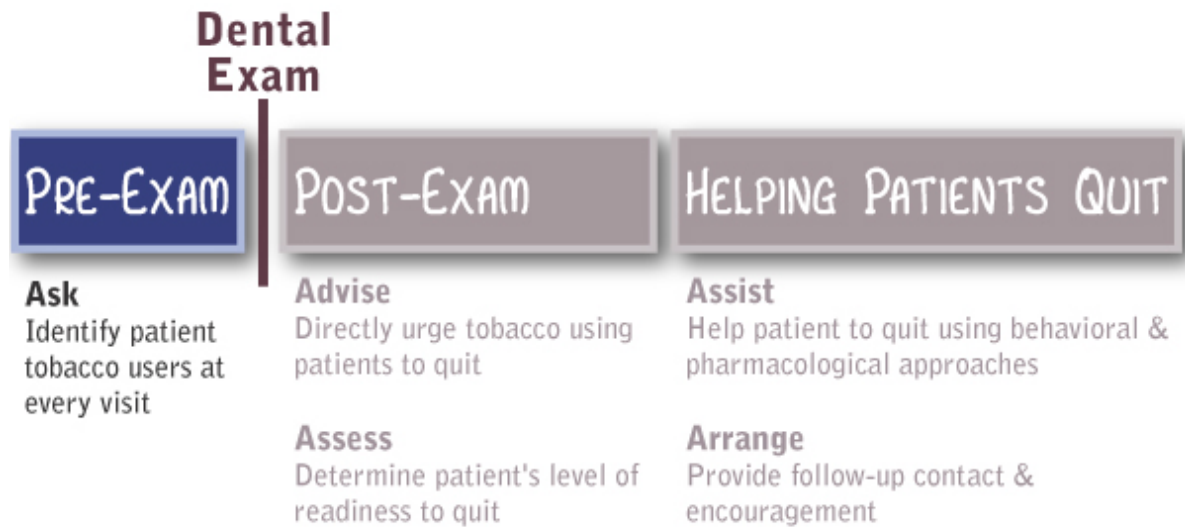


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Pre-Exam



After completing this section you will be able to:

- Make asking about your patients' tobacco use a routine part of care
- Include an assessment of your patients' tobacco use at every visit

Asking is the First Step

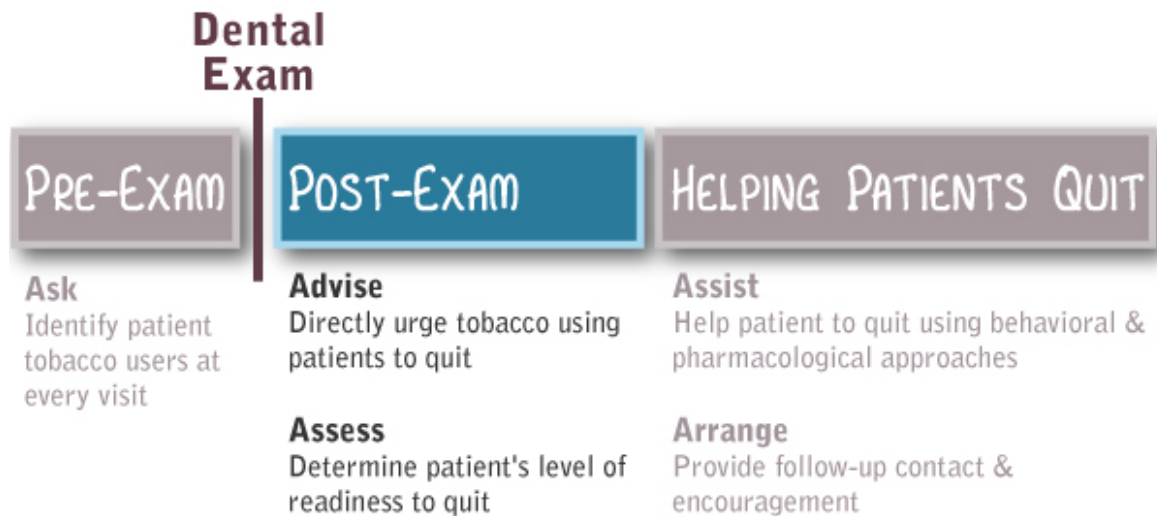
The first step in addressing tobacco use is to ask your patients if they smoke. In an ideal world every health history form would include a "tobacco user" question, but no matter whether it is included or not, it is important to ask each patient at every visit about his or her smoking habits.

You can do this during your review of the patient's health history form - make asking a part of your routine.

Always have a "tobacco moment."

For 2 examples: Watch the videos in the "Pre-Exam" section of the website

Post-Exam



After completing this section you will be able to:

1. Identify tobacco-related oral pathology in your patients
2. Explain and show tobacco-related oral health findings to your patients
3. Give direct advice about quitting to your patients
4. Understand the processes of addiction and behavioral change
5. Use a simple quitting scale to obtain your patients' self-reported level of readiness to quit
6. Use standard follow-up questions to further assess your patients' readiness to quit

Advise

You have completed the oral exam and now it is time to advise your patient to stop smoking. Advise means giving a strong, clear personalized message to quit.

Giving direct advice to quit and relating that advice to any oral findings can be a powerful tool in moving patients closer to deciding to quit. Patients often hear about the harmful effects of smoking, but as a dental professional you are in a unique position – often you can actually show the patient what smoking is doing to their body ... right now. The immediacy of this kind of feedback can have a significant impact on your patients.

Assessing a Patient's Readiness to Quit

Assess readiness at each appointment

In order to focus your efforts on patients who are ready to make a change you will want to assess their readiness to quit at each appointment. Change does not progress in a straight line, people may seem disinterested about quitting, but may report a quit attempt at their next visit. Or people may take action to quit, be unsuccessful and become discouraged. Regular assessment at each visit is important.

0 to 10 quitting scale

The 0 to 10 quitting scale provides some insight to your patients' feelings about quitting and it also provides you with the opportunity to continue your tobacco cessation conversation by asking some follow-up questions. The goal is to engage your patients in talking and thinking about quitting and gradually moving them from the lower part of the 0 to 10 scale to the upper part.

