### Nicotine Patch

**24-hour delivery systems**
- 21, 14, 7 mg/24 hr

**16-hour delivery systems**
- 15 mg/16 hr

*(Generic available, over-the-counter (OTC))*

**Description & Examples**
Delivers nicotine directly through the skin.

**Pros & Cons**

**Pros**
- Achieve constant levels of replacement
- Easy to use
- Only needs to be applied once a day
- Few side effects

**Cons**
- Less-flexible dosing — cannot titrate dose to acutely manage withdrawal symptoms
- Slow onset of delivery
- Mild skin rashes and irritation

**Comments/Limitations**
- Patches vary in strengths and the length of time over which nicotine is delivered.
- Patches may be placed anywhere on the upper body, including arms and back.
- Avoid hairy areas.
- Rotate the patch site each time a new patch is applied.

**Dosing Recommendations**

- >10 cigs/day = 21 mg/day x 4–6 wks, then 14 mg/day x 2–3 wks, then 7 mg/day x 2–3 wks.
- <10 cigs/day = 14 mg/day x 6 wks, then 7 mg/day x 2 wks.
- Adjust based on withdrawal symptoms, urges, and comfort. After 4–6 weeks of abstinence, taper every 2–4 weeks in 7–14 mg steps as tolerated.

**Duration**
- 8–12 weeks

### Nicotine Lozenge

**2 mg, 4 mg**
*(OTC)*

**Description & Examples**
Delivers nicotine through the lining of the mouth while the lozenge dissolves.

**Pros & Cons**

**Pros**
- Easy to use
- Can titrate to manage withdrawal symptoms
- May satisfy oral cravings
- Delivers doses of nicotine approximately 25% higher than nicotine gum

**Cons**
- Should not eat or drink 15 minutes before use or during use; avoid acidic beverages
- Should not be chewed or swallowed
- Need for frequent dosing can compromise compliance
- Nausea frequent (12–15%)

**Comments/Limitations**
- Use at least 8–9 lozenges/day initially.
- Instruct patients to allow lozenge to dissolve slowly over 20–30 minutes.
- Rotate to different sites of the mouth.
- Nicotine release may cause a warm, tingling sensation.
- Maximum 20 lozenges/day.
- Efficacy and frequency of side-effects related to amount used.
- Review package directions carefully to maximize benefit of product.

**Dosing Recommendations**

- Based on time to first cigarette of the day:
  - <30 minutes = 4 mg
  - 30 minutes = 2 mg
- Based on cigarettes/day:
  - >20 cigs/day = 4 mg
  - <20 cigs/day = 2 mg
- Initial dosing = 1–2 lozenges every 1–2 hours (minimum 9/day) x 6 wks, then 1 q2–4hrs x 3 wks, then 1 q4–8hrs x 3 wks
- Taper as tolerated.

**Duration**
- 12 weeks
### Nicotine Gum

- **2mg, 4mg** (Generic available, OTC)
- **Description & Examples**
  - Delivers nicotine through the lining of the mouth while gum is parked between cheek and gum.

