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VAPE and ESCAPE FROM PERIODONTITIS?

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Abstract

The increasing use of vaping, or electronic cigarettes, across various age groups has raised important questions about its effects on oral health, especially concerning periodontal disease. Periodontal disorders, including gingivitis and periodontitis, depend heavily on the balance of the oral microbial environment. Evidence is emerging that the chemical constituents of e-cigarette aerosol may disturb this delicate microbial balance, potentially worsening periodontal health. Clinical research has shown that individuals who vape experience greater clinical attachment loss compared to both non-smokers and traditional cigarette smokers, suggesting that vaping could pose distinct risks to the periodontium. Although more extensive and detailed studies are necessary to confirm these findings and clarify underlying mechanisms, current insights highlight the importance for dental professionals to remain alert and undertake further investigation. This review emphasizes the need for thorough scientific exploration to better understand how vaping influences periodontal disease and to guide clinical decisions and public health policies.

Introduction

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In the symphony of modern indulgences, vaping, the electronic siren, has seduced both the youth and seasoned adults with its beguiling allure. The prevalence of vaping, or the use of electronic cigarettes, has observed a noteworthy surge in popularity, encompassing a demographic that spans from the younger generation to adults in recent years. A recent article by Simone Pettigrew et. Al., in 2023 stated that among non-tobacco users, 31% were curious about using e-cigarettes and 23% intended to use in the following year, indicating high levels of susceptibility.1 While it has garnered attention for its contemporary appeal, it is imperative to acknowledge that vaping may wield deleterious consequences upon oral health, specifically in association with periodontal disease. It is worth noting, however, that the definitive assessment of health hazards linked to vaping remains a subject of ongoing research.

Periodontal disease, an encompassing term within the realm of oral health, spans a spectrum of ailments, such as gingivitis and periodontitis, each wielding its own spectrum of afflictions. Recent scientific investigations have unveiled a plausible correlation between vaping and the exacerbation of periodontal diseases. Central to this emerging understanding is the composition of e-cigarette aerosols, a complex amalgamation of chemicals and toxins, which are suspected culprits in the perturbation of the delicate oral microbiota.2

The oral microbiota, akin to a meticulously orchestrated symphony, maintains the equilibrium within the oral cavity.3 This disruption, scientists posit, augments the vulnerability of individuals to the development of periodontal diseases. In a recent study by Fangxi Xu, et.al., in 2021; in Comparative effects of E-Cigarette aerosol on periodontium of periodontitis patients. A total of 159 patients with 31 cigarette smoker, 32 e-cigarette smokers and 38 non smokers were screened. Carbon monoxide and salivary cotinine levels were highest in cigarette smokers. Bleeding on probing and average PDs similarly increased in all 3 groups, but CAL uniquely increased in e-cigarette smokers. They concluded that CAL after 6months was significantly worse only in e-cigarette smokers.4

Though the evidence is mounting, it is critical to acknowledge that our comprehension of the interplay between vaping and periodontal health remains a work in progress. In conclusion, the ascent of vaping within contemporary society beckons us to scrutinize its potential ramifications on oral health. This emergent association with periodontal disease, as underlined by recent scientific investigations, underscores the need for vigilance and ongoing exploration of this evolving paradigm. It is within the crucible of scientific inquiry that we shall forge a clearer understanding of this intricate nexus, thereby enhancing our ability to address the consequences of vaping on oral health with discernment and precision.

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