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NHS Foundation Trust

Diabetes

Current Awareness Bulletin

October 2025

Our Current Awareness Bulletins provide details of recently published articles in a given subject. They are a quick and easy way to keep up to date.

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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: 10th November @ 11am & 2nd December @ 12 noon

- **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: 11th November @ 10am & 3rd December @ 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: 28th November @ 12 noon & 9th December @ 1pm

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. Characterizing the clinical profile and prevalence of people with diabetes attended in the hospital setting by using unstructured healthcare data and natural language processing: the Diabetic@ study

Authors: Blanco-Carrasco A.J., Merino-Torres J.F., Almanza M.R., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: This study aimed to evaluate the potential of unstructured electronic health records (EHRs) data, analyzed using natural language processing (NLP) and machine learning (ML), to describe the prevalence and clinical spectrum of diabetes mellitus (DM) in hospitals.]

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2. Diabetes and community nursing

Authors: Hill S, Holt R.I.G.

Publication Date: 2025

Journal: British Journal of Community Nursing

[The rising prevalence of diabetes, particularly in older people, is placing an unsustainable burden on district and community nursing teams. District and community nurses now handle complex diabetes management, including insulin administration, glucose monitoring, foot screening and patient education, despite workforce shortages. Hospital discharges often add to their workload, as many people with diabetes lose confidence in self-management and rely

on district and community nurses for insulin injections. Without proper training and support, district nurses struggle to provide holistic care, leading to poorer patient outcomes. Better collaboration between hospital teams, diabetes specialists and primary care providers is essential to address this issue. Investing in nurse education and technology, such as continuous glucose monitoring, could reduce home visits and ease the pressure on district nurses while improving diabetes care.]

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3. **Diabetes devices: a growing environmental burden**

Authors: Ho C.N., Ayers A.T., Heinemann L, et al.

Publication Date: 2025

Publication Date: Diabetes Research and Clinical Practice

[The environmental footprint of diabetes devices is a growing yet often overlooked issue in healthcare sustainability. Our recently published article highlights the amount of waste generated annually by insulin pump users and multiple daily injections (MDI) users, which were 33 lbs and 37.1 lbs, respectively. [1] To estimate the total annual waste generated by 8.4 million insulin-requiring individuals [2] in the U.S., we utilized statistics available from the American Diabetes Association (ADA) and the T1D Exchange [2 3 4].]

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4. **Impact of diabetes on cellular connections: Pathological insights and emerging therapeutic targets**

Authors: Kanwal A, Kanwar N, Shetty M.P., et al.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

Background: Cell junctions play a pivotal role in the normal functioning of tissues. The alterations in the expression or structure of these junctions are linked to several pathologies including diabetes mellitus and its secondary complications. Therefore, this review discusses the implications of diabetes mellitus on cell junctions across different organs and tissues.

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5. **Menu Assessment Tools Used in Residential Aged Care: A Scoping Review of Content and Quality**

Authors: Bartrim K, Pashley A, Wheeler M, et al.

Publication Date: 2025

Journal: Journal of Human Nutrition and Dietetics 2025

This scoping review aimed to identify and synthesise existing publicly available tools that support menu assessments for residential aged care settings, specifically the tools content areas, recommendations and quality. The scoping review was conducted according to Levac et al. scoping review methodology and reported following the Preferred Reporting Items for

Systematic Review and Meta-Analyses extension for Scoping Reviews. Menu assessment tools were identified through grey literature through Google and Google Scholar search engines using key terms such as ‘residential aged care’ and ‘menu assessment’. Data were synthesised and reported narratively, according to content areas of menu planning, nutritional basis of the menu, texture modification/fluid consistency, therapeutic and special diets and foodservice management recommendations. Quality appraisal was conducted using the Appraisal of Guidelines for REsearch & Evaluation Instrument. Seventeen tools from seven countries were included. There was variability in the content and recommendations, with no included tool covering all content areas. The overall quality ranged from two to six (out of seven), and no tools met the quality criteria to be recommended for use in their current form. The lack of consistency in content areas, recommendations and quality of tools indicates the need to modify existing tools or to conduct research to support the development of a new evidence-based tool. Future research is needed to gain consensus on acceptable content areas, appropriate recommendations and to develop an evidence-base to underpin the tools. A purpose-built, evidence-based tool is essential for consistent foodservice evaluation and for improving food and nutrition standards, ultimately enhancing resident outcomes.

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6. **The necessity of strengthening glycemic and lipid metabolism management for improving brain structure and cognitive function in people with diabetes: A retrospective study based on UK Biobank**

Authors: Han L, Li Q, Zhang L, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Objective: To investigate the relation of glycemic and lipid metabolism with brain structure and cognitive function in people with diabetes, so as to improve cognitive function in these individuals.

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7. **Novel data-driven pathophysiological phenotypes among women with prediabetes in an Indian population**

Authors: Mathews E, Joseph A, Anand T.N.A., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Data on pathophysiological phenotypes for prediabetes in Indian ethnic populations are scarce. We investigated data-driven, pathophysiological phenotypes of prediabetes associated with the incidence of diabetes mellitus.]