As you become more comfortable talking to your patients about their smoking you also will become more comfortable asking your follow-up questions. However, until you reach that level of comfort you might find it useful to follow these "rule of thumb" guidelines.

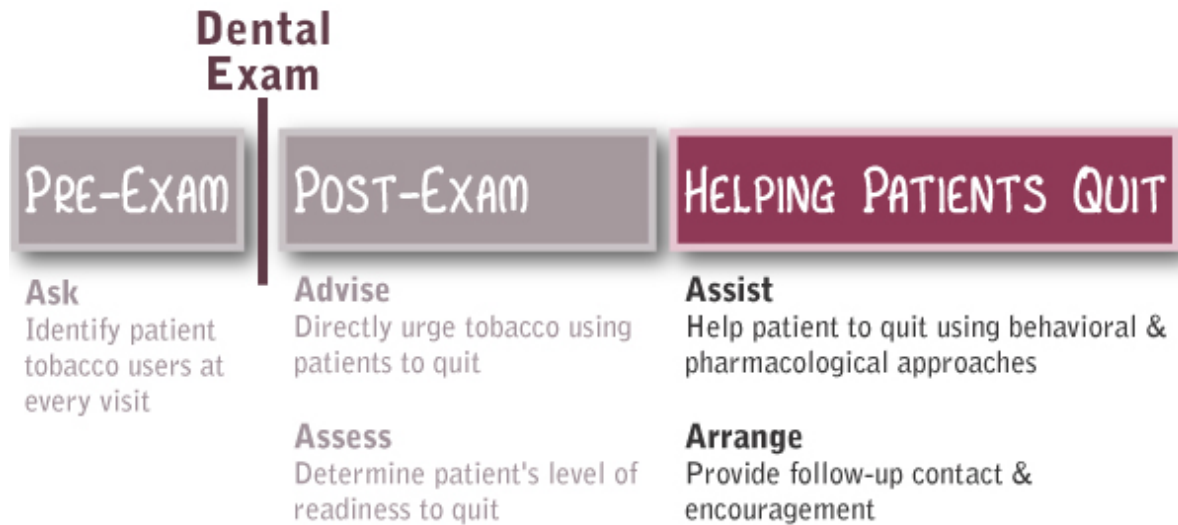
Remember, these are not firm guidelines they are designed solely to help you with your tobacco conversation until it becomes routine for you.



Before the next section, complete *Post-Exam*:

- Look at the images on *Pathology*
- Complete the *Just a Conversation* section
- Complete the 4 exercises on post-exam advising and assessing a patient
- Watch the 2 videos in the *Assess Examples* section

Helping Patients Quit



After completing this section you will be able to:

1. Determine which medication or combination of medications is appropriate to help a patient to successfully quit using tobacco.
2. Name and classify the first and second line tobacco cessation pharmacotherapeutics currently available.
3. Obtain expertise writing prescriptions for over the counter and prescription tobacco cessation pharmacotherapeutic regimens.
4. Become familiar with tobacco cessation materials that are available from health departments, professional organizations and the United States Public Health Service to assist patients in their quit attempt.
5. Learn how to refer patients to local and online tobacco cessation resources.

Introduction to Assisting the Patient

A healthcare provider's assistance is critical

When a smoker makes the decision to quit smoking, the assistance of a healthcare provider can be a critical aid to his or her success. Assisting patients in quitting smoking can be done as part of a brief treatment or as part of an intensive treatment program. Studies have shown that when clinicians provide advice and brief assistance, patients are twice as likely to quit smoking compared to quitting on their own. In addition, the use of cessation medication can double the effect of the clinician's advice.

Help create a quit plan

Assisting the patient in the dental office begins with helping the patient with a quit plan and the setting of a quit date. This ideally should be within 2 weeks. Brief counseling and support in the dental office includes the following steps:

1. Provide practical counseling.

- Recognize danger situations: Identify events, internal states, or activities that increase the risk of smoking or relapse
- Develop coping skills: Identify and practice coping or problem solving skills; typically, these skills are intended to cope with danger situations
- Provide basic information: Provide basic information about smoking and successful quitting

2. Provide intra-treatment social support.

- Encourage the patient in the quit attempt
- Communicate caring and concern
- Encourage the patient to talk about the quitting process

3. Recommend the use of approved pharmacotherapy, except in special circumstances.

4. Provide supplementary written materials.

Practical counseling

In the office setting, the clinician assists the patient with the recognition of danger situations for smoking, the development of coping skills, and provides practical information on smoking and successful quitting.

<p>1. Recognize danger situations Identify events, internal states, or activities that increase the risk of smoking or relapse.</p>	<p>Examples:</p> <ul style="list-style-type: none"> • Negative affect • Being around other smokers • Drinking alcohol • Experiencing urges • Being under time pressure
<p>2. Develop coping skills Identify and practice coping or problem solving skills. Typically, these skills are intended to cope with danger situations.</p>	<p>Examples:</p> <ul style="list-style-type: none"> • Anticipate and avoid temptation • Learn cognitive strategies that reduce negative moods • Accomplish lifestyle changes that reduce stress, improve quality of life, or produce pleasure • Learn cognitive and behavioral activities to cope with smoking urges (e.g., distracting attention)
<p>3. Provide basic information Provide basic information about smoking and successful quitting.</p>	<p>Examples:</p> <ul style="list-style-type: none"> • Any smoking (even a single puff) increases the likelihood of full relapse • Withdrawal typically peaks within 1-3 weeks after quitting • Withdrawal symptoms include negative mood, urges to smoke, and difficulty concentrating • Addictive nature of smoking

Intra-treatment social support

Common elements of intra-treatment social support

There are 3 supportive treatment components:

1. Encourage the patient in the quit attempt	Examples: <ul style="list-style-type: none"> • Note that effective tobacco dependence treatments are now available • Note that one-half of all people who have ever smoked have now quit • Communicate belief in patient's ability to quit
2. Communicate caring and concern	Examples: <ul style="list-style-type: none"> • Ask how the patient feels about quitting • Directly express concern and willingness to help • Be open to the patient's expression of fears of quitting, difficulties experienced, and ambivalent feelings
3. Encourage the patient to talk about the quitting process	Ask about: <ul style="list-style-type: none"> • Reasons the patient wants to quit • Concerns or worries about quitting • Success the patient has achieved • Difficulties encountered while quitting

Pharmacotherapeutics for Tobacco Cessation

Introduction

This section will provide you with information about the various smoking cessation therapies that are available and also will help you become more comfortable in discussing these therapies with your patients.

