INTERNATIONAL JOURNAL OF TECHNICAL AND NATURAL SCIENCES

Dietary Acidity and Dental Erosion: Effects of Frequent Acidic Food and Beverage Intake

Aksu Samet, Akgul Omeragic, Valentina Velkovski, Sezen Samet, Iskra Pechijareva Sadikarijo

DOI: https://doi.org//10.69648/GLJY3848

International Journal of Natural and Technical Sciences (IJTNS), 2025; 5(2): 71-86

ijtns.ibupress.com

Online ISSN: 2671-3519

Application: 12.11.2025

Revision: 30.11.2025

Acceptance: 22.12.2025

Publication: 31.12.2025

Samet, A., Omeragic, A., Velkovski, V., Samet, S., & Pechijareva-Sadikarijo, I. (2025). Dietary acidity and dental erosion: Effects of frequent acidic food and beverage intake. International Journal of Natural and Technical Sciences, 5(2), 71-86. https://doi.org//10.69648/GLJY3848

Aksu Samet[1], Akgul Omeragic[1], Valentina Velkovski[2], Sezen Samet[1], Iskra Pechijareva Sadikarijo[1]

[1] Faculty of Dental Medicine, International Balkan University, Skopje, North Macedonia

[2] Faculty of Technology and Technical Sciences, University" St. Kliment Ohridski"- Bitola, North Macedonia

Aksu Samet https://orcid.org/0000-0001-7922-5058

Akgul Omeragic https://orcid.org/0009-0001-09931-3455

Valentina Velkovski https://orcid.org/0000-0003-4978-5710

Sezen Samet https://orcid.org/0009-0004-1168-1902

Iskra Pechijareva Sadikarijo https://orcid.org/0000-0002-3022-4094

Corresponding author: Email: aksu.samet@ibu.edu.mk

BALKAN JOURNALS

Abstract

Dental erosion is a multifactorial issue that is becoming increasingly related to modern eating patterns, and particularly due to the increased amount of acidic food and drinks being consumed. Although some studies have demonstrated that dietary acids can erode teeth in a laboratory setting, very few clinical studies have examined the habits of adult individuals who consume these types of foods. Therefore, the purpose of this study was to evaluate the relationship between the frequency of consumption of various acidic dietary products (lemons, carbonated beverages, sour candies, vinegar, pickled vegetables, and sports drinks) and the presence of dental erosion in adult patients. The primary hypothesis of this study is that adult patients diagnosed with clinical dental erosion consume acid-containing dietary products more frequently than adults without erosive lesions. To test the hypothesis, a quantitative, cross-sectional study was conducted with a sample of 60 adult patients aged 18-40 years who presented at a dental clinic in a university environment. Each participant underwent a clinical examination performed by trained and calibrated dental examiners. The participants were divided into two groups: a study group of patients with clinically confirmed erosive lesions (n = 30) and a control group of patients without erosive lesions (n = 30). A standardized questionnaire was used to ascertain the dietary patterns of each group of participants by determining how much the participants consumed weekly and monthly of the acidic foods (lemon juice, carbonated drinks, etc.) under study. Comparison of means between groups was accomplished using an independent samples t-test with $p<0.05$ set as statistically significant. Participants with dental erosive lesions indicated significantly greater frequency of consumption on both a weekly and monthly basis than participants without erosive lesions for all foods assessed except for pickled vegetables.

Keywords: dental erosion, dietary acids, eating behavior, enamel demineralization, adults

Introduction

Tooth erosion represents the progressive loss of hard dental tissues and has been a feature throughout human history. Teeth in prehistoric populations were often used in the processing of abrasive foods, to which structural wear naturally occurred. However, due to changes in lifestyle and dietary habits, dental erosions still appear as a common and clinically significant feature. Currently, dental erosion is understood to be a chronic, localized, and pathological dental hard tissue due to the action of chemical dissolution brought about by acids, independent of bacterial activity. In contrast to the acids produced by oral microbiota, dental erosion is primarily associated with exogenous dietary acids, as well as endogenous acid exposure resulting from gastric reflux or recurrent vomiting, often linked to systemic or psychosomatic conditions**.** Exogenous acids are derived from dietary intake and are commonly found in citrus fruits, carbonated soft drinks, sour candies, vinegar, and sports drinks. In contrast, endogenous (intrinsic) acids originate from gastric sources such as reflux or vomiting, resulting in repeated acid exposure of the enamel surface.

This research was intended to explore the possible association between adults' eating habits and the development of dental erosion. To accomplish a systematic and accurate analysis, research participants were divided into two groups based on clinical assessments of their teeth: (1) included adults with erosive lesions, and (2) included adults without any clinically detectable signs of erosion. A comparison of both groups will create an opportunity for the researchers to test for links between specific types of eating patterns and the progression of dental erosion.

