

Abstract

Concept for Preventive Strategy through Optimizing the Nutrition of Pregnant Women in Bulgaria [†]

Peter Markov ¹, Irina Markova ² and Donka Baykova ^{3,*}¹ Acibadem City Clinic MBAL “TOKUDA”, 1407 Sofia, Bulgaria; p_markov@abv.bg² Faculty of Public Health, Health Care and Sports, Southwest University, 2700 Blagoevgrad, Bulgaria; dr_rinna@abv.bg³ Medical Centre “MARKOV”, 1404 Sofia, Bulgaria

* Correspondence: d.baykova@abv.bg or d.baykova49@gmail.com

[†] Presented at the 14th European Nutrition Conference FENS 2023, Belgrade, Serbia, 14–17 November 2023.

Abstract: Background: Healthy nutrition of pregnant women is a powerful factor for reducing health risks during this period and for the outcome of pregnancy. The objective of the present work is to establish a preventive strategy for pregnant women in Bulgaria by means of a physiologically based nutritional model created upon national and international expert recommendations. Methods: Sociological and documentary methods were used. Results and discussion: The presented strategy concept includes 7 “steps” in the construction and individualization of nutritional regimes for pregnant women by medical professionals. The first step involves the quantitative satisfaction of the women’s increased nutritional energy needs (compared to non-pregnant women of the same age). During the first trimester, women require the following: +70 kcal/day; second trimester: +260 kcal/day; third trimester: up to +500 kcal/day. The second step involves increasing the intake of high-quality protein; during the first trimester, women require +1 g/day; second trimester: +9 g/day; third trimester: +28 g/day. For the third step, fats and carbohydrates do not require additional supplements during pregnancy. For the fourth step, a physiologically justified increase in vitamin and mineral food intake is necessary. As a percentage, the increase is as follows: vitamins A and E: +8%; C and B12: +11%; B1, B2 and niacin (B3): +30%; B6: +46%; A: +60%; folate (B9): +81%; copper: +15%; iodine: +33%; iron and zinc: +50%. The fifth step involves the selection of medico-biological criteria for proper nutrition: weight gain: from 11.5 to 16 kg in healthy women with normal body mass (BMI from 18.5 to 24.9) before the beginning of pregnancy. Overweight women (BMI from 25 to 29.9) should not gain more than 7 to 11 kg; obese women (BMI over 30) should not gain more than 6 to 8 kg; underweight women (BMI < 18.5) should not gain more than 12.5 to 18 kg. The sixth step involves performing a medical assessment for pregnancy-related health problems. The seventh step includes the development of practical recommendations for a healthy diet with a set of products adapted to the specific metabolic needs of the pregnant women and distribution of food intake during the day. Conclusion: The experts in this field should provide medical professionals (involved in the healthcare of pregnant women) with the necessary skills and techniques to implement this preventive strategy in their counseling practices.

Keywords: strategy; optimization; nutrition; pregnant women

Citation: Markov, P.; Markova, I.; Baykova, D. Concept for Preventive Strategy through Optimizing the Nutrition of Pregnant Women in Bulgaria. *Proceedings* **2023**, *91*, 379. <https://doi.org/10.3390/proceedings2023091379>

Academic Editors: Sladjana Sobajic and Philip Calder

Published: 28 February 2024



Copyright: © 2024 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Author Contributions: Authors declare equal contributions in every aspect. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: No ethical approval was required.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data is available upon request via email stated above.

Conflicts of Interest: The authors declare no conflicts of interest.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.