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PRACA POGLĄDOWA
REVIEW

Continuous glucose monitoring in diabetes management – evidence, applications, and future perspectives: A comprehensive review of recent developments

Ciągłe monitorowanie glikemii w leczeniu cukrzycy – dowody, zastosowania i perspektywy na przyszłość: kompleksowy przegląd najnowszych osiągnięć

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ABSTRACT

Continuous glucose monitoring (CGM) represents a major advancement in diabetes management, offering continuous assessment of interstitial glucose levels and real-time feedback that supports more precise glycemic control. This technology, which can operate as intermittently scanned or real-time systems, provides dynamic insights into glucose fluctuations that conventional methods such as self-monitoring of blood glucose and glycated hemoglobin (HbA1c) fail to capture. CGM has been shown to enhance metabolic stability, increase time in target range, and reduce the frequency of both hypo- and hyperglycemia. In type 2 diabetes, observational and randomized studies have demonstrated improvements in treatment satisfaction, self-efficacy, and quality of life in addition to glycemic outcomes, while population-level data suggest reductions in hospitalizations and healthcare costs. The use of CGM in prediabetes reveals distinct patterns of glucose variability and may facilitate earlier detection of dysglycemia, though its application in this group remains investigational. Among pediatric patients, CGM supports improved metabolic control and early recognition of nocturnal hypoglycemia, yet challenges related to cost, device adherence, and accessibility persist. In pregnant women with diabetes, continuous monitoring has been associated with improved maternal and neonatal outcomes; however, regulatory approval and standardized guidelines are still lacking. Despite its growing clinical relevance, CGM research remains limited by study heterogeneity, cost considerations, and incomplete evidence regarding long-term cost-effectiveness. Nevertheless, current data strongly support its role as an integral component of modern diabetes management across diverse patient populations.

KEYWORDS

diabetes, continuous glucose monitoring, glycemic control, diabetes management

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STRESZCZENIE

Ciągłe monitorowanie glikemii (*continuous glucose monitoring* – CGM) zrewolucjonizowało podejście kliniczne do leczenia cukrzycy, dostarczając danych w czasie rzeczywistym, które umożliwiają bardziej precyzyjną i spersonalizowaną kontrolę glikemii. Dowody pochodzące zarówno z badań randomizowanych, jak i z obserwacji w warunkach rzeczywistych konsekwentnie potwierdzają, że CGM poprawia wyniki metaboliczne, zmniejsza liczbę epizodów hipo- i hiperglikemii oraz zwiększa satysfakcję z leczenia i ogólną jakość życia pacjentów. W przypadku cukrzycy typu 2 korzyści te obejmują również aspekty behawioralne i psychospołeczne, przyczyniając się do lepszej samokontroli oraz ograniczenia kosztów opieki zdrowotnej. Zastosowanie CGM u osób w stanie przedcukrzycowym, u pacjentów pediatrycznych oraz u kobiet w ciąży podkreśla rosnące znaczenie tego systemu w szerokim spektrum zaburzeń metabolicznych. Mimo iż nadal istnieją pewne wyzwania – szczególnie związane z kosztami urządzeń, ich dostępnością oraz brakiem ujednoliconych zaleceń w niektórych grupach pacjentów – korzyści kliniczne stają się coraz bardziej oczywiste. Aktualne dane naukowe wspierają integrację CGM jako kluczowego elementu kompleksowej opieki diabetologicznej. Szerokie wdrożenie tej technologii będzie zależeć od dalszego rozwoju zaleceń opartych na dowodach naukowych, zapewnienia sprawiedliwego systemu refundacji oraz edukacji zarówno pacjentów, jak i pracowników ochrony zdrowia. Dzięki tym działaniom CGM ma potencjał, by poprawić wyniki kliniczne, zmniejszyć ryzyko powikłań długoterminowych oraz zwiększyć autonomię pacjentów w zarządzaniu cukrzycą.