Literature Review

The lesions in adults, such as erosion, are increasingly recognized as significant oral health issues, and numerous studies emphasize the role of acids, primarily from dietary sources, in the development of dental erosion (Chow & Brown, 1973; Samet et al., 2025). The mineral component of human teeth is composed of calcium and phosphorus apatite crystals, [$Ca_{10}(PO_4)_6(OH)_2$], a hard, water-insoluble salt essential for the formation of both bone and teeth. (Zhubi et al., 2024)**.**

According to Cheng et al. (2009), acidic drinks have a direct effect on causing demineralization to the enamel, and how often a person drinks acidic drinks can be related to what their teeth look like after they have lost some enamel due to having an acidic drink frequently. Many studies in which a dentist examines a person for ero-

sive lesions after their first visit show that most of the time, erosive lesions will be visible during a person's first dental examination (Elton et al., 2009). There are two ways a person can prevent erosive lesions on their teeth from progressing. Dentists help to educate patients and prevent further damage from other causes (i.e., using fluoride), and patients use individual preventive measures (i.e., brushing their teeth twice a day, reducing intake of sugar-containing food items). Many biochemical processes in organisms use buffer solutions that keep the pH approximately the same throughout most of these processes, being about 7.3 and 7.4 (Samet, 2025; Samet & Ristovska, 2016). Many studies have found that low salivary pH increases enamel breakdown risk and thereby links the environments of the mouth to both caries and erosive lesions (Pattem et al., 2022; Samet et al., 2025).

Food and drink that are high in citric acid or phosphoric acid can sap our dental enamel of calcium, weakening it. When enamel becomes weaker than before it was consumed, the ability to properly bond to restoration materials can also diminish (Dina et al., 2025). For example, researchers were able to assess the effect soda beverages (cola) have on enamel using in vitro studies and also determined how acidic (pH) citrus drinks erode an individual's dental enamel by measuring the changes in pH level, as well as measuring any enamel loss during the experiment. According to Kessler and Türp, soda beverages weaken enamel. This finding was confirmed by a study by Lussi et al. in their recent publication. (Kessler & Türp, 2020; Lussi et al., 2023).

The article also cites that numerous studies (Alcázar-Hernández et al., 2024; Ganss et al., 2001; Venables et al., 2005) show how systemic factors and lifestyle choices affect dental erosion. Sports drinks may cause dental damage in individuals participating in sports due to their acidity; however, recent research indicates that adding nano hydroxyapatite to these beverages may protect teeth from damage caused by the acidity of the pH. In addition, gastric reflux and psychological disorders such as bulimia cause adults to expose their teeth to the same acidic substance in the stomach repeatedly; the level of exposure increases as a result of exacerbated vomiting and nausea associated with bulimia (Bahal & Djemal, 2014; Beresescu et al., 2025; Min et al., 2011).

Research has shown that certain medications and other pharmacological agents, including aspirin, aspirin-like substances (i.e., salicylates), and particularly vitamin C, any antihypertensives (medications used to lower high blood pressure), and tricyclic antidepressants (which are commonly used to treat depression), may negatively affect the quality of saliva (i.e., pH and/or flow) and can contribute to enamel demineralization (Kaidonis et al., 2017; Venables et al., 2005; Zimmer et

al., 2015). The erosive potential of acidic beverages, specifically sports drinks such as those sold under the Gatorade name, has been discussed in many studies using in vitro methods, with the findings showing frequent use of these products can increase enamel demineralization, as well as providing insight into lifestyle choices and current eating/drinking patterns. Studies that assess erosive potential, however, generally have relied on in vitro experimental methods and general dietary patterns (González-Aragón Pineda et al., 2016; Willershausen et al., 2014). When producing powdered or ready-to-drink versions of sports drinks, acacia gum (or gum arabic) has been identified as a sugar replacement that is stable against salivary breakdown and oral bacteria, and therefore represents a non-cariogenic additive (Blazevska et al., 2025).

In summary, the studies reviewed provide overwhelming evidence for the impact of dietary acids on dental erosion but highlight the limited research on the pattern of consumption of those dietary acids in adults' natural eating habits. Therefore, the purpose of this study will be to evaluate how intake of the following food and drink products correlates with the presence of clinically diagnosed erosive lesions to better understand this issue (Chow & Brown, 1973; Samet et al., 2025; Zhubi et al., 2024).

Methods and Materials

The present study was designed as a quantitative cross-sectional study to assess the association between the consumption of acidic dietary products and the occurrence of dental erosions in adults. The patients in this study were adults of both sexes, aged 18–40 years, attending the Clinic for Dental Diseases and Endodontics at the University Clinical Center "Prof. Dr. Bojo Andreski" in Skopje. A sample of 60 participants was selected, and they were clinically examined and separated into two groups by calibrated dental professionals based on the presence or absence of erosive lesions**:** a study group of 30 participants diagnosed with clinically confirmed erosive lesions of the teeth, and a control group of 30 participants without erosive lesions. Exclusion criteria for the study were as follows: (1) Presence of chronic diseases, and (2) Certain physiological conditions.

