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# Diabetes

# Current Awareness Bulletin

## November 2025

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## New training via MS Teams available from the Academy Library:

- **Bitesize searching databases for evidence: a quick guide to help you develop your literature searching skills**
  45 minutes. Learn how to transform a question into a search strategy, and how to find the best evidence in a database.
  **Next sessions: 22nd January 2026 @ 2pm & 13th February 2026 at 3pm**

- **Simple and painless evidence into practice (BMJ Best Practice and the LKS Hub)**
  30 minutes. Learn about quick and hassle-free ways to seamlessly incorporate evidence into your daily work.
  **Next sessions: 16th January 2026 @ 10am & 2nd February 2026 @ 11am**

- **Quickfire health literacy: communicating with patients more effectively**
  30 minutes. Learn about the communication barriers patients may encounter, and ways to ensure they get the most from their care.
  **Next sessions: 7th January 2026 @ 2pm & 19th February 2026 at 3pm**

  Book a session today at https://forms.office.com/e/HyiSXfDaYV (these sessions will be held on a monthly basis)

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**1. Difference between cystatin C- and creatinine-based estimated glomerular filtration rate and risk of diabetes-related multimorbidity among adults with diabetes**

**Authors:** Chen F, Zhang Y, Gao D, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: To evaluate the association of discrepancies between cystatin C- and creatinine-based estimated glomerular filtration rate (eGFRdiff) with incident diabetes-related multimorbidity.]

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**2. The economic impact of diabetes: Assessing incremental direct costs in Australia using linked administrative data**

**Authors:** Asiamah-Asare B.K.Y., Randall S, Mnatzaganian G, et al.

**Publication Date:** 2025

**Journal:** Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Background**: Diabetes poses huge financial implications for individuals and healthcare systems. This study aims to quantify the incremental direct healthcare costs associated with diabetes in Australia.]

**3. New-onset diabetes mellitus post COVID-19 infection: a systematic review and *meta*-analysis**

**Author:** Cocking E, Daher J, Alabbood M.

**Publication Date:** 2025

**Journal:** Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aims**: This systematic review and *meta* -analysis aimed to determine the relative risk of new-onset diabetes mellitus (NODM) in COVID-19 patients compared to individuals without COVID-19, with subgroup analyses based on diabetes type, age, severity of COVID-19 infection and corticosteroid use.]

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**4. Non-syndromic WFS1 mutations are not a rare cause of diabetes in Pakistan**

**Authors:** Rafique I, Mir A, Popovic N, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[Short abstract (50 words): We examined 68 Pakistani patients with young onset diabetes and found a surprisingly high rate (4/68) of non-syndromic WFS1 diabetes, a recently described recessive condition. This frequency far exceeds the prevalence of the fully expressed syndrome, probing the effect of high consanguinity on the risk of non-syndromic WFS1 diabetes.]

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**5. Relationship between body fat and cognitive function in individuals with diabetes mellitus**

**Authors:** Quadra M.R., Schäfer A.A., Meller F.O., et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aim:** To investigate the relationship between body fat and cognitive function in individuals with Diabetes mellitus (DM).]

**Children with diabetes**

**6. Fluids in paediatric diabetic ketoacidosis: the choice is not solely academic**

**Authors:** Rabbone I, Bonfanti R, Cherubini V, et al.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[The management of paediatric diabetic ketoacidosis (DKA) requires meticulous fluid and electrolyte administration, where established protocols guide gradual rehydration and metabolic correction. 12 While the academic debate between saline 0·9% and balanced crystalloids like Ringer's solution continues, practical considerations regarding additive compatibility with Ringer's solution, particularly at DKA onset, deserve specific attention. In paediatric DKA, aggressive and precise electrolyte repletion, especially of potassium and often phosphate, is fundamental. A critical concern with calcium-containing solutions like Ringer's is that the addition of potassium phosphate risks precipitation of calcium salts. This incompatibility is not confined to direct mixing within the infusion bag but extends to co-administration through the same intravenous line, including via a three-way stopcock, potentially leading to calcium phosphate precipitates. [3] Such events can result in catheter occlusion and, more alarmingly, systemic micro-emboli in vulnerable paediatric patients. Similarly, if sodium bicarbonate administration is considered in the rare event of severe, life-threatening acidosis (although its routine use is discouraged in paediatric DKA), [2] the presence of calcium in Ringer's solution could again pose a risk of precipitation.]

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**7. Low parental stress and positive well-being in Finnish children and adolescents with type 1 diabetes**

**Authors:** Pironetti R, Saha M.T., Luukkaala T, et al.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[**Introduction**: Given the limited knowledge about family dynamics and well-being among pediatric patients with type 1 diabetes (T1D) in Finland, this study aimed to assess parental stress, patient well-being, and their potential associations with glycemic control at a Finnish diabetes clinic.]

**8. Non-autoimmune, insulin-deficient diabetes in children and young adults in Africa: evidence from the Young-Onset Diabetes in sub-Saharan Africa (YODA) cross-sectional study**

**Authors:** Katte J.C., Squires S, Dehayem M.Y., et al.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[**Background**: Studies of type 1 diabetes in sub-Saharan Africa have suggested that the clinical phenotype might differ from phenotypes reported elsewhere. We aimed to establish whether type 1 diabetes diagnosed in children and young adults in three countries across sub-Saharan Africa is of autoimmune origin.]

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**9. Responsive feeding, diabetes management, weight status and diet quality in a culturally diverse group of 1–5-year-old Australian children with type 1 diabetes**

**Authors:** Lobley K, Youde L.S., Vandervliet L, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: To examine responsive feeding in culturally-and-linguistically diverse (CALD) Australian children (1–5 years) with type-1 diabetes (T1D) and associations with diabetes management, weight status and diet quality.]

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**Cardiovascular Disease**

**10. Adherence patterns to cardiovascular medications in people with type 2 diabetes mellitus: a retrospective cohort study using group-based trajectory analysis in primary care**

**Authors:** Chodapuneedi S, Koh J.W., Orman Z, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aim**: To assess adherence to glucose-, lipid-, and blood pressure-lowering medications in people with T2DM and identify predictors of non-persistent adherence behaviours.]

**11. Association Between Type 2 Diabetes Mellitus and Heart Failure: A Retrospective Study from a Tertiary Care Diabetes Centre in India**

**Authors:** Pradeepa R, PramodKumar T.A., Anjana R.M., et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[**Introduction**: The study aimed to explore the association between type 2 diabetes (T2D) and heart failure (HF) using echocardiography and NT-proBNP. The study also derived an NT-proBNP cut-off for diagnosing HF by echo in Asian Indians with T2D.]

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**12. Cardiovascular risk stratification in an ethnically mixed population with type 1 diabetes mellitus: comparison of the Steno Type 1 Risk Engine with the Scottish-Swedish risk model**

**Author:** Paliares I.C., Dualib P.M., Aroucha P.M.T., et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aim**: This study compared the performances of the Steno Type 1 Risk Engine (ST1RE) and the Scottish-Swedish risk model in a predominantly young and ethnically diverse type 1 diabetes (T1D) cohort.]

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**13. Correction to: Association Between Type 2 Diabetes Mellitus and Heart Failure: A Retrospective Study from a Tertiary Care Diabetes Centre in India**

**Authors:** Pradeepa R, PramodKumar T.A., Anjana R.M., et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[This corrects "Association Between Type 2 Diabetes Mellitus and Heart Failure: A Retrospective Study from a Tertiary Care Diabetes Centre in India."

**14. Diabetes mellitus and postural hypotension in prehospital care**

**Author:** Young W.

**Publication Date:** 2025

**Journal:** Journal of Paramedic Practice

[Postural hypotension, defined as a sustained reduction in systolic blood pressure of at least 20 mmHg or diastolic blood pressure of at least 10 mmHg upon standing, is a common but often under-recognised complication in individuals with diabetes mellitus. This continuing professional development (CPD) module explores the pathophysiological mechanisms underpinning this association, the clinical implications for paramedic practice, and the importance of accurate assessment and management in the prehospital setting. Evidence from clinical and epidemiological research is synthesised to highlight the significance of early recognition and intervention. The article concludes with recommendations for paramedic practice in the identification and management of patients with diabetes at risk of postural hypotension.]

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**15. DNA repair and inflammatory response genes play a central role in protecting patients with long-standing type 1 diabetes from vascular complications**

**Authors:** Özgümüş T, Sulaieva O, Begum M.C., et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** Individuals with type 1 diabetes (T1D) are typically diagnosed at a young age and exposed to lifelong hyperglycaemia. Despite improved metabolic control, the risk of vascular complications remains challenging. However, some individuals remain free from developing major diabetic complications even after long duration, so-called “escapers”. This study investigated transcriptomic biomarkers linked to protection from microvascular complications in the Dialong cohort of long-standing T1D.]