We begin with an overview of the seven primary therapies available. Five of these are nicotine replacement therapies, and include the nicotine patch, gum, lozenge, as well as nasal spray and inhaler. Bupropion and varenicline are therapies that use alternative non-nicotine replacement mechanisms to aid the patient in quitting. Which therapy you prescribe will depend on careful evaluation and discussion with your patient.

Nicotine Physiology

What is nicotine?

Nicotine is an alkaloid, one of a group of organic chemicals found in plants.

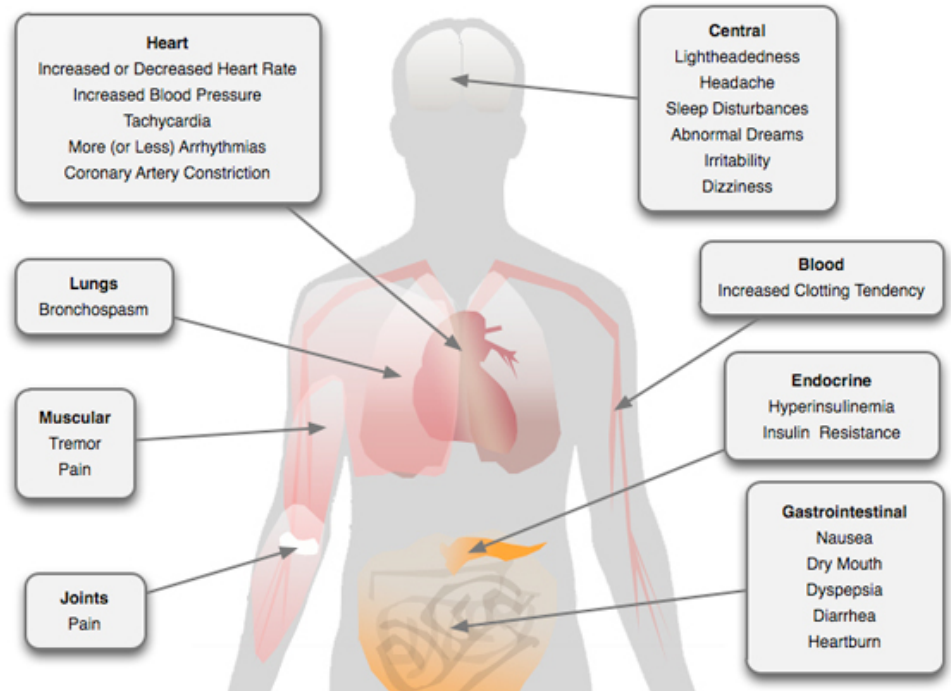
It is distributed quickly through the bloodstream and can cross the blood-brain barrier. It takes a few seconds for nicotine to reach the brain when inhaled. The half-life of nicotine in the body is around two hours. Nicotine is metabolized in the liver by cytochrome P450 enzymes.

Cotinine is a byproduct of the metabolism of nicotine, which remains in the blood for up to 48 hours. Saliva, urine or blood tests are available that measure cotinine levels and can be used as an indicator of a person's exposure to nicotine.

How does nicotine work?

Nicotine interacts with nicotinic acetylcholine receptors within the brain, and body organs including the heart and in the adrenal glands. Nicotine alters the sensitivity of the cholinergic receptors. Cholinergic receptors are involved in respiration, heart rate and muscle contraction. Nicotine increases the levels of several neurotransmitters including dopamine. Increased levels of dopamine are responsible for the euphoria and relaxation and eventual addiction caused by nicotine consumption. Nicotine affects the sympathetic nervous system via splanchnic nerves within the adrenal medulla, stimulating the release of epinephrine into the bloodstream. The release of epinephrine increases the heart rate, blood pressure and respiration, and raises blood glucose levels. Nicotine alters mood by acting both as a stimulant and a relaxant. Smokers experience reduced appetites and a raised metabolism, and often lose weight as a consequence.

SIDE EFFECTS OF NICOTINE



Nicotine affects the sympathetic nervous system via splanchnic nerves within the adrenal medulla, stimulating the release of epinephrine into the bloodstream. The release of epinephrine increases the heart rate, blood pressure and respiration, and raises blood glucose levels.

Nicotine alters mood by acting both as a stimulant and a relaxant. Smokers experience reduced appetites and a raised metabolism, and often lose weight as a consequence.

Mechanism of action: nicotine replacement therapy

Nicotine absorbed from NRTs leads to a reduction in nicotine withdrawal symptoms in tobacco users who abstain from smoking. NRT does not eliminate the symptoms of withdrawal, because none of the NRT delivery systems are able to reproduce the rapid and high levels of arterial nicotine obtained from inhalation of cigarette smoke.

In seconds:

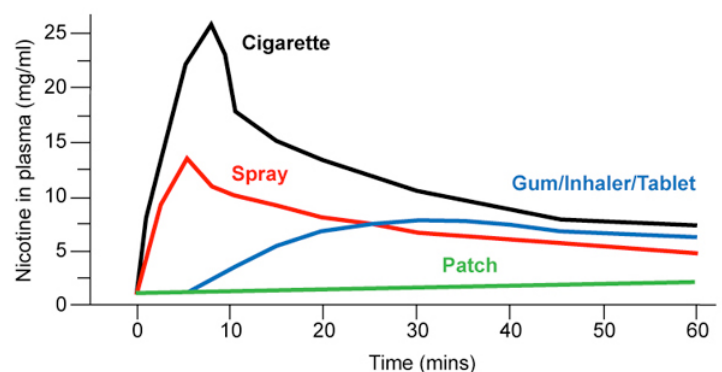
Nicotine is absorbed into the arterial bloodstream via inhalation to the lungs of tobacco smoke from cigarettes, cigars or pipe smoke.

