

## **Nicotine Replacement Therapy (NRT) and Medication for Smoking Cessation:** **Frequently Asked Questions**

This information sheet is designed to answer frequently asked questions regarding the use of NRT and medications. It should serve as a companion guide to the video by Dr. Marc Fishman. *The authors of this guide are not physicians* and this information should not serve as a replacement to having a thorough discussion with a physician regarding specific medical needs.

### **What are the different forms of NRT? How do they work?**

Nicotine Replacement Therapy (NRT) comes in a variety of delivery systems. Some are available over the counter and some by prescription. The forms of NRT available include:

- Patches (OTC) -25mg, 21mg, 15mg, 14mg, 10mg, 7mg, 5mg
- Gum (OTC) – 2mg, 4mg
- Lozenge (OTC) – 2mg, 4mg
- Inhaler (Rx) – 4mg
- Nasal Spray (Rx)- 0.5mg

NRT works by delivering nicotine in a form safer than cigarettes. NRT helps with withdrawal, reduces craving, and allows patients to taper off nicotine gradually and steadily to increase likelihood of quitting successfully.

The patches are considered long-acting and come in a range of dosages. They provide transdermal delivery of nicotine at consistent blood levels and should be changed once a day. People who smoke less than 10 cigarettes a day can usually start the patches with a lower dosage (e.g., 14mg).<sup>1</sup> A physician or pharmacist can suggest which dosage may be appropriate for each individual. The other types of NRT also come in varying dosages but are short-acting and should be used as needed. Always consult a physician for specific dosage related questions.

### **Is NRT safe?**

Yes, it's the non-nicotine products in tobacco (such as tar, carbon monoxide and ammonia) that are dangerous and have significant health consequences, especially when combusted. Nicotine is the addictive component of tobacco products. Although nicotine has some side effects that are problematic, it is much less harmful than smoked tobacco. The negative effects for use of nicotine in NRT are far fewer as compared to the health risks of tobacco use.

### **Can e-cigarettes be used to aid a quit attempt?**

E-cigarettes are considered safer than smoking cigarettes; however, little is known about their safety and they may be less safe than other forms of NRT. E-cigarettes are not regulated by the FDA and may not always contain consistent ingredients.

### **What are the prescription medications approved for smoking cessation?**

There are two anti-craving medications that are FDA approved: bupropion (Zyban®/Wellbutrin®) and varenicline (Chantix®). Both medications reduce cravings and the rewarding effects of cigarettes in the brain.

### **Are there side effects of NRT or medications?**

Although there are some side effects associated with pharmacological treatments, the side effects are less severe and problematic than many people think. Common side effects for both Chantix and Wellbutrin are depression, irritability, or other psychiatric side effects (such as nightmares). Additionally, if an individual takes more than one anti-craving medication or combines one or both of these medications with NRT, the potential for side effects is higher. However, these effects can be managed, and monitoring for these side effects is important.

There have been FDA black box warnings for Chantix, resulting from isolated consumer reports of depressed mood, suicidal thoughts, hostility, and agitation. There have also been reports of decreased tolerance to alcohol and increased risk for seizures. While these side effects are uncommon, they should be monitored when taking Chantix through ongoing communication with a physician. In 2016 the FDA removed all black box warnings from Chantix after research showed an equal adverse risk rate for all forms of NRT, medications, and placebo.<sup>2</sup>

### **When should someone start taking medication and/or NRT?**

Anti-craving medicines (Chantix or Wellbutrin) can and should be started at least one week before an individual's quit date in order to give the medication time to enter the individual's system and start taking effect. Individuals can also begin using these medications well before setting a quit date to reduce cravings and help them cut down prior to quitting.

NRT should be started in the days before or on the quit date to help alleviate withdrawal symptoms. However, individuals can use NRT before quitting to practice or to help them cut down (i.e., a partial quit attempt).

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<sup>1</sup> U.S. National Library of Medicine, *Nicotine Replacement Therapy*. <https://www.nlm.nih.gov/medlineplus/ency/article/007438.htm>. Accessed on 2/5/16.

<sup>2</sup> Anthenelli, R. M., Benowitz, N. L., West, R., St Aubin, L., McRae, T., Lawrence, D., ... & Evins, A. E. (2016). Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial. *The Lancet*, 387(10037), 2507-2520.

