

## RATIONALE for INTERVENING

- ▶ Save lives, reduce harm (smoking is the #1 cause of preventable death in the US)
- ▶ Smoking is amenable to treatment (rates have decreased 50% since the 1960's)
- ▶ Effective treatments exist (even for those not willing to quit right now)
- ▶ Clinical opportunities are numerous (smokers access health care frequently)
- ▶ Even brief interventions are effective (if targeted and repeated)
- ▶ Non-physicians also have impact (nurses, Nurse Practitioners, Physician Assistants, and other allied health professionals)
- ▶ Treatment is cost-effective (both counseling and medications)
- ▶ Demonstrates sincere commitment to patient's well-being (evidence of greater patient satisfaction, too)

Efficacy of Treatment Delivery Format		
Format	Odds Ratio (95% CI)	Estimated Abstinence Rate
No format	1.0	10.8%
Self-help	1.2	12.3%
Proactive tele- phone counseling	1.2	13.1%
Group counseling	1.3	13.9%
Individual counseling	1.7	16.8%

Efficacy of Interventions by Various Types of Clinicians		
Type Clinician	Odds Ratio (95% CI)	Estimated Abstinence Rate
No clinician	1.0	10.2%
Self-help	1.1	10.9%
Nonphysician clinician	1.7	15.8%
Physician clinician	2.2	19.9%

Efficacy of Various Intensity Levels of Person-to-Person Contact		
Level of Contact	Odds Ratio (95% CI)	Estimated Abstinence Rate
No contact	1.0	10.9%
Minimal contact (3 minutes or less)	1.3	13.4%
Low intensity counseling (3-10min.s)	1.6	16.0%
Higher intensity Counseling (over 10min.s)	2.3	22.1%

# ***Treating Tobacco Use and Dependence***

## **Guideline Origins**

*Treating Tobacco Use and Dependence*, a Public Health Service-sponsored Clinical Practice Guideline, is the product of the Tobacco Use and Dependence Guideline Panel ("the panel"), consortium representatives, consultants, and staff. These 30 individuals were charged with the responsibility of identifying effective, experimentally validated, tobacco dependence treatments and practices. This guideline updates the 1996 *Smoking Cessation, Clinical Practice Guideline No. 18* that was sponsored by the Agency for Health Care Policy and Research, U.S. Department of Health and Human Services. The original guideline reflected the extant scientific research literature published between 1975 and 1994.

This guideline was written in response to new, effective clinical treatments for tobacco dependence that have been identified since 1994, and these treatments promise to enhance the rates of successful tobacco cessation. The accelerating pace of tobacco research that prompted the update is reflected by the fact that 3,000 articles on tobacco published between 1975 and 1994 were collected and screened as part of the original guideline. Another 3,000 were published between 1995 and 1999 and contributed to the updated guideline. These 6,000 articles were reviewed to identify a much smaller group of articles that served as the basis for guideline data analyses and panel opinion.

The updated guideline was sponsored by a consortium of seven Federal Government and nonprofit organizations:

- Agency for Healthcare Research and Quality (AHRQ)
- Centers for Disease Control and Prevention (CDC)
- National Cancer Institute (NCI)
- National Heart, Lung, and Blood Institute (NHLBI)
- National Institute on Drug Abuse (NIDA)
- Robert Wood Johnson Foundation (RWJF)
- University of Wisconsin Medical School's Center for Tobacco Research and Intervention (CTRI).

All of these organizations have the mission to reduce the human costs of tobacco use. Given the importance of this issue to the health of all Americans, the updated guideline is published by the U.S. Public Health Service.

### **Internet Citation:**

*Treating Tobacco Use and Dependence*. Summary, June 2000. U.S. Public Health Service.  
<http://www.surgeongeneral.gov/tobacco/smokesum.htm>

(A free copy of the full guideline may be obtained from the AHRQ by calling 1-800-358-9295 and asking for Publication Number AHRQ 00-0032).

