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The Alleged Harm of Chocolate Consumption on Teeth: A Myth or Reality

Introduction

Recent studies have focused on cocoa (dark chocolate) in dentistry as it has helpful compounds like theobromine, polyphenols, and flavonoids. These ingredients can enhance dental health by helping to strengthen tooth enamel, making it harder and enabling it to fight against harmful bacteria that cause caries. Theobromine has also been studied as a possible alternative to fluoride in enhancing enamel.

Objective

The aim of this article is to provide an extensive review of the effects of cocoa on dental health, comparing theobromine-dependent remineralization with fluoride therapy and considering the potential risk of overconsumption.

The key aim of the present research is to elaborate upon the influence of dark chocolate on oral health through the presentation of its capability for enamel remineralization, its antimicrobial quality, and enhancement of oral welfare.

Material and Methods

A review of research was conducted, examining dark chocolate's impact on enamel microhardness, antimicrobial activity, and cariogenic potential. Data were taken from in vitro, in vivo, and clinical studies, concentrating on the relationship between dark chocolate and dental health outcomes.

Results

Research shows that theobromine improves enamel remineralization by making stable hydroxyapatite-like structures, enhancing tooth hardness and resistance to acid. Cocoa polyphenols have antibacterial effects against *Streptococcus mutans*, reducing biofilm formation and plaque accumulation. Additionally, flavonoids were also found to promote gum health.

Conclusion

Dark chocolate can serve as a helpful addition to oral hygiene because it hardens enamel, fights bacteria, and reduces inflammation. However, we need to be mindful of its sugar content. Future studies should explore sugar-free forms that are rich in theobromine to achieve maximum dental benefits with minimal risks.

Keywords: Dark chocolate, theobromine, flavonoid, polyphenol, cocoa

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Biography

Behzod Shavkatxojayev was born in 2006 in Tashkent, Uzbekistan, into a family of doctors. In 2023, he entered Central Asian University, enrolling in the Faculty of Dentistry. He is currently a third-year student.