8. **Profile of monogenic diabetes: a Pan-India study**

Authors: Mohan V, Amutha A, Aarthy R, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aim**: To evaluate the frequency of monogenic diabetes mutations among individuals clinically suspected to have monogenic diabetes in India.]

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9. **Reassessing driving safety in diabetes**

Author: The Lancet Diabetes & Endocrinology

Publication Date: 2025

Journal*:* Lancet Diabetes & Endocrinology

[The prevalence of diabetes is increasing worldwide; however, its impact on routine daily activities is often underappreciated and overlooked. Driving, for example, is an activity that requires sustained mental alertness and quick reflexes. These capacities can be disrupted by a range of medical conditions, including diabetes, especially in people who are on insulin or sulfonylureas.]

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10. **Efficacy and safety of automated insulin delivery in children aged 2–6 years (LENNY): an open-label, multicentre, randomised, crossover trial**

Authors: Battelino T, Kuusela S, Ambika Shetty A, et al.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

Background: Early-life glycaemic control disturbances can negatively affect brain development and plasticity. This study aimed to assess the efficacy and safety of automated insulin delivery (AID) with the MiniMed 780G system in children with type 1 diabetes aged 2–6 years requiring at least 6 units of insulin a day.

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11. **More options for young children with type 1 diabetes**

Authors: Boughton C.K.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

Hybrid closed-loop insulin delivery systems are transforming the management of type 1 diabetes. Young children with type 1 diabetes are arguably the most challenging age group to

manage, due to inconsistent food intake, unpredictable activity, and inability to reliably communicate symptoms of hypoglycaemia. The management burden on carers is substantial, with many parents of young children with type 1 diabetes not able to work due to their caregiver commitments. Among all age groups, young children also have the highest variability in day-to-day insulin requirements, highlighting the importance of automated insulin delivery systems in this population. [1] At present, two hybrid closed-loop systems, CamAPS FX and Omnipod 5, are approved for use in young children (aged <6 years) with type 1 diabetes.

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12. **Additive effect of atherogenic index of plasma and social determinants of health on all-cause and cardiovascular mortality in U.S. adults with diabetes and prediabetes**

Authors: Yu R, Ma C, Yuan X, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: Diabetes and prediabetes present significant global health challenges, especially as the population ages. However, prediabetes is often under-recognized, and reliable predictors of long-term outcomes remain scarce. This study aimed to identify the most effective metabolic health-related indicator and combine it with Social Determinants of Health (SDoH) to enhance the accuracy of predicting long-term mortality in U.S. adults with diabetes and prediabetes.

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13. **Adherence to statins and development of atherosclerosis-related events. A systematic review and meta-analysis**

Authors: Basios A, Chatzi C.A., Markozannes G, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Background:** Adherence to lipid-lowering treatment (LLT) is of paramount importance for the prevention of atherosclerosis-related events (ASCVD). The threshold for someone to be adherent is ≥80 % of the total prescribed medication. We conducted a meta-analysis to assess how adherence to LLT affects the development of ASCVD.]

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14. **Associations between insulin resistance indices and cardiovascular disease in older adults with cardiovascular-kidney-metabolic syndrome stage 0–3: The GOLD-Health cohort**

Authors: Wang M, Lin W, Liu H, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: To evaluate the association between eight insulin resistance (IR) indices and incident cardiovascular disease (CVD) and compare their predictive efficacy in older adults with cardiovascular-kidney-metabolic (CKM) syndrome stages 0–3.

15. **BMI lower than 23 kg/m^2 is better for screening of diabetes and cardiovascular risk in Asian Indians? : Clinical and research implications of emerging data**

Authors: Misra A, Sharma S.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

Across the globe, excess body weight is a major driver of type 2 diabetes (T2D) and cardiovascular disease (CVD) [1]. Yet Asian Indians develop these conditions at lower levels of body mass index (BMI) and higher levels of body fat than most other ethnic groups [2, 3]. This intriguing issue is the subject of several publications by our group [4 5 6 7] and others [8]. Three recent publications—an India Heart Watch analysis of BMI and diabetes risk published in this issue of the journal [9], a detailed review of South-Asian body-fat distribution [10], and a National Consensus redefining obesity for Indians [2]—make a compelling case for re-examining what we call a “healthy weight” in this population.

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16. **Comparison of the prognostic value of different arterial sites atherosclerosis risk markers for development of Macro- and microvascular complications in individuals with type 2 diabetes: The Rio de Janeiro type 2 diabetes cohort study**

Authors: Cardoso C.R.L., Leite N.C., De Souza A.C., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: Aortic stiffness, ankle-brachial index (ABI), and ultrasonographic carotid atherosclerosis (intima-media thickness and plaques) are preclinical atherosclerosis risk markers. However, their prognostic importance for development of macro- and microvascular outcomes has not been compared in individuals with type 2 diabetes.

