day. Ask about previous quit attempts.

2) **ADVISE** the Veteran to quit.

- ✓ Provide clear, strong and personalized suggestions.

3) **ASSESS** readiness to quit.

- ✓ Are you willing to give quitting a try in the next 30 days?

4) **ASSIST** patients with their quit attempt.

- ✓ Set target quit date, offer pharmacotherapy, and discuss the role of medication in treatment.

5) **ARRANGE** follow up.

- ✓ Arrange follow up contact in clinic, by phone, refer to the VA Tobacco Quit Line (1-855-QUIT-VET), or refer to a more structured tobacco cessation program if the Veteran needs additional assistance.

Use motivational interviewing techniques, asking open-ended questions when using the 5As. Understanding why a Veteran wants to quit and their motivating factors will help in providing support during the quit attempt.

Figure 6. If There is Not Time for Follow Up, Then What to Do?¹²



1) **ASK** about tobacco use.

2) **ADVISE** the Veteran to quit.

3) **PRESCRIBE** tobacco cessation medications.

4) **REFER** the Veteran to tobacco cessation services offered by the facility or the VA Tobacco Quit Line (1-855-QUIT-VET).

Additional VA Tobacco Cessation Services to Provide Support During a Quit Attempt

- ✓ Smokefree Vet: Mobile Text Message Service: www.smokefree.gov/VET
- ✓ Stay Quit Coach Mobile Application: www.mobilehealth.va.gov/app/stay-quit-coach
- ✓ VA Tobacco and Health Webpage: www.mentalhealth.va.gov/quit-tobacco/

When asking about tobacco use, include all types of tobacco and nicotine products—not just cigarettes. The Veteran's response will provide a more accurate, comprehensive assessment of dependence to nicotine and help guide treatment decisions. Using more than one form of tobacco or nicotine product typically is an indication of a higher dependence to nicotine than using one form.

Figure 7. Non-cigarette Forms of Tobacco^{13–30}

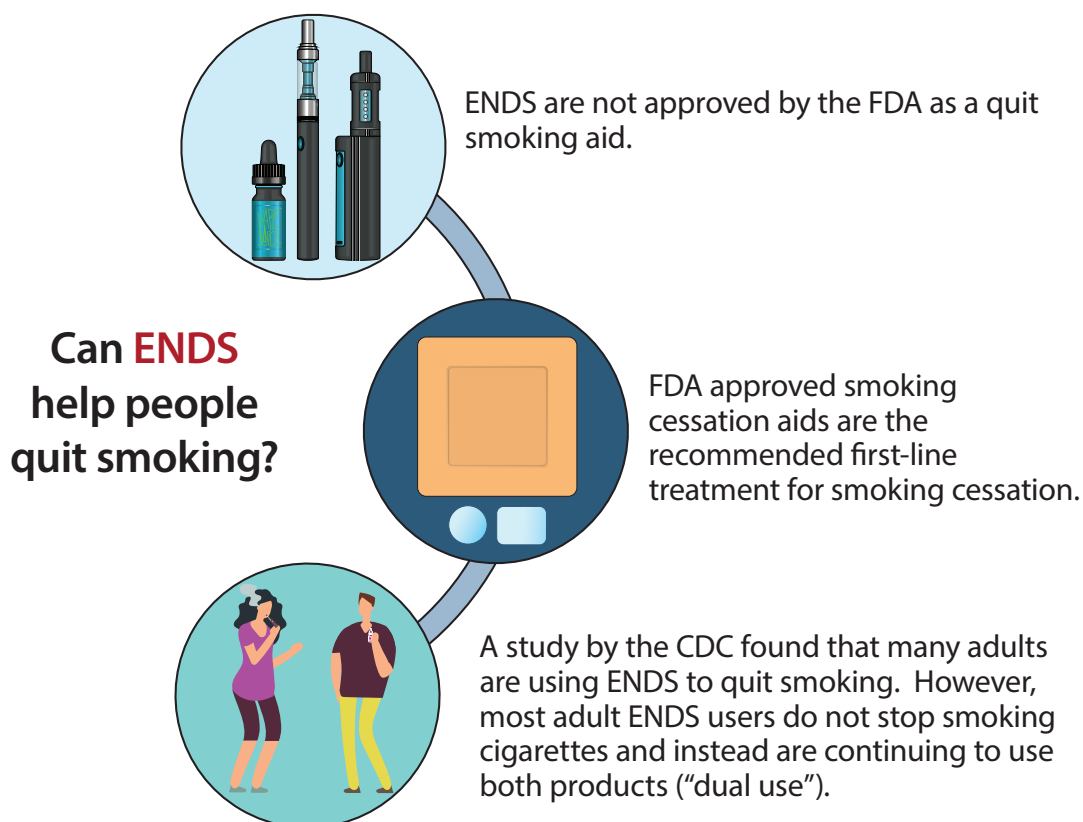
	<p>Cigars</p> <ul style="list-style-type: none">• Contain the same toxic and carcinogenic compounds found in cigarettes and are not a safe alternative to cigarettes• Health problems associated with regular cigar smoking include:<ul style="list-style-type: none">- Causes cancer of lung, esophagus, larynx, and oral cavity;- Causes diseases of the mouth, heart disease, stroke, and lung disease;- Can lead to nicotine addiction.
	<p>Smokeless Tobacco</p> <ul style="list-style-type: none">• Forms include snuff, chewing tobacco, and dissolvable tobacco.• Health problems associated with smokeless tobacco include:<ul style="list-style-type: none">- Causes cancer of the mouth, esophagus, and pancreas;- Causes diseases of the mouth and can increase risk of heart disease and stroke;- Can lead to nicotine addiction.
	<p>Pipe Tobacco</p> <ul style="list-style-type: none">• Health problems associated with regular pipe smoking include:<ul style="list-style-type: none">- Causes cancer of the lung, oropharynx, esophagus, colon and rectum, pancreas and larynx;- Causes cardiovascular disease and lung disease;- Can lead to nicotine addiction.
	<p>Hookah – Water Pipe</p> <ul style="list-style-type: none">• Most water pipe use in the United States is by youth and college students.• In a one-hour hookah session, users may puff on a hookah about 200 times, which is equivalent to smoking one pack of cigarettes.• Passing smoke through water does not make it safer:<ul style="list-style-type: none">- Hookah smoke has high levels of toxic agents similar to cigarettes;- Can cause lung cancer, stomach cancer, esophageal cancer, bladder cancer, reduced lung function, and decreased fertility.

Electronic Nicotine Delivery Systems (ENDS)^{30–39}

- In 2017, 2.8% of adults used ENDS.
- Among youth, ENDS are used more than any tobacco or nicotine product including cigarettes.
- ENDS aerosol may contain nicotine, volatile organic compounds, cancer-causing chemicals, heavy metals, and flavoring agents like diacetyl which is linked to lung disease.
- ENDS can cause unintended injuries from defective batteries, including burns from fires and explosions. Exposure to the liquid that contains concentrated nicotine can be toxic to adults, children and pets.