In minutes:

Nicotine is also absorbed via the venous bloodstream through the buccal mucosa. This is the mechanism of absorption for nicotine gum, inhaler, and lozenge. Nicotine is absorbed through the nasal mucosa with spray. The uptake of nicotine through the nasal mucosa is more rapid than through the buccal mucosa.

In hours:

With the Nicotine patch nicotine is absorbed transcutaneously via the venous bloodstream. A skin patch uses a membrane to control the rate at which the drug contained in the reservoir within the patch can pass through the skin and into the bloodstream.



Sources: Benowitz, N. L., Chan, K., Denaro, C. P., & Jacob, P. (1991).

Stable isotope method for studying transdermal drug absorption: The nicotine patch. *Clinical Pharmacology and Therapeutics*, 50, 286-293, and Benowitz, N. L., Porchet, H., Sheiner, L., & Jacob, P. (1988). Nicotine absorption and cardiovascular effects with smokeless tobacco use: Comparison with cigarettes and nicotine gum. *Clinical Pharmacology and Therapeutics*, 44, 23-28

Nicotine overdose symptoms

- nausea
- fainting
- vomiting
- dizziness
- diarrhea
- weakness
- rapid heartbeat

If any of these symptoms occur the patient should discontinue and call your office or their physician.

Selecting a regimen

There is no simple answer. To select an appropriate regimen for your patient follow these steps:

- 1. Assess your patient's health history**
- 2. Assess contraindications**
- 3. Prescribe**
- 4. Tweak if your recommendation is not initially successful**

Your assessment of your patient will help you to decide which medications or combination of medications would work best. This assessment should include:

- Current smoking history
- Past smoking history
- Number of prior quit attempts
- The stage of change of the tobacco user
- Prior use of NRT or non-NRT smoking cessation products
- Medical history
- Dental history
- Medication list

A successful quit attempt would be an indication that you selected the correct therapy for your patient. Don't take a failed quit attempt to mean a treatment failure. Most smokers are not successful in quitting tobacco on their first attempt. It can take multiple attempts to successfully quit.

Use the knowledge that you gained from the failed attempt to "tweak" the regimen you chose or to select a different approach. Nicotine Replacement Therapies (NRTs), bupropion (Zyban) and varenicline (Chantix) are all safe and effective when used correctly.

The selection of the appropriate medication is dependent on several factors including the patient's health, tobacco history and level of addiction.

About Prescriptions

Nicotine inhaler and spray, varenicline, and bupropion are prescription medications. Over the counter (OTC) medications such as nicotine patch, gum and lozenge do not require that you issue a written prescription to the patient. Many State Medicaid programs including New York and New Jersey's cover OTCs, but require that a written prescription be presented to the pharmacy in order to receive the medication. If you know your patient is covered by Medicaid, complete an Rx for him or her. However, we recommend you complete a prescription for all patients requiring OTC NRTs. To prescribe an OTC medication, write a conventional script and instruct the patient to bring the script to the pharmacist. The OTC will be provided to the patient and billed to the Medicaid program.

Coverage by private insurance carriers for prescription pharmacotherapeutics is provided through a prescription drug plan that is frequently attached to a medical insurance product. Your patients should check with their medical / pharmaceutical plan to see if they have coverage for prescription tobacco cessation products.

Coverage for tobacco cessation pharmacotherapeutics is an area where many State Medicaid programs provide more comprehensive coverage than traditional private insurance programs.

Writing a Prescription

When you write a prescription provide your patient with a one-month supply of medication and two refills to enable him or her to obtain sufficient medication for a three-month period. If you have provided a patient with a pharmacotherapeutic regimen for tobacco cessation, you should arrange for follow up with the patient during routine treatment visits or at an established recall visit within the dental office.

How to write a prescription:

OFFICIAL NEW YORK STATE PRESCRIPTION

JOHN DOE, DDS
0000 BROADWAY
NEW YORK, NY 00000
555 (555)-5555
LIC. 000000

PRACTITIONER DEA NUMBER

--	--	--	--	--	--	--	--	--	--

Patient Name _____ Date _____

Address _____

City _____ State _____ Zip _____ Age _____ Sex

M	F
---	---

R_x

1. The name and strength of the prescribed drug
2. Disp: The quantity and type (tablet, lozenge, spray, patch, inhaler, gum) of the prescribed drug dispensed
3. Sig: Directions for use (include quantity per day and time period for use)

--

Prescriber Signature **X** _____

MAXIMUM DAILY DOSE
(controlled substances only)

THIS PRESCRIPTION WILL BE FILLED GENERICALLY UNLESS PRESCRIBER WRITES 'daw' IN BOX BELOW

REFILLS

☐ None

Refills: _____

--

PHARMACIST
TEST AREA:

Dispense As Written

Quiz:

Take the quiz in *Helping Patients Quit* then read pages 14-29 in the Course Guide

About NRTs

Goal of NRTs

The purpose of nicotine replacement therapy is to safely replace an individual's daily nicotine intake that was obtained from tobacco use. A successful tobacco cessation effort should adequately replace all the nicotine that is lost when a patient quits smoking.

How do NRTs work?

NRTs work by temporarily reducing symptoms of nicotine withdrawal after quitting smoking. They are very safe when used as directed - there is little risk of your patient becoming dependent. With NRTs, blood concentrations of nicotine peak more slowly, reaching much lower levels when compared to smoking. Your patient will not experience a nicotine "rush," but he or she also won't experience the painful cravings and withdrawal symptoms associated with quitting. NRTs help to take the edge off cigarette cravings without providing the tars and poisonous gases found in cigarettes.

NRT dosage

About 1 mg of nicotine is absorbed per cigarette; hence, a 1-pack per day (PPD) smoker requires replacement of approximately 20 mg of nicotine per day.