Dietary habits data were collected using a standardized questionnaire (Table 1), and participants were surveyed regarding their weekly and monthly intake of lemon juice, carbonated drinks, sour candies, vinegar (acetic acid), pickled vegetables, and sports drinks. The collected data were subjected to statistical analysis by using

statistical programs of STATISTICA 7.1; SPSS 17.0; Mean values of consumption frequencies between the study and control groups were compared using the independent samples t-test.

Table 1:

Questionnaire for consumption of specific acidic foods and beverages.

	Consumption per week	Consumption per month
Lemon juice		
Carbonated drinks		
Sour candies		
Acetic acid (vinegar)		
Pickled vegetables		
Sports drinks		

Results and Discussion

From the analysis of the result of the present study it is evident that those participants who have been diagnosed as having erosive lesions, consume a considerably greater amount of food and/or drink that contain an acid content than those individuals diagnosed as not having erosive lesions; which supports our hypothesis of this research and also corresponds with other currently available literature that has established that the presence of exogenous dietary acids contributes significantly to the aetiology of dental erosion.

Lemon Juice Consumption

In Table 2, the results of weekly lemon juice consumption are presented. In the study group, the mean value was 8.2 ± 5.5, whereas in the control group it was lower, 2.5 ± 1.3. The difference in lemon juice consumption, in the t-test, was statistically significant ($p = 0.001051$).

Table 2: Presentation of patients from both groups regarding the consumption of lemon juice weekly and monthly, and the t-test

Lemon juice	Average 1*	Average 2*	t-test	df	p	N–1*	N–2*	St.Dev 1*	St.Dev 2*
Weekly	8,24138	2,500000	3,540863	39	0,001051	29	12	5,51398	1,314257
Monthly	32,13333	6,533333	7,298063	58	0,000000	30	30	18,57832	4,897102

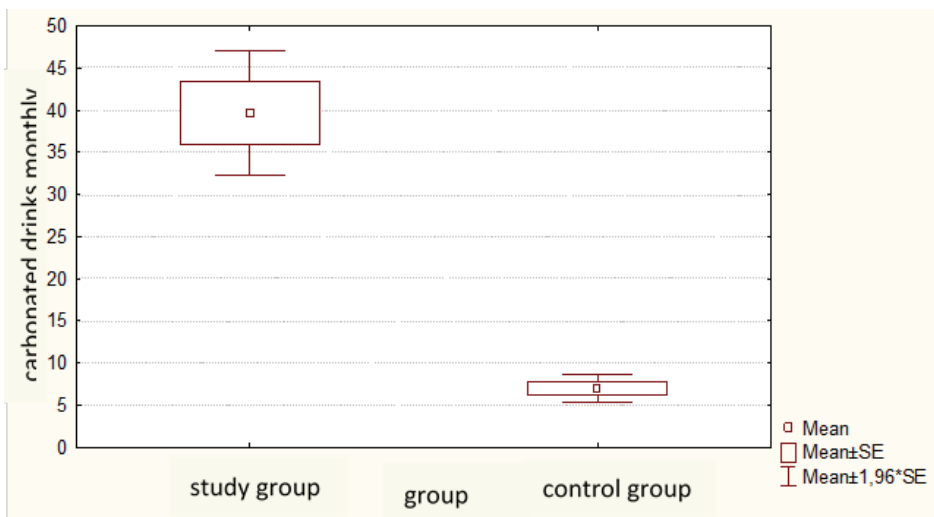
1*-study group

2* - control group

On average, the monthly lemon juice consumption in the study group was 32.1 ± 18.6, while in the control group it was much lower, 6.5 ± 4.9. The results are presented in Table 2 and Figure 1**.** The difference in monthly lemon juice consumption, according to the t-test, was statistically significant ($p < 0.000001$)**.**

Figure 1:

Presentation of patients from both groups regarding monthly lemon juice consumption.



The results indicate that the use of citric acid, which is found naturally in many different citrus fruits, is likely to contribute to the demineralization of the outer layers of tooth enamel due to its chelating properties. The highest amount of citric acid was found in lemon juice, which produced the greatest erosive effect in this study. These results support the findings by Zimmer et al. 2015 where it was determined that repeated exposure to citrus foods and drinks leads to an increase

in the amount of erosion found on tooth surfaces. González-Aragón Pineda et al. (2016) noted that 31.7% of adolescents developed erosive lesions because of the consumption of acidic drinks; thus showing that the intake of lemon juice is one of the major factors leading to the development of erosive lesions.

Carbonated Drink Consumption

In Table 3, the results of weekly carbonated drink consumption are presented. In the study group, the mean value was 14.4 ± 6.1, whereas in the control group it was 2.2 ± 1.1. The difference in carbonated drink consumption, in the t-test, was statistically significant ($p < 0.000001$).

