

Concerns regarding the consequences of Nicotex for smoking and tobacco chewing cessation

Dear Editor,

Tobacco use is a significant global public health challenge, contributing to preventable diseases and premature mortality. Efforts to mitigate tobacco consumption emphasize the crucial role of smoking and tobacco chewing cessation in reducing associated health risks. Nicotex, a nicotine replacement therapy (NRT), has garnered attention as a potential aid in this regard.^[1]

The global tobacco epidemic results in over 8 million deaths annually, with more than 7 million attributed to direct tobacco use and around 1.2 million to secondhand smoke exposure, as reported by the World Health Organization (WHO). The urgency for effective cessation aids is underscored by the staggering health and economic consequences, causing preventable diseases like cardiovascular disorders, respiratory issues, and various cancers. The economic burden associated with treating tobacco-related illnesses further emphasizes the need for robust cessation strategies.^[2]

Nicotex, widely used as a NRT, emerges as a potential aid in smoking and tobacco chewing cessation. By providing controlled nicotine doses without harmful tobacco smoke toxins, Nicotex helps manage withdrawal symptoms and gradually reduces nicotine dependence.^[3]

Understanding patterns of tobacco consumption is crucial for tailoring effective cessation interventions. Demographic groups defined by age, socioeconomic status, and education level face varying barriers to quitting, necessitating targeted cessation programs addressing specific challenges faced by diverse populations.^[4]

Examining Nicotex's effectiveness in aiding smoking and tobacco chewing cessation is essential. This discussion addresses concerns about Nicotex use, emphasizing the need for a comprehensive understanding of its role as an NRT for individuals seeking to quit smoking or tobacco chewing.

Some studies conclude that the Consumption Dependency Cycle Model provides a thorough comprehension of contextual elements, processes, and outcomes linked to smokeless tobacco use. This model proves valuable for researchers aiming to formulate successful interventions in the realm of smokeless tobacco consumption.^[5]

This communication aims to address concerns about Nicotex use, emphasizing the need for a comprehensive understanding of its role as a NRT for individuals seeking to quit smoking or tobacco chewing. The title reflects the critical need for effective cessation aids and the potential consequences of Nicotex on smoking and tobacco chewing cessation.

Global Statistics

1. Smoking Prevalence: According to the World Health Organization (WHO), as of 2018, approximately 1.1 billion people worldwide smoked tobacco.
2. Mortality: Tobacco use is a leading cause of preventable death globally. The WHO estimated that tobacco-related illnesses were responsible for more than 8 million deaths each year.
3. Morbidity: Smoking is linked to a range of health issues, including cardiovascular diseases, respiratory diseases (like chronic obstructive pulmonary disease [COPD]), and various cancers.
4. Secondhand Smoke: Exposure to secondhand smoke is also a significant public health concern, causing over 1 million deaths annually.^[2-7]

Statistics for India

1. Smoking Prevalence: According to the Global Adult Tobacco Survey (GATS) conducted in 2016–2017, about 28.6% of adults in India use tobacco in some form. This includes smoking and smokeless tobacco.
2. Mortality: Tobacco-related diseases are a significant cause of mortality in India. The Global Burden of Disease Study estimated that around 1.3 million deaths in India were attributable to tobacco use in 2017.
3. Morbidity: Tobacco use in India is associated with various health issues, including cardiovascular diseases, respiratory diseases, and cancers of the lung, mouth, and throat.
4. Secondhand Smoke: Exposure to secondhand smoke is also a concern in India, affecting both adults and children.^[2-5,7]

Nicotine Dependency and Withdrawal *Potential Dependency on Nicotex as a Substitute for Nicotine:*

Introduction of a New Dependency: Individuals using Nicotex as a smoking or chewing cessation aid may

develop a dependency on this nicotine replacement therapy (NRT) product. Nicotex, while designed to assist in quitting, could become a substitute for the nicotine obtained from traditional tobacco products, potentially leading to a new form of dependency.

Withdrawal Symptoms and Challenges Associated With Reducing Nicotex Usage:

Nicotine Replacement Withdrawal: Individuals may experience withdrawal symptoms when attempting to reduce or discontinue Nicotex use, mirroring the challenges faced during quitting smoking or tobacco chewing.

Physical Symptoms: Withdrawal symptoms may include cravings, irritability, headaches, and fatigue, posing challenges to those attempting to decrease their dependence on Nicotex.