# Key Findings of the TREATING TOBACCO USE AND DEPENDENCE Clinical Practice Guideline

(Published jointly by the Agency for Healthcare Research and Quality, The US Public Health Service and the National Cancer Institute, this guideline was based on an exhaustive systematic review and analysis of the extant scientific literature from 1975 to 1999, using the results of more than 50 meta-analyses)

1. Tobacco dependence is a chronic condition that often requires repeated intervention. However, effective treatments exist that can produce long-term or even permanent abstinence.
2. Because effective tobacco dependence treatments are available, every patient who uses tobacco should be offered at least one of these treatments:
  - Patients *willing* to try to quit tobacco use should be provided treatments identified as effective in this guideline.
  - Patients *unwilling* to try to quit should be provided a brief intervention designed to increase their motivation to quit.
3. It is essential that clinicians/healthcare delivery systems (administrators, insurers, purchasers) institutionalize consistent identification, documentation, and treatment of every tobacco user seen in a health care setting.
4. Brief tobacco dependence treatment is effective, and every patient who uses tobacco should be offered at least brief treatment.
5. There is a strong dose-response relation between the intensity of tobacco dependence counseling and its effectiveness. Treatments involving person-to-person contact (via individual, group, or proactive telephone counseling) are consistently effective, and their effectiveness increases with treatment intensity (e.g., minutes of contact).
6. Three types of counseling and behavioral therapies were found to be especially effective and should be used with all patients who are attempting tobacco cessation:
  - Provision of practical counseling (problem-solving/skills training)
  - Provision of social support as part of treatment (intra-treatment social support)
  - Help in securing social support outside of treatment (extra-treatment social support).
7. Numerous effective pharmacotherapies for smoking cessation now exist. Except in presence of contraindications, these should be used with all patients who are attempting to quit smoking:
  - Five *first-line* pharmacotherapies were identified that reliably increase long-term smoking abstinence rates:
    - 1) Bupropion SR
    - 2) Nicotine gum
    - 3) Nicotine inhaler
    - 4) Nicotine nasal spray
    - 5) Nicotine patch
  - Two *second-line* pharmacotherapies were identified as efficacious (clinicians may consider these if the first-lines are not effective):
    - 1) Clonidine
    - 2) Nortriptyline
  - Over-the-counter nicotine patches are effective relative to placebo, and their use should be encouraged.
8. Tobacco dependence treatments are both clinically effective and cost-effective relative to other medical and disease prevention interventions. As such, insurers and purchasers should ensure that:
  - All insurance plans include as a reimbursed benefit the counseling and pharmacotherapeutic treatments identified as effective in this guideline
  - Clinicians are reimbursed for providing tobacco dependence treatment just as they are reimbursed for treating other chronic conditions.

# Treating Tobacco Use and Dependence: A Systems Approach

## Guideline Recommendations for Systems Changes SIX STRATEGIES

1. Every clinic should implement a tobacco-user identification system.
2. All health care systems should provide education, resources, and feedback to promote provider interventions.
3. Clinical sites should dedicate staff to provide tobacco dependence treatment and assess the delivery of this treatment in staff performance evaluations.
4. Hospitals should promote policies that support and provide tobacco dependence services.
5. Insurers and managed care organizations (MCOs) should include tobacco dependence treatments (both counseling and pharmacotherapy) as paid or covered services for all subscribers or members of health insurance packages.
6. Insurers and MCOs should reimburse clinicians and specialists for delivery of effective tobacco dependence treatments and include these interventions among the defined duties of clinicians.

Smoker Identification Systems (95% C.I.)		
Screening System	Estimated Intervention Rate	Estimated Abstinence Rate
No screening system in place to identify smoking status (reference group)	38.5%	3.1%
Screening system In place to identify smoking status	65.6%	6.4%

## Treating Tobacco Use and Dependence: Patients Willing to Quit The 5 As

**ASK** - Systematically identify all tobacco users every visit (i.e., smoking status is the 5<sup>th</sup> vital sign).

**ADVISE** - Strongly urge all tobacco users to quit (in a *Clear, strong* and *personalized* manner).

**ASSESS** - Determine willingness to make a quit attempt (within 30 days).  
YES: provide assistance (see next "A") or refer out  
NO: provide motivational intervention (see 5Rs)  
Special Populations: provide additional information

**ASSIST** - Aid the patient in quitting.  
Help them develop a plan  
Provide practical counseling (problem solving/skills training)\*  
Provide intra-treatment support\*\*  
Help patient obtain extra-treatment support\*\*\*  
Recommend approved pharmacotherapy\*\*\*\*  
Provide supplementary materials

\*Practical counseling to help recognize danger situations, develop coping skills and provide basic information on smoking/quitting.