Table 3:

Presentation of patients from both groups regarding the consumption of carbonated drinks weekly and monthly, and the t-test

Carbonated drinks	Average 1*	Average 2*	t-test	df	p	N–1*	N–2*	St.Dev.1*	St.Dev.2*
Weekly	14,43333	2,166667	6,845149	40	0,000000	30	12	6,12335	1,114641
Monthly	39,66667	6,962963	8,033182	55	0,000000	30	27	20,73367	4,327741

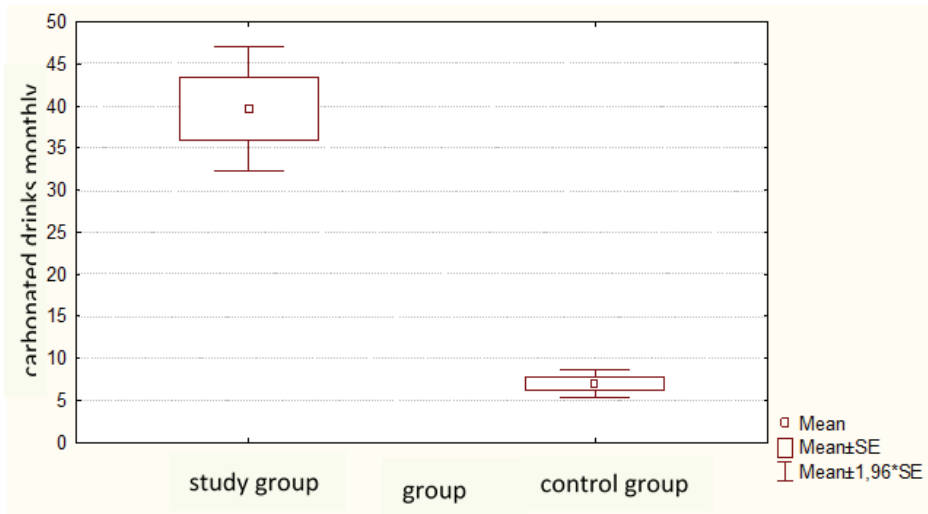
1*-study group

2* - control group

The average monthly consumption of carbonated drinks in the study group was 39.6 ± 20.7, while in the control group, it was lower, 7.0 ± 4.3. These results are shown in Table 3 and Figure 2. The difference in monthly carbonated drink consumption, in the t-test, was statistically significant ($p < 0.000001$).

Figure 2:

Presentation of patients from both groups regarding monthly carbonated drinks consumption.



Carbonated beverages contain a combination of a high level of phosphoric and citric acids, low pH, and high levels of titratable acid. Studies in vitro have shown that drinking these products frequently and extensively can result in very large amounts of enamel surface loss over time (Zimmer et al., 2015). These types of studies from the public health perspective should be alarming, considering the large number of adolescents and young adults consuming carbonated drinks regularly.

Sour Candy Consumption

Results in Table 4, weekly consumption of sour candies in the study group, where the mean value was 20.4 ± 11.3, while consumption of sour candies was lower in the control group, 2.0 ± 0.0. According to the t-test, the difference in sour candy consumption between the two groups was statistically significant (p = 0.000981).

Table 4: Presentation of patients from both groups regarding the consumption of sour candies weekly and monthly, and the t-test.

Sour candies	Average 1*	Average 2*	t-test	df	p	N–1*	N–2*	St.Dev.1*	St.Dev.2*
Weekly	20,43333	2,000000	3,617917	33	0,000981	30	5	11,25162	0,000000
Monthly	49,30000	5,100000	8,751087	48	0,000000	30	20	22,21082	4,517801

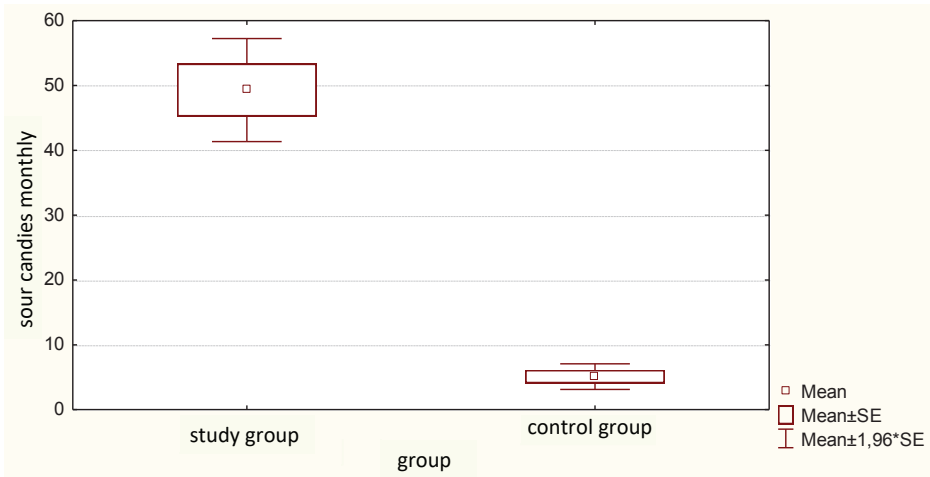
1*-study group

2* - control group

For monthly consumption, the study group had a mean of 49.3 ± 22.2, while the control group's consumption was lower, 5.1 ± 4.5. These results are shown in Table 4 and Figure 3. The difference in monthly sour candy consumption, according to the t-test, was statistically significant ($p < 0.000001$).