The 5 Types of NRTs

Available over-the-counter (OTC): <ul style="list-style-type: none"> • Patch • Gum • Lozenge 	Prescription only: <ul style="list-style-type: none"> • Nasal Spray • Inhaler
--	--

Patients may prefer an NRT that offers self-administered dosing such as the gum, lozenge, or inhaler since these options meet oral gratification needs, and provide alternatives for patients at high risk for transdermal-related skin irritation. On the other hand, because the nicotine patch is worn continuously, it lessens chances of suffering from several of the major smoking withdrawal symptoms such as tenseness, irritability, drowsiness, and lack of concentration. Finally, the nasal spray may be a good choice for smokers who are highly dependent, because it reduces nicotine cravings within several minutes of dosing, and unlike the patch, allows the user to self-dose as necessary. You should be aware, however, that the dependency potential is greater with the nicotine nasal spray than with other NRTs.

NRTs

In the dental office the NRTs are typically used as "front line" pharmacotherapeutic aides. Nicotine patch, gum and lozenge are available over the counter and are easily obtained by patients.

NRT Side Effects

Precautions for all NRTs

- Do not use in patients with serious arrhythmias, or with severe or worsening angina
- Discontinue if tachycardia or palpitations occur
- Do not use during immediate post-myocardial infarction period

Use with caution in patients with:

- Coronary heart disease
- Vasospastic diseases
- Hyperthyroidism
- Pheochromocytoma
- Insulin dependent diabetes
- Active peptic ulcer disease
- Accelerated hypertension
- Bronchospastic disease

Additional side effects specific to the individual products are presented in the description of each medication.

Patch

The nicotine patch is a skin patch that uses a membrane to control the rate at which the drug contained in the reservoir within the patch can pass through the skin and into the bloodstream.



How does it work?	The nicotine patch works by slowly releasing a constant amount of nicotine into the body through the skin and into the blood while the patch is worn.
Precautions	Do not use in patients with known allergy to adhesives
Concentrations available	<ul style="list-style-type: none"> • 21 mg (patients who smoke 10 or more cigarettes a day) • 14 mg (patients who smoke less than 10 cigarettes a day) • 7 mg (for tapering only)

How to use it

It is recommended that one patch be worn for 16-24 hours. If your patient craves cigarettes when they wake up in the morning, they should wear the patch for 24 hours. Otherwise, it is okay to take it off at bedtime and apply a fresh patch first thing in the morning. In addition, if your patient is having vivid dreams or other sleep disturbances, you may recommend they remove the patch at bedtime and apply a new patch the following morning.

The patch should be applied at approximately the same time each day.

Even if the urge to smoke is gone before the end of the prescribed regimen, completing the full step down program is important. The step down treatment period allows a gradual reduction in the amount of nicotine the patient is receiving, rather than a sudden stop, and will increase the chances of quitting successfully.

For the 21 mg patch taper as follows:

- Use the 21 mg patch for 6 weeks
- Step down to the next size patch, 14 mg, for 2 weeks
- Follow by 2 weeks of 7 mg patch

For the 14 mg patch taper as follows:

- Use the 14 mg patch for 6 weeks
- Step down to the 7 mg patch for 2 weeks

Things to remember when prescribing it:	
Nicotine patches generally stick well to most people's skin	<ul style="list-style-type: none"> • Place it on a non-hairy, non-irritated area of skin that is clean and dry • Don't worry if the patch falls off, just replace it • Some soaps, body creams, lotions, and sunscreens can also cause problems
Helpful tips to get the patch to stick	<ul style="list-style-type: none"> • Clean the area of skin with rubbing alcohol first • If the problem is persistent, use medical adhesive tape over the patch
Water won't harm the nicotine patch	<ul style="list-style-type: none"> • Patients can bathe, shower, swim or use a hot tub for short periods while wearing the patch • The patch should be removed two hours prior to prolonged, strenuous exercise, as this may increase nicotine absorption through the skin

Smoking while using NRTs is not recommended because there is a risk of getting too much nicotine and experiencing an overdose. Your patient should call your office or his or her physician if he or she develops symptoms of nicotine overdose: cold sweats, fainting, confusion, or pounding heart.

Side effects

The most common side effects while wearing the patch are:

- Skin irritation or discoloration
- Vivid dreams or other sleep disturbances

Gum

Nicotine is bound to an ion exchange resin and is added to a gum base.



How does it work?	The nicotine from the gum is steadily released and then is absorbed via the blood vessels in the oral buccal mucosa. Some of the nicotine also goes into the saliva, is swallowed, and absorbed through the gastrointestinal tract.
Precautions	Do not use in patients with poor dentition or complex fixed or removable dental prostheses
Concentrations available	<ul style="list-style-type: none"> • 2 mg (use for < 10 cig/24hr) • 4 mg (use for ≥ 10 cig/24hr)

1 piece of gum = 1 dose

The dosage your patient will need is determined by how much he or she smokes. The 4 mg dose is suggested for most patients (even those smoking less than 10 cigarettes a day). Patient compliance with chewing (20- 30 minutes per piece) and frequency of use are hard to follow for the 2 mg dose. Patients should not exceed 24 pieces of gum each day. For example, a 9 cigarette a day smoker would need to replace 9 mg of nicotine. The recommended 2 mg dose would provide 1 mg of nicotine if chewed for 30 minutes. This patient would need to chew for 4.5 hours per day to replace all the nicotine present in his/her cigarettes. This is difficult for most patients and the reason we suggest using the 4 mg nicotine gum.

1	Use 1 piece every 1-2 hours for the first 6 weeks or until the patient is comfortable with quit attempt
2	Use 1 piece every 2-4 hours for the next three weeks
3	Use 1 piece of gum every 4-8 hours for the next 3 weeks, until you gradually stop usage

- Take evenly spaced throughout the day to replace need for nicotine
- Decrease by one piece per day every few days

Things to remember when prescribing it

Nicotine gum is not designed to be chewed like normal gum.

"Park and chew" method

1. Insert a piece of gum into the mouth
2. Chew it a few times to break it down, until mouth "tingles"
3. Park it between the gum and cheek and leave it there

If the patient does not use the “park and chew” method and instead chews continuously without parking, the nicotine will be released directly into the saliva, be swallowed, and absorbed through the gastrointestinal tract resulting in severe nausea and tachycardia.

Advise your patient not to eat or drink for 15 minutes before or while using the gum because this can reduce the absorption of the nicotine.

Side effects

In first few days:

- mouth sores
- jaw muscle aches
- increased saliva production
- indigestion
- headache

These symptoms will subside with use.