SŁOWA KLUCZOWE

cukrzyca, ciągłe monitorowanie glikemii, kontrola glikemii, zarządzanie cukrzycą

Introduction

A malfunction in the action and/or secretion of insulin can lead to diabetes mellitus (DM), a metabolic disorder. This condition results in chronic hyperglycemia (elevated plasma glucose levels) along with abnormalities in the metabolism of proteins, fats, and carbohydrates. Long-term complications of DM include nephropathy, neuropathy, retinopathy, and an increased risk of cardiovascular disease [1].

To achieve optimal glycemic control, self-monitoring of blood glucose is an essential component of diabetes management [1,2,3]. Maintaining proper blood glucose regulation is vital for reducing the risk of severe long-term complications, including macrovascular damage (cardiovascular disease) and microvascular damage (nephropathy, retinopathy, and neuropathy). Consequently, regular blood glucose testing is recommended [1,3,4].

The conventional method of self-monitoring involves obtaining a capillary blood sample from the fingertip, which is analyzed using a small, portable glucose meter. This provides the glucose concentration at the time of collection. Although this technique yields an accurate measurement, significant fluctuations in glucose levels may go unnoticed, preventing optimal glycemic management [1,5,6]. To measure glucose levels effectively, several finger pricks must be performed daily. The frequent punctures required for self-monitoring are often uncomfortable or painful for many individuals [1,7]. Therefore, can glucose measurements be made less intrusive for patients? This study focuses on modern technologies designed to improve the accuracy of glucose monitoring while reducing the burden on patients.

Methodology

This review evaluated the use and clinical impact of continuous glucose monitoring (CGM) across diverse patient groups, including individuals with type 1 and type 2 diabetes, those with prediabetes, children, and pregnant women. A comprehensive literature search was conducted in the databases of PubMed, the Cochrane Library, and Google Scholar using combinations of keywords and MeSH terms related to CGM and diabetes and applying Boolean operators to refine the results. Articles published in the last five years were prioritized to ensure current results; however, older studies were included when no recent evidence was available, particularly in pediatric and obstetric research. Only studies published in English or Polish were considered. Original research articles, randomized controlled trials, observational studies, systematic reviews, and meta-analyses conducted in human subjects and focusing on CGM use or CGM-related outcomes were eligible for inclusion. The exclusion criteria encompassed studies published in languages other than English or Polish, research conducted on animals, case reports, conference abstracts, and commentaries lacking original data, as well as older publications unless justified by limited newer evidence. The titles and abstracts were screened to identify potentially relevant studies, followed by full-text evaluation to confirm eligibility. Data extracted from the selected studies covered study design, population characteristics, CGM technology type, and clinical outcomes such as HbA1c, time in range, and hypoglycemia metrics, forming the basis for the narrative synthesis presented in this article.

Glucose monitoring systems

CGM is a minimally invasive technology that uses a sensor to continually monitor interstitial glucose subcutaneously. It then sends the glucose data to a portable device. Intermittently scanned CGM, which only shows the user's blood sugar levels after scanning with a reader, is one type of CGM. Real-time CGM has largely surpassed this. It continuously sends glucose data via Bluetooth to a smartphone app or mobile reader, providing real-time glucose readings, predictive trends, and alarms. It also enables cloud-based sharing of glucose data with caregivers or medical professionals. Nowadays, CGM is frequently used for automatic insulin administration or self-monitoring [8,9]. CGM has altered the lives of people with diabetes. The current generation of CGM devices are less intrusive and no longer require calibration with fingerstick glucose. CGM devices record glucose readings every minute or every few minutes and offer the wearer detailed information on glucose trends. In people with diabetes, CGM data can give valuable insights into glucose irregularities that are not revealed in a hemoglobin A1c (HbA1c) test [10,11].

Use of continuous glucose monitoring in diabetes mellitus type 1

Type 1 diabetes is a chronic autoimmune disease that leads to the progressive destruction of pancreatic beta cells, resulting in insulin deficiency and persistent hyperglycemia [12]. CGM has become an increasingly valuable tool in managing this condition, as it enables real-time assessment of glucose fluctuations and offers a more comprehensive understanding of glycemic control. Studies have consistently demonstrated that continuous monitoring improves glucose stability, increases the proportion of time spent within the target glycemic range, and reduces both hyperglycemia and hypoglycemia, regardless of the type of system [13]. Although changes in long-term glycemic markers such as glycated hemoglobin are often modest, continuous monitoring provides insight into day-to-day glucose variability that traditional indicators fail to capture, highlighting its clinical relevance beyond conventional measurements.