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17. **Diabetic retinopathy and chronic kidney disease synergistically increase the risk of incident cardiovascular disease in type 2 diabetes: Insights from two cohort studies**

Authors: Park Y.S., Lee K.N., Koo B.K., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: Chronic kidney disease (CKD) is a well-established cardiovascular risk factor for type 2 diabetes (T2D); however, the role of diabetic retinopathy (DR) remains unclear. This study evaluated the individual and combined effects of DR and CKD on cardiovascular disease (CVD) in T2D.

18. **Efficacy and safety of SGLT-2 inhibitors in patients with comorbid type 2 diabetes and atrial fibrillation: A meta-analysis**

Authors: Tang T, Guo M, Yu H, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

This *meta*-analysis investigated the efficacy and safety of sodium-glucose cotransporter-2 inhibitors (SGLT-2i) in patients with type 2 diabetes mellitus (T2DM) and atrial fibrillation (AF), a topic with limited prior consensus. A systematic search of six electronic databases was conducted from inception to 03 Jan 2025. Following quality assessment, data from 10 studies (1 randomized controlled trial and 9 cohort studies; total n = 44,559) were analyzed using RevMan5.4. Results demonstrated that SGLT-2i significantly reduced the incidence of ischemic stroke [RR = 0.74, 95 % *CI* (0.62, 0.87), P = 0.0004], cardiovascular mortality [RR = 0.60, 95 % *CI* (0.46, 0.79), P = 0.0003], hospitalization for heart failure (HF) [RR = 0.55, 95 % *CI* (0.48, 0.63), P < 0.001], and all-cause mortality [RR = 0.41, 95 % *CI* (0.26, 0.65), P = 0.0001] compared to control group. No significant differences were observed in myocardial infarction risk [RR = 0.97, 95 % *CI* (0.75, 1.26), P = 0.85] or adverse drug events (ADE) [RR = 0.79, 95 % *CI* (0.39, 1.60), P = 0.51]. Subgroup analyses stratified by geographic regions, control group interventions, and study designs yielded results largely consistent with the primary analysis. These findings confirm that SGLT-2i provides clinically meaningful benefits in T2DM patients with AF, demonstrating both efficacy and safety.

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19. **Impact of cardiovascular risk visualization on motivation to self-manage young-onset type 2 diabetes**

Authors: Abraha M, Senga J, Vallis M, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: To investigate the accessibility, credibility, emotional responses, and impacts of cardiovascular risk visualizations in motivating self-management of young-onset type 2 diabetes (YOD).

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20. **Microvascular diseases predict mortality and cardiovascular events in type 2 diabetes: A retrospective cohort study**

Authors: Huang C.T., Chan C.Y., Tsai M.C., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: To determine whether the burden of microvascular diseases (MiVDs) will affect macrovascular outcomes in individuals with type 2 diabetes.

21. **Optimising cardiac surgery outcomes in people with diabetes: the OCTOPuS pilot feasibility study**

Authors: Holt R.I., Barnard-Kelly K, Patel M, et al.

Publication Date: 2025

Journal: Health Technology Assessment

[**Background**: Surgical outcomes are worse in people with diabetes, in part, because of the effects of hyperglycaemia, obesity and other comorbidities. Two important uncertainties in the management of people with diabetes undergoing major surgery exist: (1) how to improve diabetes management prior to an elective procedure and (2) whether that improved management leads to better post-operative outcomes.
Objective: The Optimising Cardiac Surgery ouTcOmes in People with diabeteS project aimed to assess whether a pre-operative outpatient intervention delivered by a multidisciplinary specialist diabetes team could improve diabetes management and cardiac surgical outcomes for people with diabetes. Although the intervention could be applied to any surgical discipline, cardiothoracic surgery was chosen because 30–40% of those undergoing elective cardiac revascularisation have diabetes.]

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22. **PhenoAgeAccel is associated with all-cause and cardiovascular mortality in patients with diabetes and prediabetes: A cohort study**

Authors: Xi J, Zhang Z, Hou B, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims:** Phenotypic Age Acceleration (PhenoAgeAccel) is a measure of biological aging, with higher scores indicating faster aging. Few studies have explored its association with mortality in patients with diabetes or prediabetes. This study aimed to investigate the predictive value of PhenoAgeAccel for all-cause and cardiovascular mortality in these patients.]

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23. **Prevalence of cardiovascular and renal comorbidities among patients with type 2 diabetes routinely treated in the primary care setting in Greece: An epidemiological study (the RECARDIA study)**

Authors: Papanas N, Tsimihodimos V, Katsiki N, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

Aims: This study aimed to generate real-world data on the prevalence of cardiovascular disease (CVD), including atherosclerotic CVD (ASCVD) and heart failure (HF), as well as chronic kidney disease (CKD) in patients with type 2 diabetes mellitus (T2DM) routinely treated in Greece.

