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## Articles:

Periodontitis overview



Oral mucosal changes  
caused by nicotine pouches



How safe are nicotine  
pouches?



# Substance Misuse Prevention: A Collection of Readings

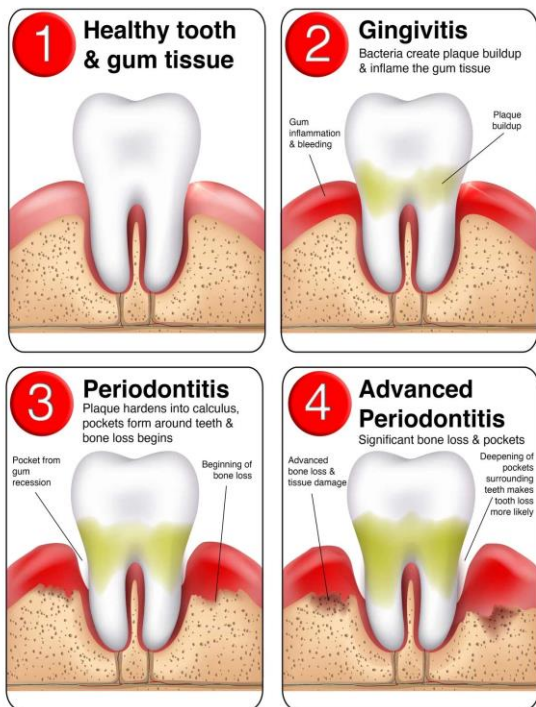
## What About Nicotine?



### Emerging Oral Nicotine Products and Periodontal Diseases (NIH, 2023)

Oral nicotine pouches (ONPs) are recently emerging as a new “modern oral” nicotine product. Because of the nicotine and flavors, these pouches are appealing to young-adult nonsmokers. ONPs are marketed as “tobacco-free” and are controversially described as a lower-risk product. However, there is limited evidence to justify this promise of lower-risk. Findings from a review by Ye & Rahman (2023) stated that oral nicotine products contain flavorings, pH buffer, filling agents, as well as a trace of toxic TSNAs, metal, and formaldehyde. The mix of contents in ONPs thus poses a risk to periodontal health.

## What Happens with Periodontal Disease?



## Oral Lesions



### Oral Nicotine Pouch Usage and Nicotine Absorption

ONPs are used by inserting between the lip and gum to release nicotine for 30-60 minutes per use. Nicotine is absorbed into the blood stream via the oral mucosa, unlike vape products or cigarettes in which nicotine uptake is through inhalation. Due to the rapid increase in blood nicotine levels through this delivery system, some ONPs with high unprotonated nicotine may result in greater nicotine dependency.

### Risk to Periodontal Health

Periodontal disease is the leading cause of tooth loss and contributes to some systemic diseases. Holding ONPs so close to the gingival tissue can cause mechanical injury and irritation. The primary toxic component of nicotine pouches interacts with host cells and affects inflammatory responses within periodontal tissue, potentially deteriorating the tissue. Additionally, when used regularly, ONPs can lead to the development of oral lesions. Oral lesions often appear as white patches or sores primarily in the area where the pouch is placed in the mouth. The severity of oral lesions can vary depending on the frequency and duration of ONP use. Lesions can be reversible when ONP use stops.

### Coping with Nicotine Withdrawal (Healthline, 2024)

Dealing with nicotine withdrawal is difficult, but temporary. Knowing what symptoms to expect, using nicotine replacement therapy (NRT) products, and finding distractions can help cope with withdrawal.

Symptoms: cravings, anxiety, irritability, restlessness, trouble sleeping, difficulty concentrating, increased appetite, nausea

NRT products (provide nicotine in small doses to reduce cravings and manage symptoms): patches, lozenges, inhalers, gums, nasal sprays

Ways to help cope with triggers: eat hard foods to keep your mouth busy, chew gum or hard candy, squeeze a stress ball or use a fidget toy, change up your routine such as going for a walk during a break time

For comments on this newsletter or suggestions for future articles please contact: Diane Geyer LCPC, LADC, CCS, NCC~ Director of Training or Mary Furlong, Graduate Assistant~  
Email: [diane.geyer@maine.edu](mailto:diane.geyer@maine.edu) or [mary.furlong@maine.edu](mailto:mary.furlong@maine.edu)