### **What is the recommended duration of use for NRT and/or medications?**

Chantix is designed for a 12-week course; however it may be helpful for some people to continue for longer periods.<sup>3</sup> A 7-12 week course is also typical for Wellbutrin, yet for many individuals it may be helpful to continue use for a longer duration (6 months – 1 year). The recommended course of NRT is individualized. Nonetheless, research has found that using NRT for 4 or more weeks is associated with increased likelihood of quitting.<sup>4</sup> People who are more dependent may benefit from longer use (i.e., 12 weeks or more). If considering a longer than typical duration of use of any medication, this should be discussed with a physician. In general, anti-craving medications and NRT are considered safe to take for long periods of time (i.e., a maintenance dose of NRT taken for a year or more) if it is helpful for the client to stay quit.

### **Can a person take more than one medication or form of NRT?**

*Combination NRT is more effective than monotherapy.* You can combine long-acting delivery systems, such as the patch, with short acting delivery systems (e.g., gum, lozenges, inhaler and spray), which provide a spike of nicotine in the blood system to help with momentary cravings. When combining multiple forms of NRT or NRT with smoking cigarettes, providers sometimes worry about too much nicotine. This is an important consideration for individuals who may have severe cardiac issues, however for most people the biggest side effect of too much nicotine is nausea. If individuals experience nausea, they should consider cutting down the amount of nicotine they are taking.

Combining NRT and Wellbutrin is also safe and recommended by Dr. Fishman. Although the Chantix label states that NRT should not be taken with Chantix, it is not unsafe to do so. Chantix blocks the effects of nicotine so it is not typically considered necessary to take NRT with Chantix. However, it does not block the effects of nicotine 100% so there may be some benefits of using NRT, especially a short acting form. In some cases, it may be helpful to combine anti-craving medicines (i.e., using Chantix and Wellbutrin together). Please consult a physician when considering either of these options, as the combination of these medications should be supervised by a physician who understands an individual's medical needs.

### **Can pregnant women use NRT for smoking cessation?**

Smoking during pregnancy is associated with adverse health outcomes, not only for the patient, but also for the unborn fetus. Although there is insufficient research about the use of NRT during pregnancy, *there is broad clinical consensus that NRT and Wellbutrin are safer than smoking, and this combination is appropriate to use when treating pregnant woman.* Pregnant smokers should consult their physician regarding starting NRT and/or medications.

### **What are the special considerations for adolescents? Are medications effective?**

There are no FDA approved pharmacotherapeutic aids for individuals under age 18. In adolescents, there is little evidence for the effectiveness of medications and NRT. Research on Wellbutrin found no differences between adolescents taking Wellbutrin and those taking a placebo. Studies of NRT have not found that they increase quit rates; however, they have found that NRT use is associated with a decrease in daily cigarette usage in adolescents.<sup>5</sup> Adolescents in general can be hard to treat, but this should not discourage further efforts. The earlier you intervene, the more likely you are to have success in any behavioral change.

### **What are the special considerations for people with comorbid mental health problems?**

Medications can cause psychiatric side effects in the general population; these rates tend to be higher in patients with psychiatric comorbidity. Individuals should be monitored for:

- Risk of depression/anxiety with Chantix
- Problems associated with alcohol use while taking Chantix - some people experience decreased tolerance to alcohol, including increased drunkenness, unusual or aggressive behavior, or memory loss<sup>6</sup>
- Risk of irritability or agitation with Wellbutrin
- Risk of mania with Wellbutrin among patients with bipolar disorder (Wellbutrin is not considered appropriate for patients with a history of manic or hypomanic episodes)

Additionally, nicotine can interact with many psychiatric medications. Thus, as people are weaned off of nicotine they may need lower dosages of their psychiatric medications. Therefore, an individual's psychiatrist should be made aware of their quitting.

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<sup>3</sup> <http://www.chantix.com/common-questions> Accessed on 12/12/15

<sup>4</sup> Zhang, B., Cohen, J. E., Bondy, S. J., & Selby, P. (2015). Duration of Nicotine Replacement Therapy Use and Smoking Cessation: A Population-Based Longitudinal Study. *American Journal of Epidemiology*, 181(7), 513-520. doi: 10.1093/aje/kwu292

<sup>5</sup> Karpinski, J. P., Timpe, E. M., & Lubsch, L. (2010). Smoking Cessation Treatment for Adolescents. *The Journal of Pediatric Pharmacology and Therapeutics* : JPPT, 15(4), 249–263.

<sup>6</sup> FDA Drug Safety Communication: FDA updates label for stop smoking drug Chantix (varenicline) to include potential alcohol interaction, rare risk of seizures, and studies of side effects on mood, behavior, or thinking. Accessed on 12/14/15. <http://www.fda.gov/Drugs/DrugSafety/ucm436494.htm>