



Nutritional Approaches to Managing Pediatric Migraine

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Limited evidence and experience support the use of pharmacological treatments for pediatric and adolescent migraine, compared to their use in adults.¹ As a result, there is an increasing focus on non-pharmacological interventions for this age group. Nutrition is often emphasized as a key factor in these interventions.² In addition to identifying and managing specific foods that may trigger headaches, it is essential to establish healthy eating habits in children's daily routines.

A review paper by Na,³ published in *Headache and Pain Research*, provides a well-organized summary of various types of dietary therapies and the literature on their application to chronic headaches. The classic ketogenic diet is the most recognized among these dietary therapies; however, several variations exist, including the modified Atkins therapy, the low glycemic index diet (LGIT), and a diet enriched with polyunsaturated fatty acids. These dietary approaches differ in their levels of calorie restriction, allowable amounts of proteins and carbohydrates, and overall nutrient composition.

Dietary therapies have proven effective in treating pediatric refractory epilepsy, which explains why pediatric neurologists are often more experienced in administering ketogenic diets than their peers in other fields.⁴ These dietary therapies, believed to work through mechanisms such as anti-inflammatory effects, modulation of the gut microbiome, and enhanced mitochondrial function, are

attracting interest for treating not only headaches but also a wide range of neurological and medical conditions. However, the effectiveness of these diets can be limited by the dietary preferences of children and adolescents, which may affect long-term adherence. Moreover, the decision to implement nutritionally restrictive diets in children with less severe headaches is complex, especially during critical growth and development stages. While the area of pediatric refractory epilepsy is well-documented, evidence supporting the use of dietary therapies for pediatric migraines is still limited, making their clinical application challenging. A more feasible approach might be to begin with the LGIT, which is less restrictive and more accessible. Na's review³ provides a concise overview of the LGIT and includes relevant studies that support its use.

Over recent decades, the eating habits of children and adolescents have undergone significant changes. The increased consumption of high-calorie, low-nutrient foods, the adoption of Westernized diets, and the greater availability of processed foods have all contributed to rising rates of obesity and nutrient imbalances among young people. Additionally, the high consumption of caffeine-containing beverages—such as energy drinks, sodas, and coffee—has been linked to the onset of headaches in this age group. Beyond the therapeutic scope of dietary therapies outlined in Na's review,³ it may be beneficial to explore the relationship between nutrition and migraines.⁵

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Therefore, it is crucial to create a nutritional health plan that includes eating a well-balanced diet, avoiding skipped meals, and identifying potential food triggers. Foods commonly associated with triggering headaches, such as monosodium glutamate, processed meats, and aspartame, should be consumed in moderation. It is also advisable to keep a food diary to accurately track any correlations between diet and headache occurrence. This approach could not only help alleviate headaches but also improve the overall health of children, with full parental cooperation likely being essential.

In conclusion, more attention must be directed toward establishing healthy eating habits, and the LGIT serves as a promising starting point for dietary interventions.

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