Figure 3:

Presentation of patients from both groups regarding monthly sour candies consumption.



These findings also correlate with an in vitro study by Lussi et al. (2023), where it was shown that sour candies had the highest erosive potential because of the very low pH level, high acid concentration, and long duration of retention in the mouth. They concluded from their research that frequent use of sour candies is going to present a risk to tooth enamel, as even chewing gum, which contains some amount of calcium bicarbonate, will not provide sufficient protective effects from this acidic material when used frequently (i.e., daily) for an extended period. Therefore, the likelihood of enamel erosion is very high for children and adolescents who are the primary target group for marketing sour candies.

Vinegar Consumption

In Table 5, the results of weekly vinegar (acetic acid) consumption are presented. In the study group, the mean value was 20.6 ± 20.4, while consumption was lower in the control group, 4.6 ± 2.4 per week. The difference in vinegar consumption in the t-test was statistically significant ($p = 0.018821$).

Table 5:

Presentation of patients from both groups regarding the consumption of vinegar weekly and monthly, and the t-test

Vinegar	Average 1*	Average 2*	t-test	df	p	N–1*	N–2*	St.Dev.1*	St.Dev.2*
Weekly	20,63333	4,600000	2,454051	38	0,018821	30	10	20,43912	2,366432
Monthly	34,40000	8,379310	7,454129	57	0,000000	30	29	17,83371	6,032139

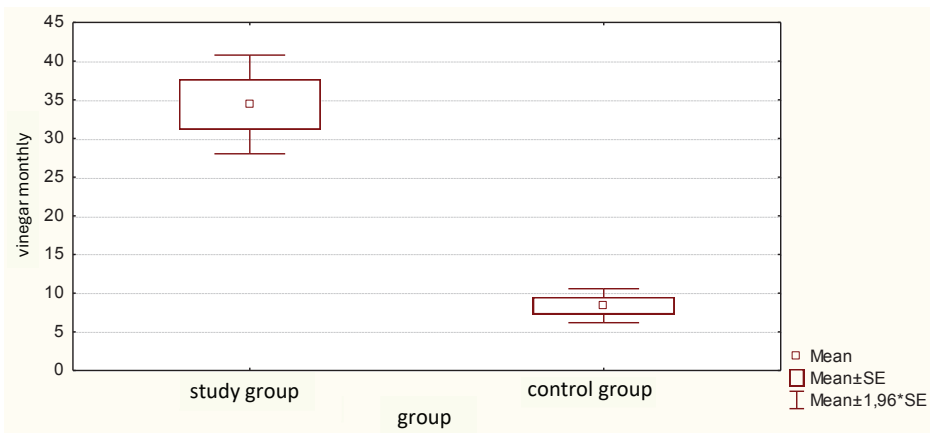
1*-study group

2* - control group

The average monthly vinegar consumption in the study group was 34.4 ± 17.8, while it was lower in the control group, 8.4 ± 6.0 per month. These results are shown in Table 5 and Figure 4. The difference in monthly vinegar consumption, in the t-test, was statistically significant (p = 0.018821).

Figure 4:

Monthly vinegar consumption of both patient groups.



The similarities found in this study are consistent with those from Willershausen et al. (2014), where they report that a variety of vinegar types (e.g., balsamic, raspberry, white, wine) exert the same erosive effects with only minor differences in terms of pH levels. Acetic acid, the active ingredient in vinegar, lowers the pH level of the mouth and also creates damage to the tooth enamel with frequent use (Samet et al., 2025). The findings from the current study provide additional evidence to support the classification of various types of vinegar as a high-risk food group when used consistently over time.

Pickled Vegetable Consumption

In Table 6, the results of the average weekly consumption of pickled vegetables are presented. In the study group, the mean value was 11.7 ± 8.9, while in the control group it was 5.4 ± 3.1. The difference in weekly pickled vegetable consumption, in the t-test, was not statistically significant (p = 0.132214).

Table 6:

Presentation of patients from both groups regarding the consumption of pickled vegetables weekly and monthly, and the t-test

Pickled vegetables	Average 1*	Average 2*	t-test	df	p	N–1*	N–2*	St.Dev.1*	St.Dev.2*
Weekly	11,72414	5,400000	1,544858	32	0,132214	29	5	8,95982	3,130495
Monthly	28,44828	4,454545	7,456750	49	0,000000	29	22	14,73719	3,555375

