

# Nicotine Replacement Therapy (NRT): Safe Usage, Prescription Necessity, and the Role of Comprehensive Tobacco Cessation Programs

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## ABSTRACT

Today tobacco use is the single utmost avertable cause of death in the world. Tobacco use is regularly mistakenly perceived to be exclusively a personal choice. Nicotine is the main active constituent in tobacco products that reinforces individual to tobacco dependence behavior. It is tobacco's other components which cause widespread mortality and morbidity. Though almost all of the toxicity of smoking is attributed to other components in cigarettes, it is the pharmacological effects of nicotine that lead to tobacco addiction. Therefore, pharmacological interventions for tobacco cessation continue to evolve with our growing knowledge of the neurochemical basis of nicotine addiction. Nicotine is the main alkaloid of tobacco smoke and the principal modulator of the psychopharmacological effects associated with addiction. Nicotine replacement therapy (NRT) aims to reduce motivation to consume tobacco and the physiological and psychomotor withdrawal symptoms through delivery of nicotine.

**Key-Words:** Tobacco, Nicotine, Nicotine Replacement Therapy, Addiction, Cigarettes

## INTRODUCTION

Tobacco addiction is a global public health issue, responsible for millions of preventable deaths every year. While most smokers are aware of the health risks, quitting smoking remains an incredibly difficult task due to nicotine dependence and the psychological aspects of addiction. Nicotine Replacement Therapy (NRT), available in various over-the-counter (OTC) forms such as patches, gums, lozenges, inhalers, and sprays, offers a scientifically-backed method to assist smokers in quitting. NRT reduces withdrawal symptoms and cravings by delivering nicotine without the harmful chemicals found in tobacco smoke, significantly increasing the chances of quitting successfully.<sup>1</sup> However, NRT is not without risks. Nicotine is still an addictive substance with potential side effects, and the improper use of NRT can lead to complications. This raises the question: Should NRT be prescription-based to ensure its safe and effective use? In this article, we will explore the safe usage of NRT, its benefits and risks, and the need for prescription oversight. We will also discuss how comprehensive tobacco cessation programs, such as the ICanCaRe

Tobacco Wellness Program, integrate NRT with behavioral support to maximize quitting success.

## Benefits of NRT Products

NRT has been proven effective in helping individuals quit smoking. By delivering nicotine in controlled doses, it helps reduce the severity of withdrawal symptoms such as irritability, anxiety, depression, insomnia, and cravings, making it easier for smokers to stop.<sup>2</sup> A systematic review by the Cochrane Collaboration found that NRT can double or triple the likelihood of quitting compared to using no aids.<sup>1</sup> Importantly, NRT is safer than smoking. While it provides nicotine, which is the addictive substance in tobacco, it does not contain the thousands of harmful chemicals like tar and carbon monoxide that contribute to the health risks associated with smoking, such as lung cancer, heart disease, and respiratory issues.<sup>3</sup> By switching to NRT, smokers are exposed to significantly fewer toxins, making it a safer option for those trying to quit.

## Types of NRT Products

NRT is available in several forms, each with different modes of delivery, durations of action, and user preferences:

*Nicotine Patches:* Provide a steady dose of nicotine throughout the day, Easy to use, making them ideal for regular smokers with consistent cravings.

*Nicotine Gum:* Delivers nicotine when chewed, and so

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allowing users to manage cravings as they occur. Ideal for smokers who need more flexibility in nicotine dosing.

*Nicotine Lozenges:* Dissolve slowly in the mouth, providing gradual nicotine delivery. Preferred by users who dislike chewing gum.

*Nicotine Inhalers:* Mimic the hand-to-mouth action of smoking, providing psychological comfort. Deliver rapid nicotine relief for smokers who miss the habitual actions of smoking.

*Nicotine Nasal or Oral Sprays:* Offer the quickest relief by delivering nicotine directly through the nasal or oral membranes. Suitable for users who experience sudden, intense cravings.

## Safe Use of NRT

While NRT products are effective, they must be used correctly to ensure safety and success. Many smokers may be unaware of the proper way to use NRT, leading to potential misuse, side effects, and even nicotine overdose. Common side effects include skin irritation from patches, mouth ulcers from gums, throat irritation from inhalers, and nausea from lozenges. More severe reactions like irregular heartbeat or allergic responses are rare but can occur, particularly if the dosage is too high.<sup>3</sup> To use NRT safely and effectively, it is crucial to:

### 1. Set a Quit Date

Choose a date to quit smoking and begin using NRT. Having a plan in place, along with support from family, friends, or a professional, increases the chances of success.