24. **Red blood cell distribution width to albumin ratio as a predictor of all-cause and cardiovascular mortality in patients with cardiovascular disease with diabetes or pre-diabetes: National Health and Nutrition Examination Survey 2001–2018**

Authors: Shao X, Ou Y, Bai G, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: The red blood cell distribution width to albumin ratio (RAR) index has been identified as a new composite marker for multiple diseases. However, the association between RAR index and mortality in patients with Cardiovascular Disease (CVD) with diabetes or pre-diabetes is not yet established. Therefore, this study aimed to investigate the association of the RAR index with all-cause and cause-specific mortality in patients with CVD with diabetes or pre-diabetes.]

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25. **Relative monocyte count is associated with metabolic syndrome and other cardiometabolic risk markers in subjects at Secondary Health Care: a cross-sectional study**

Authors: Cândido F.G., Da Silva A, Cotta e Oliveira N.M., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background:** Relative monocyte count (RMC) is a low-cost widely used biomarker with the potential to predict obesity-related health risks. However, high cardiovascular risk could affect white blood cell dynamics. So, we aimed to investigate the associations between RMC with cardiometabolic risk markers in subjects at secondary prevention. **Methods:** This cross-sectional survey involved 687 subjects at Secondary Health Care. The cardiometabolic risk markers were obesity, metabolic syndrome, high waist circumference, high waist-to-height ratio, hypertension, diabetes, dyslipidemia, high glycated hemoglobin, waist-hypertriglyceridemic phenotype 1 and 2, visceral adiposity index, atherogenic index of plasma, lipid accumulation product, and deep-abdominal-adipose-tissue. Pearson's chi-square test, binomial, and multiple Logistic regression were adopted (α = 0.05). **Results:** The first tertile of RMC (<5.20 %) was associated with higher odds of metabolic syndrome (OR 1.62; 95 %CI 1.10–2.17 for NCEP-ATPIII criteria and OR 1.48; 95 %CI 1.01–2.33 for IDF), diabetes (OR 1.68; 95 %CI 1.02–2.76), high glycated hemoglobin (OR 2.31; 95 %CI 1.16–4.59), hypertriglyceridemia (OR 1.57; 95 %CI 1.02–2.40), and waist-hypertriglyceridemic phenotype 1 (OR 1.58; 95 %CI 1.04–2.40) and 2 (OR 1.83; 95 %CI 1.17–2.88), compared to the third tertile, regardless of confounders. **Conclusion:** The lower RMC tertile was associated with higher odds of cardiometabolic disorders in subjects at secondary prevention.]

26. **Role of rs490683 variant in the promoter region of the ghrelin receptor gene on body weight and metabolic syndrome after a partial meal replacement hypocaloric diet**

Authors: De Luis D, Izaola O, Primo D, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

Background and aims: Few studies have evaluated the effect of rs490683 on weight loss. The objective of our study was to evaluate the role of this variant of *GHSR* gene on body weight loss and cardiovascular risk factors secondary to a partial meal replacement (pMR) hypocaloric diet.

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27. **Sex differences in the risk of vascular and non-vascular complications in type 2 diabetes: the Fukuoka Diabetes Registry**

Authors: Ohkuma T, Iwase M, Higashi T, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: There is recent evidence for sex-based differences in complications associated with type 2 diabetes, with women showing a lower risk of macrovascular complications than men. However, sex differences in the risks of microvascular and non-vascular complications, as well as macrovascular complications, are unclear.

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28. **Synergistic interaction and cumulative effect between frailty and triglyceride-glucose index exacerbate cardiovascular disease burden in middle-aged and older adults**

Authors: Liu M, Li J, Yan K, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Background and aim: Frailty and high triglyceride-glucose index (TyG) are independent risk factors for cardiovascular disease (CVD) and often coexist in middle-aged and older adults. This study aims to explore this influence in aging populations.

29. **Time in target range of fasting blood glucose ranges defined by WHO and ADA guidelines and cardiorenal Risk: Insights from two cohorts**

Authors: Zhang J, Xu H, Liu Y, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: Through the utilization of the time in target range (TTR), our study aims to reassess the differential risks of cardiorenal diseases associated with inconsistent pre-diabetes criteria, as defined by the World Health Organization (WHO) and the American Diabetes Association (ADA).

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30. **Cardiovascular, kidney related, and weight loss effects of therapeutics for type 2 diabetes: a living clinical practice guideline**

Authors: Agarwal A, Mustafa R, Manja V, et al.

Publication Date: 2025

Journal: BMJ 2025

Clinical question: What are the benefits and harms of medications for adults with type 2 diabetes at varied risks of cardiovascular and kidney related complications?
Context: Emerging clinical trials of novel medications have demonstrated benefits on cardiovascular, kidney, and weight related outcomes in people with type 2 diabetes. Dynamically updated practice guidelines adhering to standards of trustworthiness are necessary in response to a rapidly evolving evidence base and the availability of multiple medication alternatives. This living practice guideline incorporates the latest available medications and evidence and provides recommendations stratified by risks of cardiovascular and kidney complications to inform diabetes management.