Ask Veterans about all types of tobacco and nicotine products – not just cigarettes. Try asking, “Do you use any tobacco or nicotine products, like cigarettes, smokeless/ chewing tobacco, hookahs, electronic cigarettes, or vapes like JUULs®?”

Figure 8. Should We Recommend ENDS to Help Veterans Quit Smoking?^{39–41}



CDC = Centers for Disease Control and Prevention. FDA = Food and Drug Administration.

More long-term studies are needed to determine if ENDS can be safely recommended to assist in tobacco cessation.

Figure 9. Stages of Quitting Tobacco⁴²

Quitting tobacco is a cyclical process for most Veterans and their readiness to quit (or stay quit) will change over time. Assess readiness to quit (or to stay quit) at each contact with a Veteran.

How many quit attempts are typical? Most estimate six to 10 attempts in a lifetime.^{43–45}

Mark Twain may have said it best: “Quitting smoking is easy: I’ve done it thousands of times.”



Table 1. Addressing Common Concerns from Veterans About Quitting Tobacco

Patient	Provider
<i>I don't want counseling; I only want medication.</i>	Medication alone helps most people, but adding counseling from a telephone or group program works even better.
<i>I want to try acupuncture or hypnosis.</i>	Complementary therapies have had mixed results so it is not clear how much they help. However, getting extra help from a group cessation classes and taking the nicotine patch and lozenge has worked for many people.
<i>I am worried about weight gain when I stop smoking.</i>	Start slowly increasing your physical activity and be careful not to eat simply to replace smoking a cigarette. Also try eating vegetables and drinking water instead of having candy or chips. The benefits of quitting tobacco far outweigh the risk from weight gain.
<i>I don't understand how nicotine replacement therapies (NRTs) could be harmless if tobacco is harmful.</i>	Studies have shown that medicinal nicotine in doses used in the patch, lozenge and gum is safe. What is harmful in tobacco—besides the higher level of addictive nicotine—are the 7,000 other chemicals, including at least 70 that cause cancer.
<i>My life is too stressful to quit tobacco.</i>	Using tobacco is one way many people deal with stress. Over the long-term, quitting smoking has been shown to decrease anxiety and stress. Counseling may help you develop new and healthier ways to cope with your stress.

Table 1. Addressing Common Concerns from Veterans About Quitting Tobacco (continued from page 8)

Patient	Provider
<i>Can I use electronic cigarettes or vapes to quit smoking?</i>	Some people have been able to quit successfully with electronic cigarettes, but they also may contain ingredients that are harmful. There is little known about the long-term risks. Using electronic cigarettes may be safer than smoking cigarettes; however, safer is not the same as safe. More is understood about using medications to help quit smoking that are approved by the Food and Drug Administration (FDA), like the nicotine patch and nicotine lozenge. So, these medications are recommended to use when quitting tobacco.

If a Veteran is not ready to quit in the next 30 days, use motivational interviewing techniques to help them to start thinking about quitting.

- Ask open-ended questions.
- Use reflective listening.
- Ask for permission to provide information or opinion.
 - “Can I give you some information on that?”
- Emphasize personal choice and control.
 - “Only you can make the decision to stop smoking”.

Try using the 5 Rs to help increase motivation to quit and also to maintain motivation during a quit attempt:

Relevance	• What are some things that concern you about your smoking?
Risk	• How might smoking be affecting your health?
Reward	• What could you gain by quitting smoking?
Roadblocks	• What barriers do you have in quitting smoking?
Repetition	• Is it okay if I check in with you about your smoking next time we meet?

Figure 10. Medication and Counseling Together are the Most Effective Way to Quit Smoking¹²

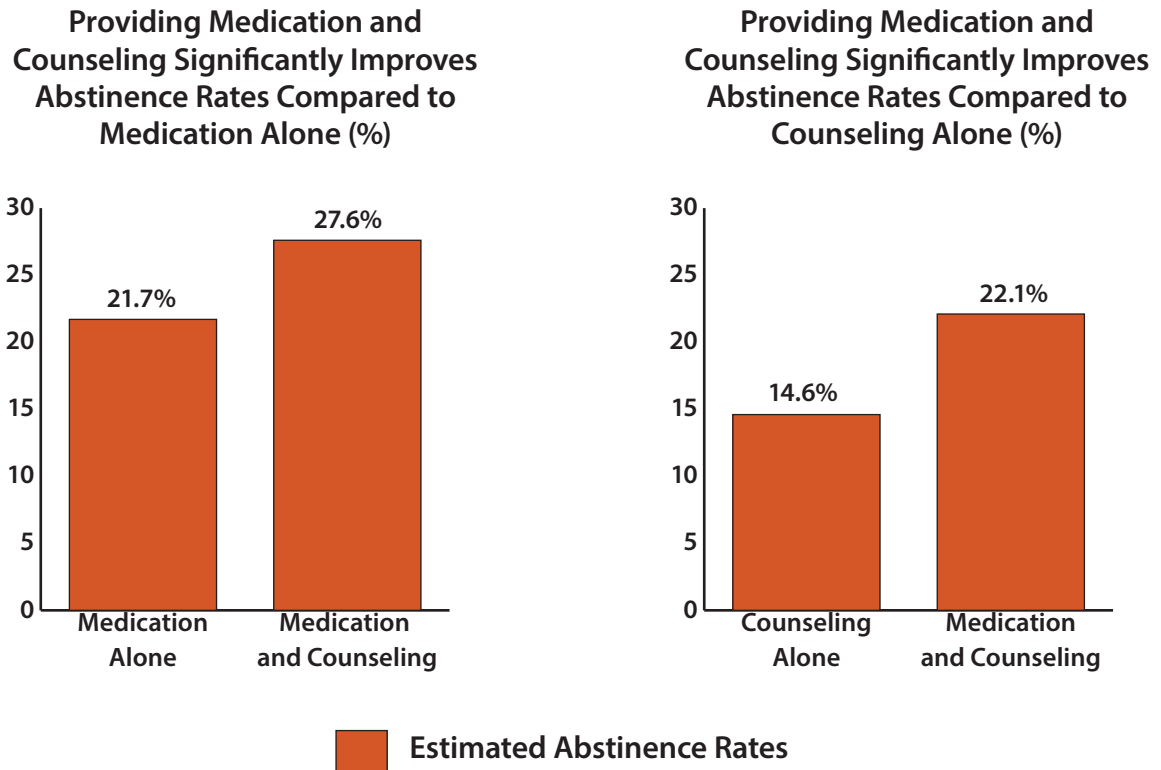
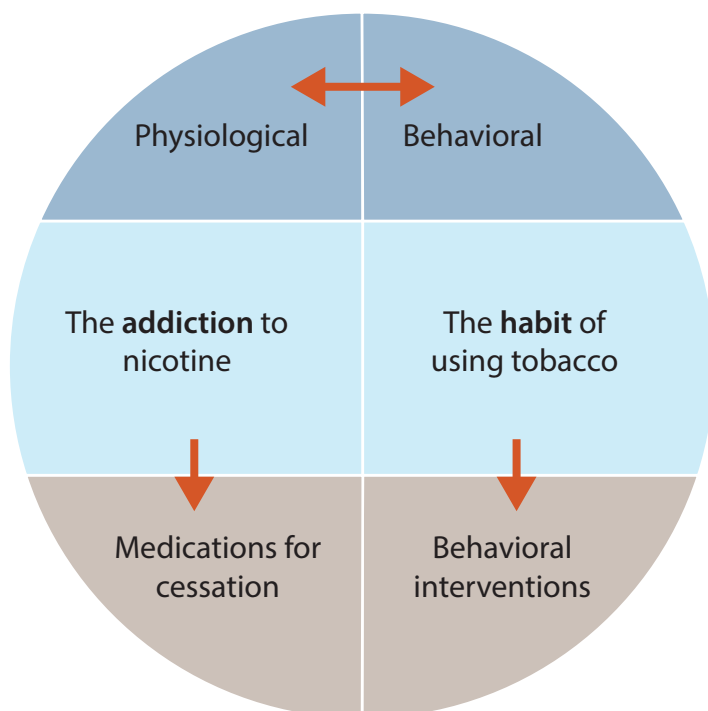