The standardization of CGM metrics has strengthened the comparability of recent studies, yet significant heterogeneity in research design, populations, and outcome measures continues to pose challenges for interpretation [13]. Increasingly, continuous monitoring is being integrated with automated insulin delivery systems, reflecting a shift toward more advanced and personalized diabetes management strategies. In adults, this approach has been associated with fewer hypoglycemic episodes and improved quality of life when compared with traditional methods based on multiple daily injections and self-monitoring of blood glucose [14]. Similar patterns have been reported in pediatric populations, although differences in average glycemic control between treatment groups have generally not been statistically significant. Data regarding the use of CGM in pregnant women remain limited, underscoring the need for further research [14]. Economic analyses indicate that while CGM provides clear clinical benefits and enhances patients' quality of life, its higher cost may limit its cost-effectiveness compared with standard monitoring. Moreover, most long-term predictive models are derived from adult data, which restricts their applicability to children and pregnant women [14]. Despite these limitations, CGM represents a key advancement in type 1 diabetes care, offering a more dynamic and individualized approach to achieving optimal glycemic control [13,14].

Use of continuous glucose monitoring in diabetes mellitus type 2

Findings from numerous observational and randomized studies indicate that CGM systems provide benefits that extend beyond glycemic control alone. Population-based analyses have shown that the adoption of these devices has brought about reductions in emergency department visits and hospitalizations related to diabetes complications. Studies conducted across different healthcare settings confirm that CGM contributes to greater metabolic stability and may also lead to lower healthcare utilization and costs [15].

Several investigations have explored behavioral and psychosocial changes following the introduction of CGM. Participants often report more engagement in self-care, stronger motivation for physical activity, and improved understanding of the relationship between lifestyle choices and glucose levels. These studies have also demonstrated higher self-efficacy, enhanced satisfaction with diabetes management, and a stronger sense of empowerment. In some cases, when combined with lifestyle counseling, CGM has been associated with modest yet clinically relevant reductions in body weight [15,16].

Clinical trials have consistently demonstrated that CGM improves patient-reported outcomes, including treatment satisfaction, quality of life, and emotional well-being. Results from validated questionnaires assessing treatment satisfaction and diabetes-related distress generally favor CGM over conventional monitoring. Furthermore, CGM has been shown to support improved self-management and to be correlated with reductions in HbA1c levels among individuals with type 2 diabetes [15,16,17,18].

Current professional guidelines, including those from major diabetes associations in North America, recommend considering CGM not only for individuals treated with insulin, but also for adults with type 2 diabetes managed with non-insulin therapies. Even periodic use of these systems is recognized as a valuable tool for supporting individualized glycemic targets, guiding medication adjustments, and reinforcing lifestyle interventions. Continuous or intermittent monitoring is especially recommended for individuals at higher risk of hypoglycemia or with difficulties achieving optimal glucose control [15].

Economic analyses from various countries have provided additional support for broader access to CGM for type 2 diabetes patients. Studies have demonstrated that these systems are cost-effective – and in some models even cost-saving, due to reduced hospital admissions and improved work productivity. Overall, CGM represents an effective and economically justified approach to improving diabetes management, enhancing quality of life, and preventing long-term complications in individuals living with type 2 diabetes [15,19].

The available research demonstrates consistent outcomes across both randomized controlled trials and real-world studies, confirming the association between CGM and improved glycemic management in type 2 diabetes. Nonetheless, limitations remain, including the relatively small number of randomized trials, variability in the types of monitoring systems evaluated, and limited cost-effectiveness modeling to fully establish the long-term clinical and economic impact. Further high-quality research is warranted to consolidate the role of CGM as a standard component of care in this population [19].

