University "St. Kliment Ohridski" - Bitola, Republic of North Macedonia
Faculty of Technology and Technical Sciences - Veles

Book of proceedings of the 1ˢᵗ International Scientific Conference - Food Science, Nutrition, Innovative Technologies and Sustainability

Veles, North Macedonia
February 2026

University "St. Kliment Ohridski" - Bitola, Republic of North Macedonia

Faculty of Technology and Technical Sciences - Veles

Book of proceedings of the 1st International Scientific Conference - Food Science, Nutrition, Innovative Technologies and Sustainability

Veles, North Macedonia
February 2026

ORGANIZING COMMITTEE

Vezirka Jankuloska, PhD, Dean, University "St. Kliment Ohridski" – Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Vesna Knights, PhD, Vice-Dean for Science and International Cooperation, University "St. Kliment Ohridski" – Bitola, Faculty of Technology and Technical Sciences - Veles, Republic of North Macedonia

Aleksandar Stanković, PhD, Vice-Dean for Science and International Cooperation, Faculty of Applied Sciences – Niš, University of Economics Academy in Novi Sad, Serbia

INTERNATIONAL SCIENTIFIC COMMITTEE

Vesna Knights, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Anka Trajkoska Petkoska, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Vezirka Jankuloska, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Gorica Pavlovska, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Valentina Velkovski, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Tatjana Kalevska, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Daniela Nikolovska Nedelkoska, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Viktorija Stamatovska, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Tatjana Blazhevska, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Nevena Gruevska, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Sanja Sazdovska, PhD, University "St. Kliment Ohridski" - Bitola, Faculty of Technology and Technical Sciences – Veles, Republic of North Macedonia

Namik Durmishi, PhD, University of Tetova, Faculty of Food Technology and Nutrition, Tetovo, Republic of North Macedonia

Gafur Xhabiri, PhD, University of Tetova, Faculty of Food Technology and Nutrition, Tetovo, Republic of North Macedonia

Ismail Ferati, PhD, University of Tetova, Faculty of Food Technology and Nutrition, Tetovo, Republic of North Macedonia

Vladimir Kitanovski, PhD, Mother Teresa University, Skopje, Republic of North Macedonia

Aksu Samet, PhD, International Balkan University, Faculty of Dental Medicine, Skopje, Republic of North Macedonia

Ljupcho Mihajlov, PhD, "Goce Delchev" University, Faculty of Agriculture, Shtip, Republic of North Macedonia

Emilija Arsov, PhD, "Goce Delchev" University, Faculty of Agriculture, Shtip, Republic of North Macedonia

Frosina Babanovska-Milenkovska, PhD, "Ss. Cyril and Methodius" University – Skopje, Faculty of Agricultural Sciences and Food, Republic of North Macedonia

Mishela Temkov, PhD, "Ss. Cyril and Methodius" University – Skopje, Faculty of Technology and Metallurgy, Republic of North Macedonia

Dimitar Nakov, PhD, "Goce Delchev" University, Faculty of Agriculture, Shtip, Republic of North Macedonia

Ljubica Karakashova, PhD, "Ss. Cyril and Methodius" University – Skopje, Faculty of Agricultural Sciences and Food, Republic of North Macedonia

Jasenka Gajdoš Kljusurić, PhD, University of Zagreb, Faculty of Food Technology and Biotechnology, Zagreb, Croatia

Tamara Jurina, PhD, University of Zagreb, Faculty of Food Technology and Biotechnology, Zagreb, Croatia

Jasmina Lukinac, PhD, Josip Juraj Strossmayer University of Osijek, Faculty of Food Technology, Osijek, Croatia

Marko Jukić, PhD, Josip Juraj Strossmayer University of Osijek, Faculty of Food Technology, Osijek, Croatia

Aleksandar Stanković, PhD, University of Economics Academy in Novi Sad, Faculty of Applied Sciences – Niš, Serbia

Filip Cvetković, PhD, University of Economics Academy in Novi Sad, Faculty of Applied Sciences – Niš, Serbia

Jasminka Gligorijević, PhD, Faculty of Applied Sciences – Niš, University of Business Academy in Novi Sad, Serbia

Sanja M. Petrović, PhD, University of Niš, Faculty of Technology – Leskovac, Serbia