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31. **Differential impact of short-term and long-term glycemic variability on peripheral nerve function in type 2 diabetes: A 5-year cohort study**

Authors: Iwamoto T, Morita M, Hidaka S, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

Aims: Several studies have demonstrated the association between glycemic variability (GV) and diabetic peripheral neuropathy (DPN). However, none has compared the effects of short-term and long-term GV on DPN in a cohort. This study evaluates the association between short-term and long-term GV and peripheral nerve function in a cohort of outpatients with type 2 diabetes.

32. **Association between long-term serum uric acid variability and diabetic retinopathy: A prospective study in patients with Type 1 and Type 2 diabetes**

Authors: Zhu Q, Wang H, Qu Y, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To evaluate the association between serum uric acid (SUA) variability and the development and/or severity of diabetic retinopathy (DR) in patients with Type 1 and Type 2 diabetes mellitus (DM).]

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33. **Diabetic retinopathy and chronic kidney disease synergistically increase the risk of incident cardiovascular disease in type 2 diabetes: Insights from two cohort studies**

Authors: Park Y.S., Lee K.N., Koo B.K., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims:** Chronic kidney disease (CKD) is a well-established cardiovascular risk factor for type 2 diabetes (T2D); however, the role of diabetic retinopathy (DR) remains unclear. This study evaluated the individual and combined effects of DR and CKD on cardiovascular disease (CVD) in T2D.]

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34. **Evaluating lipid-lowering drug targets for full-course diabetic retinopathy**

Authors: Cao J, Su T, Chen S, et al.

Publication Date: 2025

Journal: British Journal of Ophthalmology

Background Implementing lipid control in patients with diabetes is regarded as a potential strategy for halting the advancement of diabetic retinopathy (DR). This study seeks to use Mendelian randomisation (MR) to assess the causal relationship between lipid traits and lipid-lowering drug targets and full-course DR (background DR, severe non-proliferative DR (NPDR) and proliferative DR (PDR)).

35. **Global burden of blindness or visually impairment attributable to diabetic retinopathy in the adults aged 70 years and older, 1990–2021: Results from the global burden of disease study in 2021**

Authors: Chen Y, Tang S, Huang Y, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims:** This study aimed to assess the global burden of vision loss due to diabetic retinopathy (DR) among adults aged 70 and older from 1990 to 2021, focusing on regional, national, gender disparities, and its association with the socio-demographic index (SDI), using Global Burden of Disease (GBD) 2021 data.]

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36. **Identifying facilitators, barriers and areas of opportunity in diabetic retinopathy screening: quality improvement through qualitative methods**

Authors: Du S, Freeby M, Han M, et al.

Publication Date: 2025

Journal: BMJ Open Quality

[**Objective**: Quality improvement efforts have aimed to improve annual diabetic retinopathy screening at our institution, but rates remain well below goal. To better understand facilitators, barriers and operational issues unique to our health system and to develop a comprehensive understanding of the care pathway, the Patient Voice toolkit was applied.]

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37. **IDF diabetes Atlas: A worldwide review of studies utilizing retinal photography to screen for diabetic retinopathy from 2017 to 2024 inclusive**

Authors: Owens D.R., Gurudas S, Sivaprasad S, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice
Aims: This study aimed to report the global prevalence of diabetic retinopathy (DR) based on retinal imaging, using English-language articles published from 2017 to June 2024.

38. **Prediction of diabetic retinopathy using machine learning and its association with dementia risk in older adults with type 2 diabetes mellitus**

Authors: Lee S.H., Hwang G, Lee D.Y., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: Diabetic Retinopathy (DR), a common microvascular complication of diabetes, has been associated with an increased risk of dementia. This study aimed to develop Machine Learning (ML) models to predict DR occurrence and evaluate its potential as a prognostic biomarker for dementia.

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39. **Renal function and its association with retinal microcirculation and choroidal thickness in type 2 diabetes: Insights from cystatin C and creatinine**

Authors: Liu K, Zhu Y, Chen S, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: To examine the association between renal dysfunction and macular retinal microvascular density and choroidal thickness (mCT) in type 2 diabetes mellitus (T2DM).]

Risk factors for corneal nerve fiber loss in Chinese patients with type 2 diabetes mellitus
Huang L, Chen X, Xiao Z, et al. *Diabetes Research and Clinical Practice* 2025, 226: 112304.
[**Aims**: The length of corneal nerve fibers (CNFL), a sensitive parameter for predicting early diabetic peripheral neuropathy (DPN), is influenced by abnormal glucose and lipid metabolism. We examined related glucose and lipid factors affecting CNFL in patients with type 2 diabetes mellitus (T2DM) and their diagnostic value in detecting abnormal CNFL.]

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40. **Association between metabolic phenotype and diabetic kidney disease in adult-onset type 1 diabetes patients from China: A multi-center cross-sectional study**

Authors: Jiang J, Wang P, Jiang J, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aim:** To explore the association of different metabolic phenotypes with diabetic kidney disease (DKD) and high DKD progression risk in adult-onset type 1 diabetes mellitus (T1DM) patients from China.]