<table>
<thead>
<tr>
<th>Description &amp; Examples</th>
<th>Pros &amp; Cons</th>
<th>Comments/Limitations</th>
<th>Dosing Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine Gum</td>
<td>PROS</td>
<td>The term “gum” is misleading; it is not chewed like regular gum.</td>
<td>• Based on cigarettes/day: &gt;20 cigs/day = 4 mg gum &gt;20 cigs/day = 2 mg gum Based on time to first cigarette of the day: &gt;30 minutes = 4 mg &gt;30 minutes = 2 mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Many people use this medication incorrectly.</td>
<td>Initial dosing = 1–2 pieces every 1–2 hrs (10–12 pieces/day) x 6 wks, then 1 piece every 2–4 hours x 3 wks, then 1 piece every 4–8 hours x 3 wks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Advise patients to chew each piece slowly.</td>
<td>Taper as tolerated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chew for 15–30 chews and park between cheek and gum when peppery or tingling sensation appears.</td>
<td>DURATION • Standard duration is up to 12 weeks. Longer durations have been studied and associated with better abstinence rates.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rotate to different sites of the mouth.</td>
<td>• Nicotine patch dose may be increased if patient is requiring more frequent use of PRN gum or lozenge after patch taper.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Resume chewing when taste or tingle fades.</td>
<td>• Dose patch as described above.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Repeat chew/park steps until taste or tingle does not return (about 30 minutes).</td>
<td>• Prescribe 2mg or 4mg gum or lozenge (according to dose-dependence level described above) on an as-needed basis when acute withdrawal symptoms and urges to use tobacco occur. (Initially, most patients require about 6–8 pieces of gum or lozenges/day)</td>
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<tr>
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<td>• Review package directions carefully to maximize benefit of product.</td>
<td>• Nicotine patch dose may be increased if patient is requiring more frequent use of PRN gum or lozenge after patch taper.</td>
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<tr>
<td></td>
<td>CONS</td>
<td>Requires proper chewing technique for maximum benefit and to minimize adverse effects</td>
<td>DURATION • Patch: 8–10 weeks (with lozenge) or 8–24 weeks (with gum) • Gum: 26–52 weeks • Lozenge: 12 weeks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The term “gum” is misleading; it is not chewed like regular gum.</td>
<td>• Providing two types of delivery system, one passive and one active, appears to be more efficacious.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Many people use this medication incorrectly.</td>
<td>• Should be considered for those who have failed single therapy in the past or those considered highly tobacco dependent.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Advise patients to chew each piece slowly.</td>
<td>• Considered a first-line treatment in the 2008 Update USPHS Clinical Practice Guidelines.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chew for 15–30 chews and park between cheek and gum when peppery or tingling sensation appears.</td>
<td>• Not a FDA-approved strategy.</td>
</tr>
<tr>
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**NRT**

- **Combination Nicotine Replacement Therapy (NRT)**
  - Nicotine patch + Nicotine gum PRN
  - Nicotine patch + Nicotine lozenge PRN

<table>
<thead>
<tr>
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<th>Comments/Limitations</th>
<th>Dosing Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine patch + Nicotine gum PRN</td>
<td>PROS</td>
<td>Permits sustained levels of nicotine (patch) with rapid adjustment for acute cravings and urges (PRN gum or lozenge) More efficacious than monotherapy</td>
<td>• Dose patch as described above.</td>
</tr>
<tr>
<td>Nicotine patch + Nicotine lozenge PRN</td>
<td>CONs</td>
<td>May increase risk of nicotine toxicity Added cost of two NRT products versus one</td>
<td>• Prescribe 2mg or 4mg gum or lozenge (according to dose-dependence level described above) on an as-needed basis when acute withdrawal symptoms and urges to use tobacco occur. (Initially, most patients require about 6–8 pieces of gum or lozenges/day)</td>
</tr>
</tbody>
</table>

**Duration**

- **Patch**: 8–10 weeks (with lozenge) or 8–24 weeks (with gum)
- **Gum**: 26–52 weeks
- **Lozenge**: 12 weeks
## Part 3: Medications for Tobacco Use Cessation

### NON-NICOTINE MEDICATION

#### Bupropion SR

*(Generic available)*

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
</table>
| • Easy to use  
• Pill form — may be associated with better compliance  
• Few side effects  
• May be beneficial in patients with depression  
• May be used in combination with NRT | • Contraindicated with certain medical conditions and medications  
• Increased seizure risk |

#### Bupropion SR

+ Nicotine Patch

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
</table>
| • Easy-to-use combination (FDA approved)  
• Uses agents with two different mechanisms of action | • Does not allow for adjustment of acute cravings or urges  
• Added cost of two NRT products versus one  
• May be associated with more side effects than monotherapy |

### COMMENTS/LIMITATIONS

- Treatment should be initiated 1 week prior to quit date and titrated.  
- Avoid bedtime dosing to minimize insomnia, but allow 8 hours between doses.  
- Use with caution in patients with liver disease (dose adjustment necessary).  
- A slight risk of seizure (1:1000) is associated with use of this medication.  
- Assess seizure risk and avoid if:  
  - Personal history of seizures  
  - Significant head trauma/brain injury  
  - Anorexia nervosa or bulimia  
  - Abrupt discontinuation of alcohol or sedatives  
  - Concurrent use of medications that lower the seizure threshold

### DOSING RECOMMENDATIONS

- Start medication 1 week prior to the quit date:  
  - 150 mg QD x 3 days, then  
  - 150 mg BID x 4 days, then  
  - On quit date STOP SMOKING  
  - Continue at 150 mg BID x 8–12 weeks.  
- If patient has been successful at quitting, an additional 12 weeks may be considered.  
- May stop abruptly.  
- No need to taper.