Chewing the gum too fast can cause:

- lightheadedness
- dizziness
- hiccups
- nausea
- vomiting
- insomnia

If these effects occur, chew the gum more slowly.

Lozenge

Nicotine is bound to an ion exchange resin and is added to a sugar free hard sweet lozenge.



How does it work?	The nicotine from the lozenge is steadily released and then is absorbed via the blood vessels in the oral buccal mucosa. Some of the nicotine also goes into the saliva, is swallowed, and absorbed through the gastrointestinal tract.
Precautions	Patients with dry mouth or sicca syndrome may not be able to produce enough saliva to dissolve lozenge
Concentrations available	<ul style="list-style-type: none"> • 2 mg (use for < 10 cig/24hr) • 4 mg (use for ≥ 10 cig/24hr)

How to use it

The dosage your patient will need is determined by how much they smoke.

1 lozenge= 1 dose

The 4 mg dose is suggested for most patients (even those smoking less than 10 cigarettes a day). Patient compliance with using (20- 30 minutes per piece) and frequency of use are hard to follow for the 2 mg dose. Patients should not exceed 24 lozenges each day. For example, a 9 cigarette a day smoker would need to replace 9 mg of nicotine. The recommended 2 mg dose would provide 1 mg of nicotine if used for 30 minutes. This patient would need to use lozenges for 4.5 hours per day to replace all the nicotine present in his/her cigarettes. This is difficult for most patients and the reason we suggest using the 4 mg nicotine lozenge.

1	Use 1 lozenge every 1-2 hours for the first 6 weeks or until the patient is comfortable with quit attempt
2	Use 1 lozenge every 2-4 hours for the next three weeks
3	Use 1 lozenge every 4-8 hours for the next 3 weeks, until you gradually stop usage

- Take evenly spaced throughout the day to replace need for nicotine

Things to remember when prescribing it

Allow to slowly dissolve. The nicotine lozenge is not designed to be chewed.

To use the lozenge correctly:

1. Insert lozenge into the mouth
2. Allow it to slowly dissolve in the mouth while moving it from side to side
3. Do not chew

If the patient chews on the lozenge and does not allow it to dissolve slowly, the nicotine will be released directly into the saliva, be swallowed, and absorbed through the gastrointestinal tract resulting in severe nausea and tachycardia. Advise your patient not to eat or drink for 15 minutes before or while using the lozenge because this can reduce the absorption of the nicotine.

Have your patient contact you or their physician if they develop symptoms of too much nicotine in the body: cold sweats, fainting, confusion, or pounding heart.

Side effects

From incorrect use of the lozenge:

- Hiccups
- Cough

If chewed or swallowed:

- Indigestion
- Heartburn

These symptoms will subside with use.

Sucking too fast or chewing the lozenge can cause:

- Lightheadedness
- Dizziness
- Hiccups
- Nausea
- Vomiting
- Insomnia
- If these effects occur, suck on the lozenge more slowly

If these effects occur, chew the gum more slowly.

Nasal Spray

About

Nicotine nasal spray is aerosolized nicotine contained in a spray pump.



How does it work?	The nicotine is delivered to the user by spraying it into the nostrils, and is rapidly absorbed by the nasal membranes inside the nose. The spray device is similar to the type used for over-the-counter decongestant sprays. Because it is rapidly absorbed, nasal spray delivers the nicotine "hit" much more quickly than other NRTs. This feature makes it attractive to some highly dependent smokers.
Precautions	Do not use for patients with severe reactive airway disease because of potential to exacerbate bronchospasm
Concentrations available	<ul style="list-style-type: none"> • 10 mg spray bottle: contains 100 mg nicotine (10 mg/ml) in an inactive vehicle • 100 doses per bottle • Prescription only

How to use it

1 spray in each nostril = 1 dose = 1 mg nicotine

1	1-2 doses per hour for 8 weeks <ul style="list-style-type: none"> • <i>Maximum of 5 doses per hour, or 40 doses (80 sprays) per day for heavily addicted smokers who smoke a pack or more of cigarettes a day</i>
2	Initial therapy is for 3 months
3	Taper for 3-6 months; skip doses to taper

Things to remember when prescribing it

- Fast relief for heavy smokers
- Easy to adjust dose
- Dependency potential is greater with the nasal spray so advise your patient to communicate with you any feelings of excessive dependency on the spray
- Avoid food and acidic drinks such as coffee, tea, citrus juices, and sodas 15 minutes before and during use as they inhibit the uptake of nicotine
- Do not smoke while using this product

Because of these concerns the nasal spray may not be the most appropriate form of treatment for heavily addicted smokers. For these patients the nasal spray may be helpful as a supplemental source of nicotine when used in combination with another form of nicotine replacement therapy or when used in conjunction with a non-nicotine replacement therapy.

To use the nasal spray correctly:

1. Blow nose if it is not clear
2. Tilt head back slightly
3. Insert tip of bottle into nostril—as far as is comfortable
4. Breathe through mouth
5. Spray once in each nostril; do not sniff or inhale while spraying

If nose runs, gently sniff to keep the nasal spray in nose. Wait 2 or 3 minutes before blowing nose.

Side effects***The most common side effects from the nasal spray are:***

- Irritation of the nose and throat
- Teary eyes
- Sneezing
- Cough

These side effects are usually short-lived and are tolerated after the first week of use.

Inhaler

About

The nicotine inhaler consists of a plastic cylinder containing a cartridge that delivers nicotine when it is puffed through the mouth.



How does it work?	Although similar in appearance to a cigarette, the inhaler delivers nicotine into the mouth, not the lungs, and enters the body by absorption through the oral and pharyngeal mucosa. It enters the bloodstream much more slowly (several minutes) than the nicotine from cigarettes (several seconds).
Precautions	Patients with hypersensitivity or allergy to nicotine or menthol should not use this product
Concentrations available	<ul style="list-style-type: none"> • 10 mg nicotine = 1 cartridge NICOTROL Inhaler = 4 mg nicotine delivered • Each package includes a mouthpiece and 42 cartridges of nicotine • Prescription only

How to use it

The initial dosage is individualized.