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**16. Effects of GLP-1 agonists on 10-year cardiovascular risk reduction in primary prevention: A 44-week open label prospective study**

**Authors:** Seijas-Amigo J, Salgado-Barreira Á, Castelo-Dominguez R, et al.

**Publication Date:** 2025

**Journal:** Diabetes & Metabolic Syndrome: Clinical Research & Review*s*

[**Aims**: Patients with Type 2 diabetes mellitus face elevated cardiovascular risk. We assessed the effect of GLP-1 receptor agonists on 10-year CVR in a primary prevention cohort.]

**17. Incretins and the cardiovascular system: bridging digestion with metabolism**

**Authors:** Avogaro A, Fadini G.P.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[The mechanisms driving the cardiovascular and renal benefits of therapies targeting intestinal hormones in type 2 diabetes are still not fully understood. We propose that incretin hormones—glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic peptide (GIP)—act as a critical link connecting digestion, metabolism, and cardiovascular function, supporting physiological adaptations to nutrient intake. Incretin hormones help regulate blood flow and cardiac activity, enhancing nutrient absorption while protecting the heart and vessels. After meals, incretin hormones promote vasodilation—especially in the splanchnic and peripheral circulations—via nitric oxide, improving endothelial function, vascular flexibility, and blood pressure control, which supports tissue perfusion and meets the body's increased metabolic demands. GLP-1 also has mild inotropic effects, promoting efficient circulation without straining the heart. At the same time, vasodilation boosts glucose and lipid uptake, linking digestion directly to energy metabolism. These mechanisms lower vascular resistance, reduce cardiac workload, and improve myocardial glucose use, which becomes especially valuable during ischaemic events. Incretins also have anti-inflammatory and antioxidant effects, which help prevent endothelial dysfunction and arterial stiffening, reducing the risk of atherosclerosis. Clinically, GLP-1 receptor agonists and dual GLP-1 and GIP receptor agonists leverage these effects to improve cardiovascular and possibly renal outcomes in people with type 2 diabetes or obesity. By linking digestion, metabolism, and cardiovascular health, incretin-based therapies do more than just regulate blood sugar; they help reduce morbidity and mortality and are becoming a core component of modern diabetes care.]

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**18. NerveCheck master to screen patients with type 1 or type 2 diabetes for peripheral and cardiac autonomic neuropathy**

**Authors:** Galiero R, Rezki A, Simeon V, et al.

**Publication Date:** 2025

**Author:** Journal of Diabetes and Its Complications

[**Aim:** NerveCheck Master (NCKM) is a portable device designed to assess vibration, warm, cold and heat pain perception thresholds. NCKM was shown to offer good diagnostic accuracy for diabetic peripheral neuropathy (DPN). Cardiac autonomic neuropathy (CAN) remains underdiagnosed. We assessed the role of NCKM against Michigan Neuropathy Screening Instrument (MNSI) to screen patients with diabetes for both DPN and CAN.]

**19. Regional and systemic adipose mass and peripheral conduit artery function**

**Authors:** Wakeham D.J., Beckman B.E., Mashayekhi M, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Introduction**: Vascular function and metabolic function are inherently coupled. While prior studies have linked body mass index (BMI) and visceral adiposity to reduced FMD, the relationship between whole-body and limb-specific adiposity and vascular function in adults with pre-diabetic levels of insulin resistance remains unclear.]

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**20. Relationship between triglyceride-glucose index and stroke risk in middle-aged and older Chinese population: a national longitudinal study based on explainable machine learning**

**Authors:** Gao Y, Zhang M, Xu C, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: The triglyceride-glucose (TyG) index is a recognized surrogate marker for insulin resistance. This study explores the relationship between the baseline TyG index and the subsequent risk of stroke in middle-aged and older adults, while also examining the variable importance of various predictors potentially influencing stroke incidence.]

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**Diabetic Neuropathy**

**21. NerveCheck master to screen patients with type 1 or type 2 diabetes for peripheral and cardiac autonomic neuropathy**

**Author:** Galiero R, Rezki A, Simeon V, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aim:** NerveCheck Master (NCKM) is a portable device designed to assess vibration, warm, cold and heat pain perception thresholds. NCKM was shown to offer good diagnostic accuracy for diabetic peripheral neuropathy (DPN). Cardiac autonomic neuropathy (CAN) remains underdiagnosed. We assessed the role of NCKM against Michigan Neuropathy Screening Instrument (MNSI) to screen patients with diabetes for both DPN and CAN.]

**22. Progressive improvements in patient-reported outcomes with the high-concentration capsaicin patch: A retrospective cohort study in patients with painful diabetic peripheral neuropathy (CASPAR study)**

**Authors:** Überall M.A., Kender Z, Quandel T, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Objective:** To assess long-term outcomes and tolerability associated with repeated topical high-concentration capsaicin patch (HCCP) treatments in painful diabetic peripheral neuropathy (pDPN).]

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**23. Omega-3 fatty acid supplementation for distal symmetrical peripheral neuropathy in adults with diabetes mellitus**

**Author:** Britten-Jones A.C., Linstrom T.A., Makrai E, et al.

**Publication Date:** 2025

**Journal:** Cochrane Database of Systematic Reviews

[**Rationale**: Diffuse distal symmetrical polyneuropathy (DSPN) is a common complication in people living with diabetes mellitus. There is currently no effective treatment for DSPN. There is a biological rationale that omega-3 polyunsaturated fatty acids (PUFAs) may modify peripheral nerve function in DSPN. However, there is a lack of certainty about the potential benefits and harms of omega-3 PUFAs as a treatment for DSPN.

**Objectives**: To evaluate the benefits and harms of oral omega-3 PUFA supplements as a treatment for DSPN in adults with diabetes mellitus, compared to placebo or no treatment.]

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**Eye Diseases**

**24. Fenofibrate and Diabetic Retinopathy**

**Authors:** Parra-Pineda A, Lizarazo-Bocanegra S, Villalba-Montero L.F., et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[Diabetic retinopathy (DR) is a preventable, frequent, and serious complication of diabetes, with a large impact on morbidity and disability. More than 125 million people worldwide suffer from DR. The pathogenesis of DR involves different pathways, many of them exacerbated by chronic hyperglycemia, but not necessarily a direct consequence of it. Fibrates are a well-known family of medications traditionally employed for the treatment of hypertriglyceridemia and low HDL cholesterol, which act through binding to the nuclear receptor peroxisome proliferator-activated receptors (PPAR)-alpha in several tissues. PPAR-alpha is expressed in the human retina. Animal and cellular models have

demonstrated that PPAR activation by fibrates improves cellular phenomena involved in the genesis of DR, including chronic inflammation, oxidative damage, vascular hyperpermeability and microglial activation. Secondary analyses of fenofibrate trials originally designed to assess cardiovascular outcomes, systematically found an apparent benefit from fenofibrate treatment on diverse measures of DR appearance and severity. Finally, the LENS (Lowering Events in Non-Proliferative Retinopathy) study proved in a dedicated randomized trial that early fenofibrate use lowers the risk of DR progression in a statistically significant and clinically meaningful manner. These results have positioned fenofibrate as the first agent proven to specifically delay DR, without mediation by glycemic control. Future studies will test whether this effect extends to other microvascular diabetes complications.]

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**25. Thyroid eye disease and the IGF-1 receptor**

**Author:** Smith T.J.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[I have read the Review by Wilmar M Wiersinga and colleagues, [1] in which the authors have raised several important points that invite additional perspectives.]

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**26. Validation of a self-administered Home ETDRS visual acuity testing (H-ETDRS) for self-monitoring vision changes in retinal diseases**

**Author:** Liu Z, Huang Y, Jin L, et al.

**Publication Date:** 2025

**Journal:** British Journal of Ophthalmology

[**Objective**: To validate a self-administered Home Early Treatment Diabetic Retinopathy Study (H-ETDRS) visual acuity (VA) test and to assess its accuracy in detecting VA decline in patients with retinal diseases.]

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**27. Which treatment modality offers the best outcomes for diabetic retinopathy? A systematic review and network meta-analysis**

**Authors:** Chen K.Y., Chan H.C., Chan C.M.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Background and objective**: Diabetic retinopathy (DR) is a leading cause of preventable blindness globally, with proliferative diabetic retinopathy (PDR) and diabetic macular edema (DME) being the

most vision-threatening complications. While panretinal photocoagulation (PRP) has been the traditional treatment for PDR, anti-vascular endothelial growth factor (anti-VEGF) therapies have emerged as effective alternatives. However, the comparative efficacy and safety of these interventions remain unclear. This network *meta* -analysis aimed to evaluate and compare the effectiveness of anti-VEGF agents, PRP, and combination therapies in improving visual and anatomical outcomes in patients with DR.]