\*\*Intra-treatment support to encourage quit attempt, communicate caring/concern, encourage talking about quitting.

\*\*\*Extra-treatment support – to help patient learn how to solicit support, prompt them to seek support, arrange outside support.

\*\*\*\*Pharmacotherapy – 5 recommended first-line medications (nicotine gum, patch, nasal spray or inhaler and bupropion). Should be used if not contraindicated, special considerations may be needed for some patients (see guideline for details).

**ARRANGE** – Schedule follow-up contact  
Either in-person or via telephone  
Soon after quit date, preferably during the first week  
Second follow-up within the first month

# Treating Tobacco Use and Dependence Patients Unwilling to Quit The 5 Rs

## Relevance

Elicit specific, personal reasons why quitting is relevant to patient  
Help make connection to disease status/risk, family or social situation, health concerns, age, gender, etc.

## Risks

Ask patient to identify potential negative consequences (highlight those that are relevant)  
Look at acute, long-term and environmental risks

## Rewards

Ask patient to identify potential benefits of quitting (highlight those that are relevant)  
E.g., improve health, save money, set good example for children, feel better about self, etc.

## Roadblocks

Ask patient to identify barriers to quitting and note elements of treatment (problem solving, pharmacotherapy) that could address them.  
E.g., withdrawal, fear of failure, weight gain, lack of support, depression, loss of enjoyment

## Repetition

Repeat motivational intervention each clinic visit

## Former Smokers: Preventing Relapse

### Minimal Practice Relapse Prevention =

Use open-ended questions and encourage active discussion of benefits of cessation, successes, problems encountered or anticipated.

### Prescriptive Relapse Prevention =

Help patient identify coping mechanisms to address potential threats to abstinence (e.g., lack of support, negative mood/depression, strong or prolonged withdrawal symptoms, weight gain, flagging motivation/feeling deprived).

## Smoking Cessation Plan “Needs Assessment”

<b>WHAT</b>	<b>WHO</b>	<b>HOW</b>	<b>EDUCATION</b>	<b>MATERIALS</b>
<b>ASK</b> smoking status	<i>Receptionist? Intake nurse?</i>	<i>Clipboard form in lobby? Part of vital signs?</i>	<i>Simple instructions?</i>	<i>Questionnaire? Amend current form?</i>
<b>ADVISE</b> cessation	<i>RN? NP? PA? MD?</i>	<i>During exam? (document in chart)</i>	<i>Read guideline? Take online course(s)?</i>	<i>Quick Reference Guide? Use Internet?</i>
<b>ASSESS</b> interest	<i>RN? NP? PA? MD?</i>	<i>During exam? (document in chart)</i>	<i>Read guideline? Take online course(s)?</i>	<i>Quick Reference Guide? Use Internet?</i>
<b>ASSIST</b> in setting up a quit plan (for patients ready to quit)	<i>RN? NP? PA? MD? (staff designated as Smoking Cessation Specialist?)</i>	<i>Provide counseling? Refer to Quitline? Refer to local program? Refer to Specialist? Provide self-help resources?</i>	<i>Read guideline? Simple instruction (for referrals)? Take online course(s)? Provide staff training?</i>	<i>Quick Reference Guide? List of Quitlines, local programs, online resources/use Internet? Use CTRI training manual?</i>
<b>ARRANGE</b> follow-up	<i>RN? NP? PA? MD? (Smoking Cess. Specialist?)</i>	<i>Refer to Quitline? Refer to local program? Refer to Specialist? Refer to PCP/clinic?</i>	<i>Simple instruction?</i>	<i>List of Quitlines, local programs, online resources/use Internet? Referral form (develop)?</i>
<b>MOTIVATE</b> for patients not ready to quit	<i>RN? NP? PA? MD? (Smoking Cess. Specialist?)</i>	<i>Provide motivational intervention? Refer to Quitline/Specialist  (“wants to quit but can’t)? Provide self-help resources?</i>	<i>Read guideline? Take online course? Provide staff training? Simple instruction (for referrals)?</i>	<i>Quick Reference Guide? List of Quitlines, online resources/use Internet? Use CTRI training manual?</i>
<b>PREVENT RELAPSE</b> for patients who quit within past 12 months	<i>RN? NP? PA? MD? (Smoking Cess. Specialist?)</i>	<i>Provide counseling? Refer to Quitline? Refer to Specialist? Provide self-help resources?</i>	<i>Read guideline? Simple instruction (for referrals)? Take online course? Provide staff training?</i>	<i>Quick Reference Guide? List of Quitlines, online resources/use Internet? Use CTRI training manual?</i>