41. **Biomarkers in diabetic nephropathy: A comprehensive review of their role in early detection and disease progression monitoring**

Authors: Wani Z.A., Ahmed S, Saleh A, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Diabetic nephropathy (DN) is a primary contributor to end-stage renal disease (ESRD), arising from intricate pathways that include glomerular hypertension, inflammation, and oxidative stress. Conventional indicators like albuminuria and serum creatinine frequently identify renal impairment only at advanced stages, constraining early intervention. This thorough review assesses both established and novel biomarkers, including those signalling tubular injury (e.g., KIM-1, NGAL), inflammation (e.g., TNF-α, MCP-1), oxidative stress, and extracellular matrix turnover for their capacity to identify diabetic nephropathy at earlier stages, track disease progression, and forecast outcomes. The study examines the increasing significance of multi-biomarker panels, advanced technologies such as proteomics, and machine learning methodologies in improving diagnostic precision and individualised risk evaluation. This study highlights the necessity of incorporating innovative biomarker methodologies to develop early, accurate, and personalised diagnostic tools aimed at alleviating the impact of DN and enhancing patient outcomes. This study is a significant resource for physicians and researchers seeking to enhance the diagnosis and management of diabetic kidney disease.

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42. **Clinical outcomes in people with type 2 diabetes and acute kidney disease: combined SGLT2i and GLP-1RA therapy vs. monotherapy**

Authors: Chen J.Y., Chuang M.H., Lai H.W., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims:** To evaluate the effectiveness of combined therapy of Sodium-glucose cotransporter 2 inhibitors (SGLT2i) and Glucagon-like peptide-1 receptor agonists (GLP-1RAs) versus monotherapy in patients with type 2 diabetes mellitus (T2DM) and acute kidney disease (AKD).]

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43. **Diabetic retinopathy and chronic kidney disease synergistically increase the risk of incident cardiovascular disease in type 2 diabetes: Insights from two cohort studies**

Authors: Park Y.S., Lee K.N., Koo B.K., et al.

Publication Date: 2025

Journal: 2025

Aims: Chronic kidney disease (CKD) is a well-established cardiovascular risk factor for type 2 diabetes (T2D); however, the role of diabetic retinopathy (DR) remains unclear. This study

evaluated the individual and combined effects of DR and CKD on cardiovascular disease (CVD) in T2D.

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44. **Imaging-based lean mass distribution and diabetic nephropathy in the US population**

Authors: Zhang X, Han B, Yuan W, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: The present study aims to investigate the association between lean body mass (LBM) distribution and diabetic nephropathy (DN) in the US population with diabetes.]

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45. **Impact of SGLT2 inhibitors on kidney health and survival in patients with polycystic kidney disease and type 2 diabetes**

Authors: Yen F.S., Huang J.Y., Dong C, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: To evaluate the impact of sodium-glucose cotransporter-2 inhibitors (SGLT2i) on dialysis, cardiovascular, and mortality risks in patients with polycystic kidney disease (PKD) and type 2 diabetes (T2D).

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46. **Mortality, kidney, and safety outcomes with SGLT2 inhibitors versus DPP4 inhibitors in patients with type 2 diabetes treated with systemic glucocorticoids: a real-world exploratory study**

Authors: Schechter M, Cohen Y, Fishkin A, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Background: Clinical trials that demonstrated sodium-glucose cotransporter-2 inhibitors (SGLT2) inhibitors benefits in patients with type 2 diabetes excluded patients treated with glucocorticoids. It is unknown whether SGLT2 inhibitors are safe and effective for these patients, limiting their clinical use.

47. **Obstructive sleep apnea is associated with cardiac structural and functional alterations in patients with advanced diabetic kidney disease**

Authors: Nielsen S, Nyvad J, Grove E.L., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: Obstructive sleep apnea (OSA) is common in type 2 diabetes mellitus (T2DM), but its association with cardiac structure and function in advanced diabetic kidney disease (DKD) remains unclear.

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48. **Outcomes in New User Cohorts of SGLT2 Inhibitors or GLP-1 Receptor Agonists with Type 2 Diabetes and Chronic Kidney Disease**

Authors: Layton J.B., Ziemiecki R, Johannes C.B., et al.

Publication Date: 2025

Journal: Diabetes Therapy

Introduction: People with chronic kidney disease (CKD) and type 2 diabetes (T2D) have an increased risk of kidney failure and cardiovascular disease. Sodium-glucose cotransporter-2 inhibitors (SGLT2i) and glucagon-like peptide-1 receptor agonists (GLP-1 RA) have shown cardiorenal protective effects. The objective of this multinational, multidatabase study was to describe the incidence of kidney and cardiovascular outcomes in separate, non-mutually exclusive cohorts of patients with CKD and T2D who initiated either an SGLT2i or a GLP-1 RA.

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49. **The Predictive Value of Insulin Resistance Surrogates for Diabetic Kidney Disease in Type 2 Diabetes Mellitus**

Authors: Sun Q, Zhao M, Wang X, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: Insulin resistance (IR) is a major feature of type 2 diabetes mellitus (T2DM) and plays a crucial role in the accelerated progression of diabetic kidney disease (DKD). It has been found that surrogates of IR are of high value in assessing IR status. This study aims to evaluate the associations between surrogates of IR and DKD in T2DM.]