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**Kidney Disease**

**28. Association of chronic kidney disease and type 2 diabetes mellitus with metabolic dysfunction-associated steatotic liver disease and liver fibrosis assessed by transient elastography: a cross-sectional study based on NHANES 2017–2020**

**Author:** Xu T, Zhu W.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: The study endeavors to elucidate the separate and combined associations of chronic kidney disease (CKD) and type 2 diabetes mellitus (T2DM) with the prevalence risks of metabolic dysfunction-associated steatotic liver disease (MASLD) and liver fibrosis (LF).]

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**29. Incremental value of CT-based perirenal fat characteristics in the categorization and progression prediction of diabetic kidney disease**

**Authors:** Fan J, Zuo L, Liu X, et al

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** To explore the association between computed tomography (CT)-derived perirenal adipose tissue (PAT) characteristics and diabetic kidney disease (DKD) risk categories according to the Kidney Disease: Improving Global Outcomes (KDIGO) guideline, and to determine the incremental predictive value of PAT characteristics for DKD rapid progression in patients with type 2 diabetes mellitus (T2DM).]

**30. Pharmacokinetic-pharmacodynamic (PK/PD) modelling of cotadutide effect in patients with chronic kidney disease and type 2 diabetes mellitus**

**Authors:** Yu H, Parker V, Selvarajah V, et al.

**Publication Date:** 2025

**Journal:** British Journal of Clinical Pharmacology

[**Aims**: Cotadutide is a dual glucagon-like peptide-1/glucagon receptor agonist. The objective of the analysis was to develop a pharmacokinetic-pharmacodynamic (PK/PD) model to describe the relationship between cotadutide exposure and response on urine albumin-to-creatinine ratio (UACR), urinary albumin (UALB), and body weight in participants with chronic kidney disease (CKD) and type 2 diabetes mellitus (T2DM) using data from a Phase2b study (NCT04515849).]

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**31. The role of biomarkers of innate and adaptive immunity in the early detection of diabetic nephropathy in children and adolescents with type 1 diabetes mellitus**

**Authors:** Yıldırım A.T., Bayar N.T.I., Yiğit Y, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** Neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR) are biomarkers linked to microvascular complications in adult diabetics. This study aimed to assess whether NLR and PLR, which increase in chronic inflammation, could aid in early detection of diabetic nephropathy (DN) in children and adolescents with Type 1 diabetes mellitus (T1DM).]

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**32. Sodium zirconium cyclosilicate (Lokelma) to enable ACEIs/ARBs use in the treatment of patients with diabetic kidney disease**

**Authors:** Hao X, Liu J, Gu L, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: In diabetic kidney disease (DKD), Angiotensin-converting enzyme inhibitors (ACEIs)/ angiotensin receptor blockers (ARBs) are key treatments but may cause hyperkalemia. This randomized controlled trial (RCT) firstly evaluates sodium zirconium cyclosilicate (SZC) to optimize renin-angiotensin-aldosterone system inhibitor (RAASi) use in DKD, addressing evidence gaps in this field.]

**Liver Disease**

**33. Association between multifactorial control and excess risk of liver diseases in type 2 diabetes: a prospective cohort study**

**Authors:** Chen R, Zhou Y, Xu M, et al.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[**Introduction**: To examine the association of the number of controlled risk factors with the excess risk of severe metabolic dysfunction-associated steatotic liver disease (MASLD) and major adverse liver outcomes (MALO) among patients with type 2 diabetes.]

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**34. GLP-1 receptor agonists and risk of hepatocellular carcinoma and all-cause mortality in patients with MASLD and type 2 diabetes: a propensity score–matched population-based cohort study**

**Authors:** Chen W.M., Ng H.J., Jao A.T., et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Background**: Hepatocellular carcinoma (HCC) is increasingly driven by non-viral causes, particularly metabolic dysfunction–associated steatotic liver disease (MASLD), which commonly coexists with type 2 diabetes mellitus (T2DM). Given the strong link between T2DM and HCC and the lack of approved pharmacologic preventive strategies, agents with dual metabolic and oncologic benefits are urgently needed. Glucagon-like peptide-1 receptor agonists (GLP-1RAs) have demonstrated anti-inflammatory, anti-fibrotic, and potential anti-tumor effects.]

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**35. Prevalence of Hepatic Steatosis and Fibrosis in Asian Indian Individuals with Type 2 Diabetes**

**Authors:** Bhuvanesswar K.C., Srivastava B.K., Amutha A, et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[**Introduction**: Metabolic dysfunction-associated steatotic liver disease (MASLD) is closely associated with diabetes mellitus, representing a significant health concern owing to its potential progression to cirrhosis of the liver.

We aim to determine the prevalence of MASLD using transient elastography (TE by FibroScanR by Echosens, Paris) in individuals with type 2 diabetes (T2D).]

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**Diabetic Foot**

### 36. Clinical outcomes of patients with Polyvascular disease admitted with an acute diabetic foot ulcer

**Authors:** Tal N, Hershkowitz I, Gorin K, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** Diabetic foot ulcer (DFU) is a common cause of admission in patients with diabetes. Diabetes increases the likelihood of inpatient Major Adverse Cardiovascular Events (MACE), and the presence of polyvascular disease (PD), defined by the presence of atherosclerosis in two or more arterial beds, further amplifies this risk. We assessed the impact of PD on outcomes in patients admitted due to a DFU.]

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### 37. The equality and disparities of progress in the diabetic foot in the North American and Caribbean (NAC) region

**Author:** McConnie S.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[Eighty-five (85%), of lower limb amputations are preventable. Amidst all the research and data on prevention, has there been any improvements within the North American and Caribbean region? Exploring the current data and outcomes it shows that there has been no improvement in the diabetic foot and the resulting suffering associated. There seems to be a connection between systemic racism, accessibility from a financial and political base line and lack of education on the impact prevention and policies that can be implemented to halt this crisis. The recognition of this fact has supported the launch of new collaborative efforts through the Limb preservation alliance. This new organisation will work with and through other organisations to expand on the mission of avoidable amputations. Some of these organisations to date are Wounds Canada, Caribbean Wounds network, American Limb preservation Society and others within the region, with the view point that weighing in can be impactful for our future outcomes. The outcome is a focus on prevention not treatment.]

**38. A national quality survey of in-patient diabetic foot care calls for centralizing care and improving patient communication**

**Authors:** Ein-Gal Y, Aharon-Hananel G, Sigawi T, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** To evaluate the quality of inpatient care for patients with diabetic foot ulcers (DFU) and examine the relationship between managerial awareness of quality indicators and the actual care provided, as documented in the electronic medical records (EMRs).]

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**39. A Systematic Review of Submetatarsal Fat Pad Augmentation for the Treatment and Prevention of Diabetes-Related Foot Ulceration**

**Authors:** Ashmore C, Virdee J, Culmer P, et al.

**Publication Date:** 2025

**Journal:** Journal of Foot and Ankle Research

[**Background**: Diabetes-related foot ulceration (DFU) represents a significant and increasing cause of morbidity and economic burden to health services. Surgical offloading has shown great effectiveness in the prevention and healing of DFU. The objective of this review is to assess the effectiveness of submetatarsal plantar fat pad modulation in preventing DFU and to characterise the different biomaterials used to this end.]

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**Diabetic Ketoacidosis**

**40. Continuous ketone monitoring for diabetes: a new era for diabetes**

**Authors:** Sherr J.L., Nally L.M.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[Ketone monitoring has long been crucial in the management of individuals with diabetes, especially in the prevention of diabetic ketoacidosis, a potentially life-threatening complication. Yet, real-world engagement with current methods for ketone testing are suboptimal. However, a new frontier is emerging with the development of continuous ketone monitoring, which promises to reshape our understanding of diabetes and our management approach.]