### COMBINATION MEDICATION

#### Bupropion SR

+ Nicotine Patch

<table>
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<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
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</table>
| • Easy-to-use combination (FDA approved)  
• Uses agents with two different mechanisms of action | • Does not allow for adjustment of acute cravings or urges  
• Added cost of two NRT products versus one  
• May be associated with more side effects than monotherapy |

#### Bupropion SR

• Should be considered for those who have failed single therapy in the past or those considered highly tobacco dependent.  
• Considered a first-line treatment in the 2008 Update USPHS Clinical Practice Guidelines.

### DOSING RECOMMENDATIONS

- Use standard doses and duration.  
- **Bupropion:** See bupropion dosing above; continue for 8–12 weeks.  
- If patient has been successful at quitting, an additional 12 weeks may be considered.  
- **Nicotine patch:** Dose patch as described above for total duration of 8–12 weeks.
# VHA Tobacco Use Cessation: Treatment Guidance

## Part 3: Medications for Tobacco Use Cessation

### Description & Examples

<table>
<thead>
<tr>
<th>COMBINATION MEDICATION</th>
<th>PROS</th>
<th>CONS</th>
<th>COMMENTS/LIMITATIONS</th>
<th>DOSING RECOMMENDATIONS</th>
</tr>
</thead>
</table>
| **Bupropion SR** + **Nicotine Lozenge or Gum** | **PROS**  
- Uses agents with two different mechanisms of action  
- Allows for rapid adjustment for acute cravings and urges (PRN gum or lozenge)  
- More efficacious than monotherapy  
- Treatment should be initiated 1 week prior to quit date and titrated.  
- Taking the medication with food and titrating the dose as directed may help with nausea.  
- Take with a full glass of water.  
- Varenicline should not be used in combination with NRT.  
- Dose must be adjusted if kidney function is impaired.  
- VHA-specific varenicline prescribing guidelines at: www.pbm.va.gov/ClinicalGuidance/CriteriaForUse/VareniclineCriteriaForPrescribing.doc | **CONS**  
- Added cost of two NRT products versus one  
- May be associated with more side effects than monotherapy  
- Nausea common in up to 1/3rd of patients  
- Severe neuropsychiatric symptoms may occur  
- Safety and efficacy have not been established in patients with serious psychiatric illness | **PROS**  
- Provides two types of mechanisms of action, including an active delivery system, appears to be more efficacious.  
- Should be considered for those who have failed single therapy in the past or those considered highly tobacco dependent.  
- Though not included in the 2008 Update USPHS Clinical Practice Guidelines, data published after the Update supports this combination.  
- Not a FDA-approved strategy. | **DOSING RECOMMENDATIONS**  
- Use standard doses and duration.  
- **Bupropion**: See bupropion dosing above; continue for 8–12 weeks.  
- If patient has been successful at quitting, an additional 12 weeks may be considered.  
- Prescribe 2mg or 4mg gum or lozenge (according to dose-dependence level described above) on an as-needed basis when acute withdrawal symptoms and urges to use tobacco occur. (Initially, most patients require about 6–8 pieces of gum or lozenges/day.) |

### NON-NICOTINE MEDICATION

| **Varenicline** | **PROS**  
- Easy to use  
- Pill form — may be associated with better compliance  
- No known drug interactions  
- Unique mechanism of action | **CONS**  
- Nausea common in up to 1/3rd of patients  
- Severe neuropsychiatric symptoms may occur  
- Safety and efficacy have not been established in patients with serious psychiatric illness | **TAKING WITH FOOD** and full glass of water.  
- Start medication one week prior to the quit date:  
  - 0.5 mg QD x 3 days, then  
  - 0.5 mg BID x 4 days, then  
  - On quit date STOP SMOKING and  
  - Take 1.0 mg BID x 11 weeks  
- If not smoking at the end of twelve weeks, may continue for an additional 12 weeks.  
- May stop abruptly.  
- No need to taper. |