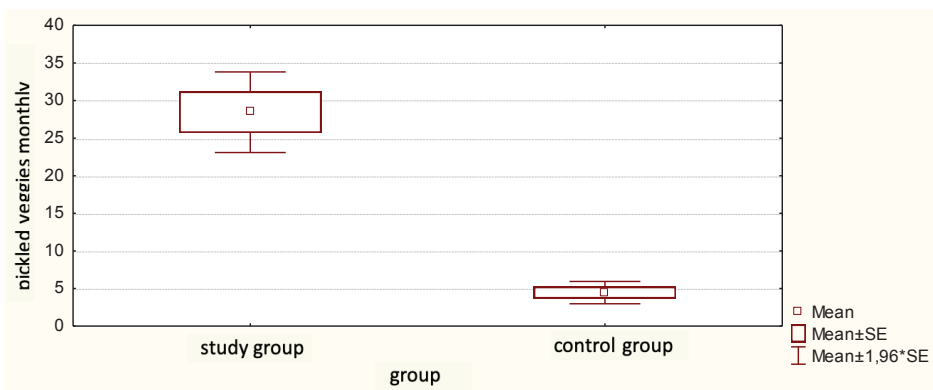
1*-study group

2* - control group

In Table 6 and Figure 5, the results of monthly pickled vegetable consumption are presented. In the study group, the mean value was 28.4 ± 14.7, while consumption was lower in the control group, 4.5 ± 3.6. The difference in monthly pickled vegetable consumption, was statistically significant (p < 0.000001).

Figure 5:

Presentation of patients from both groups regarding monthly pickled vegetable consumption.



The differences in consumption patterns may be contributing to this discrepancy, as infrequent use probably does not have a large effect on enamel erosive potential

(Beresescu et al., 2025). In addition to pH, major factors influencing the erosive potential of acidic foods are the frequency and duration of exposure, and salivary buffer capacity (Samet et al., 2025). Although it may seem that weekly consumption is too insignificant to be a factor, monthly consumption better represents food choices that have an effect on enamel erosion.

Sports Drink Consumption

In Table 7**,** the weekly consumption of sports drinks is presented, where the study group mean value was between 5.4 ± 4.4, whereas no patients in the control group consumed sports drinks.

Table 7: Weekly and monthly consumption of sports drinks of both groups.

Sports drinks	Average 1*	Average 2*	t-test	df	p	N–1*	N–2*	St.Dev.1*	St.Dev.2*
Weekly	5,35000			18		20	0	4,40424	
Monthly	18,72414	2,000000	4,849739	37	0,000022	29	10	10,78324	1,333333

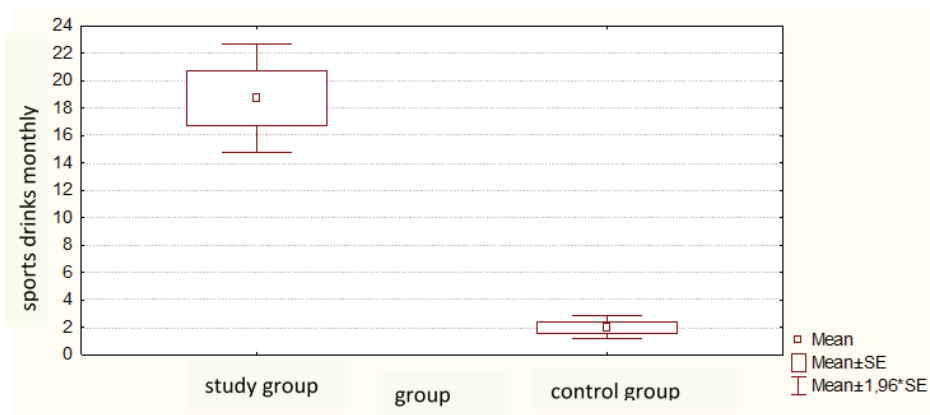
1*-study group

2* - control group

The average monthly consumption of sports drinks in the study group was 18.7 ± 10.8**,** while it was lower in the control group, 2.0 ± 1.3. These results are shown in Table 7 and Figure 6**,** where the difference in sports drink consumption, according to the t-test, was statistically significant (p = 0.000022).

Figure 6:

Monthly sports drinks consumption of patients from both groups.



Sports drinks have an erosive potential due to their ingredients, which usually contain both citric acid and high levels of carbohydrates. Young adults often consume sports drinks in large quantities and multiple times a day; therefore, they may consume them immediately before or just after physical activity, at which time the body's production of saliva is reduced. Lack of saliva increases the risk of demineralization of teeth through food and drink sources, including sports drinks.

Interpretation and Preventive Implications

The results of the present study indicate that adults with clinically confirmed dental erosion consume acidic foods and beverages significantly more frequently than individuals without erosive lesions. The results support previous studies, which have shown that regular consumption of acid (dietary acids) relates strongly to a significantly increased incidence of erosive tooth wear. As previously cited, developing dental erosion is directly influenced, not only by the particular type of acidic product consumed, but also by the amount, frequency, and consistency with which it is consumed. Consumption of acidic dietary products can result in regular exposure to dietary acids that can exceed the buffering ability of saliva and cause enamel demineralisation and a reduced potential for natural processes of enamel remineralisation. In comparison, infrequent or sporadic consumption of acidic dietary products does not appear to affect enamel strength as significantly.

