

The consumption of non-alcoholic beverages and the occurrence of dental erosion among a group of adults visiting dental practices in Krakow

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Abstract

The aim of the study was to assess correlations between the consumption of selected non-alcoholic beverages and the prevalence of tooth erosion among adults visiting dental practices in Krakow. Dental erosion in group 124 people aged 18–55 was assessed using BEWE, while oral dryness with a mirror test. FFQ was used to assess fluid intake, supplemented with questions regarding oral hygiene and socio-demographic factors. Dental erosion, mostly mild, was found in 38.7% of participants. Dry mouth (second and third degree in a mirror test) concerned 16.1% of subjects. Dental erosion was significantly more common ($p = 0.01$) among participants with dry mouth. More frequent consumption of sweetened beverages as well as 100% juices (fruit, vegetable) correlated with dental erosion. Overall consumption of such beverages and also milk, as well as daily fluid intake was significantly higher among subjects with dental erosion.

Incorrect behaviors regarding the quality and quantity of drinks may contribute to tooth erosion among adults.

Key words: dental erosion, consumption of non-alcoholic beverages, total fluid intake, adults

Słowa kluczowe: erozja zębów, spożycie napojów bezalkoholowych, pobranie płynów, osoby dorosłe



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Przygotowanie do wydania elektronicznego finansowane w ramach umowy 641/P-DUN/2018 ze środków Ministra Nauki i Szkolnictwa Wyższego przeznaczonych na działalność upowszechniającą naukę.

Introduction

Dental erosion, understood as loss of hard tissue (enamel, dentine, root cement), is a progressive and irreversible loss of non-carious origin, which arises due to the interaction of acids on teeth surface. Besides aesthetic consequences, its occurrence also affects oral health – hypersensitivity and the potential loss of damaged teeth, associated with the inflammation of the pulp (pulpitis), periapical tissues or greater probability of post-traumatic lesions affected by erosion. The formation of dental

erosion is dependent on many external and internal factors. The latter include the following: the structure of teeth, the amount and structure of secreted saliva and the course of some diseases, such as the gastro-esophageal reflux, or the occurrence and severity of vomiting. The main external factor conducive to dental erosion is the lifestyle, particularly the nutritional behaviour associated with the consumption of (carbonated and non-carbonated) non-alcoholic beverages [1].

Erosion is caused by solutions of acids that come into contact with the teeth. It is assumed that any type of fluid