50. **Prevalence of cardiovascular and renal comorbidities among patients with type 2 diabetes routinely treated in the primary care setting in Greece: An epidemiological study (the RECARDIA study)**

Authors: Papanas N, Tsimihodimos V, Katsiki N, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

Aims: This study aimed to generate real-world data on the prevalence of cardiovascular disease (CVD), including atherosclerotic CVD (ASCVD) and heart failure (HF), as well as chronic kidney disease (CKD) in patients with type 2 diabetes mellitus (T2DM) routinely treated in Greece.

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51. **Prevalence of diabetic kidney disease by world region of birth among immigrants and long-term residents of Canada with type 2 diabetes**

Authors: Mohamed S, Lipscombe L.L., Lipscombe J, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims:** To measure the prevalence of diabetic kidney disease (DKD) among immigrants and long-term residents with type 2 diabetes (T2D).]

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52. **Renal function and its association with retinal microcirculation and choroidal thickness in type 2 diabetes: Insights from cystatin C and creatinine**

Authors: Liu K, Zhu Y, Chen S, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Objective: To examine the association between renal dysfunction and macular retinal microvascular density and choroidal thickness (mCT) in type 2 diabetes mellitus (T2DM).

53. **Screening, prevalence, and burden of chronic kidney disease in people with type 2 diabetes managed by endocrinologists: A nationwide cross-sectional study**

Authors: Martínez-Montoro J.I., Aparicio-Sánchez J.J., Pimentel B, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: To describe and characterize chronic kidney disease (CKD) prevalence, screening practices and associated burden on people with type 2 diabetes (T2D) managed by endocrinologists.

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54. **Time in target range of fasting blood glucose ranges defined by WHO and ADA guidelines and cardiorenal Risk: Insights from two cohorts**

Authors: Zhang J, Xu H, Liu Y, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice
Aims: Through the utilization of the time in target range (TTR), our study aims to reassess the differential risks of cardiorenal diseases associated with inconsistent pre-diabetes criteria, as defined by the World Health Organization (WHO) and the American Diabetes Association (ADA).

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55. **Underrepresentation of older adults in diabetes and kidney disease trials**

Authors: Vart P.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

Management of older adults with type 2 diabetes and chronic kidney disease is complex. These individuals often have multiple comorbidities, take several medications, and are at increased risk of adverse drug reactions—factors that necessitate more personalised treatment strategies. However, clinical trials in diabetes and chronic kidney disease often underrepresent older adults, despite these conditions being highly prevalent in the older population. This underrepresentation leads to unclear clinical guidelines; about 30% of physicians find it difficult to apply these guidelines and are forced to extrapolate findings to older adults, [1] which ultimately contributes to suboptimal prescribing in this population. This issue is becoming increasingly pressing with the ageing population. In response, there is a growing call to improve the representativeness of older adults in diabetes and chronic kidney disease trials. [2] To achieve this, there is a need to evaluate whether current methods for assessing the representativeness of older adults in clinical trials are adequate, and, if not, identify how they can be improved for assessing representativeness and reporting of evidence for this age group.

56. **Complications (find here atherosclerosis, claudication, diabetic foot, ulcers etc) Clinical profile and risk of periprosthetic joint infection after total knee arthroplasty in patients with and without diabetes**

Authors: Anneberg M.

Publication Date: 2025

Authors: The Bone and Joint Journal

Aims: Diabetes is a known risk factor for periprosthetic joint infection (PJI) following total knee arthroplasty (TKA). However, the diabetes population is characterized by considerable phenotypic heterogeneity. This study aimed to describe the complex clinical risk profile and associated risk of PJI after TKA in patients with and without diabetes.

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57. **Endothelin-1 and diabetes mellitus-induced erectile dysfunction: from pathogenesis to therapeutic potential**

Authors: Chen H, Gao Z, Lin X, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

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Diabetes mellitus-induced erectile dysfunction (DMED) is a common complication of diabetes. In recent years, clinical and experimental studies have demonstrated the crucial role of vascular endothelial structure and function damage in the pathogenesis of DMED, suggesting the core role of vascular lesions in DMED. Endothelin-1 (ET-1) is currently reported as a potent long-acting vasoconstrictor, which could be upregulated by hyperglycemia and is considered as a biomarker of diabetic endothelial dysfunction. In this study, we review the increase of ET-1 level in a hyperglycemic environment and the mechanisms by which it contributes to the pathogenesis of DMED. Clinical and experimental evidence demonstrate that hyperglycemia significantly upregulates ET-1 levels, which could arise from the specific signaling pathway or epigenetic changes such as DNA hypomethylation. Prolonged ET-1 elevation could lead to inflammation, oxidative stress, and reduced nitric oxide (NO) generation and utilization rate, which induce the occurrence of penile erectile dysfunction. Furthermore, we explore the therapeutic potential of regulating ET-1 expression for DMED treatment, by interventions targeting ET-1 synthesis or receptor blockade. In a word, our study summarized that DMED could be driven by ET-1 dysregulation, offering new insights for future clinical trials to improve the treatment of DMED and other diabetic complications.