Saša Savić, PhD, University of Niš, Faculty of Technology – Leskovac, Serbia

Arber Hyseni, PhD, University "Isa Boletini" – Mitrovica, Faculty of Food Technology, Kosovo

Indrit Loshi, PhD, University "Haxhi Zeka" – Peja, Faculty of Agribusiness, Kosovo

Joanna Harasym, PhD, University of Economics – Wrocław, Faculty of Production Engineering, Department of Biotechnology and Food Analysis, Poland

Agnieszka Orkusz, PhD, University of Economics – Wrocław, Faculty of Production Engineering, Department of Biotechnology and Food Analysis, Poland

Amrita Poonia, PhD, Banaras Hindu University, Institute of Agricultural Sciences – Department of Dairy Science and Food Technology, Varanasi, India

Nishant Kumar, PhD, National Institute of Food Technology Entrepreneurship and Management, New Delhi, India

Velitchka Gocheva, PhD, University of Food Technology-Plovdiv, Department of Biotechnology, Bulgaria

Mersiha Suljkanović, PhD, University of Tuzla, Faculty of Natural Sciences and Mathematics, Bosnia and Herzegovina

Zoltán Kovács, PhD, Hungarian University of Agriculture and Life Sciences, Institute of Food Science and Technology, Hungary

Gokhan Durmaz, PhD, Inonu University, Department of Food Engineering, Malatya, Turkey

Deniz İnnal, PhD, Burdur Mehmet Akif Ersoy University, Faculty of Arts and Sciences, Department of Biology, Burdur, Turkey

Didem Cinkilic, PhD, Aydin Adnan Menderes University, Department of Food Engineering, Turkey

Rigerta Sadikaj, PhD, University of Tirana, Faculty of Natural Sciences, Department of Biotechnology, Albania

Dritan Arapi, University of Tirana, Faculty of Natural Sciences, Department of Biotechnology, Albania

OPTIMIZING DIETARY STRATEGIES IN THE CARE OF PATIENTS WITH DIABETES MELLITUS

Gabriel Zhivkovikj[1], Denis Arsovski[2][0000-0003-4992-686X], Angelka Jankulovska[2][0000-0002-4840-0308], Zlatko Lozanovski[2][0009-0009-9228-893X]

[1]Clinical Hospital Dr. Trifun Panovski – Bitola, North Macedonia
[2]Higher Medical School Bitola, University St. Kliment Ohridski Bitola, North Macedonia
E-mail: gabriel.zhivkovikj@gmail.com;

Abstract

Introduction: Diabetes mellitus is a chronic metabolic disorder requiring a comprehensive, multidisciplinary approach, with dietary management serving as a foundation for optimal glycemic control and prevention of complications. A structured dietary regimen complements pharmacological treatment, yet long-term adherence remains challenging due to behavioral, socioeconomic, and educational barriers.

Materials and methods: This research involved 40 participants with type 1, type 2 and gestational diabetes mellitus. Data were collected with a structured questionnaire that assess dietary habits, nutritional knowledge, viewed obstacles to dietary adherence, and participation in professional nutritional counseling. Clinical indicators such as fasting blood glucose and HbA1c levels were recorded to evaluate glycemic control in relation to dietary practices.

Discussion: Although most participants appreciated the significance of diet in diabetes management, consistent adherence to recommended practices was limited. The most frequently reported barrier was poor dietary discipline, followed by limited availability of suitable food and financial constraints. Positive dietary changes such as reduced sugar intake, elimination of sweetened beverages, and increased vegetable consumption were found, but were inconsistently maintained. Finally, the role of nutritionists in planning and implementing appropriate dietary strategies was underrepresented, with most participants relying on self-designed diets or guidance from diabetologists.

Conclusion: Despite general awareness of the importance of nutrition, there is still a critical shortfall between knowledge and implementation. Greater integration of nutritionists into multidisciplinary diabetes care, expanded patient education, and adoption of digital tools for individualized dietary support can improve dietary adherence and glycemic outcomes.

Keywords: diabetes mellitus, dietary management, glycemic control, diet.