1 cartridge delivers 80 puffs = 2 mg absorbed = 2 cigs
10 cartridges/24 hr = 1ppd

1. Take 40 puffs
2. Take an hour break
3. Take another 40 puffs

The manufacturer recommends 8-100 puffs for 20 minutes for optimal results, but many patients find such use unenjoyable or impractical. If nose runs, gently sniff to keep the nasal spray in nose. Wait 2 or 3 minutes before blowing nose.

Treatment takes place in two stages:

1	Up to 12 weeks The patient should use as many nicotine cartridges as needed (at least 6, but no more than 16 daily) to quell the craving for cigarettes.
2	6 – 12 weeks The patient should gradually reduce daily consumption until he or she is nicotine-free.

Things to remember when prescribing it

- Patients should not worry about missing doses
- They should use the inhaler no more than is needed
- Avoid food and acidic drinks such as coffee, tea, citrus juices, and sodas 15 minutes before and during use as they inhibit the uptake of nicotine
- Do not smoke while using this product

To use the nasal spray correctly:

Just breathe the nicotine in through the inhaler, taking shallow breaths or shallow "puffs". This gives you enough nicotine to help reduce cravings for nicotine.

Patient is not to puff the inhaler like a cigarette; rather instruct to hold the puff in the mouth for a moment, then to resume regular breathing. This is more akin to cigar or pipe smoking.

Side effects

A common side effect of inhaler use is irritation of the throat and mouth and cough when initiating therapy and dyspepsia.

If any side effects develop or change in intensity, your patient should be advised to inform you as soon as possible so you can recommend a change in dosage or medication.

Non-NRTs Bupropion



Initially developed and marketed as an antidepressant (Wellbutrin and Wellbutrin SR), Zyban (bupropion hydrochloride) is a sustained-release non-nicotine tablet that aids smoking cessation. It is available as brand name and generic.

How does it work?	While it isn't understood exactly how bupropion works in smoking cessation, we do know that this prescription-strength medicine alters the brain's chemistry by affecting two chemicals in the brain that are believed to help regulate mood – dopamine and norepinephrine. Taking bupropion results in diminished nicotine cravings, and often smokers find it easier to quit because smoking loses its appeal.
Precautions	<ul style="list-style-type: none"> Do not prescribe to patients who: <ul style="list-style-type: none"> Are taking other medicines that contain bupropion HCL Have a seizure history Have eating disorder(s) Are taking a monoamine oxidase inhibitor It is recommended that patients do not drink alcohol, or if necessary, that they consume small amounts while taking this medication. If your patient is accustomed to drinking large amounts of alcohol and suddenly stops, he or she may increase his or her chance of having a seizure. Therefore, it is important to discuss your patients' use of alcohol before you prescribe bupropion Patients should refrain from or use caution when driving a car or operating complex, hazardous machinery until they know if bupropion affects their ability to perform these tasks <p>It is important that you ask about all medications, prescription or over-the-counter, that your patients are taking or plan to take while taking bupropion. Bupropion should not be used by patients who are taking medications that are metabolized by the cytochrome P450 2B6 pathway. It is important not to take medicines that may increase the chance for seizure.</p>
Concentrations available	<ul style="list-style-type: none"> Zyban 150 mg, purple tablet Bupropion 150 mg

Things to remember when prescribing it

- Take 2nd tablet in early evening to reduce insomnia
- Never take a missed dose of bupropion, wait and take the next tablet at the regular time
- Swallow bupropion tablets whole. Do not to chew, divide, or crush tablets
- Patients should report changes in mood and behavior

How to use it

- Most people take bupropion for 7-12 weeks
- No tapering is required

Smoking and bupropion

Although it is not considered dangerous to smoke and use bupropion at the same time, continuing to smoke after the quit date will seriously reduce the chances of success.

Some patients may require a nicotine replacement therapy in addition to bupropion if they find that cravings persist. If you plan to recommend combination therapy for your patient using bupropion and a nicotine replacement therapy, monitoring of blood pressure is required. Using bupropion and NRTs in combination can raise blood pressure. Blood pressure should be monitored for the first three weeks of the combination therapy to make sure that it stays within acceptable levels.

Side effects

Common side effects:

- Dry mouth
- Difficulty sleeping (advise him or her to avoid taking the medicine too close to bedtime)
- Anxiety
- Change in appetite

The side effects associated with bupropion are generally mild and often disappear after a few weeks.

Serious side effects:

- Changes in mood and behavior have been reported with bupropion use
- Bupropion can induce seizure activity

Summary

The risks of using bupropion for smoking cessation should be weighed against the benefits of use. Bupropion is effective in helping patients to quit smoking. The benefits of quitting smoking are substantive. The FDA requires the following warning to be provided for bupropion prescriptions:

Advise patients and caregivers that the patient using bupropion for smoking cessation should contact a healthcare provider immediately if agitation, depressed mood, or changes in behavior or thinking that are not typical for the patient are observed, or if the patient develops suicidal ideation or suicidal behavior. In many post-marketing cases, resolution of symptoms after discontinuation of bupropion was reported, although in some cases the symptoms persisted, therefore, ongoing monitoring and supportive care should be provided until symptoms resolve.

Varenicline

Varenicline is a non-nicotine prescription pill designed to help adults stop smoking. Varenicline is the generic name for Chantix. It is currently only available in the Chantix brand name form.