Figure 11. Treatment Should Address the Physiological and Behavioral Aspects of Dependence¹²



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If a Veteran is interested in quitting, they should be provided brief counseling and medication or referred to a tobacco cessation program.

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Pharmacotherapy for Tobacco Cessation

Tobacco cessation success is greatest when medication and behavioral counseling are used together during a quit attempt. When people stop using tobacco, they experience withdrawal symptoms, which include irritability, anxiety, depression, hunger, restlessness, insomnia, and cravings. Using FDA-approved medications helps manage nicotine withdrawal symptoms and reduce urges to use tobacco. Medication selection should be individualized for the Veteran based on their preferences, health conditions, other medications, and possible side effects.

Figure 12. Options for Pharmacotherapy



Combination Therapy

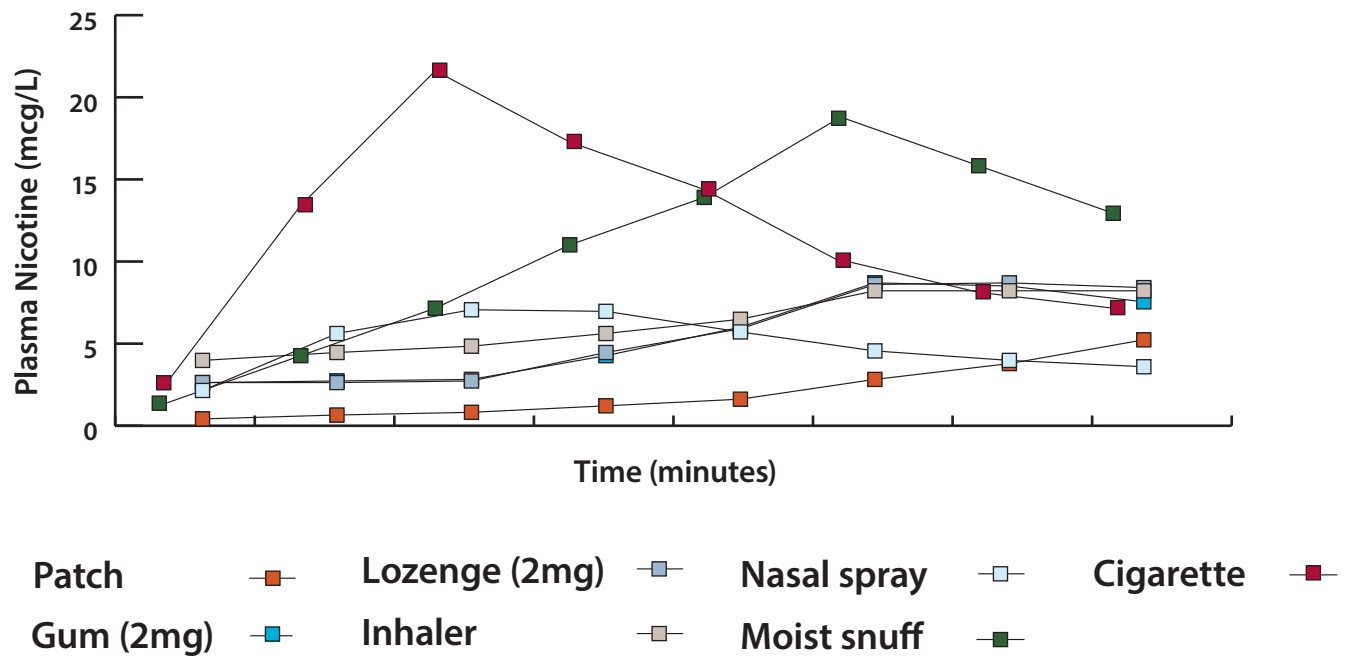
Combination therapy is the recommended first-line treatment for tobacco cessation.

- Combination Nicotine Replacement Therapy (NRT)
 - Nicotine patch + nicotine lozenge
 - Nicotine patch + nicotine gum
- Combination Bupropion/NRT
 - Bupropion + nicotine lozenge
 - Bupropion + nicotine gum
 - Bupropion + nicotine patch

Monotherapy with NRT or bupropion can be considered for patients who are unable to tolerate combination therapy or wish to use monotherapy; however, cessation rates may be lower.

Plasma nicotine concentrations using the nicotine patch, nicotine lozenge, or nicotine gum as monotherapy are less than half of the peak achieved from a cigarette smoked over five minutes. The FDA approved the use of the nicotine patch in combination with the short-acting nicotine products (e.g., lozenge, gum, nasal spray) after clinical studies showed the products were safe to use in combination.

Figure 13. Cigarette Smoking Provides Significantly Higher Nicotine Levels Compared to NRT. The Risk of Nicotine Toxicity is Low from Combination NRT.⁴⁶⁻⁴⁸



The concentration time curves in this graph depict levels achieved after administration of a single dose of nicotine following a period of overnight abstinence. The administration of nicotine varies with the cigarette smoked over five minutes, the moist snuff (two grams) placed between the cheek and gum for 30 minutes, inhaler used over 20 minutes (80 puffs), gum chew/park for over 30 minutes, the lozenge held in the mouth for approximately 30 minutes and the patch applied to the skin for one hour.

Using combination NRT with the nicotine patch in combination with the nicotine gum, lozenge, nasal spray, or inhaler is considered safe and provides lower nicotine levels than cigarette smoking.