1. Introduction

Diabetes mellitus is a chronic metabolic condition characterized by elevated blood glucose due to impaired insulin secretion or action, representing a growing global health problem that necessitates sustainable management strategies (Hossain, Al-Mamun, & Islam, 2024). Nutritional interventions are important element in glycemic control, complication prevention, and quality of life improvement (Evert et al., 2019). The aim of this research to evaluate nutritional practices as part of multidisciplinary diabetes care, focusing on individualized approaches. The research is motivated by the differential between dietary recommendations and actual adherence, influenced by socioeconomic, behavioral, and cultural barriers. By integrating

clinical results with patient perceptions, it seeks to provide understanding of effective dietary strategies.

1.1 Dietary management in Diabetes mellitus

Dietary management is important component in the comprehensive treatment of diabetes mellitus, aimed at achieving optimal glycemic control, maintaining a healthy body weight, and preventing both acute and chronic complications (American Diabetes Association, 2022; ElSayed et al.,2023). Dietary adaptations are very important for a wide group of conditions, as feeding difficulties, prolonged meal duration, and reduced mobility often require modified textures and individualized nutritional strategies to ensure adequate intake and support optimal health (Chichevska Jovanova et al., 2025). Carbohydrates, as the main macronutrient affecting glycemia, should come primarily from complex, fiber-rich sources, while refined and high-glycemic foods should be limited (Murillo et al., 2022). Dietary fiber, especially soluble fiber, supports glycemic control and gut microbiota diversity, thereby improving insulin sensitivity (Evert et al., 2019).

Healthy fats from sources such as avocados, nuts, seeds, and oily fish rich in omega-3 support cardiovascular protection, while lean plant- and animal-based proteins improve safety and stabilize blood glucose (Schwingshackl et al., 2018). Evidence shows the efficacy of dietary patterns like the Mediterranean diet, with balanced macronutrient distribution, high fiber, and low sodium, as well as plant-based regimens, both connected to improved glycemic control, weight reduction, and lipid profiles (Esposito et al., 2017). Guidelines further recommend limiting red and processed meats, refined grains, sugary beverages, and highly processed foods, alongside moderation in alcohol intake to prevent caloric excess (Ley et al., 2014). With individualized dietary planning, ideally under the supervision of a nutritionist it is important to align nutritional strategies with the metabolic profile and lifestyle of the patients. When integrated with regular physical activity and adherence to pharmacological therapy, individualized nutrition forms the basis for effective diabetes management, improving both clinical results and quality of life (Franz et al., 2015).

2. Material and methods

This study was designed as a descriptive cross-sectional research aimed at evaluating dietary practices, adherence to nutritional recommendations, and glycemic control among individuals diagnosed with diabetes mellitus. The research applied a combined quantitative–qualitative approach by integrating structured self-reported data with clinical indicators to examine the relationship between nutritional behaviors and glycemic outcomes. The study was conducted at the Diabetes Center of the PHI Clinical Hospital "Dr. Trifun Panovski" Bitola and included 40 participants diagnosed with type 1, type 2, or gestational diabetes mellitus.

The sample was selected based on clearly defined inclusion and exclusion criteria to ensure methodological consistency. Inclusion criteria required a clinically confirmed diagnosis of type 1, type 2, or gestational diabetes, documentation in medical records, and voluntary informed consent. Exclusion criteria encompassed individuals without a confirmed diagnosis of the specified diabetes types. These criteria ensured that all respondents were capable of accurately reporting dietary habits, adherence behaviors, and perceived barriers to nutritional management.

Data collection was performed using a self-administered structured questionnaire developed specifically for this study. It included sections on demographic characteristics, dietary habits (meal frequency, consumption patterns, portion control, food preferences), adherence to dietary recommendations assessed via a 5-point Likert scale, participation in nutritional counseling, sources of dietary guidance, perceived obstacles to adherence, and self-reported dietary modifications aimed at improving glycemic control. Clinical data were extracted from medical records, including fasting blood glucose and HbA1c values (three-month glycemic control indicator). Independent variables included demographics, diabetes type, treatment

approach (insulin, oral therapy, combined therapy), dietary adherence score, key dietary modifications, and perceived obstacles. The dependent variable was glycemic control categorized by HbA1c levels (<6.5 mmol/L, 6.5–7.5 mmol/L, 7.6–8.5 mmol/L, >8.5 mmol/L).