41. **Fluids in paediatric diabetic ketoacidosis: the choice is not solely academic**

**Authors:** Rabbone I, Bonfanti R, Cherubini V, et al.

**Publication Date:**

**Journal:** Lancet Diabetes & Endocrinology

[The management of paediatric diabetic ketoacidosis (DKA) requires meticulous fluid and electrolyte administration, where established protocols guide gradual rehydration and metabolic correction. 12 While the academic debate between saline 0·9% and balanced crystalloids like Ringer's solution continues, practical considerations regarding additive compatibility with Ringer's solution, particularly at DKA onset, deserve specific attention. In paediatric DKA, aggressive and precise electrolyte repletion, especially of potassium and often phosphate, is fundamental. A critical concern with calcium-containing solutions like Ringer's is that the addition of potassium phosphate risks precipitation of calcium salts. This incompatibility is not confined to direct mixing within the infusion bag but extends to co-administration through the same intravenous line, including via a three-way stopcock, potentially leading to calcium phosphate precipitates. [3] Such events can result in catheter occlusion and, more alarmingly, systemic micro-emboli in vulnerable paediatric patients. Similarly, if sodium bicarbonate administration is considered in the rare event of severe, life-threatening acidosis (although its routine use is discouraged in paediatric DKA), [2] the presence of calcium in Ringer's solution could again pose a risk of precipitation.]

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**Children with diabetes**

**42. Continuous glucose monitoring in gestational diabetes mellitus: hope or hype?**

**Authors:** Chai T.Y., Leathwick S, Agarwal M.M., et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[The screening, diagnosis and management of gestational diabetes mellitus (GDM) have evolved over time. Similarly, continuous glucose monitoring (CGM) has advanced in parallel: from intermittent to real-time monitoring, shorter to longer wear-time and poor to increased precision. Thus, CGM has replaced multiple glucose fingerstick testing in type 1 diabetes mellitus (T1D), including pregnant women with T1D. Despite its advantages, the uptake of CGM in women with GDM remains limited. Doubts persist over its cost, accuracy and optimal utilisation, besides there is paucity of evidence supporting its use in both diagnosis and management. This review summarises the current clinical evidence, benefits and limitations of using CGM in pregnant women with GDM. Like T1D, only larger pointed studies and randomised controlled trials will clarify the value of CGM in GDM.]

**43. Gut microbiome and serum metabolic alterations in recurrent gestational diabetes mellitus**

**Authors:** Zheng W, Lu Y, Yuan X, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aim**: This study aimed to identify gut microbiome and serum metabolic alterations in women with recurrent gestational diabetes mellitus (GDM), which affects a significant proportion of those with a prior history.]

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**44. Impact of gestational and type 2 diabetes on fetal endothelial cell miRNA expression**

**Authors:** Sultan S, Sabeeh R.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** Fetal exposure to hyperglycemia *in utero* have been suggested to induce epigenetic changes through expression of various miRNAs, and cause dysfunctional endothelium connected with elevated risk of cardiovascular disease (CVD) in offspring during early adulthood. In this study, we investigated whether hyperglycemia-induced changes in the expression of 28 fetal endothelial microRNAs (miRNAs) are associated with endothelial dysfunction and CVD.]

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**45. Low prolactin levels as a marker of gestational diabetes in late pregnancy**

**Author** Scairati R, Auriemma R.S., Di Meglio S, et al.

**Publication Date:** 2025

*Diabetes Research and Clinical Practice*

[**Aims**: Beyond its known role in lactation, prolactin is emerging as a hormone involved in gestational glucose metabolism. This study aimed to assess prolactin trajectories across pregnancy and their association with metabolic outcomes, including gestational diabetes (GDM).]

**46. Preconception and pregnancy artificially sweetened beverage consumption and its association with adverse pregnancy outcomes: findings from the Australian longitudinal study on women's health**

**Authors:** Gebremichael B, Begum M, Bianco-Miotto T, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Background and aim**: Exposure to artificial sweeteners has been linked to adverse health outcomes. We aimed to examine the association between preconception and pregnancy artificially sweetened beverage (ASB) consumption and adverse pregnancy outcomes.]

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**Diabetes mellitus Type 1**

**47. Cardiovascular risk stratification in an ethnically mixed population with type 1 diabetes mellitus: comparison of the Steno Type 1 Risk Engine with the Scottish-Swedish risk model**

**Authors:** Paliares I.C., Dualib P.M., Aroucha P.M.T., et al.

**Publication Date:** 2025

**Journal:** Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aim**: This study compared the performances of the Steno Type 1 Risk Engine (ST1RE) and the Scottish-Swedish risk model in a predominantly young and ethnically diverse type 1 diabetes (T1D) cohort.]

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**48. Correction to: Safety and Effectiveness of Glargine 300 U/ml After Switching from Basal Insulins in Patients with Type 1 Diabetes: COMET-T Study**

**Author:** Gölz S, Mader J.K., Bilz S, et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[This corrects "Safety and Effectiveness of Glargine 300 U/ml After Switching from Basal Insulins in Patients with Type 1 Diabetes: COMET-T Study."

**49. Effect of a structured educational intervention delivered through a mobile application on glycated haemoglobin and self-efficacy in adolescents with type 1 diabetes mellitus: a systematic review and meta-analysis**

**Authors:** Rubab H, Aziz F, Gul R, et al.

**Publication Date:** 2025

**Journal:** BMJ Open

[**Objectives**: Type 1 diabetes mellitus (T1DM) is a chronic illness affecting children and adolescents worldwide. Mobile health apps (MHAs) are increasingly used to deliver structured educational interventions (SEI) aimed at reducing glycated haemoglobin (HbA1c), enhancing self-efficacy and self-management in adolescents with T1DM. This review and meta-analysis assessed the effectiveness of SEI via MHAs on HbA1c and self-efficacy in adolescents with T1DM.]

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**50. Effects of individual, health system and neighborhood risks on diabetes health outcomes among emerging adults with type 1 diabetes**

**Authors:** Ellis D.A., Carcone A.I., Buggs-Saxton C, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: To test associations between individual, health system and neighborhood-level risk and protective factors, and health outcomes in a diverse sample of emerging adults (EAs) with type 1 diabetes (T1D).]

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**51. Low parental stress and positive well-being in Finnish children and adolescents with type 1 diabetes**

**Authors:** Pironetti R, Saha M.T., Luukkaala T, et al.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[**Introduction**: Given the limited knowledge about family dynamics and well-being among pediatric patients with type 1 diabetes (T1D) in Finland, this study aimed to assess parental stress, patient well-being, and their potential associations with glycemic control at a Finnish diabetes clinic.]

52. M**editerranean diet adherence among adolescents with type 1 diabetes: Insights into dietary patterns, glycemic control, and gender differences**

**Authors:** Gillon-Keren M, Propper-Lewinsohn T, David M, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: To assess Mediterranean Diet (MD) adherence in adolescents with type 1 diabetes)T1D(, explore its associations with glycemic control and cardiometabolic risk factors, and examine gender-specific dietary patterns.]

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**53. New-onset diabetes mellitus post COVID-19 infection: a systematic review and *meta*-analysis**

**Author:** Cocking E, Daher J, Alabbood M.

**Publication Date:** 2025

**Journal:** Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aims**: This systematic review and *meta* -analysis aimed to determine the relative risk of new-onset diabetes mellitus (NODM) in COVID-19 patients compared to individuals without COVID-19, with subgroup analyses based on diabetes type, age, severity of COVID-19 infection and corticosteroid use.]

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**54. Non-autoimmune, insulin-deficient diabetes in children and young adults in Africa: evidence from the Young-Onset Diabetes in sub-Saharan Africa (YODA) cross-sectional study**

**Author:** Katte J.C., Squires S, Dehayem M.Y., et al.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[**Background**: Studies of type 1 diabetes in sub-Saharan Africa have suggested that the clinical phenotype might differ from phenotypes reported elsewhere. We aimed to establish whether type 1 diabetes diagnosed in children and young adults in three countries across sub-Saharan Africa is of autoimmune origin.]

**55. A randomized pilot sleep and circadian behavior clinical trial to improve glycemic and psychological outcomes in young adults with type 1 diabetes (NCT04975230)**

**Authors:** Armentrout B.L., Wenzell M.L., Strohl K.P., et al.

**Publication Date:** 2025

**Journal:** Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aims:** To investigate the preliminary efficacy of a cognitive behavioral sleep and circadian intervention on glycemic and psychological outcomes in young adults with type 1 diabetes.]

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**56. Responsive feeding, diabetes management, weight status and diet quality in a culturally diverse group of 1–5-year-old Australian children with type 1 diabetes**

**Authors:** Lobley K, Youde L.S., Vandervliet L, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: To examine responsive feeding in culturally-and-linguistically diverse (CALD) Australian children (1–5 years) with type-1 diabetes (T1D) and associations with diabetes management, weight status and diet quality.]

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**57. The role of biomarkers of innate and adaptive immunity in the early detection of diabetic nephropathy in children and adolescents with type 1 diabetes mellitus**

**Authors:** Yıldırım A.T., Bayar N.T.I., Yiğit Y, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** Neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR) are biomarkers linked to microvascular complications in adult diabetics. This study aimed to assess whether NLR and PLR, which increase in chronic inflammation, could aid in early detection of diabetic nephropathy (DN) in children and adolescents with Type 1 diabetes mellitus (T1DM).]