Figure 14. Recommended Starting Dose for Combination NRT⁵⁴

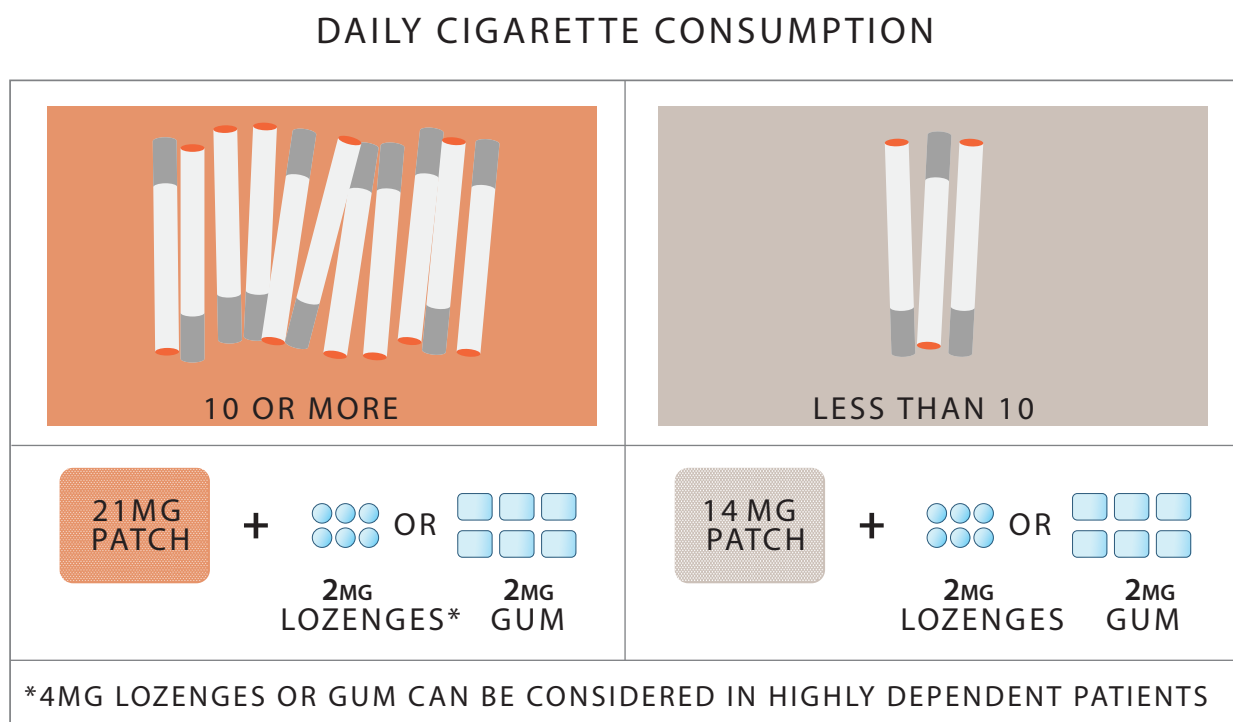
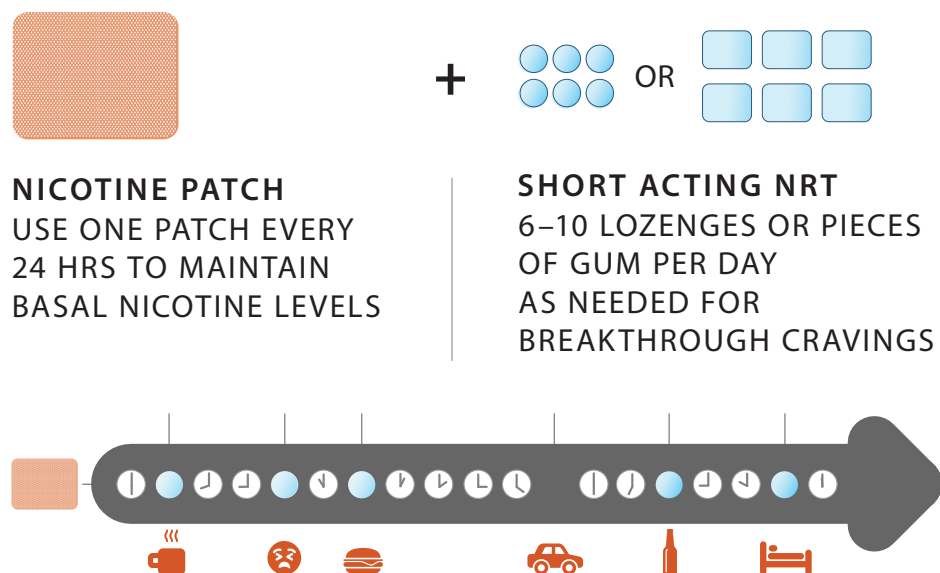
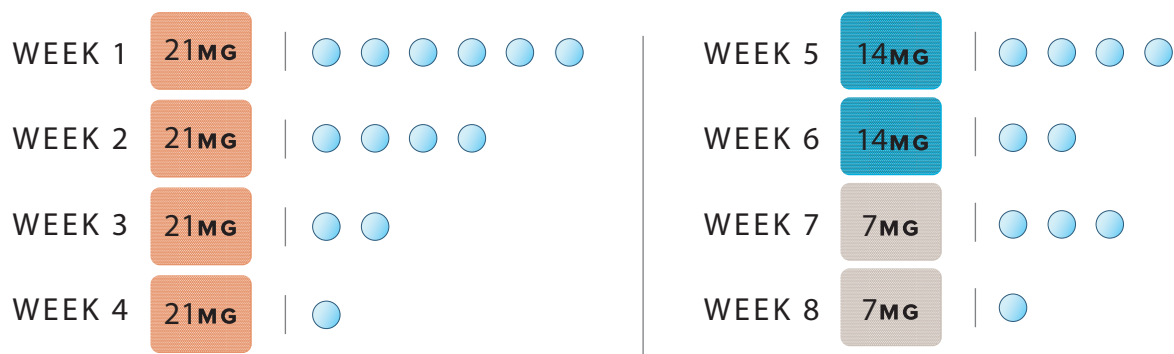


Figure 15. Start on Target Quit Day



Advise the Veteran to use the nicotine gum or lozenge when they have a craving for tobacco and to use before a situation where they may have a craving, like meeting with friends with whom they used to smoke. Once they have been using the combination for a few weeks, recommend starting other substitutes for tobacco like using sugar-free gum or mints, chewing on straws, or eating vegetables instead of the nicotine lozenge or gum. Explain that the goal is to eventually taper off the nicotine lozenge or gum.