# Implementing Smoking Cessation in a Medical Office

## 5 STEPS

**Goal:** Reduce smoking/tobacco use

**Objective:** Implement the PHS clinical practice guideline recommendations for a brief smoking cessation intervention (5A's / 5R's)

STEP 1 – DEVELOP A PLAN

STEP 2 – GATHER RESOURCES

STEP 3 – TRAIN STAFF

STEP 4 – IMPLEMENT PLAN

STEP 5 – REVIEW & REVISE



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### Step 1 - Develop a Plan

Success is more likely if a procedure is developed that is suitable to office staffing and fits in well with current procedure.

- ✓ Meet with staff
  - Explain the goal and objective (gain their support)
  - Involve them in planning (get practical input)
  - Assign a coordinator (one person identified to be in charge of monitoring procedures, ordering supplies, identifying glitches)
- ✓ Develop methods (that can be integrated into current procedures) for:
  - Screening & documentation of smoking status
  - Assessing willingness to quit & documentation of motivation
  - Advising quitting & documentation of advice given
  - Assisting/counseling -or- Eliciting risks/rewards/roadblocks (& documentation)
  - Arranging/doing follow-up (& documentation)
- ✓ Identify a start date and a review date

*Adapted from the "Implementing Smoking Cessation Guidelines in Medical Practice Tool Kit" published by the Alliance for the Prevention and Treatment of Nicotine Addiction and the "Make Yours a Fresh Start Family Training Manual" published by the American Cancer Society.*

### Step 2 - Gather Resources

Needs assessment can be done by all staff or assigned to the coordinator (with input from staff).

- ✓ Obtain pro-cessation materials for lobby/waiting room, such as:
  - Posters and/or signs
  - Pamphlets and/or handouts
  - Videos
- ✓ Obtain individualized patient materials
  - Educational pamphlets specific to patient (age, gender, literacy) and/or disease condition (risk factors, secondhand smoke)
  - Quit plan aids (self-help materials, referral resource list)
  - Sample medications and/or patient education materials about medications
- ✓ Obtain staff education material, as needed (printed or resources online)
- ✓ Develop a referral resource list
  - Local programs and/or support groups
  - Internet resources and/or Quitline number(s)
  - Specialists in the community (HMO/hospital/health department)

### Step 3 - Train Staff

Provide education/training to degree that staff feels comfortable enough to try new activities.

- ✓ Provide written material/staff education videos
- ✓ Provide Internet training opportunities
- ✓ Provide onsite staff training

### Step 4 - Implement Plan

- ✓ Begin procedures on start date
- ✓ Monitor and identify glitches as they occur (this task can be assigned to the coordinator)
- ✓ Get feedback from staff (on how to improve the plan or what they need)

### Step 5 - Review and Revise

- ✓ Conduct chart audits
- ✓ Inventory materials used
- ✓ Revise procedures (using chart audit results, staff feedback and materials inventory)
- ✓ Give staff positive feedback (including incentives)

# Smoking Cessation Medications

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Adapted/excerpted from: Fiore MC, Bailey WC, Cohen SJ, et. al. *Treating Tobacco Use and Dependence*. Quick Reference Guide for Clinicians. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. October 2000. Source: <http://www.surgeongeneral.gov/tobacco/tobaqrq.htm>

Full text copies of the *Quick Reference Guide* or the *Clinical Practice Guideline* are available online at the Surgeon General's website: [www.surgeongeneral.gov/tobacco](http://www.surgeongeneral.gov/tobacco) or they may be ordered from any of the following:

Agency for Healthcare Research and Quality (AHRQ) 800-358-9295  
Centers for Disease Control and Prevention (CDC) 800-CDC-1311  
National Cancer Institute (NCI) 800-4-CANCER

For sources of additional healthcare provider education and resource materials, check out the Alliance for the Prevention and Treatment of Nicotine Addiction website at [www.aptna.org](http://www.aptna.org)

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## Recommend the Use of Approved Pharmacotherapy, Except in Special Circumstances

- Recommend the use of pharmacotherapies found to be effective
- Explain how these medications increase smoking cessation success and reduce withdrawal symptoms
- The first-line pharmacotherapy medications include:
  - bupropion SR
  - nicotine gum
  - nicotine inhaler
  - nicotine nasal spray
  - nicotine patch
- The second-line pharmacotherapy medications include:
  - clonidine
  - nortriptyline
- Over-the-counter nicotine patches are effective relative to placebo, and their use should be encouraged.

The use of pharmacotherapy is a key part of a multicomponent approach to assisting patients with their tobacco dependence. The following tables address the clinical use of pharmacotherapies for tobacco dependence and some of the more common questions and concerns regarding pharmacotherapy.

## Clinical Guidelines for Prescribing Pharmacotherapy for Smoking Cessation

Who should receive pharmacotherapy for smoking cessation?	All smokers trying to quit, except in the presence of special circumstances. Special consideration should be given before using pharmacotherapy with selected populations: those with medical contraindications, those smoking fewer than 10 cigarettes/day, pregnant/breastfeeding women, and adolescent smokers.
What are the first-line pharmacotherapies recommended?	All five of the FDA-approved pharmacotherapies for smoking cessation are recommended, including bupropion SR, nicotine gum, nicotine inhaler, nicotine nasal spray, and the nicotine patch.
What factors should a clinician consider when choosing among the five first-line pharmacotherapies?	Because of the lack of sufficient data to rank-order these five medications, choice of a specific first-line pharmacotherapy must be guided by factors such as clinician familiarity with the medications, contraindications for selected patients, patient preference, previous patient experience with a specific pharmacotherapy (positive or negative), and patient characteristics (e.g., history of depression, concerns about weight gain).
Are pharmacotherapeutic treatments appropriate for lighter smokers (e.g., 10-15 cigarettes/day)?	If pharmacotherapy is used with lighter smokers, clinicians should consider reducing the dose of first-line nicotine replacement therapy (NRT) pharmacotherapies. No adjustments are necessary when using bupropion SR.
What second-line pharmacotherapies are recommended?	Clonidine and nortriptyline.
When should second-line agents be used for treating tobacco dependence?	Consider prescribing second-line agents for patients unable to use first-line medications because of contraindications or for patients for whom first-line medications are not helpful. Monitor patients for the known side effects of second-line agents.
Which pharmacotherapies should be considered with patients particularly concerned about weight gain?	Bupropion SR and nicotine replacement therapies, in particular nicotine gum, have been shown to delay, but not prevent, weight gain.
Are there pharmacotherapies that should be especially considered in patients with a history of depression?	Bupropion SR and nortriptyline appear to be effective with this population.
Should nicotine replacement therapies be avoided in patients with a history of cardiovascular disease?	No. The nicotine patch in particular is safe and has been shown not to cause adverse cardiovascular effects.
May tobacco dependence pharmacotherapies be used long-term (e.g., 6 months or more)?	Yes. This approach may be helpful with smokers who report persistent withdrawal symptoms during the course of pharmacotherapy or who desire long-term therapy. A minority of individuals who successfully quit smoking use ad libitum NRT medications (gum, nasal spray, inhaler) long term. The use of these medications long term does not present a known health risk. Additionally, the FDA has approved the use of bupropion SR for a long-term maintenance indication.
May pharmacotherapies ever be combined?	Yes. There is evidence that combining the nicotine patch with either nicotine gum or nicotine nasal spray increases long-term abstinence rates over those produced by a single form of NRT.