Psychological Impact: The psychological aspects of withdrawal, such as mood swings and anxiety, can contribute to the difficulty of reducing Nicotex usage.

Relapse Risk: The presence of withdrawal symptoms might increase the risk of relapse into smoking or tobacco use, highlighting the importance of managing these challenges effectively.^[3,5,8,9]

Nicotex Long-Term Health Implications

- 1. Cardiovascular Health:** Long-term use of Nicotex may raise concerns related to cardiovascular health, as nicotine itself can affect blood pressure and heart function. Prolonged exposure to nicotine, even in the form of nicotine replacement therapy, may contribute to an increased risk of cardiovascular diseases over time.
- 2. Respiratory System:** Nicotex users may face challenges related to the respiratory system, as inhaling nicotine can have consequences for lung function. Long-term inhalation of nicotine, even in controlled doses, may be linked to respiratory conditions or exacerbate pre-existing respiratory issues.
- 3. Oral Health:** For individuals using Nicotex as a gum or lozenge, there may be concerns about the impact on oral health. Prolonged use might contribute to dental problems, including gum issues or changes in oral pH.
- 4. Cancer Risk:** While Nicotex aims to provide a safer alternative to traditional tobacco, there may be concerns about the potential carcinogenic effects of prolonged nicotine exposure. Research might explore the correlation between extended Nicotex use and the risk of certain cancers, although the risk is expected to be lower than with smoking.
- 5. Neurological Effects:** Nicotine, even in replacement therapy, can have effects on cognitive function. Long-term use may raise questions about its impact

on memory and attention. Exploring whether extended Nicotex use is associated with an increased risk of neurological diseases or conditions.

- 6. Endocrine System:** Nicotine can influence the endocrine system, affecting hormonal balance. Long-term use of Nicotex may have implications for metabolic processes, potentially leading to weight gain or other endocrine-related issues.
- 7. Bone Health:** Nicotine has been associated with alterations in calcium metabolism. Investigating the potential long-term impact on bone health and density. Nicotex use contributes to an increased risk of osteoporosis or bone-related conditions.
- 8. Mental Health:** Exploring the impact of long-term Nicotex use on mental health, including potential links to anxiety, depression, or other psychiatric disorders. Understanding how extended Nicotex use might contribute to psychological addiction and dependence.
- 9. Immune System Function:** Investigating the influence of Nicotex on immune system function and whether long-term use affects the body's ability to respond to infections.^[4-6,8,9]

Nicotine Replacement Therapies (NRTs) and Other Cessation Techniques: Their Strategic Role within the Spectrum of Cessation Strategies

- 1. Addressing Nicotine Dependency:** NRTs, including Nicotex, play a pivotal role in addressing nicotine dependency by providing controlled doses of nicotine, mitigating withdrawal symptoms, and facilitating a smoother transition away from tobacco use. NRTs complement other cessation techniques by offering a pharmacological solution to address the physiological aspects of addiction.
- 2. Diverse Modalities for Individual Preferences:** The spectrum of cessation strategies includes diverse modalities, such as behavioural therapies, support groups, and prescription medications. Offering a range allows for tailoring interventions to individual preferences, increasing the likelihood of engagement and success. Healthcare professionals can strategically combine NRTs with non-nicotine medications or behavioural interventions based on the unique needs and preferences of each individual.
- 3. Combining Pharmacological and Behavioural Approaches:** NRTs are often used in conjunction with behavioural support, counselling, or therapy to address both the physical and psychological aspects of addiction. The strategic integration of NRTs with behavioural interventions creates comprehensive treatment plans that increase the effectiveness of smoking cessation efforts.
- 4. Stepwise Approaches for Gradual Reduction:** NRTs, including step-down formulations like patches with

decreasing nicotine concentrations, support gradual reduction strategies. This stepwise approach helps individuals adjust to decreasing nicotine levels, easing the transition to complete cessation. Flexibility in titration allows users to customize their approach, aligning with their readiness to quit and tolerance for withdrawal symptoms.