These findings suggest that dietary modification, or the adjustment of dietary content, can be a key factor in managing dental erosion from a preventive perspective. Decreasing the occurrence of consumption of food or drink that is acidic, and decreasing the length of time foods and drinks remain in contact with each other in the mouth, as well as providing neutralization solutions after consuming acidic foods/drinks, may reduce the likelihood of dental erosion. Additional studies suggest that dairy foods, particularly milk, yogurt and cheese, are helpful to reduce enamel demineralization when consumed at the end of a meal, as these foods contain calcium and phosphate which increase the remineralization capacity of teeth; they also contain casein phosphopeptide–amorphous calcium phosphate complexes which help with remineralization and the buffering of acids (Beresescu et al., 2025; Chaudhary et al., 2017; Reynolds, 2008; SAMET et al., 2025).

The importance of clinical assessment and education of patients in determining who is at greater risk of dental erosion is also highlighted by these findings. The inclusion of a dietary assessment during routine dental check-ups for patients may allow dentists to detect dental erosion-related issues early and put into place meth-

ods for preventative treatment for adult patients with frequent consumption of acidic food products.

Study Limitations

Nonetheless, there were several restrictions in this investigation that have yet to be resolved. As the study has a cross-sectional design, it is hard to know whether acidic food consumption caused any erosion of teeth. Also, as food consumption data were collected through self-reports, they may not accurately reflect actual behaviour. Furthermore, this research had a small sample size and was only performed in one location. Factors other than acidic food consumption that may have affected the results, such as salivary flow rate, buffering capacity, and/or social class, weren't evaluated either. Regardless, this research has provided great detail about the impact of an individual's diet on their dental health.

Conclusion

The consensus emerging from this research study is that there is a significant relationship between consuming acidic foods frequently and having dental erosions. Analysis of dental erosive lesions found that individuals aged 18 to 40 years with dental erosion consumed lemon juice, carbonated beverages, sour candies, vinegar, and sports drinks more frequently than those without erosive lesions. Other analyses have revealed that not only the types of acidic products consumed are significant, but the amount and regularity of consumption also play an important role. Occasional use of these products may have little or no effect on the development of erosive lesions. This insight demonstrates the necessity of implementing preventive strategies that involve both behavioural modification and protective interventions. Future investigations may be warranted to establish specific individual differences in sensitivity to erosive lesions, taking into account the composition of their saliva, genetics, and lifestyle.

References

Alcázar-Hernández, J. M., Pecci-Lloret, M. R., & Guerrero-Gironés, J. (2024). Oral Manifestations in Patients in Treatment with Antidepressants: A Systematic Review. In *Journal of Clinical Medicine* (Vol. 13, Issue 22). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/jcm13226945

Bahal, P., & Djemal, S. (2014). Dental Erosion from an Excess of Vitamin C. *Case Reports in Dentistry*, *2014*(1), 485387. https://doi.org/10.1155/2014/485387

Beresescu, G., Beresescu, L., & Beresescu, G. (2025). *Erosive Impact of Acidic "Healthy" Beverages on Dental Enamel: A Systematic Review (2013–2025)*. https://doi.org/10.20944/PREPRINTS202505.1016.V1

Blazevska, Z., Pavlova, V., & Samet, A. (2025). *APPLICATION OF ACACIA GUM, A PLANT DIETARY FIBER, IN THE PRODUCTION OF POWDERED DRINKS*. www.globalscientificjournal.com

Chaudhary, I., Tripathi, A. M., Yadav, G., & Saha, S. (2017). Effect of Casein Phosphopeptide-amorphous Calcium Phosphate and Calcium Sodium Phosphosilicate on Artificial Carious Lesions: An in vitro Study. *International Journal of Clinical Pediatric Dentistry*, *10*(3), 261. https://doi.org/10.5005/JP-JOURNALS-10005-1447

Chow, L. C., & Brown, W. E. (1973). Phosphoric Acid Conditioning of Teeth for Pit and Fissure Sealants. *Journal of Dental Research*, *52*(5), 1158. https://doi.org/10.1177/00220345730520053501;ISSUE:ISSUE:DOI

Dina, K., Velkovski, V., & Samet, A. (2025). Determination of Hematological and Biochemical Parameters in Blood Samples from Oncological Patients in Kosovo. *International Journal of Technical and Natural Sciences*, *5*(1), 25–41. https://doi.org/10.69648/NDDD5147

Dina, K., Velkovski, V., Samet, A., & Blazevska, Z. (2025). *IMPACT OF DIETARY SUPPLEMENT RECOMMENDATIONS ON HEMATO-LOGICAL AND BIOCHEMICAL PARAMETERS IN CANCER PATIENTS FROM KOSOVO: A SIX-MONTH CLINICAL EVALUATION*. www.globalscientificjournal.com

Elton, V., Cooper, L., Higham, S. M., & Pender, N. (2009). Validation of enamel erosion in vitro. *Journal of Dentistry*, *37*(5), 336–341. https://doi.org/10.1016/J.JDENT.2009.01.006