## Suggestions for the Clinical Use of Pharmacotherapies for Smoking Cessation<sup>a</sup>

Pharmacotherapy	Precautions/ Contraindications	Side Effects	Dosage	Duration	Availability	Cost/day <sup>b</sup>
<b>First-line Pharmacotherapies (Approved for use for smoking cessation by the FDA)</b>						
Bupropion SR	History of seizure  History of eating disorder	Insomnia  Dry mouth	150 mg every morning for 3 days, then 150 mg twice daily (Begin treatment 1-2 weeks pre-quit)	7-12 weeks maintenance up to 6 months	Zyban (prescription only)	\$3.33
Nicotine Gum		Mouth soreness  Dyspepsia	1-24 cigs/day-2 mg gum (up to 24 pcs/day)  25+ cigs/day-4 mg gum (up to 24 pcs/day)	Up to 12 weeks	Nicorette, Nicorette Mint (OTC only)	\$6.25 for 10, 2-mg pieces  \$6.87 for 10, 4-mg pieces
Nicotine Inhaler		Local irritation of mouth and throat	6-16 cartridges/day	Up to 6 months	Nicotrol Inhaler (prescription only)	\$10.94 for 10 cartridges
Nicotine Nasal Spray		Nasal irritation	8-40 doses/day	3-6 months	Nicotrol NS (prescription only)	\$5.40 for 12 doses
Nicotine Patch		Local skin reaction  Insomnia	21 mg/24 hours 14 mg/24 hours 7 mg/24 hours  15 mg/16 hours	4 weeks then 2 weeks then 2 weeks  8 weeks	Nicoderm CQ (OTC only), Generic patches (prescription and OTC), Nicotrol (OTC only)	Brand name patches \$4.00-\$4.50 <sup>c</sup>
<b>Second-line Pharmacotherapies (Not approved for use for smoking cessation by the FDA)</b>						
Clonidine	Rebound hypertension	Dry mouth  Drowsiness  Dizziness  Sedation	0.15-0.75 mg/day	3-10 weeks	Oral Clonidine-generic, Catapres (prescription only)  Transdermal Catapres (prescription only)	Clonidine: \$0.24 for 0.2 mg  Catapres (transdermal): \$3.50
Nortriptyline	Risk of arrhythmias	Sedation  Dry mouth	75-100 mg/day	12 weeks	Nortriptyline HCl-generic (prescription only)	\$0.74 for 75 mg

a The information contained within this table is not comprehensive. Please see package insert for additional information.

b Prices based on retail prices of medication purchased at a national chain pharmacy, located in Madison, WI, April 2000.

c Generic brands of the patch recently became available and may be less expensive.

**NOTE:** OTC=Over the Counter.

# Nicotine Replacement Therapy (NRT)

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## GUIDELINES:

Instruction - each form of NRT requires some instruction to patient.

Titration - initial dose based on educated guess, let patient's comfort level determine subsequent dose adjustment.

Duration - should be used for at least a month, duration will depend on patient needs (long-term maintenance may be appropriate in certain cases).

Pregnancy Category - all forms are Category C.

Combination - using two forms (patch & gum) together may be appropriate (patch provides steady state and gum/nasal spray/inhaler can be used for higher dose or prn for high risk situations - not recommended for patients with heart disease/arrhythmia).

Toxicity - patient should stop smoking immediately; if significant increase in cardiovascular or other effects due to nicotine level occur, reduce dose or discontinue (see PDR for symptoms of toxicity).

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**GUM** (nicotine polacrilex): gum-like product available OTC, reduces physical withdrawal symptoms.

- buccal, not gastric, absorption
- oral pH affects absorption (e.g., orange juice, coffee, cola prevent absorption)
- rapid increase in nicotine level but slower onset of action than cigarettes
- available in 2mg or 4mg doses - should use enough to relieve symptoms
- a dose is used up after 30 minutes
- usually used for 1-6 months, 1 piece/hour
- not chewed like gum - bitten few times and "parked" between cheek & gum.

**PATCH** (nicotine transdermal system): available by prescription (Habitrol) and OTC (Nicoderm CQ and Nicotrol).

- delivered in steady dose through the skin
- apply new patch same time each day, get into a routine
- apply anywhere on upper body, rotate skin sites (up to 50% have topical reaction - consider use of steroid spray powder)
- use more or less than one patch as needed for comfort (doses vary by brand), titrate down as smoke-free days accumulate
- some brands come in varying doses per patch, patches can be cut & used in "halves" in order to titrate dose.