Use of continuous glucose monitoring in prediabetes

The use of CGM has provided new insights into glucose regulation, revealing that postprandial glucose responses vary substantially among individuals. These differences are influenced not only by macronutrient composition, but also by factors such as age, cholesterol level, sleep patterns, dietary fiber, salt intake, and genetic variations, underscoring the limitations of uniform dietary recommendations and the potential role of CGM in developing personalized nutrition strategies, even in individuals with normoglycemia [20]. Currently, prediabetes diagnosis relies solely on fasting plasma glucose, HbA1c level, and oral glucose tolerance tests, as the use of CGM for this purpose has not yet been formally approved [20]. Nevertheless, the continuous assessment of glucose levels offered by CGM may better reflect the dynamic nature of glycemic regulation and enable earlier identification of dysglycemia [20,21]. Studies comparing individuals with normal glucose tolerance and those with prediabetes indicate that CGM can detect subtle metabolic changes; in prediabetes, higher mean glucose levels and reduced time within normal glycemic ranges have been observed [22]. Indices of glucose variability, including standard deviation, coefficient of variation, and mean amplitude of glycemic excursion, have emerged as key indicators of early glycemic disturbances [20,21,22]. Composite indices such as the J-index, CONGA, and GRADE further support these findings, showing increased variability and greater glycemic risk patterns in prediabetes [22]. Moreover, CGM facilitates the identification of postprandial and postexercise glucose fluctuations, supporting indivi-dualized lifestyle interventions aimed at preventing the progression to diabetes [20]. Collectively, these findings highlight the potential of CGM as a valuable tool for early detection and personalized management of dysglycemia.

Use of continuous glucose monitoring in pediatric patients

CGM provides continuous assessment of interstitial glucose levels throughout the day and night, enabling the detection of glycemic fluctuations that might be overlooked with conventional spot measurements. In pediatric patients, CGM is employed to improve glycemic control, reduce the frequency of hypoglycemic episodes, and support more precise insulin therapy management. Evidence indicates that its use in children is associated with reductions in HbA1c levels compared with traditional self-monitoring of blood glucose, while also allowing the identification of nocturnal hypoglycemia episodes that often remain undetected by standard testing methods [23].

In this population, CGM offers an accurate reflection of glycemic patterns and plays a critical role in the early detection of hypoglycemia [5]. Despite these benefits, economic analyses highlight that the costs of CGM should be considered alongside its potential to reduce diabetes-related complications. Factors such as device acceptance, comfort, and affordability continue to limit its widespread use in children, emphasizing the need for further research to evaluate long-term outcomes, including cost-effectiveness and quality of life [23].

Use of continuous glucose monitoring in pregnant women

Diabetes during pregnancy is associated with an increased risk of numerous maternal and fetal complications, including preeclampsia, preterm labor, polyhydramnios, the need for cesarean delivery, small- and large-for-gestational-age infants, congenital malformations, stillbirths, intensive care unit admissions after delivery, and perinatal mortality [24,25,26]. Studies assessing the use of CGM in women with type 1 diabetes who are pregnant or planning pregnancy have demonstrated clear clinical benefits. Women using this technology maintained better glucose stability and spent more time within the target glycemic range than those relying on standard monitoring methods. Improved maternal glucose control was linked to lower rates of neonatal complications, fewer intensive care admissions, and shorter hospital stays for newborns [24,27]. Given the heterogeneous nature of gestational diabetes, where some women respond adequately to nutritional therapy while others require intensive insulin regimens, CGM may serve as a valuable prognostic tool to stratify risk and identify patients who would benefit most from pharmacologic intervention, particularly in the third trimester, when treatment time is limited [24].

Limitations

Major limitations identified in studies of CGM in type 1 diabetes include substantial heterogeneity among trials, differences in study design and population characteristics, and potential bias from industry sponsorship. The exclusion of participants with lower adherence and the predominant use of HbA1c as a primary endpoint may reduce generalizability and fail to capture the full range of glycemic variability. Furthermore, the growing integration of CGM into automated insulin delivery systems reduces the re-levance of findings derived from studies assessing stand-alone monitoring [13].