How does it work?	Varenicline is believed to work by mimicking nicotine by stimulating nicotine receptors to release dopamine while at the same time blocking nicotine from stimulating the nicotine receptors. Although the varenicline dopamine release is modulated and less than what a smoker would receive from having a cigarette, it is longer lasting and remains throughout the day as long as it is taken as directed.
Precautions	<ul style="list-style-type: none"> Breastfeeding women should avoid use Persons with severe renal impairment require a dosage adjustment Can exacerbate prior or current psychiatric illness Patients are advised to tell their physicians about any history of depression or other mental health problems, which may worsen while taking varenicline
Concentrations available	<ul style="list-style-type: none"> 0.5 mg, white tablet 1.0 mg, blue tablet

How many to take

1	Start 1 week before quit date
2	First 3 days 0.5 mg/24hr
3	Next 4 days 0.5 mg/BID (one in the morning, and one in the evening)
4	After first 7 days 1 mg/BID (one in the morning, and one in the evening)

- Patients should be treated for 12 weeks
- An additional 12-week course is recommended for successful patients to increase the likelihood of long-term abstinence

Note: Varenicline can be prescribed as a 1 month starter pack which includes:

- One week of 0.5 mg varenicline
- 1.0 mg varenicline for 3 weeks

Things to remember when prescribing it

- Always check for allergies to any of the ingredients in varenicline
- Varenicline should be taken on a full stomach and with a full glass (8 ounces) of water
- 1 dose should be taken in the morning & 1 dose in the evening

- A missed dose should be taken as soon as the patient remembers unless it is time to take the next dose
- If this happens, instruct the patient to wait until the next dose
- Unsuccessful patients or those who relapse should be encouraged to make another attempt once factors contributing to the failure have been addressed

Side effects

Varenicline is generally well tolerated. The most common side effects are:

- Gastrointestinal in nature
- Nausea & constipation
- Abnormal dreams
- Insomnia

Serious side effects:

- Changes in mood and behavior have been reported with bupropion use
- Bupropion can induce seizure activity

Summary

The risks of using bupropion for smoking cessation should be weighed against the benefits of use. Bupropion is effective in helping patients to quit smoking. The benefits of quitting smoking are substantive. The FDA requires the following warning to be provided for bupropion prescriptions:

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Prescription Writing and Videos:

Follow through each of the 7 medications in the *NRTs* and *Non NRTs* sections.

- Practice writing a prescription for each
- Watch videos on explaining the most difficult points of each medication.

Combination Therapy

When to consider?

- Patients who have failed prior pharmacotherapeutic assisted tobacco cessation attempts or
- Heavy smokers (more than one pack of cigarettes a day)

Combination therapy may include the use of:

**NRT
+
NRT**

OR

**Bupropion (Zyban)
+
NRT**

Exclusively NRT-based combination therapy should include:

- Long-acting source of nicotine such as nicotine patch and
- Short-acting treatment such as nicotine gum, lozenge, inhaler or spray

A combination of two short-acting NRTs can also be considered.

Bupropion (Zyban) can be combined with any of the NRTs.

Rationale

Current product information does not support the use of more than one NRT, however, there is pharmacologic rationale to support the use of multiple NRT regimens. NRT regimens typically provide a lower plasma level of nicotine than a patient would receive from cigarette smoking. Many patients fail in a quit attempt, particularly in the first few weeks because their nicotine levels are too low and they cannot overcome their craving for nicotine.

Arrange Follow-Up

Learning objectives

After completing this section you will be able to:

- Discuss tobacco use at every dental visit
- Provide encouragement and support to patients who make a commitment to quit

Goals

What you do during the Arrange step of the intervention depends on your practice and the resources you have available to you. Following up with your patients who have made a commitment to quit can be achieved by making phone call, text messaging or email contact on or around the date they have decided to quit. By making contact you are offering encouragement and showing your continued support.

Behavioral counseling and quit lines

Alternatively, referral to behavioral counseling is also very effective. This can take the form of referral to a local hospital or clinic that offers individual cessation counseling or group counseling sessions or to a state telephone quit line which offers services at no cost to everyone who has access to a phone. Quit line services include sending educational materials to your patients' homes, offering referrals to local programs, and providing individual telephone counseling.

After initial contact has been made with a quit line, the first call is generally followed by further pre-arranged calls to the patient from a quit line counselor. During the telephone counseling sessions patients are asked about any problems they may be having with the cessation medications they are taking, how their quit attempt is going, what problems they are having, what challenges they are facing, and whether or not they have slipped and had some cigarettes. If they have relapsed the counselor will go over what led to the slip and determine how to get the patient back to abstinence and avoid any further slips.

You can connect smokers to quit lines in two different ways. You can provide a quit line number and encourage the smoker to call, but it is better to connect the smoker more directly. In many states it is possible, with the patient's permission, to send the smoker's name and contact information to the quit line, which will initiate a call to the patient. Many quit lines provide copies of enrollment forms that can be faxed directly to the quit line.

Research shows that the most effective approaches, the ones resulting in the highest quit rates, combine behavioral and pharmacotherapy treatments together. Additionally, relapse is common among smokers who are trying to quit and most smokers make multiple quit attempts. Therefore, providing follow-up and ongoing support to your patients is important.

Quit lines

Quit lines are an additional support mechanism available to your patients. You can refer your patient to a quit line by providing the quit line contact information to your patient. They are toll-free help lines where a patient can talk to a counselor about ways to stop. Counselors can mail the patient information on how to quit, and can link the patient to local services to help as well.

Many quit lines also provide information for special groups, such as:

- Pregnant women
- Users of smokeless (chew and snuff) tobacco
- People who want to help a friend or family member quit
- Different racial or ethnic groups
- Teen smokers

1-800-QUIT-NOW

Anyone in the United States can call 1-800-QUIT-NOW (1-800-784-8669). Many states also have their own quit lines. If your state has one, your patient will be automatically redirected to it when he or she calls 1-800-QUIT-NOW.

smokefree.gov

The U.S. government has a website, www.smokefree.gov, dedicated to helping people give up tobacco. It links to the North American quit line site, which includes an [interactive map](#). Most states can use translators to provide counseling in more than 140 languages.

Patient Materials

Another way to help your patients is to give them self-help written materials to take home. Take the time to look at the patient materials before you distribute them. Some patients may ask you what information is contained in the brochures. Other patients may have questions about the material.

To print self-help materials go to the following:

- The Agency for Healthcare Research and Quality (AHRQ): <http://www.ahrq.gov/consumer/tobacco/helpsmokers.htm>
- The American Cancer Society: <http://www.cancer.org/Healthy/StayAwayfromTobacco/GuidetoQuittingSmoking/guide-to-quitting-smoking>

To order self-help materials go to the following:

- The National Cancer Institute: <https://cissecure.nci.nih.gov/ncipubs/cannedsearchres.aspx>

Completing the course:

- Watch an example: *Combination Therapy Video*
- Practice the first step of selecting *treatment choices*
- Complete 4 *Virtual Patients*