**NASAL SPRAY** (nicotine in a nasal spray): relieves withdrawal symptoms & craving.

- available by prescription only, unlikely to go OTC (some abuse liability)
- spray in anterior nares *without* inhaling (absorption is through lining of the nose)
- used at onset of urge to smoke: usual dose is 1mg (one spray of 0.5mg each nostril): start dose is 1-2 applications/hour; min. 8 applications/day & max. 40 applications/ day, not to exceed 5 applications/hour
- initial mucosal irritation, tolerance will develop (but should not be used by those with sinus problems, allergies or asthma)
- more rapid onset of action than the gum.

**INHALER** (nicotine vapor in inhaler device): relieves withdrawal symptoms & craving.

- available by prescription only, unlikely to go OTC (some abuse liability)
- vapor sucked through mouthpiece into the mouth, absorbed buccally (not in the lungs)
- sometimes causes dyspepsia, mild irritation of mouth/throat, cough (on initial use)
- given in dose of 8-10 puffs (about the same amt. nicotine as 1 puff on average cigarette)
- starting dose: 6-16 cartridges used throughout day; after initial treatment period of up to 12 weeks, a gradually reduce dose
- not recommended for use beyond 6 months.

*Sources: ASAM conference on nicotine dependence, lecture by Dr. John Hughes, 1997 and 4th Edition Physicians' Desk Reference, 1995.*

**LOZENGE** (approved by FDA and put on the market in January 2003): OTC lozenge; dissolves slowly in mouth (20-30 minutes), not to be chewed or swallowed; should not eat or drink 15 minutes before using or while lozenge is in mouth; 2mg or 4mg dose available; maximum recommended is 5 lozenges every 6 hours or 20/day. *Source: GlaxoSmithKline website at <<http://commitlozenge.com>>*

## Other Pharmacological Adjuncts for Smoking Cessation

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### Bupropion SR (Zyban)

Available by prescription only - it is not nicotine replacement:

- Improves quit rates
- Reduces symptoms of depression
- Reduces nicotine withdrawal symptoms and craving (appears to be more effective than NRT for reduction in craving/urge to smoke)
- Can be used in combination with the patch, gum, etc.
- Can be used while patient is still smoking/using tobacco
- Weight loss is more common than weight gain
- Improvement seen in both short and long-term quit rates
- Side effects include insomnia, nausea and dry mouth
- Contraindicated if the patient has a history of seizure, bulimia or anorexia, or is currently on an MAO inhibitor or Wellbutrin (OK to prescribe with SSRIs, TCAs)
- Has an FDA Class B rating for pregnant women

To Use:

- Have patient start 5-7 days prior to target quit date
- Initial dose recommended is 150mg once a day for 3-4 days followed by a maintenance dose of 150mg twice a day (doses should be at least 8 hours apart)
- Treatment regimen recommended is at least 7 weeks, continue as needed based on progress
- Length of treatment depends on progress
- No taper needed when stopping treatment.

### Clonidine (Catapres)

A medication for hypertension (prescription only) with significant side effects, can be used orally (pill) or transdermally (patch). It is not real expensive (FDA Class C, not approved for smoking cessation):

- Some evidence of reduction in urge to smoke (more effective with women than men)
- Improvement seen in short-term quit rates, but not long-term rates (effectiveness minimal after about 8 weeks)
- Significant side effects: dry mouth, low BP
- Pregnancy Category C

### Nortriptyline HCL

Available by prescription only, significant side-effects and contraindicated for patients with cardiovascular disease but may be effective for patients with a history of depression who are unable to use NRT and/or Zyban (not FDA approved for smoking cessation).