5. **Pharmacological Diversity:** The availability of various NRT formulations, such as patches, gums, lozenges, and inhalers, provides options to accommodate different user preferences and lifestyles. Strategic use involves considering user characteristics, such as the severity of nicotine dependence, preferences, and lifestyle factors, to recommend the most suitable NRT formulation.
6. **Integration With Technology Interventions:** Integrating NRTs with technology-assisted interventions, such as mobile apps or telemedicine, enhances accessibility, user engagement, and monitoring of progress. The use of technology allows for data-driven decision-making, enabling healthcare professionals to tailor interventions based on real-time feedback and user-reported outcomes.
7. **Global Accessibility and Affordability:** NRTs, being relatively accessible and affordable, contribute to the global reach of smoking cessation efforts. Addressing tobacco use on a global scale involves strategic considerations for making NRTs widely available, especially in regions where they can have a significant public health impact.
8. **Supporting Long-Term Success and Relapse Prevention:** NRTs strategically contribute to long-term success by providing options for maintenance therapy, addressing potential relapse challenges beyond the initial cessation period. Regular monitoring and adjustments to NRT regimens, in collaboration with healthcare professionals, support sustained abstinence and minimize the risk of relapse.^[3,4,8-10]

Conclusion

It is essential to highlight the potential drawbacks of relying solely on Nicotex for smoking or tobacco cessation. A holistic approach, incorporating behavioural therapies, support groups, and comprehensive counselling, may offer a more effective and sustainable solution. By addressing these concerns, we can better support individuals in their quest to overcome nicotine addiction and lead healthier lives.

While Nicotex and other nicotine replacement therapies (NRTs) have proven efficacy in helping individuals quit smoking or tobacco chewing, it is essential to approach their usage with caution. A balanced and informed strategy that includes professional guidance, behavioural support, and periodic reassessment is

crucial for a successful and sustainable journey towards a tobacco-free life. It's not just about replacing one source of nicotine with another, but adopting a comprehensive plan that addresses the multifaceted nature of tobacco addiction. This approach ensures a higher likelihood of success and long-term well-being for those striving to quit.

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Conflicts of interest

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Ram K. Garg

Department of Community Health Nursing, Teerthanker Mahaveer University, College of Nursing Moradabad, Uttar Pradesh, India

Address for correspondence:

Dr. Ram K. Garg,
Department of Community Health Nursing, Teerthanker Mahaveer University, College of Nursing Moradabad - 244 102, Uttar Pradesh, India.
E-mail: ram.nursing@tmu.ac.in

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References

1. Kalkhoran S, Benowitz NL, Rigotti NA. Prevention and treatment of tobacco use: JACC health promotion series. *J Am Coll Cardiol* 2018;72:1030-45. doi: 10.1016/j.jacc.2018.06.036.
2. Demissie HS, Smith T, de Quevedo IG, Kress AC, Twentymen E. Factors associated with quit attempt and successful quitting among adults who smoke tobacco in Ethiopia: Global Adult Tobacco Survey (GATS) 2016. *Tob Prev Cessat* 2022;8:12. doi: 10.18332/tpc/146170.
3. Sandhu A, Hosseini SA, Saadabadi A. Nicotine Replacement Therapy. [Updated 2023 Nov 12]. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK493148>.
4. United States Public Health Service Office of the Surgeon General; National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. Smoking Cessation: A Report of the Surgeon General. Washington (DC): US Department of Health and Human Services; 2020. Chapter 1, Introduction, Conclusions, and the Evolving Landscape of Smoking Cessation. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK555595>.
5. Fattahi E, Solhi M, Hashemi Nazari SS, Barati H, Mehrabian F, Manzari ZS, *et al.* A model to explain smokeless tobacco consumption in adults: A grounded theory study. *Heliyon* 2023;9:e20734. doi: 10.1016/j.heliyon.2023.e20734.
6. Baker CL, Bruno M, Emir B, Li VW, Goren A. Smoking cessation is associated with lower indirect costs. *J Occup Environ Med* 2018;60:490-95. doi: 10.1097/JOM.0000000000001302.

7. Rai B, Bramhankar M. Tobacco use among Indian states: Key findings from the latest demographic health survey 2019-20. *Tob Prevat* 2021;7:19. doi: 10.18332/tpc/132466.
8. Wadgave U, Nagesh L. Nicotine replacement therapy: An overview. *Int J Health Sci (Qassim)* 2016;10:425-35.
9. Lee PN, Fariss MW. A systematic review of possible serious adverse health effects of nicotine replacement therapy. *Arch Toxicol* 2017;91:1565-94. doi: 10.1007/s00204-016-1856-y.
10. Hartmann-Boyce J, Chepkin SC, Ye W, Bullen C, Lancaster T. Nicotine replacement therapy versus control for smoking cessation. *Cochrane Database Syst Rev* 2018;5:CD000146. doi: 10.1002/14651858.CD000146.pub5.

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