İstanbul, November 26-27 2024

III. INTERNATIONAL MINERAL WATER CONGRESS

Proceedings and Books of Abstracts

BİR ÖMÜR MADEN SUYU

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III. ULUSLARARASI MADEN SUYU KONGRESİ

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Assoc. Prof. Muhammet Emin Çam

Tuğba Şimşek

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Contents

Can Mineral Water be a Safe Alternative in Sports Parameters and Sustainable Health to Energy and Sports Drinks for Adolescent Athletes?

Ömer Mor*, Ece Öz*, Kürşat Bakdım**, Elif Günalan***

Abstract

Energy and sports drinks (ESDs) are frequently consumed for improved hydration and sports performance by athletes in various branches, including fencing, road cycling, football, tennis, handball, and rugby. Statista Consumer Market Insights data declared that the global revenue of the energy and sports drinks (ESDs) industry was 195,74 billion U.S. dollars in 2023. Moreover, the total revenue was projected to increase by 24.05% between 2024 and 2029 (1). However, the ESD consumption routine may become a health concern in the future, particularly in adolescent athletes. Excessive consumption of ESDs is related to dental erosion, tooth decay, obesity, type II diabetes, and several chronic disorders due to their high sugar content and low pH levels. Therefore, alternative solutions with high pH levels, sufficient minerals, and low sugar content must be found. This review discusses the effect of natural mineral waters (NMWs) on sports parameters and sustainable health compared to ESDs for adolescent athletes. In this context, related publications in the last 30 years have been obtained from Google Scholar, Scopus, and PubMed databases. Scientific literature was evaluated in terms of sports parameters, dental health, and risk of chronic disease development. Firstly, NMWs can contribute to rehydration, improved acid-base balance, and relieving muscle fatigue post-exercise. However, more evidence is required to impact performance directly. Secondly, NMWs with high pH and fluoride content may be safer for dental health than ESDs. Lastly, the consumption of non-sweetened NMWs does not result in obesity, but it may cause hypertension and urological diseases. In conclusion, consumption of ESDs or NMWs alone is insufficient for sports performance and sustainable health. Therefore, the effects of combined consumption of ESDs and NMWs on adolescent athletes should be investigated in the future, and their optimal consumption amounts for sustainable health should be determined.

* Istanbul Health and Technology University, Institute of Graduate Education.

** Istanbul Health and Technology University, Faculty of Dentistry.

*** Istanbul Health and Technology University, Faculty of Health Sciences, Department of Nutrition and Dietetics.

Keywords: Dental erosion, mineral water, oxidative stress, sports drinks, sustainable health

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