**58. Sarcopenia in type 1 diabetes mellitus: a systematic review**

**Author:** Milluzzo A, Quaranta G, Manuella L, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Introduction**: Sarcopenia is the progressive skeletal muscle impairment that affects 10–16 % of the elderly worldwide. Sarcopenia can be recognised at any age, particularly in subjects with a wide range of conditions, including metabolic diseases. We conducted a systematic review of current evidence on the association between sarcopenia and type 1 diabetes (T1D).]

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**59. Sex-based disparities in perceived versus objective glycaemic control in type 1 diabetes: a cross-sectional cohort study**

**Authors:** Snethlage C.M.F., Smeets P, De Groen P, et al.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[Managing type 1 diabetes has a substantial impact on quality of life and psychological health. Indeed, insulin overdosing can lead to hypoglycaemia, which has potentially damaging consequences, and consistent underdosing can lead to hyperglycaemia-associated complications or diabetic ketoacidosis. [1] Therefore, the accuracy with which individuals assess their risk of hyperglycaemia and hypoglycaemia is important for long-term diabetes management and safety.]

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**60. Sex-specific thresholds of peak oxygen consumption for detecting cardiometabolic risk in children and adolescents with type 1 diabetes**

**Author:** García-Hermoso A, Huerta-Uribe N, Hormazábal-Aguayo I, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: To establish sex-specific peak oxygen consumption (VO 2peak) thresholds that accurately discriminate cardiometabolic risk (CMR) in children and adolescents with type 1 diabetes and to validate these cut-off points using an independent cohort.]

**61. Skeletal health in adolescents with poorly controlled type 1 diabetes: results from a randomized controlled trial**

**Authors:** Pulkkinen M.A., Varimo T, Toiviainen-Salo S, et al.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[**Introduction**: Poorly controlled type 1 diabetes (T1D) has been associated with impaired bone health, but the mechanisms remain unclear. We aimed to investigate whether changes in glycemic control and glucose variability are associated with skeletal health and to evaluate the roles of insulin-like growth factor I (IGF-I) and advanced glycation end-products (AGEs) in bone mineral accrual.]

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**62. Slowly progressive type 1 diabetes and female sex as associated factors for pancreatic abnormalities on diagnostic imaging indicating precancerous potential**

**Authors:** Fukui T, Kobayashi T, Awata T, et al.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[**Introduction**: This study aimed to identify factors associated with pancreatic abnormal findings on imaging (PAI) suggesting precancerous potential between slowly progressive type 1 diabetes and acute-onset type 1 diabetes.]

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**63. Technosphere insulin in the treatment of Type 1 diabetes mellitus: A systematic review and meta-analysis**

**Authors:** Dos Santos V.K.J., De Lima Prado M.L., Da Silva G.S.N., et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** Conduct a systematic review and meta-analysis comparing Technosphere Insulin and traditional ultra-rapid insulin in T1DM.]

**64. TLR5 influences the development of type 1 diabetes**

**Authors:** Buschard K, Krogvold L, Pociot F, et al.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[In mammalian and human life, it is important that the immune system defends against microorganisms. Although there is a huge overlap, innate cells are good against bacteria, whereas T cells are good against viruses, mainly because of antibody production via T helper and B lymphocytes. Toll-like receptor 5 (TLR5) is a regulator; when it is highly expressed, T cells are inhibited, and innate cells are favored. In glucose-activated pancreatic islets, TLR5 gene expression has been found to be highly upregulated, and the islets may therefore be protected from T cell destruction resulting in autoimmune type 1 diabetes (T1D).]

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**65. National Diabetes Audit, Adolescents and Young Adults with Type 1 Diabetes 2017-24**

**Publication Date:** 2025

**NHS Digital**

[The Adolescent and Young Adult Type 1 Diabetes Audit (AYA; previously referred to as the National Diabetes Transition Audit, NDTA) links datasets from the adult and paediatric national diabetes audits. The AYA has been designed to audit care provision during the period when young people with diabetes move from paediatric to adult based clinical care. The audit covers the period 01 January 2017 to 31 March 2024 and the cohort consists of people with type 1 diabetes aged between 16 and 25 years old during the AYA period. The National Diabetes Audit (NDA) provides a comprehensive view of diabetes care in England and Wales. It measures the effectiveness of diabetes healthcare against National Institute for Health and Care Excellence (NICE) Clinical Guidelines and NICE Quality Standards*,**.

The National Paediatric Diabetes Audit (NPDA) was established to compare the care and outcomes of all children and young people with diabetes receiving care from Paediatric Diabetes Units (PDUs) in England and Wales.]

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**Diabetes mellitus Type 2**

**66. Age and sex differences of cardiovascular and mortality risks in Korean type 2 diabetes and prediabetes: An 8 million Korean nationwide population-based cohort study**

**Authors:** Yun J.S., Jung J.H., Kim B, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: This study aimed to examine the associations of prediabetes and type 2 diabetes (T2DM) with cardiovascular disease (CVD) and mortality outcomes in a population of 8 million Koreans.]

**67. Association Between Early Weight Loss and Metabolic Outcomes with Tirzepatide in Japanese Patients with Type 2 Diabetes: A SURPASS J Post Hoc Analysis**

**Authors:** Mimura H, Oura T, Chin R, et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[**Introduction**: This study assessed whether early weight loss following tirzepatide treatment was associated with clinical characteristics and outcomes at 52 weeks in Japanese patients with type 2 diabetes (T2D).]

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**68. Baseline and longitudinal changes of body roundness index and incident type 2 diabetes: evidence from the UK Biobank cohort**

**Authors:** Zhao X, Jing F, Ren Y, et al.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[**Introduction**: Type 2 diabetes (T2D) is closely associated with excess adiposity, particularly visceral fat. The body roundness index (BRI), calculated from height and waist circumference, provides a refined estimate of visceral adiposity. This study aimed to investigate the associations of baseline BRI and longitudinal changes in BRI with the risk of incident T2D.]

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**69. Effect of initial combination therapy vs. step-therapy on adherence and persistence in drug naïve type 2 diabetes patients**

**Authors:** Majd Z, Chen H, Johnson M.L., et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Background/objectives:** Emerging evidence supports the early use of intensive combination treatments among type 2 diabetes (T2D) patients for rapid and sustained glycemic control. However, the impact of initial combination therapy on treatment adherence and persistence has not been explored. Therefore, we aimed to compare adherence and persistence to antidiabetic treatments between patients receiving initial combination therapy vs. conventional step-therapy.]

**70. First-year oral antidiabetic adherence and long-term complications in newly diagnosed type 2 diabetes**

**Author:** Kim N.H., Moon J.S., Ha K.H., et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: Type 2 diabetes (T2D) is a growing public health issue, with early treatment adherence potentially impacting long-term outcomes. This study assessed the association between adherence to oral antidiabetic drugs (OADs) during the first year after diagnosis and the risk of complications and mortality.]

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**71. High rate of complications in a real-world cohort of youth with T2D: a multicenter analysis**

**Authors:** Patel D, Shah A.S., Magella B, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Introduction:** The TODAY2 study reported that 80 % of young adults with youth-onset T2D (YoT2D) had at least one diabetes comorbidity or complication at a mean duration of 13 years. Prevalence rates of comorbidities and microvascular complications in YoT2D with shorter duration and younger age is unclear, particularly in the age of new pharmacotherapies.]

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**72. The impact of learning disabilities on control, management, and outcomes of type 2 diabetes mellitus in the UK: an observational cohort study using the Clinical Practice Research Datalink**

**Author:** Wing A, Mathur R.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[**Introduction**: Adults with learning disabilities in the UK have a substantially higher risk of developing type 2 diabetes mellitus (T2DM) than the general population. This study aimed to assess the impact of living with learning disabilities on T2DM control, therapeutic management, vascular outcomes, and mortality in UK primary care.]

**73. Latent class growth mixture modeling of HbA1C trajectories identifies individuals at high risk of developing complications of type 2 diabetes mellitus in the UK Biobank**

**Authors:** Handley D, Gillett A.C., Bala R, et al.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[**Introduction**: Frequent glycated hemoglobin A1c (HbA1c) monitoring is recommended in individuals with type 2 diabetes mellitus (T2D). We aimed to identify distinct, long-term HbA1c trajectories following a T2D diagnosis and investigate how these glycemic control trajectories were associated with health-related traits and T2D complications.]