The application of CGM in individuals with prediabetes remains limited due to diagnostic frameworks that rely on static glucose measurements, which do not fully capture the dynamic nature of glycemic regulation. Existing CGM metrics were primarily developed for patients with established diabetes, reducing their applicability to prediabetic populations. Limited insurance coverage and high costs further restrict accessibility. In addition, in certain cases, use of these devices may contribute to psychological distress or maladaptive eating behaviors. Further research is needed to establish validated metrics and safe, individualized strategies for the use of CGM in this group [20].

In pediatric populations, CGM sensors may occasionally become detached or disconnected before the intended period of use, necessitating sensor replacement. Despite these occurrences, the devices are generally well tolerated, with no significant reports of infection or inflammation at insertion sites [5].

Currently, no CGM systems available in the United States have received approval from the Food and Drug Administration for use during pregnancies complicated by diabetes. At present, no professional organizations have issued formal recommendations defining best practices for the use of CGM in pregnant women with diabetes. Clinicians who apply these systems in this context should inform patients that CGM has not been approved by the Food and Drug Administration for pregnancy, while also discussing the potential benefits suggested by existing evidence [24,28].

Table I. Summary of continuous glucose monitoring applications in different populations

Population / Context	Key findings	Clinical benefits	Limitations / Considerations
Type 1 diabetes mellitus	Provides real-time glucose tracking and improves glycemic stability; integration with automated insulin delivery enhances outcomes	Increased time in target range; fewer hypoglycemic events; improved quality of life	High cost; variable study designs; limited data in children and pregnancy
Type 2 diabetes mellitus	Reduces HbA1c and diabetes-related hospitalizations; supports behavioral engagement and self-care	Better metabolic control; enhanced treatment satisfaction and quality of life; potential cost-effectiveness	Limited long-term randomized data; variability among CGM systems
Prediabetes	Detects subtle glycemic variability and postprandial excursions, providing insight into early dysglycemia	Enables personalized lifestyle interventions; helps prevent the progression of diabetes	Not approved for diagnostic use; high cost; limited validated metrics
Pediatric patients	Aids in identifying glycemic fluctuations and nocturnal hypoglycemia	Improved HbA1c; better detection of hypoglycemia; supports insulin adjustments	Sensor detachment; cost and device acceptance issues; limited long-term data
Pregnant women with diabetes	Improves maternal glucose stability and neonatal outcomes in type 1 diabetes	Reduced neonatal complications and NICU admissions; shorter hospital stays	Not FDA-approved for pregnancy; no formal clinical guidelines

HbA1c – glycated hemoglobin; CGM – continuous glucose monitoring; NICU – neonatal intensive care unit; FDA – Food and Drug Administration

Conclusions

CGM has reshaped the clinical approach to diabetes management, providing real-time data that allow for more precise and individualized glycemic control. Evidence from both randomized and real-world studies consistently confirms that it improves metabolic outcomes, reduces episodes of hypoglycemia and hyperglycemia, and enhances treatment satisfaction and overall quality of life. In type 2 diabetes, these benefits extend to the behavioral and psychosocial domains, contributing to better self-management and reduced healthcare utilization.

The application of CGM in prediabetes, pediatric patients, and pregnancy highlights its growing relevance across a broad spectrum of metabolic conditions. Although challenges remain – particularly related to costs, accessibility, and the lack of standardized recommendations in some populations – the clinical advantages are increasingly evident.

Taken together, current findings support the integration of CGM as a fundamental component of comprehensive diabetes care. Broader adoption will depend on the continued development of evidence-based guidelines, equitable reimbursement systems, and education aimed at both patients and healthcare professionals. With these efforts, CGM has the potential to improve clinical outcomes, reduce long-term complications, and promote greater patient autonomy in the management of diabetes.

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Conflict of interest

The authors declare that they have no conflict of interest.

Authors' contribution

Study design – M. Kotowicz, M. Koczkodaj, M. Bieniak

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REFERENCES

1. Langendam M, Luijf YM, Hooft L, Devries JH, Mudde AH, Scholten RJ. Continuous glucose monitoring systems for type 1 diabetes mellitus. Cochrane Database Syst Rev. 2012;1(1):CD008101. doi: 10.1002/14651858.CD008101.pub2.

