EVALUATING THE GLYCEMIC INDEX AS A DIETARY TOOL IN PEDIATRIC OBESITY INTERVENTIONS

Rakhimov B. B.
Niyazova O. A.
Sadirova M. K.

Obesity in children and adolescents is a growing concern worldwide, with significant implications for long-term health. Effective dietary interventions are crucial for managing obesity, and the glycemic index (GI) of foods offers a promising approach. This thesis evaluates the role of the GI in dietary interventions for pediatric obesity, examining its impact on metabolic health, satiety, and weight management.

The GI categorizes foods based on their impact on blood glucose levels. High-GI foods cause rapid spikes, while low-GI foods result in more gradual increases. This concept is particularly relevant for managing obesity, as it influences insulin response, hunger, and energy storage.

High-GI foods contribute to quick and significant rises in blood glucose and insulin levels. This rapid response can lead to increased fat storage and diminished feelings of fullness, driving higher overall caloric intake. For children and adolescents with obesity, frequent consumption of high-GI foods can hinder weight management efforts and exacerbate metabolic dysregulation.

Research indicates that the diets of obese children and adolescents often include excessive high-GI foods, such as refined grains, sugary snacks, and certain fruits and vegetables. These dietary choices lead to an energy imbalance, contributing to further weight gain. Additionally, the lack of low-GI foods, which provide essential nutrients and promote satiety, highlights a critical gap in current dietary practices.

Incorporating low-GI foods into dietary interventions for pediatric obesity can offer multiple benefits. Low-GI foods, such as whole grains, legumes, and non-starchy vegetables, help regulate blood glucose levels, enhance satiety, and reduce overall energy intake. By replacing high-GI foods with low-GI alternatives, dietary interventions can support sustainable weight loss and improve metabolic health.

To effectively implement low-GI dietary interventions, it is essential to consider practical aspects, such as food preferences, cultural factors, and accessibility. Education on the benefits of low-GI foods and strategies for incorporating them into daily meals can empower children, adolescents, and their families to make healthier dietary choices. Collaboration between healthcare providers, nutritionists, and schools can also facilitate the adoption of low-GI dietary practices.

Conclusion:

The glycemic index is a valuable dietary tool in managing pediatric obesity. By focusing on the GI of foods, dietary interventions can promote better blood glucose regulation, enhance satiety, and support healthier weight management. Future research should continue to explore the practical implementation of low-GI diets and their long-term impact on the health of children and adolescents with obesity.

References:

1. Саломова, Ф. И., Ниязова, О. А., & Мирсагатова, М. Р. (2022). Гигиеническая оценка расписания средних классов Общеобразовательных школ наманганской области.
2. Мирсагатова, М. Р. (2017). Особенности трудового процесса при производстве хрусталя. Молодой ученый, (1-2), 34-35.
3. Самигова, Н. Р., & Мирсагатова, М. Р. (2017). Изучение динамики изменений в функциональном состоянии сердечно-сосудистой системы рабочих мебельного производства. Молодой ученый, (50), 126-129.
4. Садуллаева, Х. А., Саломова, Ф. И., Мирсагатова, М. Р., & Кобилжонова, С. Р. (2023). Проблемы загрязнения водоемов в условиях Узбекистана.
5. Kobiljonova, S. R., Jalolov, N. N., Sharipova, S. A., & Mirsagatova, M. R. (2022). COMBINED SKIN AND RESPIRATORY MANIFESTATIONS OF FOOD ALLERGY IN CHILDREN.
6. Shaykhova, G. I., & Rakhimov, B. B. (2014). Promotion of the principles of rational nutrition in obesity. Medical Journal of Uzbekistan, (2), 138.
7. Салихова, Н. С., Косимов, Р. А., Юлдашева, З. Р., Шайхова, Г. И., Эрматов, Н. Ж., & Рахимов, Б. Б. (2016). Санитарно-эпидемиологические требования к организации питания обучающихся в общеобразовательных школах, учреждениях средне специального профессионального образования. СанПиН.–2016, 0288-10.
8. Ya, Z. S., Jalolov, N. N., Kh, P. M., & Rakhimov, B. B. (2023). Features of diet therapy for chronic liver diseases. Science Promotion, 1(2), 5-7.
9. Nurmatov, B., & Rakhimov, B. (2022). Study of virus contamination of indoor air and surfaces of hospital which specialized in the treatment of COVID-19 patients.
10. Рахимов, Б. Б., Уринов, А. М., Шайхова, Л. И., & Камилова, А. Ш. (2017). Выявление факторов риска при ожирении у детей дошкольного возраста, проживающих в г. Ташкенте.
11. Саломова, Ф. И., Искандарова, Г. Т., Садуллаева, Х. А., Шарипова, С. А., Шеркўзиева, Г. Ф., Нурматов, Б. Қ., & Садирова, М. К. (2022). “Атроф муҳит ва инсон саломатлиги мутахассислиги амалий кўникмаларни ўзлаштириш бўйича” услубий кўрсатма.
12. MK, S. K. S. F. S. (2024). Car washes as a source of environmental pollution.

13. Salomova, F., Sadullaeva, K., Samigova, N., & Sadirova, M. (2022). Study of regional features of dynamics of acute intestinal diseases in the Republic of Karakalpakstan (Livorno, Italy конф.) (Doctoral dissertation, Livorno, Italy).
14. Косимова, Х. Т., & Садирова, М. К. (2018). ОЦЕНКА ТЯЖЕСТИ И НАПРЯЖЕННОСТИ ТРУДОВОЙ ДЕЯТЕЛЬНОСТИ ВРАЧЕЙ ФИЗИОТЕРАПЕВТИЧЕСКИХ КАБИНЕТОВ. In WORLD SCIENCE: PROBLEMS AND INNOVATIONS (pp. 276-278).
15. Садуллаева, Х. А., & Садирова, М. К. (2018). ВОПРОСЫ ГИГИЕНЫ ТРУДА МЕДИЦИНСКОГО ПЕРСОНАЛА ФИЗИОТЕРАПЕВТИЧЕСКИХ КАБИНЕТОВ. In СТУДЕНТ ГОДА 2018 (pp. 196-198).
16. Rakhimov, B., Shadmanov, A., Salomova, F., Mamatkulov, B., & Nurmatov, B. (2024). Clinical characteristic of first COVID-19 patients hospitalized at the multidisciplinary clinic of the Tashkent Medical Academy: A single-center retrospective study. Current research in Clinical Medicine and drug discovery, 3(1).
17. Rahimov, B. B., Salomova, F. I., Jalolov, N. N., Sultonov, E. Y., & Obloqulov, A. G. (2023). O ‘ZBEKISTON RESPUBLIKASI NAVOIY SHAHRI HAVO SIFATINI BAHOLASH: MUAMMOLAR VA YECHIM YOLLARI.
18. Jalolov, N. N., Sultonov, E. Y., Imamova, A. O., & Oblokulov, A. G. (2023). Main factors of overweight and obesity in children. Science Promotion, 1(2), 2-4.
19. Саломова, Ф. И., Миррахимова, М. К., & Кобылжонова, С. Р. (2022). Влияние факторов внешней среды на развитие атопического дерматита у детей. In Серия конференций Европейского журнала научных архивов.