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**74. Lean diabetes is one end of the spectrum of type 2 diabetes and not a separate entity**

**Authors:** Mohan V, Pramodkumar T.A., Deepa M, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: Lean diabetes mellitus is non-type 1 diabetes with BMI < 18.5 kg/$m^2$ and is now proposed to be a unique form of diabetes. We report on prevalence, clinical and microvascular complication profile in lean diabetes to see whether it stands out as a distinct entity or is a continuum of type 2 diabetes (T2D).]

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**75. A mediation analysis assessing if interleukin-6 mediates the association between obesity and new-onset type-2-diabetes**

**Authors:** Carris N.W., Mhaskar R, Coughlin E, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[Obesity and chronic low-level inflammation increase chronic disease development. The study objective was to better understand how obesity is linked to inflammation and inflammation to new-onset type-2-diabetes. This observational mediation analysis found that 8.1 % of the total effect of increasing BMI on new-onset type-2-diabetes risk was mediated by interleukin-6.]

**76. New-onset diabetes mellitus post COVID-19 infection: a systematic review and *meta*-analysis**

**Author:** Cocking E, Daher J, Alabbood M.

**Publication Date:** 2025

**Journal:** Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aims**: This systematic review and *meta* -analysis aimed to determine the relative risk of new-onset diabetes mellitus (NODM) in COVID-19 patients compared to individuals without COVID-19, with subgroup analyses based on diabetes type, age, severity of COVID-19 infection and corticosteroid use.]

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**77. Predicting factors of sleep quality among adults with type 2 diabetes mellitus: A systematic review**

**Authors:** Kurnia A.D., Thato R, Tsai H.T.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[The prevalence of poor sleep quality among adults with type 2 diabetes has significantly increased in recent years. This study aimed to review the empirical evidence regarding predicting factors of sleep quality among adults with type 2 diabetes mellitus (T2DM). A comprehensive systematic review search was conducted using Wiley Online Library, PubMed, Scopus, Science Direct, and ProQuest. The publication was completed in August 2024 and the systematic review protocol was registered with PROSPERO (CRD42024564579). The risk of bias was assessed using the Joanna Briggs Institute Critical Appraisal Checklist. A narrative synthesis was performed. Of the 7760 articles identified in the search, 24 articles in cross-sectional studies, case-control, and cohort studies were included in this review. The systematic review classified the factors into socio-demographic factors (gender, marital status, economic status, age, ethnicity), disease characteristics (duration of diabetes, diabetes complication, nocturia, insulin therapy), psychological factors (depressive symptom, anxiety symptoms, diabetes distress), physical factors (poor glycemic control, lower frequency of exercise, bad dietary status, smoking habit, Low HDL cholesterol, high risk of OSA), environmental factor, and social support were found to be predictors of sleep quality among adults with T2DM. Sleep quality can be influenced by socio-demographic factors, disease characteristics, psychological factors, physical factors, environmental factors, and social support. Diabetes programs to enhance sleep quality among adults with T2DM are highly encouraged based on these factors.]

**78. A qualitative study of healthcare provider perspectives on challenges and opportunities to improve diabetes self-management practices in rural Bangladesh**

**Authors:** Chowdhury H.A., Billah B, Alam Z, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: This qualitative study explores healthcare professionals' perspectives on the constraints and opportunities of diabetes self-management practices among rural people with type 2 diabetes mellitus (T2DM) in Bangladesh. It also examines suggestions and preferences for future interventions to improve diabetes self-management practices (DSMP) adherence and health outcomes.]

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**79. A review of the relationship between epicardial adipose tissue and cerebral white matter microstructural damage in type 2 diabetes mellitus**

**Authors:** Liu Z, Zhang J, Hou T, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[This review explores the relationship between epicardial adipose tissue (EAT) and cerebral white matter microstructural damage in type 2 diabetes mellitus (T2D). EAT, a metabolically active visceral fat depot, plays a critical role in systemic metabolism and inflammation. Dysfunctional EAT, characterized by lipotoxicity, oxidative stress, and pro-inflammatory cytokine secretion, may exacerbate cerebral white matter damage through mechanisms such as endothelial dysfunction, atherosclerosis, and endoplasmic reticulum stress. Clinical evidence suggests a positive correlation between EAT volume and the risk of cardiovascular complications and white matter injury, highlighting its potential as a biomarker for central nervous system damage. The review also discusses shared pathways between EAT and T2D, including insulin resistance, inflammation, and oxidative stress, which contribute to microvascular and neurodegenerative changes. Future research should focus on validating EAT-mediated pathways and exploring therapeutic interventions targeting EAT to mitigate T2D-associated neurological complications.]

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**80. Systematic review and meta-analysis of the prevalence and clinical profile of lean type 2 diabetes mellitus in Africa**

**Authors:** Oreb N, Richard K, Denis B, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Introduction**: Lean Type 2 diabetes mellitus (T2DM), defined as individuals with body mass index (BMI) < 25 kg/m 2, presents distinct clinical and biochemical characteristics across populations, particularly in Africa. This review assessed the prevalence and clinical-biochemical profiles of lean

T2DM in Africa, aiming to improve understanding and management strategies.]

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**81. Triglyceride glucose-waist height ratio index is a promising and robust glucose and lipid metabolism indicator for predicting long-term type 2 diabetes: insights from a Japanese prospective cohort data from 12 years**

**Authors:** Dou J.H., Guo F.S., Guo C, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: This study evaluates 16 commonly used glucose and lipid metabolism indicators closely associated with type 2 diabetes (T2D) risk, utilizing data from a prospective cohort study with a maximum follow-up of 12 years, to identify the optimal indicator for early recognition of future T2D risk.]

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**Diagnosis**

**82. Development and performance of a generative pretrained transformer for diabetes care**

**Authors:** Garrido-Bueno M, Cruz-Álvarez P.S., Pabón-Carrasco M, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: To design and evaluate the performance of a diabetes-related Generative Pretrained Transformer (GPT).]

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**83. Diagnosing diabetes in African populations: a twist in the tale**

**Publication Date:** 2025

**Journal:** The Lancet Diabetes & Endocrinology

[Home to almost 1·3 billion people (16% of the world's population; 55% under the age of 20 years), sub-Saharan Africa is a region undergoing rapid demographic and socioeconomic transition, where non-communicable diseases are predicted to overtake communicable diseases as the leading cause of death and disability by 2030.]

**84. Metabolomics-based prediction model for diabetes: A comprehensive analysis of biomarkers and machine learning approaches**

**Authors:** Farid D, Saleh F, Mohammed T, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: To develop a prediction model for diabetes using metabolomics data and to evaluate various machine learning approaches and identify the most effective framework for disease prediction.]

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**Glucose monitoring and control**

**85. Accuracy and Reliability of the Sinocare Continuous Glucose Monitoring System**

**Authors:** Bhargava A, McKeating K.S., Lin A, et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[**Introduction**: The Sinocare iCan i3 Continuous Glucose Monitoring (CGM) system, manufactured by Sinocare, is available in China and certain European markets. This study aimed to evaluate the performance of this system in a free-living environment.]

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**86. Continuous glucose monitoring in gestational diabetes mellitus: hope or hype?**

**Authors:** Chai T.Y., Leathwick S, Agarwal M.M., et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[The screening, diagnosis and management of gestational diabetes mellitus (GDM) have evolved over time. Similarly, continuous glucose monitoring (CGM) has advanced in parallel: from intermittent to real-time monitoring, shorter to longer wear-time and poor to increased precision. Thus, CGM has replaced multiple glucose fingerstick testing in type 1 diabetes mellitus (T1D), including pregnant women with T1D. Despite its advantages, the uptake of CGM in women with GDM remains limited. Doubts persist over its cost, accuracy and optimal utilisation, besides there is paucity of evidence supporting its use in both diagnosis and management. This review summarises the current clinical evidence, benefits and limitations of using CGM in pregnant women with GDM. Like T1D, only larger pointed studies and randomised controlled trials will clarify the value of CGM in GDM.]