Ganss, C., Klimek, J., & Giese, K. (2001). Dental erosion in children and adolescents - A cross-sectional and longitudinal investigation using study models. *Community Dentistry and Oral Epidemiology*, *29*(4), 264–271. https://doi.org/10.1034/J.1600-0528.2001.290405.X;SUBPAGE:STRING:ABSTRACT;WEBSITE:WEBSITE:PERICLES;WGROUP:STRING:PUBLICATION

González-Aragón Pineda, Á. E., Borges-Yáñez, S. A., Lussi, A., Irigoyen-Camacho, M. E., & Angeles Medina, F. (2016). Prevalence of erosive tooth wear and associated factors in a group of Mexican adolescents. *Journal of the American Dental Association*, *147*(2), 92–97. https://doi.org/10.1016/j.adaj.2015.07.016

Kaidonis, J. A., Anastassiadis, P. M., Lekkas, D., Ranjitkar, S., Townsend, G. C., & Amaechi, B. T. (2017). Prevention and control of dental erosion by professionally applied treatment. *Clinical Dentistry Reviewed 2017 2:1*, *2*(1), 1–9. https://doi.org/10.1007/S41894-017-0018-9

Kessler, P., & Türp, J. C. (2020). Influence of Coca-Cola on orthodontic materials. A systematic review. *Swiss Dental Journal*, *130*(12), 983–993. https://doi.org/10.61872/sdj-2020-12-02

Lussi, A., Lussi, A., Megert, B., & Shellis, R. P. (2023). The erosive effect of various drinks, foods, stimulants, medications and mouthwashes on human tooth enamel. *SWISS DENTAL JOURNAL SSO – Science and Clinical Topics*, *133*(7/8), 440–455. https://doi.org/10.61872/sdj-2023-07-08-01

Min, J. H., Kwon, H. K., & Kim, B. I. (2011). The addition of nano-sized hydroxyapatite to a sports drink to inhibit dental erosion—In vitro study using bovine enamel. *Journal of Dentistry*, *39*(9), 629–635. https://doi.org/10.1016/J.JDENT.2011.07.001

Pattem, J., Field, J., Waterhouse, P. J., & German, M. J. (2022). The dynamic interplay of dietary acid pH and concentration during early-stage human enamel and dentine erosion. *Frontiers in Dental Medicine*, *3*, 1040565. https://doi.org/10.3389/FDMED.2022.1040565/FULL

Reynolds, E. C. (2008). Calcium phosphate-based remineralization systems: Scientific evidence? *Australian Dental Journal*, *53*(3), 268–273. https://doi.org/10.1111/J.1834-7819.2008.00061.X

Samet Aksu. (2025). SPECTROPHOTOMETRIC MONITORING OF THE OXIDATION OF THIOBENZAMIDE AT VARYING OXIDANT CONCENTRATIONS | KNOWLEDGE - International Journal. *Knowledge International Journal*, *73*(3), 583–588. https://ojs.ikm.mk/index.php/kij/article/view/7943

Samet, A., Omeragic, A., Velkovski, V., & Samet, S. (2025). Determination of the ph value of unstimulated and stimulated saliva in a group of patients with and without dental erosion. *JNSM - Journal of Natural Sciences and Mathematics of UT*, *10*(19–20), 17–30. https://doi.org/10.62792/ut.jnsm.v10.i19-20.p3106

Samet, A., & Ristovska, N. (2016). Effect of pH to the Oxidation of Thiobenzamide with Cr(-VI) Reagent. *Bulletin of the Chemists & Technologists of Bosnia & Herzegovina / Glasnik Hemičara i Tehnologa Bosne i Hercegovine*, 102. https://openurl.ebsco.com/contentitem/gcd:133917508?sid=ebsco:plink:crawler&id=ebsco:gcd:133917508

Venables, M. C., Shaw, L., Jeukendrup, A. E., Roedig-Penman, A., Finke, M., Newcombe, R. G., Parry, J., & Smith, A. J. (2005). Erosive effect of a new sports drink on dental enamel during exercise. *Medicine and Science in Sports and Exercise*, *37*(1), 39–44. https://doi.org/10.1249/01.MSS.0000150017.74892.F5

Willershausen, I., Weyer, V., Schulte, D., Lampe, F., Buhre, S., & Willershausen, B. (2014). In vitro study on dental erosion caused by different vinegar varieties using an electron microprobe. *Clinical Laboratory*, *60*(5), 783–790. https://doi.org/10.7754/CLIN.LAB.2013.130528

Zhubi, D., Pavlova, V., Samet, A., & Author, ©. (2024). Blood Analysis of Patients with Rheumatoid Disease from Kosovo Using Non-Steroidal Anti-Inflammatory Drug-Aspirin. *International Journal of Natural and Technical Sciences (IJTNS)*, *4*(2), 57–80. https://doi.org/10.69648/WYSO8796

Zimmer, S., Kirchner, G., Bizhang, M., & Benedix, M. (2015). Influence of Various Acidic Beverages on Tooth Erosion. Evaluation by a New Method. *PLOS ONE*, *10*(6), e0129462. https://doi.org/10.1371/JOURNAL.PONE.0129462