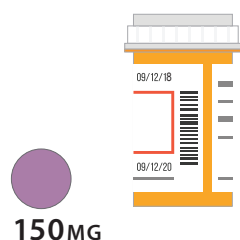
Figure 16. Example Taper Schedule Using Nicotine Patch and Nicotine Lozenge Starting at Six Lozenges per Day



The nicotine patch dose is ready to reduce to the lower step when the need for the lozenge is reduced to one or two lozenges per day. Reduce the dosage over the next two to six months.

Tapering may be extended past six months, particularly for patients with high nicotine dependence or trouble reducing dose of NRT.

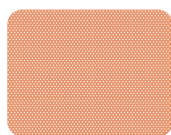
Figure 17. Combination Bupropion/NRT^{50,51}



SEVEN TO 14 DAYS BEFORE QUIT DAY

Start bupropion at 150mg SR once daily for three days then increase to 150mg SR twice daily.

NRT is not started until quit day.



OR



QUIT DAY

Start NRT:
Nicotine patch, gum or lozenge;*

Continue bupropion 150mg SR twice daily.



WHEN TO STOP

Continue bupropion for eight to 12 weeks and can consider longer.**

Stop nicotine patch at the same time as bupropion. If using nicotine lozenge or gum, then taper using the same schedule as combination NRT.

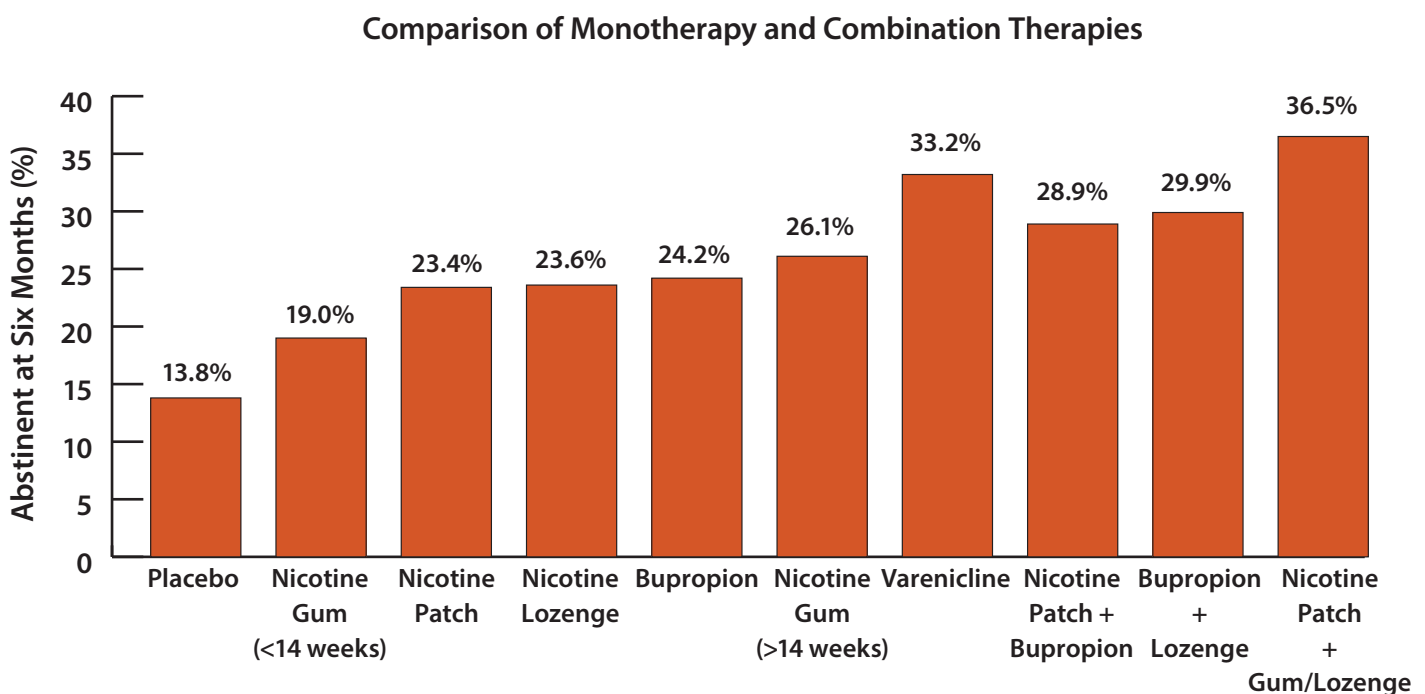
*Only use one form of NRT when used in combination therapy with bupropion. Current evidence does not show that using multiple forms of NRT with bupropion is more effective. Nicotine lozenge or nicotine gum in combination with bupropion may be more effective than nicotine patch in combination with bupropion, based on current clinical evidence. **Bupropion may help with depressive symptoms, so some patients may benefit from longer term use.

Varenicline

Table 2. Varenicline is Recommended Second Line for Tobacco Cessation.⁵⁵

Indicated for Veterans who have Experienced One or More of the Following:
<ul style="list-style-type: none"> • Previous trial of one of the following: <ul style="list-style-type: none"> • Nicotine replacement therapy • Bupropion • Combination NRT or Combination NRT/bupropion • Previous successful quit attempt using varenicline but now relapsed; • Difficulty tolerating NRT or bupropion or contraindication to these medications.
Avoid Prescribing to Veterans who have had:
<ul style="list-style-type: none"> • History of serious hypersensitivity or skin reactions to varenicline; • Suicidal plan or attempt within the past 12 months or current substance use disorder other than nicotine, unless varenicline is recommended or prescribed by a mental health provider; • Unstable mental health disorder (e.g., actively experiencing symptoms of psychosis).

Figure 18. Combination Therapy is Significantly More Effective Than Monotherapy NRT or Bupropion and Comparable to Varenicline^{12,46–55}



Meta-analysis of many abstinence trials shows combination NRT, combination bupropion/NRT and varenicline monotherapy result in the highest rates of abstinence at six months.

Offer combination NRT or combination bupropion/NRT as the first-line treatment options to patients wanting to quit. Varenicline can be considered as a second-line treatment option.

Special Populations

Women

When working with women who use tobacco, different tobacco cessation approaches may need to be considered. Women smokers have higher relapse rates compared to men.⁵⁶ Women may smoke more in social settings and are more concerned about weight gain. These concerns are common reasons for relapse.