The questionnaire was developed to assess dietary behaviors, adherence to nutritional recommendations, barriers to adherence, and engagement in nutritional counseling among individuals with diabetes mellitus. Content validity was established through expert review by a diabetologist and a nutritionist at the PHI Clinical Hospital "Dr. Trifun Panovski" Bitola, who evaluated item clarity, relevance, and adequacy. Reliability was strengthened through the structured format, use of closed-ended questions, and application of a 5-point Likert scale. Internal consistency was supported by standardized scoring and clearly defined operational variables, ensuring systematic and comparable responses suitable for statistical processing.

Statistical analysis was performed using SPSS software. Descriptive statistics summarized sample characteristics and dietary patterns through frequencies and percentages for categorical variables, and means with standard deviations where applicable. The chi-square test was applied to evaluate the association between dietary adherence and glycemic control (HbA1c categories), as well as the relationship between diabetes type and treatment approach. A p-value < 0.05 was considered statistically significant.

3. Results

Table 1. Number of respondents by gender.

Gender	Number of participants	Percentage
Male	17	42.5%
Female	23	57.5%

According to the results shown in table number 1, 57.5% (23) were female, while the remaining 42.5% (17) were male. This ratio indicates a small but significant representation of the female gender in the survey.

Table 2. Type of diabetes mellitus.

Type of diabetes mellitus	Number of participants	Percentage
Type 1	17	42.5%
Type 2	20	50%
Gestational type	3	7.5%

According to the results presented in table number 2, half of the participants 50% (20) were diagnosed with type 2 diabetes mellitus, which is consistent with its global prevalence. Type 1 diabetes was found in 42.5% (17), while gestational diabetes, typically associated with pregnancy, was reported in 7.5% (3).

Table 3. Type of treatment.

Type of treatment	Number of participants	Percentage
Tablets	12	30%
Insulin	21	52.5%
Combined	7	17.5%

According to the results presented in table number 3, most participants, 52.5% (21), use insulin therapy, indicating its high prevalence. Tablet therapy is used by 30% (12), while combination therapy (tablets and insulin) is used by 17.5% (7).

Table 4. Average number of meals per day.

Average number of meals per day	Number of participants	Percentage
2 meals	6	15%
3 meals	22	55%
4 meals and more	12	30%

According to the results shown in table number 4, 55% (22), reported consuming three meals per day, while 30% (12) had four or more meals, and 15% (6) ate only two meals daily.

Table 5. Assistance in creating diabetic dietary plan.

Assistance in creating diabetic diet plan	Number of participants	Percentage
Diabetologist	18	45%
Nutricionist	3	7.5%
Alone	19	47.5%

According to the results presented in table number 5, 47.5% (19) participants independently design their diet regimen for managing diabetes mellitus. Assistance from a diabetologist is used by 45% (18), while only 7.5% (3) receive support from a nutritionist.

Table 6. Dietary plan adherence.

Diet plan adherence	Number of participants	Percentage
1 - Never	2	5%
2 - Rarely	7	17.5%
3 - Sometimes	12	30%
4 - Often	14	35%
5 - Always	5	12.5%

According to the results presented in table number 6, 35% (14), reported often adhering to their dietary plan, followed by 30% (12) who do so sometimes. Smaller shares reported rarely adhering 17.5% (7), always adhering 12.5% (5), or never adhering 5% (2).

Table 7. Key diet changes for glycemic control.

Key diet changes for glycemic control	Number of participants	Percentage
Reduced sugar intake	20	50%
Regular meals	11	27.5%
More vegetables/fiber	13	32.5%
Portion control	9	22.5%
Quit soda/sweetened beverages	17	42.5%

According to the results presented in table number 7, most common dietary modifications for glycemic control were: reduced sugar intake 50% (20) and elimination of sweetened

beverages 42.5% (17), followed by increased vegetable and fiber consumption 32.5% (13), regular meal adherence 27.5% (11) and portion control 22.5% (9).

Table 8. Main obstacles to following the diet plan.

Main obstacles to following the diet plan	Number of participants	Percentage
Financial obstacles	9	22.5%
Unavailability of building food	12	30%
Bad habits/indiscipline	16	40%
Lack of support	6	15%
Insufficient knowledge	2	5%

The most common barrier to dietary adherence based on table 8 was bad habits and lack of discipline 40%, (16), followed by limited food availability 30% (12), financial constraints 22.5% (9), lack of support 15% (6), and insufficient nutritional knowledge 5% (2).

Table 9. Last HbA1c value (three-month glycemia).