2. Townsend RR, Kapoor SC. The effect of intensive treatment of diabetes mellitus. N Engl J Med. 1994;330(9):641–642. doi: 10.1056/NEJM199403033300914.

3. Diabetes Control and Complications Trial Research Group; Nathan DM, Genuth S, Lachin J, Cleary P, Crofford O, Davis M, et al. The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. N Engl J Med. 1993;329(14):977–986. doi: 10.1056/NEJM199309303291401.

4. Nathan DM, Cleary PA, Backlund JY, Genuth SM, Lachin JM, Orchard TJ, et al. Intensive diabetes treatment and cardiovascular disease in patients with type 1 diabetes. N Engl J Med. 2005;353(25):2643–2653. doi: 10.1056/NEJMoa052187.

5. Boland E, Monsod T, Delucia M, Brandt CA, Fernando S, Tamborlane WV. Limitations of conventional methods of self-monitoring of blood glucose: lessons learned from 3 days of continuous glucose sensing in pediatric patients with type 1 diabetes. Diabetes Care. 2001;24(11):1858–1862. doi: 10.2337/diacare.24.11.1858.

6. Brauker J. Continuous glucose sensing: future technology developments. Diabetes Technol Ther. 2009;11(Suppl 1):S25-S36. doi: 10.1089/dia.2008.0137.

7. Wentholt IM, Hoekstra JB, Devries JH. Continuous glucose monitors: the long-awaited watch dogs? Diabetes Technol Ther. 2007;9(5):399–409. doi: 10.1089/dia.2007.0215.

8. He J, Chu N, Wan H, Ling J, Xue Y, Leung K, et al. Use of technology in prediabetes and precision prevention. J Diabetes Investig. 2025;16(7):1217–1231. doi: 10.1111/jdi.70057.

9. American Diabetes Association Professional Practice Committee. 7. Diabetes Technology: Standards of Care in Diabetes-2025. Diabetes Care. 2025;48(1 Suppl 1):S146–S166. doi: 10.2337/dc25-S007.

10. Daya NR, Fang M, Wang D, Valint A, Windham BG, Coresh J, et al. Glucose abnormalities detected by continuous glucose monitoring in very old adults with and without diabetes. Diabetes Care. 2025;48(3):416–421. doi: 10.2337/dc24-1990.

11. Friedman JG, Coyne K, Aleppo G, Szmuilowicz ED. Beyond A1C: exploring continuous glucose monitoring metrics in managing diabetes. Endocr Connect. 2023;12(7):e230085. doi: 10.1530/EC-23-0085.

12. DiMeglio LA, Evans-Molina C, Oram RA. Type 1 diabetes. Lancet. 2018;391(10138):2449–2462. doi: 10.1016/S0140-6736(18)31320-5.

13. Elbalshy M, Haszard J, Smith H, Kuroko S, Galland B, Oliver N, et al. Effect of divergent continuous glucose monitoring technologies on glycaemic control in type 1 diabetes mellitus: A systematic review and meta-analysis of randomised controlled trials. Diabet Med. 2022;39(8):e14854. doi: 10.1111/dme.14854.

14. Riemsma R, Corro Ramos I, Birnie R, Büyükkaramikli N, Armstrong N, Ryder S, et al. Integrated sensor-augmented pump therapy systems [the MiniMed® Paradigm™ Veo system and the Vibe™ and G4® PLATINUM CGM (continuous glucose monitoring) system] for managing blood glucose levels in type 1 diabetes: a systematic review and economic evaluation. Health Technol Assess. 2016;20(17):v–xxxi, 1–251. doi: 10.3310/hta20170.

15. Aronson R, Abitbol A, Bajaj HS, Cheng AYY, Christopoulos S, Harris SB, et al. Continuous glucose monitoring in noninsulin-treated type 2 diabetes: A critical review of reported trials with an updated systematic review and meta-analysis of randomised controlled trials. Diabetes Obes Metab. 2025;27(11):6220–6242. doi: 10.1111/dom.70008.