*Sources: ASAM conference on nicotine dependence, lecture by Dr. John Hughes, 1997; 4th Edition Physicians' Desk Reference, 1995; 1998 Drug Topics Red Book, June 1998; Treating Tobacco Use and Dependence, USDHHS Public Health Service, June 2000.*

## Fagerström Test for Nicotine Dependence (modified)

Questions	Answers	Points
1. How soon after you wake up do you smoke your first cigarette?	<b>Within 5 minutes</b>	<b>3</b>
	<b>6-30 minutes</b>	<b>2</b>
	<b>31-60 minutes</b>	<b>1</b>
	<b>After 60 min</b>	<b>0</b>
2. Do you find it difficult to not smoke in places where you shouldn't, such as in church, in school, in a movie, at the library, on the bus, in court, or in the hospital?	Yes	1
	No	0
3. Which cigarette would you most hate to give up?	The first one in the morning	1
	Any other one	0
4. How many cigarettes do you smoke each day?	<b>10 or fewer</b>	<b>0</b>
	<b>11-20</b>	<b>1</b>
	<b>21-30</b>	<b>2</b>
	<b>31 or more</b>	<b>3</b>
5. Do you smoke more frequently during the first hours after waking up than during the rest of the day?	Yes	1
	No	0
6. Do you still smoke if you are so sick that you are in bed most of the day?	Yes	1
	No	0

Heatherton, T.F., Kozlowski, L.T., Frecker, R.C and Fagerström, K. O. (1991). The Fagerström Test for Nicotine Dependence: a revision of the Fagerström Tolerance Questionnaire. *British Journal of Addictions*, 86, 1119-1127.

Points	Physical Dependence	Recommended Patch Dose
0-3	<b>Mild</b>	7 mg
4-6	Moderate	14 mg
7-10	Heavy	21 mg

Brief Fagerström Test (Questions #1 and #4)

Scoring:

**5-6 points = heavy nicotine dependence**

**3-4 points = moderate nicotine dependence**

**0-2 points = mild nicotine dependence**

Source: Terry Rustin, M.D.

(This screening tool may provide information that is useful in making decisions regarding the use of NRT and potentially effective doses – refer to the USPHS clinical practice guideline for specific information)

### SMOKING CESSATION VIDEOS

SOURCE	ITEM	COST
Milner-Fenwick, Inc. 800-432-8433	<i>How to Quit Smoking</i> (#HA-47)	\$99.00
	<i>Guide to Stop Smoking</i> (#MV-04)	\$99.00
	<i>Smoking and Human Physiology</i> (#GN-16)	\$99.00
Health Edco 800-299-3366 x295  (This company has numerous other videos, including smokeless tobacco topics, smoking & impotence, cessation and exercise, etc)	<i>Nicotine: An Old-Fashioned Addiction</i> (Item #45128)	\$39.95
	<i>Death in the West</i> (#45121)	\$115.00
	<i>Smoking and Nutrition</i> (#47772), also available in Spanish	\$89.00
	<i>How to Avoid Weight Gain When You Stop Smoking</i> (#46115), also available in Spanish	\$89.00
	<i>The Physical Effects of Smoking</i> (#46149), also available in Spanish	\$89.00
FMS Productions, Inc. 800-421-4609	<i>Medical Aspects of Tobacco</i> (featuring Dr. Max A. Schneider, runs 30 minutes – I encourage substance abuse treatment programs to use this in their education class on tobacco)	\$295.00
American Academy of Otolaryngology-HNS 703-835-4444	<i>Poisoning Our Children: the Perils of Secondhand Smoke</i>	\$40.00
Video Learning Library <a href="http://www.videolearning.com/S2102.HTM">www.videolearning.com/S2102.HTM</a>	<i>Tobacco Road: A Dead End</i> (in the alphabetical list under “Truth About...”)	\$79.95
CDC <a href="http://www.cdc.gov/tobacco">www.cdc.gov/tobacco</a>	<i>I Can’t Breathe</i> – the story of Pan Laffin (URL for this video is: <a href="http://www.cdc.gov/tobacco/educational_materials/pamlaffin.htm">http://www.cdc.gov/tobacco/educational_materials/pamlaffin.htm</a> )	Free
Hazelden (drug treatment materials) <a href="http://www.hazelden.org">www.hazelden.org</a>	<i>Understanding the Problems of Nicotine and Tobacco</i> (#5764)	\$99.95
	<i>The Stages of Quitting Nicotine and Tobacco</i> (#5765)	\$99.95
AHA/Channing-Bete <a href="http://aha.channing-bete.com/">http://aha.channing-bete.com/</a>	AHA <i>Smoking</i> video (Item #50-1579)	\$15.00