Last HbA1c value	Number of participants	Percentage
Below 6.5 mmol/L	12	30%
6.5 - 7.5 mmol/L	17	42.5%
7.6 - 8.5 mmol/L	4	10%
Over 8.5 mmol/L	7	17.5%

The largest proportion of respondents 42.5% (17), had HbA1c values between 6.5 - 7.5 mmol/L, indicating acceptable glycemic control based on table 10. Values below 6.5 mmol/L were recorded in 30% (12) of participants. Elevated HbA1c levels between 7.6 - 8.5 mmol/L were observed in 10% (4), while 17.5% (7) had values exceeding 8.5 mmol/L, suggesting suboptimal metabolic regulation.

Table 10. Fasting blood glucose level (last check).

Fasting blood glucose	Number of participants	Percentage
Below 3.9 mmol/L	2	5%
4.0 - 5.5 mmol/L	10	25%
5.6 - 6.9 mmol/L	17	42.5%
7.0 - 8.5 mmol/L	6	15%
Above 8.5 mmol/L	5	12.5%

According to the results in table number 10, 42.5% (17) had fasting blood glucose levels between 5.6 and 6.9 mmol/L, while 25% (10) were in the optimal range of 4.0 - 5.5 mmol/L. Levels between 7.0 - 8.5 mmol/L were observed in 15% (6) of the participants, and values above 8.5 mmol/L in 12.5% (5). Hypoglycemia, i.e. values less than 3.9 mmol/L, was present in 5% (2) of the respondents.

Table 11. Association between dietary plan adherence and glycemic control (HbA1c categories).

Adherence to Dietary Plan	HbA1c < 6.5 mmol/L	HbA1c 6.5–7.5 mmol/L	HbA1c 7.6–8.5 mmol/L	HbA1c > 8.5 mmol/L
1 - Never	0	1	1	3
2 - Rarely	0	3	1	2
3 - Sometimes	1	6	2	1
4 - Often	5	7	0	1
5 - Always	6	0	0	0
Total	12	17	4	7

Based on Table 11, a chi-square test was conducted to examine the association between dietary plan adherence and glycemic control, measured by HbA1c categories. The results showed a statistically significant association between the two variables, χ^2 (12) = 30.86, p = 0.002. Patients who reported high adherence to their dietary plan ("always" or "often") had a substantially higher proportion of optimal HbA1c values (<6.5 mmol/L or 6.5–7.5 mmol/L). In contrast, participants who reported low adherence were more likely to have elevated HbA1c levels (>7.5 mmol/L).

4. Discussion

The results of this research show important information about the dietary behaviors and glycemic outcomes of persons with diabetes mellitus, revealing a clear discrepancy between awareness of nutritional importance and actual adherence to recommended dietary practices. Although many participants reported making positive dietary modifications, these changes were inconsistently maintained, which is reflected in the variability of HbA1c and fasting glucose values. The discussion below interprets these results in the context of existing evidence, with particular attention to the behavioral, structural, and educational factors that shape dietary adherence, as well as the underutilized role of nutritionists in diabetes management.

The results from Amerkamp et al. (2025) indicate that combining dietary interventions with regular exercise provides additional health benefits for individuals with type 2 diabetes, with the most consistent improvements observed in physical fitness and performance. Although effects on glycemic control and metabolic markers were less frequent, low-carbohydrate diets, especially those high in fat or protein showed superior outcomes when paired with structured exercise compared with conventional diets. These results support the importance of integrating individualized dietary planning with regular physical activity to enhance the overall effectiveness of diabetes management.

The narrative review by Minari et al. (2023) shows that, despite the wide range of nutritional interventions proposed for type 2 diabetes management, no single dietary strategy has been universally established as superior. The authors highlight that individualized dietary planning remains important, although current evidence points to the Mediterranean diet, characterized by balanced macronutrient distribution, higher fiber intake, and reduced saturated fat as one of the most promising approaches for improving metabolic outcomes.

One randomized controlled trial by Maneesing et al. (2023) shows that both general nutritional counselling and the portioned meal box approach effectively reduce HbA1c levels and improve dietary compliance in individuals with type 2 diabetes. Although no significant differences were found between the two strategies in glycemic control, the portioned meal box showed superior effects on weight reduction, satiety, and participant preference, suggesting that structured, portion-based dietary tools may improve adherence.

