

## Medications

### Nicotine Replacement Products Relieve Nicotine Cravings and Withdrawal Symptoms

Nicotine replacement products deliver measured doses of nicotine into the body, which helps to relieve the cravings and withdrawal symptoms often felt by people trying to quit smoking. Nicotine replacement products are effective treatments that can increase the likelihood that someone will quit successfully (5 <sup>[1]</sup>, 9 <sup>[2]</sup>).

#### Six forms of NRT and medication have been approved by the U.S. Food and Drug Administration (FDA):

The **nicotine patch** is available over the counter (without a prescription). A new patch is worn on the skin each day, supplying a small but steady amount of nicotine to the body. The nicotine patch is sold in varying strengths, usually as an 8- to 10-week quit-smoking treatment. Typically, the nicotine doses are gradually lowered as treatment progresses. The nicotine patch may not be a good choice for people with skin problems or allergies to adhesive tape. Also, some people experience the side effect of having vivid dreams when they wear the patch at night. These people may decide to wear the patch only during the daytime.

**Nicotine gum** is available over the counter in two strengths (2 and 4 milligrams <sup>[3]</sup>). When a person chews nicotine gum and then places the chewed product between the cheek and gum tissue, nicotine is released into the bloodstream through the lining of the mouth. To keep a steady amount of nicotine in the body, a new piece of gum can be chewed every 1 or 2 hours. The 4-milligram dose appears to be more effective among highly dependent smokers (those who smoked 20 or more cigarettes per day) (10 <sup>[4]</sup>, 11 <sup>[5]</sup>). Nicotine gum might not be appropriate for people with temporomandibular joint disease or for those with dentures or other dental work, such as bridges. The gum releases nicotine more effectively when coffee, juice, or other acidic beverages are not consumed at the same time.

The **nicotine lozenge** is also available over the counter in 2 and 4 milligram strengths. The lozenge is used similarly to nicotine gum; it is placed between the cheek and the gums and allowed to dissolve. Nicotine is released into the bloodstream through the lining of the mouth. The lozenge works best when used every 1 or 2 hours and when coffee, juice, or other acidic beverages are not consumed at the same time.

**Nicotine nasal spray** is available by prescription only. The spray comes in a pump bottle containing nicotine that tobacco users can inhale when they have an urge to smoke. Nicotine

is absorbed more quickly via the spray than with other nicotine replacement products. Nicotine nasal spray is not recommended for people with nasal or sinus conditions, allergies, or asthma or for young tobacco users. Side effects from the spray include sneezing, coughing, and watering eyes, but these problems usually go away with continued use of the spray.

A **nicotine inhaler**, also available by prescription only, delivers a vaporized form of nicotine to the mouth through a mouthpiece attached to a plastic cartridge. Even though it is called an inhaler, the device does not deliver nicotine to the lungs the way a cigarette does. Most of the nicotine travels only to the mouth and throat, where it is absorbed through the mucous membranes [6]. Common side effects include throat and mouth irritation and coughing. Anyone with a breathing problem such as asthma should use the nicotine inhaler with caution.

**Varenicline** is sold under the name of Chantix in the US and Champix in other countries. It is an effective smoking cessation treatment that patients should be encouraged to use. It is a non-nicotine medication that was approved by the FDA for the treatment of tobacco dependence in 2006. Its mechanism of action is presumed to be due to its partial nicotine receptor agonist and antagonist effects. It is well tolerated in most patients. In February and May 2008, the FDA added warnings regarding the use of Chantix. Specifically, it noted that (1) the most common side effects reported among Chantix users include nausea (30%), sleep disturbance, constipation, gas, and/or vomiting; (2) depressed mood, agitation, changes in behavior, suicidal ideation, and suicide have been reported in patients attempting to quit smoking while using Chantix; (3) some Chantix users report vivid, unusual or strange dreams. The FDA recommends (1) if a patient who is taking Chantix, or their family or caregivers, notice agitation, depressed mood, or changes in behavior that are not typical, or if the patient develops suicidal thoughts or actions, they should stop taking Chantix and call their doctor right away, (2) that patients tell their health care provider about any history of psychiatric illness prior to starting Chantix; and (3) Patients should use caution driving or operating machinery until they know how quitting smoking with CHANTIX may affect them; and (4) that clinicians monitor patients for changes in mood and behavior when prescribing Chantix. In light of these FDA recommendations, clinicians should consider eliciting information on their patients' psychiatric history. It should be used with caution in patients with severe renal dysfunction. Chantix is not recommended for use in combination with nicotine replacement therapy (NRT). It is available only with a prescription. The quit rate presented here is for 2mg/day dose; a lower dose also has a lower quit rate.

Experts recommend combining nicotine replacement therapy with advice or counseling from a doctor, dentist, pharmacist, or other health care provider. Also, experts suggest that smokers quit using tobacco products before they start using nicotine replacement products (12 [7]). Too much nicotine can cause nausea, vomiting, dizziness, diarrhea, weakness, or rapid heartbeat.

- See more at: <http://smokingcessationleadership.ucsf.edu/for-smokers/ways-to-quit#stha...> [8]

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Smoking Cessation Leadership Center  
University of California, San Francisco

3333 California Street, Suite 430, San Francisco, CA 94143, Phone: (877) 509-3786  
<https://smokingcessationleadership.ucsf.edu>

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### Links

[1] <http://www.cancer.gov/cancertopics/factsheet/Tobacco/symptoms-triggers-quitting#r5>

[2] <http://www.cancer.gov/cancertopics/factsheet/Tobacco/symptoms-triggers-quitting#r9>

[3]

<http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=CDR0000044213&version=Patient&language=>

[4] <http://www.cancer.gov/cancertopics/factsheet/Tobacco/symptoms-triggers-quitting#r10>

[5] <http://www.cancer.gov/cancertopics/factsheet/Tobacco/symptoms-triggers-quitting#r11>

[6]

<http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=CDR0000257212&version=Patient&language=>

[7] <http://www.cancer.gov/cancertopics/factsheet/Tobacco/symptoms-triggers-quitting#r12>

[8] <http://smokingcessationleadership.ucsf.edu/for-smokers/ways-to-quit#sthash.ShRiVSuV.dpuf>