Figure 19. Female Veterans Have a Higher Rate of Smoking Than Females Who Are Not Veterans and at Age of 35 Years and Older, the Rates Start to Surpass Male Veterans and Nonveterans.⁵⁷

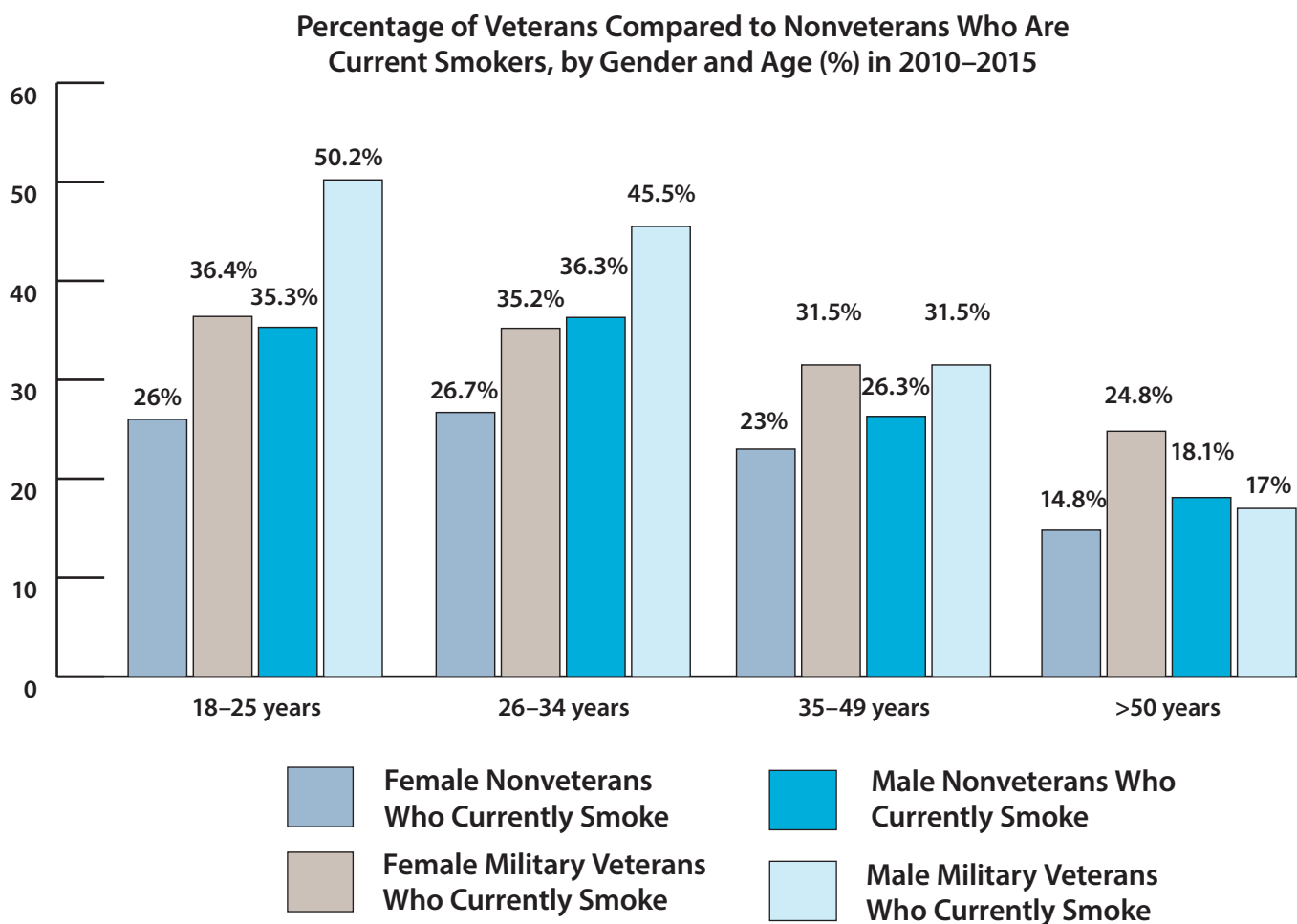
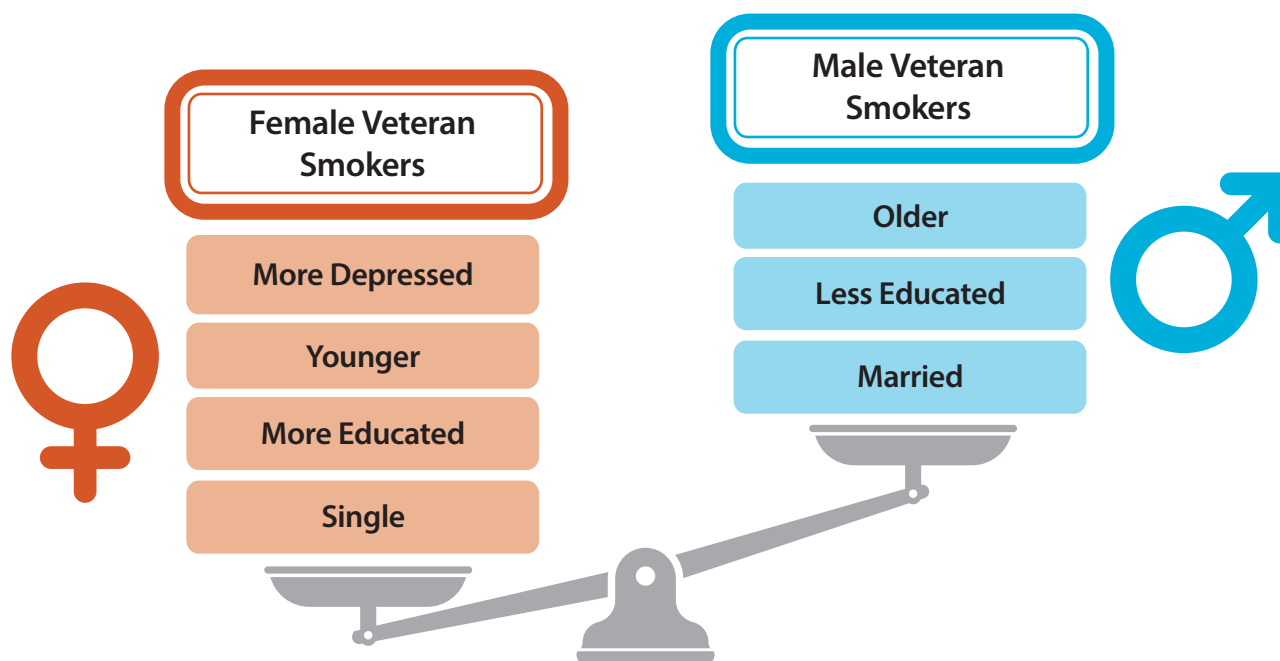


Figure 20. Comparing Female Veteran Smokers to Male Veteran Smokers^{56–59}



In addition to social and economic factors, women and men differ in how their bodies process nicotine. Metabolic differences can result in treatments that are not as effective.