One cost-benefit analysis by Al Sifri et al. (2024) shows that a low-calorie, high-protein diet is a highly cost-effective strategy for managing type 2 diabetes in outpatient environments. Compared with a standard diet, the low-calorie approach generated greater economic benefits by reducing the projected costs of diabetes-related complications, while maintaining similar or slightly lower overall yearly diet and treatment expenses.

These findings stress the need for an integrated, multidisciplinary approach, involving diabetologists and nutritionists, to provide individualized dietary counseling and ongoing support to patients, as such teams improve metabolic control and outcomes. The limited use of professional nutrition services highlights the need to expand access, especially in resource-limited settings. At the same time, digital health tools, including mobile apps and personalized meal planning, show promise as effective adjuncts, improving glycemic control and patient engagement (Bain et al., 2019; Gianfrancesco & Johnson, 2020; Xue et al., 2025; Cebrián-Cuenca et al., 2024; Andersen et al., 2023).

Strengthening patient education with practical, culturally appropriate nutritional strategies is essential to improve adherence and outcomes, in line with guidelines advocating individualized medical nutrition therapy (Reynolds & Mitri, 2024; Levi et al., 2023; Morris & Wylie-Rosett, 2010). Policy measures promoting access to healthy, affordable foods further support glycemic control. Behavioral interventions, including self-monitoring and integrated approaches combining motivational interviewing with cognitive-behavioral strategies, enhance long-term adherence and diabetes management (Miri et al., 2021; Xue et al., 2025; Ekong & Kavookjian, 2016; Marume et al., 2025).

5. Conclusion

The results of this research showed that dietary management remains a fundamental component in the treatment and long-term control of diabetes mellitus. While the majority of participants were aware of the importance of an appropriate nutritional regimen, a significant discrepancy was observed between knowledge and actual adherence to dietary recommendations. Behavioral obstacles, especially poor dietary discipline and ingrained unhealthy habits, showed as the most prevalent challenges, surpassing structural factors such as limited food availability or financial constraints. Positive changes such as reducing sugar intake, eliminating sweetened beverages, increasing vegetable consumption, and maintaining regular meals were reported by many participants, yet their inconsistent implementation limits the potential benefits for glycemic regulation. The variability in clinical parameters, including HbA1c and fasting blood glucose levels, further confirms that effective diabetes control requires not only awareness, but also sustainable behavioral change supported by continuous guidance and motivation. Notably, the role of the nutritionist in the planning and implementation of appropriate dietary strategies was found to be markedly underrepresented, underscoring the need for greater integration of specialized nutritional expertise into multidisciplinary diabetes care.

References

Morris, S. F., & Wylie-Rosett, J. (2010). Medical nutrition therapy: A key to diabetes management and prevention. *Clinical Diabetes, 28*(1), 12–18. https://doi.org/10.2337/diaclin.28.1.12

Ley, S. H., Hamdy, O., Mohan, V., & Hu, F. B. (2014). Prevention and management of type 2 diabetes: Dietary components and nutritional strategies. *Lancet, 383*(9933), 1999–2007. https://doi.org/10.1016/S0140-6736(14)60613-9

Franz, M. J., Boucher, J. L., Rutten-Ramos, S., & VanWormer, J. J. (2015). Lifestyle weight-loss intervention outcomes... *Journal of the Academy of Nutrition and Dietetics, 115*(9), 1447–1463. https://doi.org/10.1016/j.jand.2015.02.031

Ekong, G., & Kavookjian, J. (2016). Motivational interviewing and outcomes… *Patient Education and Counseling, 99*(6), 944–952. https://doi.org/10.1016/j.pec.2015.11.022

Esposito, K., Maiorino, M. I., Bellastella, G., Panagiotakos, D. B., & Giugliano, D. (2017). Mediterranean diet for type 2 diabetes… *Endocrine, 56*(1), 27–32. https://doi.org/10.1007/s12020-016-1018-2

Schwingshackl, L., Bogensberger, B., Benčič, A., et al. (2018). Effects of oils and solid fats… *Journal of Lipid Research, 59*(9), 1771–1782. https://doi.org/10.1194/jlr.P085522

Bain, S., Cummings, M., & McKay, G. (2019). Multidisciplinary approach… *EMJ Diabetes, 7*(1), 73–81. https://doi.org/10.33590/emjdiabet/10314374