**87. Continuous Glucose Monitoring Systems Can Meet the Challenge of Glucose Management and Beyond in Individuals with Type 2 Diabetes: An Expert Multidisciplinary Position.**

**Authors:** Mysliwiec M, Czupryniak L, Gellert R, et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[The increasing prevalence of type 2 diabetes (T2D) can be considered a global healthcare emergency, with far-reaching burdens on the health and well-being of people with diabetes, their carers and families, and the mounting costs within each national healthcare economy. Although application of diabetes technologies, such as insulin pumps, continuous glucose monitoring (CGM) systems, and a range of connected devices, is starting to have an impact on the outcomes of care for people with type 1 diabetes (T1D), similar application for people with T2D is lagging behind. This is a purely cost-based decision, since evidence from numerous randomized controlled trials (RCTs) and real-world studies has shown the significant clinical impact of diabetes technologies for people with T2D, whether they are on insulin therapy or not. Amongst available technologies, it is the lack of widespread access to CGM devices for people with T2D that is most pressing, as these systems have the potential to bring a quantum change in the way people with T2D and their healthcare professionals (HCPs) are supported to manage the adverse impact both of hyperglycemia and hypoglycemia. Central to improving diabetes care for people with T2D is the demonstration in many studies that CGM can actively support healthy behavioral changes to meal planning and physical activity, with concomitant improvements in mental health and quality of life. In this expert opinion, we review the significant evidence base on which application of CGM in people with T2D is founded, and make the case for wider access for every person with diabetes as early as possible after diagnosis, in order to mitigate the global impact of T2D.]

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**88. Heterogeneity of treatment effects of glucose-lowering drug classes for type 2 diabetes: LEGEND-T2DM network real-world evidence**

**Authors:** Dávila-García D.M., Falconer T, Pratt N, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** To assess heterogeneity of treatment effects (HTE) of glucose-lowering drug classes by clinical (cardiovascular [CV] risk, renal impairment) and demographic (age, sex) subgroups in adults with type 2 diabetes mellitus (T2D).]

**89. Improving Diabetes Monitoring in People with Sub-optimally Controlled Diabetes: Implementing a Clinical Laboratory-Led Quality Improvement Initiative in General Practice**

**Authors:** Holland D, Halsall I, Heald A.H., et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[**Introduction**: The appropriate use of glycated haemoglobin (HbA1c), the international standard for assessing overall glycaemic status in diabetes mellitus, is critical to ensuring optimal clinical outcome and minimise complications. We describe a clinical laboratory-led general practice service development to facilitate targeted follow-up in high-risk patients.]

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**90. Sex-based disparities in perceived versus objective glycaemic control in type 1 diabetes: a cross-sectional cohort study**

**Authors:** Snethlage C.M.F., Smeets P, De Groen P, et al.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[Managing type 1 diabetes has a substantial impact on quality of life and psychological health. Indeed, insulin overdosing can lead to hypoglycaemia, which has potentially damaging consequences, and consistent underdosing can lead to hyperglycaemia-associated complications or diabetic ketoacidosis. [1] Therefore, the accuracy with which individuals assess their risk of hyperglycaemia and hypoglycaemia is important for long-term diabetes management and safety.]

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**Hyperglycaemia**

**91. Impaired cerebral hemodynamics and oxygenation in type 2 diabetes: insights into insulin resistance and hyperglycemia effects**

**Authors:** Jlali I, Touil I, Amor H.H., et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** Emerging evidence suggests Type 2 diabetes (T2D) may adversely affect cerebral hemodynamics and oxygenation. This study aimed to explore the impact of uncomplicated T2D on cerebral hemodynamics and oxygenation during maximal exercise.]

**Insulin therapies**

**92. Correction to: Safety and Effectiveness of Glargine 300 U/ml After Switching from Basal Insulins in Patients with Type 1 Diabetes: COMET-T Study**

**Authors:** Gölz S, Mader J.K., Bilz S, et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

This corrects "Safety and Effectiveness of Glargine 300 U/ml After Switching from Basal Insulins in Patients with Type 1 Diabetes: COMET-T Study."

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**93. Ethnic differences in adipose tissue dysfunction and insulin resistance: a scoping review**

**Authors:** AlShehab M, Costabile A, Patterson M, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: The objective of this scoping review is to synthesize ethnic comparison studies focused on characteristics of adipose tissue dysfunction including ectopic fat, adipokines and insulin resistance in populations of south Asian (SA), black (BA) and white (WE) ethnicity.]

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**94. Modulation of the sodium-chloride cotransporter by insulin in auditory cells: A potential link to diabetes-related hearing complications**

**Authors:** Pålbrink A.K., Magnusson M, Degerman E.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aim:** While diabetes mellitus (types 1 and 2) is known to negatively impact vestibular and auditory function, the precise mechanisms underlying this effect are not fully understood. Building on our previous findings, which demonstrated the presence of insulin signaling components within the human saccule and identified the sodium transporter ENaC as a target for insulin signaling in HEI-OC1 auditory cells, this study aimed to investigate the role of the sodium-chloride cotransporter (NCC) in insulin signaling and to identify the upstream signaling pathways involved.]

**95. Non-autoimmune, insulin-deficient diabetes in sub-Saharan Africa**

**Author:** Svensson J.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[In *The Lancet Diabetes & Endocrinology*, Jean Claude Katte and colleagues report the results of the cross-sectional Young-Onset Diabetes in sub-Saharan Africa (YODA) study, in a population from across sub-Saharan Africa that is rarely represented in research into type 1 diabetes. [1] With the growing emphasis on the use of autoimmunity for early detection of type 1 diabetes and prevention of diabetic ketoacidosis at onset, data from underrepresented regions such as sub-Saharan Africa are especially valuable. The authors report a novel, non-autoimmune, insulin-deficient type of diabetes, defined by negativity for three of the currently known autoantibodies (autoantibodies to GADA, IA-2A, and ZnT8A). All samples were analysed in the same laboratory in the UK by ELISA. A genetic risk score (GRS) showing susceptibility to type 1 diabetes and a polygenic risk score showing susceptibility to type 2 diabetes were also assessed.]

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**96. Real-World Effectiveness of My Dose Coach™-Assisted Basal Insulin Titration in People with Type 2 Diabetes in Saudi Arabia and Kuwait**

**Authors:** Al-Sofiani M.E., Almehthel M, Al Ozairi E, et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy 2025

[**Introduction**: My Dose Coach (MDC) is a digital smartphone application approved in multiple countries, including Saudi Arabia and Kuwait, to help people with type 2 diabetes (T2D) titrate their basal insulin as per their clinician-guided, individualized diabetes care plan.]

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**97. Technosphere insulin in the treatment of Type 1 diabetes mellitus: A systematic review and meta-analysis**

**Authors:** Dos Santos V.K.J., De Lima Prado M.L., Da Silva G.S.N., et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** Conduct a systematic review and meta-analysis comparing Technosphere Insulin and traditional ultra-rapid insulin in T1DM.]

**Guidelines**

**98. Medicine Supply Notification: Admelog® (insulin lispro)**

**Publication Date:** 2025

**Community Pharmacy England**

[The Department of Health and Social Care (DHSC) has issued a medicine supply notification for the following products: Admelog® (insulin lispro) 100units/ml solution for injection 3ml cartridges, Admelog® (insulin lispro) 100units/ml solution for injection 3ml pre-filled pens, Admelog® (insulin lispro) 100units/ml solution for injection 10ml vials.]

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**Management of diabetes (diet, exercise, lifestyle)**

**99. Diabetes management during the end of life**

**Authors:** Alsararatee H.H., De Fusco M.

**Publication Date:** 2025

**Journal:** British Journal of Nursing

[For individuals with diabetes, maintaining optimal glycaemic control is essential to reduce the risk of long-term complications. However, as patients approach the end of life, the emphasis on tight glycaemic targets becomes less relevant. Instead, the primary goal shifts to maintaining blood glucose levels within a range that minimises the risk of hypoglycaemia and prevents symptomatic hyperglycaemia, thereby ensuring comfort and quality of life. This article explores the transition from disease-focused management to a person-centred approach grounded in comfort, dignity and ethical responsibility. It examines the adaptation of glycaemic targets, deprescribing, nutrition, and monitoring across the recognised phases of dying, and addresses the specific challenges of managing type 1, type 2 and steroid-induced diabetes in palliative contexts. Ethical principles including autonomy, non-maleficence, beneficence, and justice are critically applied to nursing practice, alongside recommendations for interdisciplinary communication and advance care planning. Nurses play a pivotal role in delivering proportionate, compassionate, and ethically sound care for people dying with diabetes.]

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**100. Effect of a structured educational intervention delivered through a mobile application on glycated haemoglobin and self-efficacy in adolescents with type 1 diabetes mellitus: a systematic review and meta-analysis**

**Authors:** Rubab H, Aziz F, Gul R, et al.

**Publication Date:** 2025

**Journal:** BMJ Open

[**Objectives**: Type 1 diabetes mellitus (T1DM) is a chronic illness affecting children and adolescents worldwide. Mobile health apps (MHAs) are increasingly used to deliver structured educational interventions (SEI) aimed at reducing glycated haemoglobin (HbA1c), enhancing self-efficacy and self-management in adolescents with T1DM. This review and meta-analysis assessed the effectiveness of

SEI via MHAs on HbA1c and self-efficacy in adolescents with T1DM.]