### 2. Choose the Right Product

The choice of NRT product depends on smoking habits. Patches work well for steady, consistent smokers, while lozenges or gum may be better suited for those who experience occasional cravings.

### 3. Follow Instructions

Carefully follow dosage instructions and guidelines. Avoid using multiple NRT products simultaneously unless advised by a healthcare provider. Misusing products by applying too many patches, chewing excessive gum, or overusing sprays or inhalers can lead to nicotine overdose, which may result in symptoms such as nausea, dizziness, and even seizures in extreme cases.

### 4. Combine NRT with Behavioral Support

NRT is most effective when combined with counseling or behavioral interventions. Smoking is both a physical and psychological addiction, and addressing both aspects is essential for long-term success.

### 5. Taper Off Gradually

NRT should be used as the temporary aid to quit this

not as a long-term replacement. Over time, users should reduce the dosage and frequency of NRT, eventually stopping completely after 8-12 weeks.

## Why NRT Should Be Prescription-Based

Currently, NRT products are available OTC in many countries, meaning anyone can purchase them without consulting a doctor or pharmacist. While OTC availability increases access to NRT, it also presents risks that could be mitigated by requiring NRT to be prescription-based.

### 1. Nicotine's Health Risks

Nicotine is not a harmless substance. Although it is less harmful than smoking, nicotine can still negatively impact the cardiovascular, nervous, and reproductive systems. In some cases, it may also interact with medications, leading to adverse effects. Without medical supervision, users may not be aware of these risks, increasing the likelihood of complications.

### 2. Improper Usage

Many users may not understand how to use NRT correctly. Choosing the right dosage, duration, and product type is critical to quitting success. Users may also fail to recognize the signs of overdose or other side effects. Under medical supervision, individuals can receive personalized advice to ensure the safe and effective use of NRT.

### 3. Lack of Behavioral Support

NRT is most effective when combined with behavioral counseling that addresses the psychological aspects of addiction. However, many smokers using OTC NRT products may not have access to this critical support. Prescription-based NRT would allow healthcare professionals to offer guidance on behavioral interventions and ensure that users receive comprehensive quit plans.

### 4. Risk of Nicotine Dependence

Although NRT is designed as a short-term aid, some users may become dependent on the products, using them for longer than recommended or in combination with other nicotine sources, such as cigarettes or e-cigarettes. Medical oversight could prevent prolonged nicotine use by encouraging users to gradually taper off NRT products.

### 5. Misuse and Abuse

OTC availability increases the risk of misuse. For example, individuals may use more than the recommended dosage, leading to nicotine toxicity.

Prescription requirements would ensure that users are educated on proper use, reducing the likelihood of abuse. By making NRT prescription-based, healthcare providers can assess each individual's needs, recommend the appropriate product and dosage, and offer ongoing support to ensure successful cessation. This medical oversight would not only improve the safety and effectiveness of NRT but also reduce the risk of misuse, complications, and prolonged nicotine dependence.

### The ICanCaRe Tobacco Wellness Program: A Comprehensive Approach

The ICanCaRe Tobacco Wellness Program offers a holistic, evidence-based approach to quitting smoking, integrating NRT with behavioral support, counseling, and personalized care. Our program starts with an in-depth assessment of each participant's tobacco use, medical history, and psychological needs. Based on this evaluation, we create a customized quit plan that includes:

- **NRT Selection and Guidance:** We help users choose the right NRT product and dosage while providing continuous monitoring to ensure safe usage.
- **Behavioral Counseling:** Through individual and group counseling sessions, we address the psychological and emotional aspects of quitting smoking, helping users build coping mechanisms and strategies for long-term success.
- **Ongoing Support:** The ICanCaRe mobile app provides users with motivational content, progress tracking tools, and direct access to trained counselors for real-time support.

By combining NRT with counseling and continuous support, the ICanCaRe program significantly improves the chances of successfully quitting smoking and maintaining a tobacco-free lifestyle.

### CONCLUSION

Nicotine Replacement Therapy (NRT) is a valuable tool in the fight against tobacco addiction, offering smokers a safer alternative to cigarettes. However, the improper use of NRT, its associated health risks, and the potential for misuse underscore the need for prescription-based access. By requiring medical supervision, we can ensure that NRT is used safely and effectively, while also providing smokers with the behavioral support they need to quit successfully. The ICanCaRe Tobacco Wellness Program exemplifies the

comprehensive approach to tobacco cessation, combining NRT with personalized care and ongoing support to help individuals quit smoking and stay smoke-free for life.

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