16. Seidu S, Kunutsor SK, Ajjan RA, Choudhary P. Efficacy and safety of continuous glucose monitoring and intermittently scanned continuous glucose monitoring in patients with type 2 diabetes: a systematic review and meta-analysis of interventional evidence. Diabetes Care. 2024;47(1):169–179. doi: 10.2337/dc23-1520.

17. Ferreira ROM, Trevisan T, Pasqualotto E, Chavez MP, Marques BF, Lamounier RN, et al. Continuous glucose monitoring systems in noninsulin-treated people with type 2 diabetes: a systematic review and meta-analysis of randomized controlled trials. Diabetes Technol Ther. 2024;26(4):252–262. doi: 10.1089/DIA.2023.0390.

18. Jancev M, Vissers TACM, Visseren FLJ, van Bon AC, Serné EH, DeVries JH, et al. Continuous glucose monitoring in adults with type 2 diabetes: a systematic review and meta-analysis. Diabetologia. 2024;67(5):798–810. doi: 10.1007/s00125-024-06107-6.

19. Ajjan RA, Battelino T, Cos X, Del Prato S, Philips JC, Meyer L, et al. Continuous glucose monitoring for the routine care of type 2 diabetes mellitus. Nat Rev Endocrinol. 2024;20(7):426–440. doi: 10.1038/s41574-024-00973-1.

20. Zahalka SJ, Akturk HK, Galindo RJ, Shah VN, Low Wang CC. Continuous glucose monitoring for prediabetes: roles, evidence, and gaps. Endocr Pract. 2025;31(8):1054–1060. doi: 10.1016/j.eprac.2025.05.742.

21. Rizos EC, Kanellopoulou A, Filis P, Markozannes G, Chaliasos K, Ntzani EE, et al. Difference on glucose profile from continuous glucose monitoring in people with prediabetes vs. normoglycemic individuals: a matched-pair analysis. J Diabetes Sci Technol. 2024;18(2):414–422. doi: 10.1177/19322968221123530.

22. Zahalka SJ, Galindo RJ, Shah VN, Low Wang CC. Continuous glucose monitoring for prediabetes: what are the best metrics? J Diabetes Sci Technol. 2024;18(4):835–846. doi: 10.1177/19322968241242487.

23. Shalitin S, Chase HP. Diabetes technology and treatments in the paediatric age group. Int J Clin Pract Suppl. 2011;170:76–82. doi: 10.1111/j.1742-1241.2010.02582.x.

24. O'Malley G, Wang A, Ogyaadu S, Levy CJ. Assessing glycemic control using CGM for women with diabetes in pregnancy. Curr Diab Rep. 2021;21(11):44. doi: 10.1007/s11892-021-01415-2.

25. Murphy HR, Bell R, Cartwright C, Curnow P, Maresh M, Morgan M, et al. Improved pregnancy outcomes in women with type 1 and type 2 diabetes but substantial clinic-to-clinic variations: a prospective nationwide study. Diabetologia. 2017;60(9):1668–1677. doi: 10.1007/s00125-017-4314-3.

26. Macintosh MC, Fleming KM, Bailey JA, Doyle P, Modder J, Acolet D, et al. Perinatal mortality and congenital anomalies in babies of women with type 1 or type 2 diabetes in England, Wales, and Northern Ireland: population based study. BMJ. 2006;333(7560):177. doi: 10.1136/bmj.38856.692986.AE.

27. Feig DS, Donovan LE, Corcoy R, Murphy KE, Amiel SA, Hunt KF, et al. Continuous glucose monitoring in pregnant women with type 1 diabetes (CONCEPTT): a multicentre international randomised controlled trial. Lancet. 2017;390(10110):2347–2359. doi: 10.1016/S0140-6736(17)32400-5.

28. Polsky S, Garcetti R, Pyle L, Joshee P, Demmitt JK, Snell-Bergeon JK. Continuous glucose monitor use with and without remote monitoring in pregnant women with type 1 diabetes: A pilot study. PLoS One. 2020;15(4):e0230476. doi: 10.1371/journal.pone.0230476.