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**101. Mediterranean diet adherence among adolescents with type 1 diabetes: Insights into dietary patterns, glycemic control, and gender differences**

**Authors:** Gillon-Keren M, Propper-Lewinsohn T, David M, et al.

**Publication Date:** 2025

**Journal:** Diabetes Research and Clinical Practice

[**Aims**: To assess Mediterranean Diet (MD) adherence in adolescents with type 1 diabetes)T1D(, explore its associations with glycemic control and cardiometabolic risk factors, and examine gender-specific dietary patterns.]

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**Management of diabetes (diet, exercise, lifestyle)**

**102. Khalida Ismail: merging diabetes and mental health**

**Authors:** Rahimi S, Koch M.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[“I don’t really understand, where do you belong, Khalida?” This startling question was put to Professor Khalida Ismail—a Professor of Psychiatry and Medicine at the Institute of Psychiatry, Psychology & Neuroscience, King’s College London—by a colleague after one of her talks. Khalida specialises in the intersection of diabetes and mental health, and her work spans two traditionally distinct disciplines. Navigating this hybrid space has positioned her in what she calls a “third space”, prompting critical conversations about the interdependence of physical and mental health in chronic disease care.]

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**103. Low parental stress and positive well-being in Finnish children and adolescents with type 1 diabetes**

**Authors:** Pironetti R, Saha M.T., Luukkaala T, et al.

**Publication Date:** 2025

**Journal:** BMJ Open Diabetes Research and Care

[**Introduction**: Given the limited knowledge about family dynamics and well-being among pediatric patients with type 1 diabetes (T1D) in Finland, this study aimed to assess parental stress, patient well-being, and their potential associations with glycemic control at a Finnish diabetes clinic.]

**104. A randomized pilot sleep and circadian behavior clinical trial to improve glycemic and psychological outcomes in young adults with type 1 diabetes (NCT04975230)**

**Authors:** Armentrout B.L., Wenzell M.L., Strohl K.P., et al.

**Publication Date:** 2025

**Journal:** Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aims:** To investigate the preliminary efficacy of a cognitive behavioral sleep and circadian intervention on glycemic and psychological outcomes in young adults with type 1 diabetes.]

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**105. Suicide and Self-Harm Events With GLP-1 Receptor Agonists in Adults With Diabetes or Obesity: A Systematic Review and Meta-Analysis**

**Authors:** Ebrahimi P, Batlle J.C., Ayati A, et al.

**Publication Date:** 2025

**Journal:** JAMA Psychiatry

[**Importance**: Bariatric surgery, once the criterion standard in obesity treatment, has a small but concerning association with increased suicidality. Glucagon-like peptide 1 receptor agonists (GLP-1 RAs), originally developed to treat diabetes, now provide substantial efficacy in the treatment of obesity. However, concerns of risk of suicidality with these medicines have been raised.

**Objective**: To evaluate the risk of suicidality and self-harm in randomized, placebo-controlled trials of GLP-1 RAs in adults with diabetes or obesity.]

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**Management of diabetes (diet, exercise, lifestyle)**

**106. Beyond a singular focus on GLP-1: why we need a new nomenclature now**

**Authors:** Muskiet M.H.A., Smits M.M.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[The development of glucagon-like peptide-1 (GLP-1)-based therapies for type 2 diabetes and obesity illustrates a remarkable evolution in scientific understanding and therapeutic innovation. 1 As the field moves rapidly beyond a singular focus on GLP-1 receptor agonism, the language surrounding these new and emerging therapies should also evolve, capturing the growing complexity and ambition behind these interventions designed to modulate endocrine functions. In this Comment, we trace the development, timeline, and usage of this evolving nomenclature (figure).]

**107. Efficacy and safety of a biased GLP-1 receptor agonist ecnoglutide in adults with overweight or obesity: a multicentre, randomised, double-blind, placebo-controlled, phase 3 trial**

**Authors:** Ji L, Gao L, Xue H, et al.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[**Background**: Ecnoglutide is a novel cyclic adenosine monophosphate (cAMP)-biased GLP-1 receptor agonist currently in development for weight management. We aimed to assess the efficacy and safety of once weekly ecnoglutide versus placebo for the treatment of overweight or obesity in Chinese adults.]

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**108. Heterogeneity of treatment effects of glucose-lowering drug classes for type 2 diabetes: LEGEND-T2DM network real-world evidence**

**Authors:** Dávila-García D.M., Falconer T, Pratt N, et al.

**Publication Date:** 2025

**Journal:** Journal of Diabetes and Its Complications

[**Aims:** To assess heterogeneity of treatment effects (HTE) of glucose-lowering drug classes by clinical (cardiovascular [CV] risk, renal impairment) and demographic (age, sex) subgroups in adults with type 2 diabetes mellitus (T2D).]

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**109. Is biased agonism helpful in the treatment of obesity with the GLP-1 receptor analogues?**

**Author:** Tan T.M.M.

**Publication Date:** 2025

**Journal:** Lancet Diabetes & Endocrinology

[Obesity, overweight, and the consequences of excess adiposity continue to drive a substantial proportion of morbidity and mortality around the world. Prevention and treatment of obesity is an important strategy for preventing the development of multimorbidity. [1] GLP-1 receptor monoagonists such as semaglutide [2] or GLP-1 and glucose-dependent insulinotropic peptide (GIP) receptor multiagonists such as tirzepatide [3] are now established as effective treatments for obesity and its comorbidities. [4]]

**110. Sodium-glucose cotransporter 2 inhibitor increases risk of urinary tract infection: Evidence from mendelian randomization and meta-analysis**

**Authors:** Ren J, Yang S, Wang Y, et al.

**Publication Date:** 2025

**Journal:** British Journal of Clinical Pharmacology

[**Aims**: Sodium–glucose cotransporter 2 inhibitor (SGLT2i) is a new hypoglycaemic drug with good effect. However, whether increased urine sugar also increases the risk of urinary tract infection (UTI) is still controversial.]

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**111. Treatment Preferences for Novel Type 2 Diabetes Oral Medications: Insights from the Asian Diabetes Patient Preference Study**

**Authors:** Tiwaskar M, Hwu C.M., Lim M, et al.

**Publication Date:** 2025

**Journal:** Diabetes Therapy

[**Introduction**: Type 2 diabetes mellitus (T2DM) is a global health concern with significant mortality rate associated with comorbidities like diabetic kidney disease (DKD) and cardiovascular disease (CVD). Thus, treatment guidelines recommend first-line treatment with sodium-glucose cotransporter 2 inhibitors (SGLT2Is) and/or glucagon-like peptide 1 (GLP-1) agonists for T2DM with comorbidities. However, in patients when these treatments are not tolerated, contraindicated, or considered expensive, dipeptidyl peptidase 4 inhibitors (DPP4Is) serve as an add-on or alternative for glycemic control without hypoglycemia risk. This study aimed to understand patients' preferences in three South Asian countries between SGLT2I (medication A) and DPP4I (medication B) and the reasons influencing their preference for effective management of T2DM.]

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**Guidelines**

**112. Tirzepatide for treating type 2 diabetes [NICE]**

**Publication Date:** 2025

National Institute for Health and Care Excellence (NICE)

[September 2025: We added the commercial arrangement to the recommendation. We also updated the prices and details of the commercial arrangement in the information on tirzepatide section.]

**Prevention of diabetes (diet, exercise, lifestyle)**

**113. Interventions for prediabetes: an umbrella review of systematic reviews and meta-analyses of randomized controlled trials**

**Authors:** Veronese N, Maggi S, Giussani C, et al.

**Publication Date:** 2025

**Journal:** Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aims:** This umbrella review synthesized evidence from systematic reviews and meta-analyses of randomized controlled trials (RCTs) to assess the effectiveness of interventions for preventing adverse outcomes in individuals with prediabetes.]

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**Prevention of diabetes (diet, exercise, lifestyle)**

**114. Effect of a structured educational intervention delivered through a mobile application on glycated haemoglobin and self-efficacy in adolescents with type 1 diabetes mellitus: a systematic review and meta-analysis**

**Authors:** Rubab H, Aziz F, Gul R, et al.

**Publication Date:** 2025

**Journal:** BMJ Open

[**Objectives**: Type 1 diabetes mellitus (T1DM) is a chronic illness affecting children and adolescents worldwide. Mobile health apps (MHAs) are increasingly used to deliver structured educational interventions (SEI) aimed at reducing glycated haemoglobin (HbA1c), enhancing self-efficacy and self-management in adolescents with T1DM. This review and meta-analysis assessed the effectiveness of SEI via MHAs on HbA1c and self-efficacy in adolescents with T1DM.]

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