Women may metabolize nicotine at a faster rate than men.^{60,61}

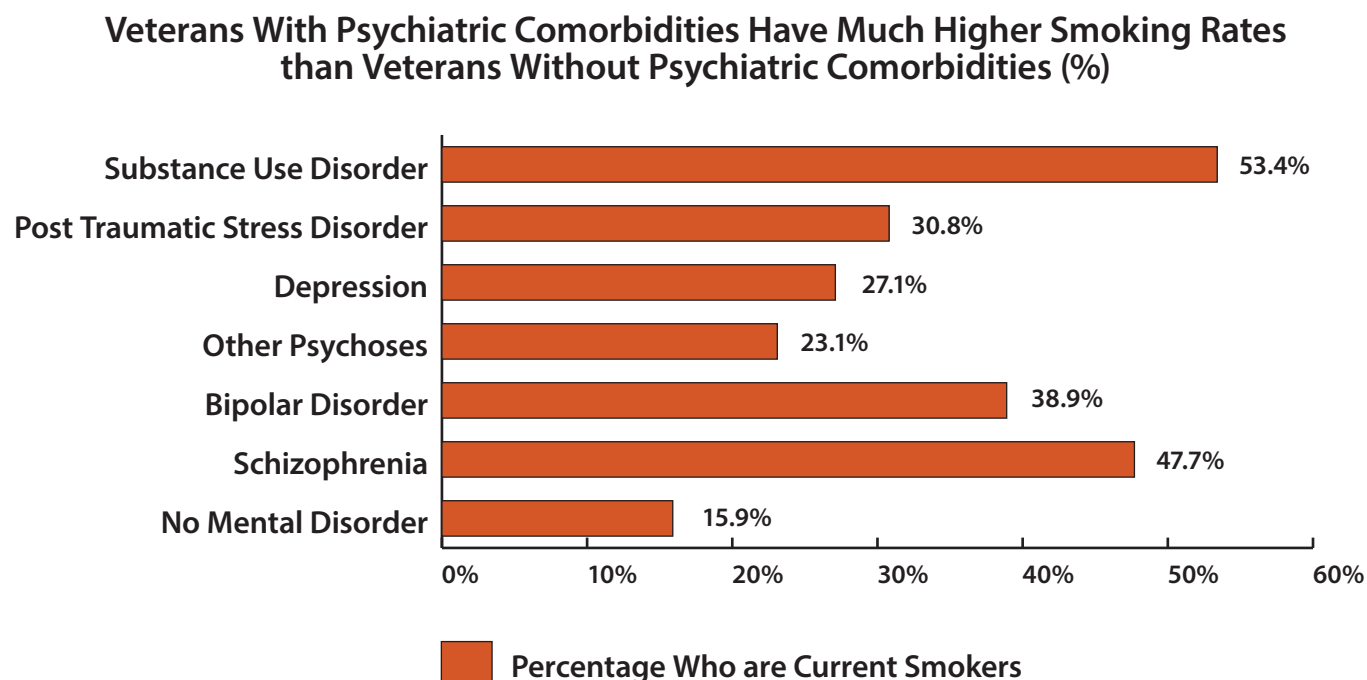
- Estrogen induces liver enzyme, Cytochrome P 450 (CYP)2D6.⁶⁰
- Nicotine is metabolized by CYP2D6.
- Induction of CYP2D6 results in faster metabolism of nicotine in women.
 - Nicotine replacement therapies may be less effective in women particularly when monotherapy is used.^{62,63} Combination therapy should be used.

Varenicline and bupropion do not appear to have differences in efficacy based on gender.^{62–66}

Mental Health Populations

Smoking rates are significantly higher in mental health populations compared to populations without mental health comorbidities. Tobacco use is a significant risk factor for death in Veterans with mental health conditions.

Figure 21. Smoking Rate by Psychiatric History in VA⁶⁷



Adults with Mental Illness or Substance Use Disorder Account for 40% of All Cigarettes Smoked.⁶⁸



Table 3. Tobacco Use is a Significant Risk Factor for Death in Veterans with Mental Illness^{69–75}

Tobacco Users with Mental Illness:
Die several years earlier, on average, than individuals without mental illness. Most deaths are due to smoking-related disease.
Have a greater risk of dying from cardiovascular disease, respiratory illnesses, and cancer than those without mental illness.
Half of the mortality for people with schizophrenia, bipolar disorder, and depression is from tobacco-related diseases.
Tobacco use predicts future suicidal behavior in Veterans, independent of age, gender, psychiatric disorder, service connection and severity of medical comorbidities.

Providers may question whether their patients with mental health illnesses want to quit tobacco. There is also a concern by providers about whether stopping tobacco may worsen psychiatric conditions.