Evert, A. B., Dennison, M., Gardner, C. D., et al. (2019). Nutrition therapy for adults with diabetes… *Diabetes Care, 42*(5), 731–754. https://doi.org/10.2337/dci19-0014

Gianfrancesco, C., & Johnson, M. (2020). Exploring the provision of diabetes nutrition education… *Journal of Human Nutrition and Dietetics, 33*(2), 263–273. https://doi.org/10.1111/jhn.12720

Miri, Z., Rezaee, N., Faghihi, H., & Navidian, A. (2021). Effect of cognitive-behavioral training… *Medical Surgical Nursing Journal, 10*(3), e120496. https://doi.org/10.5812/msnj.120496

Murillo, S., Mallol, A., Adot, A., Juárez, F., Coll, A., Gastaldo, I., & Roura, E. (2022). Culinary strategies to manage glycemic response… *Frontiers in Nutrition, 9*, 1025993. https://doi.org/10.3389/fnut.2022.1025993

American Diabetes Association Professional Practice Committee. (2022). Standards of medical care in diabetes—2022. *Diabetes Care, 45*(Suppl. 1), S17–S38. https://doi.org/10.2337/dc22-S002

ElSayed, N. A., Aleppo, G., Aroda, V. R., et al. (2023). Standards of care in diabetes—2023. *Diabetes Care, 46*(Suppl. 1), S1–S4. https://doi.org/10.2337/dc23-Sint

Andersen, J. D., Jensen, M. H., Vestergaard, P., Jensen, V., Hejlesen, O., & Hangaard, S. (2023). The multidisciplinary team… *Journal of Multimorbidity and Comorbidity, 13*, 26335565231165966. https://doi.org/10.1177/26335565231165966

Maneesing, T., Dawangpa, A., Chaivanit, P., et al. (2023). Optimising blood glucose control… *Frontiers in Nutrition, 10*. https://doi.org/10.3389/fnut.2023.1216753

Minari, T. P., Tácito, L. H. B., Yugar, L. B. T., et al. (2023). Nutritional strategies… *Nutrients, 15*(24), 5096. https://doi.org/10.3390/nu15245096

Levi, R., Bleich, S. N., & Seligman, H. K. (2023). Food insecurity and diabetes… *Diabetes Care, 46*(9), 1599–1608. https://doi.org/10.2337/dci23-0002

Cebrián-Cuenca, A. M., Moreno-Pérez, O., Campuzano-Ruiz, R., et al. (2024). Multidisciplinary panel consensus… *Archives of Medical Research, 55*(1), 102923. https://doi.org/10.1016/j.arcmed.2023.102923

Al Sifri, S., Aldahash, R., de Luis Roman, D.-A., et al. (2024). Optimizing diabetes management… *Diabetes Therapy, 15*, 155–164. https://doi.org/10.1007/s13300-023-01495-1

Hossain, M. J., Al-Mamun, M., & Islam, M. R. (2024). Diabetes mellitus… *Health Science Reports, 7*(3), e2004. https://doi.org/10.1002/hsr2.2004

Reynolds, A., & Mitri, J. (2024, April 28). Dietary advice for individuals with diabetes. *Endotext*. https://www.ncbi.nlm.nih.gov/books/NBK279012/

Amerkamp, J., Benli, S., Isenmann, E., & Brinkmann, C. (2025). Optimizing the lifestyle… *Nutrition, Metabolism and Cardiovascular Diseases, 35*(5), 103746. https://doi.org/10.1016/j.numecd.2024.09.016

Marume, A., Chidoko, E., & Chirenda, J. (2025). Dietary interventions and glycaemic control… *Journal of Public Health in Africa, 16*(1), 1325. https://doi.org/10.4102/jphia.v16i1.1325

Chichevska-Jovanova, N., Arsovski, D., & Joldeska, E. (2025). Feeding challenges… *Hrvatska revija za rehabilitacijska istraživanja, 61*(1), 65–75. https://doi.org/10.31299/hrri.61.1.4

Xue, H., Zhang, L., Shi, Y., et al. (2025). Effectiveness of digital health intervention… *Frontiers in Digital Health, 7*, 1630588. https://doi.org/10.3389/fdgth.2025.1630588