Figure 22. Readiness to Quit in Patients with Psychiatric Disorders⁷⁶

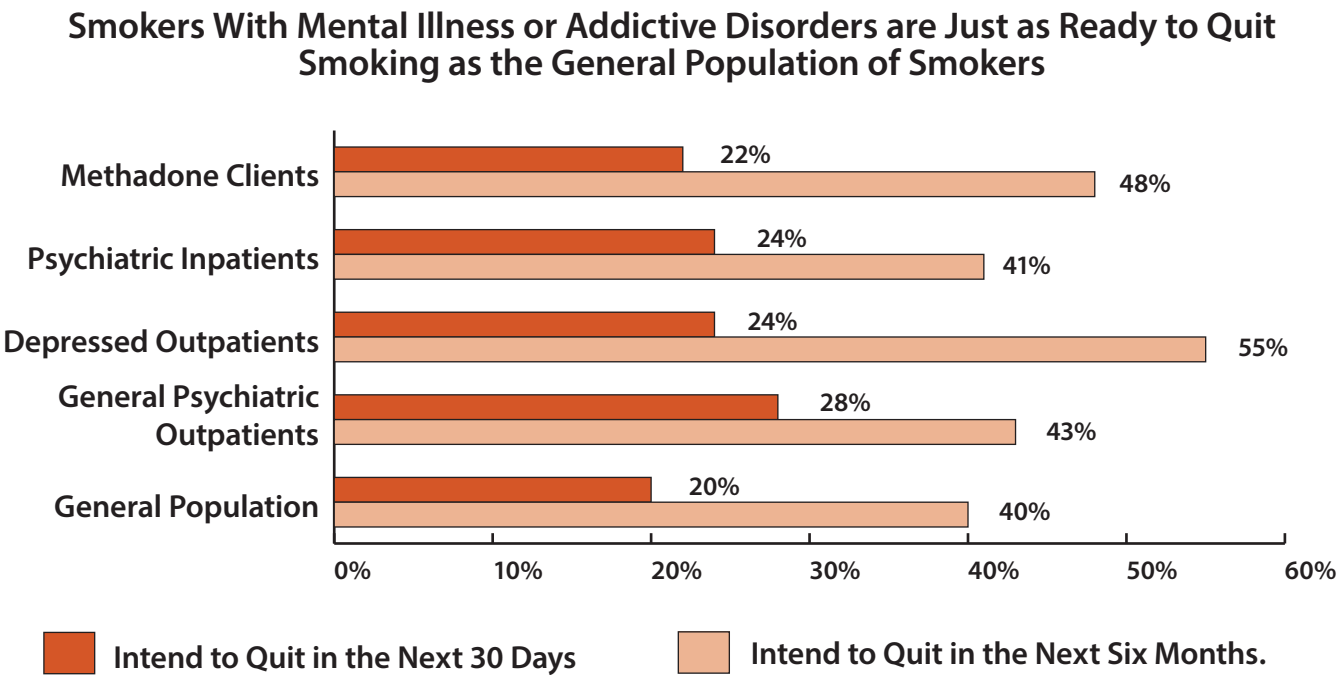


Table 4. Why Should Veterans with Schizophrenia Quit Tobacco?^{73,77–81}

Patients with Schizophrenia who Smoke:
Have higher rates of hospitalization, higher medication doses and more severe psychiatric symptoms.
Have worse cognitive functioning and poorer functional outcomes than past or never smokers.
Spend almost 30% of their income on cigarettes.
Are 3.5 times more likely to die from tobacco-related diseases than smokers in the general population.
Have the highest mortality rate from cardiovascular disease, and lung cancer is the leading cause of cancer death in this population.

Recent studies are showing that mental health symptoms usually do not worsen following tobacco cessation, and quitting reduces symptoms of anxiety and depression.⁸²

Figure 23. Quitting Tobacco May Improve Mental Health Symptoms and Ultimately Improve Psychological Quality of Life.⁸¹

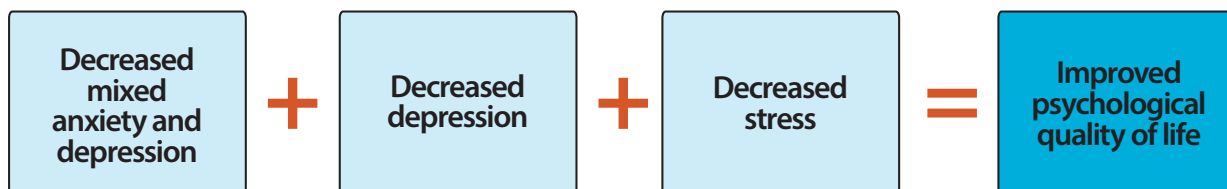


Table 5. Concerning Data for Smoking and Substance Use Disorder (SUD)^{68,77–81}

Smoking and SUD
Approximately two of every three individuals entering treatment for SUD also use tobacco.
Tobacco-related diseases account for 50% of deaths among individuals treated for alcohol use disorder.
Death rates are four times greater for cigarette smoking compared to non-smoking people with long-term drug use disorders.
Nicotine addiction and opioid addiction are mutually reinforcing ➡ Smoking cessation is associated with higher rates of stopping illicit opioids when medication assisted treatment (MAT) is used.

Should we encourage Veterans to quit smoking during SUD treatment? Historically, providers were cautious of quitting more than one addictive substance at the same time, due to concerns that this would reduce cessation rates of both substances. Research is disproving this assumption and showing that quitting tobacco products at the same time as other substances can increase long-term abstinence rates of both substances.

Figure 24. Smoking Cessation Interventions During SUD Treatment Increases Long-term Abstinence Rates of Drugs and Alcohol.⁸²

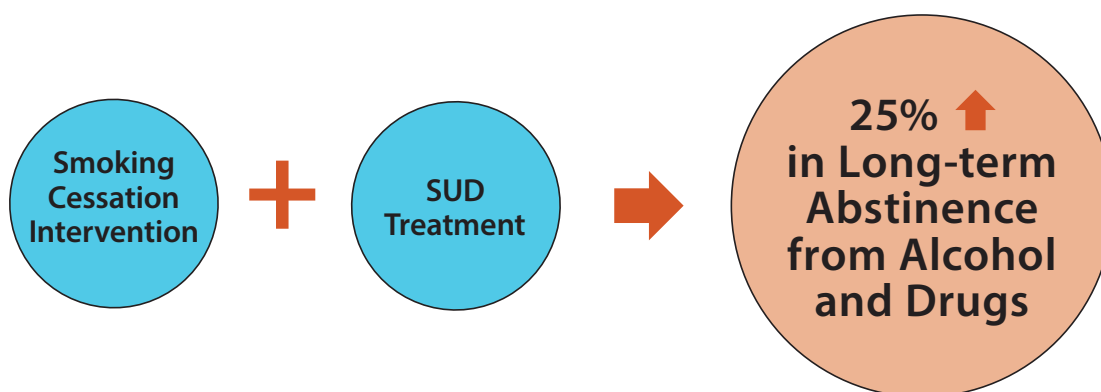


Table 6. Helping Veterans with Mental Illness and/or SUD Quit Tobacco^{68,83–88}

Considerations for Success
Evidence-based tobacco cessation treatments are effective for patients with and without mental illness and/or SUD.
Nicotine addiction may be more severe in patients with mental illness and/or SUD, so higher intensity treatments and interventions may be needed.
Veterans do not need to be free of mental health symptoms to quit tobacco.
Encourage Veterans with mental illness to use medications to quit tobacco. They will usually need combination treatment and sometimes higher doses and longer treatment duration.

People Living with HIV

Scope of the problem^{12,89–94}

- Over 40% of people living with HIV in the U.S. are smokers.
- Tobacco dependence is a chronic disorder that often requires repeated intervention and multiple attempts to quit.¹²
- Overall health consequences of smoking for those with HIV disease are more severe, including:
 - Greater probability of cardiovascular and pulmonary conditions;
 - Greater risk of AIDS and non-AIDS related illnesses;
 - Smoking increases the all-cause mortality of HIV-infected current smokers.

Benefits of smoking cessation in HIV-infected smokers^{12,90–94}

- Smoking cessation can reduce and prevent many smoking-related health problems.
- Smoking is the most clinically important modifiable cardiovascular risk factor for HIV-infected smokers.
- HIV-related symptoms decrease as early as three months after smoking cessation.
- Smoking cessation extends life expectancy and improves quality of life in people with HIV.

Figure 25. Addressing Concerns About Tobacco Use Cessation by Veterans with HIV

I am HIV-positive. My life is hard enough.	<ul style="list-style-type: none">• Smoking is even more dangerous for HIV-infected people.• It can be responsible for increasing the chances of AIDS-related infections and cancer.
Between all of my medications and feeling alone, smoking is the high point of my day.	<ul style="list-style-type: none">• Smoking can prevent your HIV medications from working as well to fight your HIV-infection.• Smoking can further weaken your immune system.
I am going to die soon anyway, so why quit now?	<ul style="list-style-type: none">• With all of the new HIV treatments, HIV-infected people now can live as long as HIV-negative people.• You are jeopardizing your health and long life by smoking cigarettes.

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Offer behavioral counseling and cessation medications to Veterans with mental health disorders, substance use disorders, and HIV who are interested in quitting.

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These are general recommendations only. The treating provider should make clinical decisions based on an individual patient's clinical condition.

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