Diabetic Foot

58. **Achievement of low-density lipoprotein cholesterol goals in patients with diabetes-related foot ulceration**

Authors: Lan N.S.R., Hiew J, Ferreira I, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

Despite their elevated risk for cardiovascular complications, two-thirds of patients with diabetes-related foot ulceration in this contemporary real-world study were not achieving guideline-recommended goals for low-density lipoprotein cholesterol. Implementation research is needed to identify the barriers and facilitators to optimal lipid management in this high priority population.

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59. **Advancements in diabetic foot ulcer therapy: The role of exosomes and decellularised extracellular matrix scaffolds**

Authors: Zhu Y, Bao S, Yin X, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Diabetic foot ulcer (DFU) ranks among the most severe complications of diabetes mellitus. DFU mainly arises from neuropathy and peripheral arterial disease, with aggravating factors like infection and edema. These ulcers impose significant physical and financial challenges, making wound healing a crucial clinical issue. Current DFU management focuses on ensuring adequate blood flow, relieving pressure, controlling infection, and debridement. Cell therapy offers notable benefits, yet the effectiveness of traditional stem cell transplants for DFU remains contentious. In this context, exosomes are gaining recognition as a promising option in tissue engineering and regenerative medicine. Their advantages include excellent biocompatibility, precise targeting, and ability to cross biological barriers, proficient drug delivery, low toxicity, and abundant availability. Numerous studies indicate that stem cell-derived exosomes contribute to diabetic wound healing by promoting angiogenesis, collagen deposition, and reducing inflammation, among other mechanisms. This acellular approach presents significant advantages over conventional methods and is crucial in DFU management. Nonetheless, challenges such as the limited retention of exosomes at injury sites render singular treatment strategies insufficient for optimal outcomes. By integrating decellularized extracellular matrix (dECM)-based scaffolds with exosomes, enhanced transfer and retention of exosomes can be achieved, along with a sustained release. This review summarizes the role and mechanisms of exosomes from various stem cells in enhancing DFU wound healing, recent advancements in dECM scaffolds, and discusses the application of exosomes combined with dECM scaffolds in DFU therapy, along with the associated challenges.

60. **Clinical frailty scale as a tool to predict outcomes after lower extremity amputation among patients with diabetes: A retrospective cohort study**

Authors: Tillqvist H, Vuorlaakso M, Helminen M, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

Aims: The primary aim of this study was to investigate how the Clinical Frailty Scale (CFS) associates with survival of patients with diabetes after lower extremity amputation (LEA).

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61. **Current situation and progress of diabetic foot care in the Middle East and North Africa region**

Authors: Halabi J, Tarshoby M.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aim: Assessing the progress of diabetic foot care in the MENA region.

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62. **Diabetes Foot Ulcer Prevention: A Review of Footwear Width Assessment for At-Risk Feet**

Authors: Jones P.J., Rowlands A.V., Davies M.J., et al.

Publication Date: 2025

Journal: Journal of Foot and Ankle Research

We performed a systematic search with a narrative review to assess consensus in quantitative methods used to assess footwear width for people at risk of DFU within research studies, and how often footwear is considered too narrow or wide. It is unclear how much space the at-risk forefoot requires. Standardised methods are needed to establish the accuracy and reliability of foot and footwear measuring tools, and to evaluate footwear fit, given their relationship with the clinical outcome.

63. **Elaboration and verification of immune-based diagnostic biomarker panel for diabetic foot ulcer**

Author: Gao H, Chen S, Li J, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

Background: Diabetic foot ulcer (DFU) constitutes a major complication in diabetes management. This study aimed to develop and validate an immune-related diagnostic model for DFU by identifying key genes and analyzing their functional enrichment.

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64. **Impact of remnant cholesterol and triglycerides on diabetes foot and disease in type 1 diabetes: A propensity score-matched case-control study**

Authors: Sebastian-Valles F, Santiago-Redondo A, García-Artacho E, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

Objective: Remnant cholesterol is an emerging cardiovascular risk factor; however, its impact on diabetes foot disease (DFD) remains poorly studied. This study evaluates the association between dyslipidaemia and DFD in a cohort of individuals with type 1 diabetes (T1D).

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65. **Latin American initiatives to improve foot care in people with diabetes: the effort to reduce diabetes-related lower extremity amputations**

Authors: Campillo-Vilorio N, Aragón-Sánchez J.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Diabetes-related foot complications represent a significant health burden across Latin America, where high rates of lower extremity amputations (LEAs) are driven by limited healthcare resources and infrastructure. Despite these challenges, various initiatives in the region have made notable progress. Programs like the Step by Step Project and the Train the Foot Trainer (TtFT), both key components of D-Foot International, have successfully trained over 4000 healthcare professionals and helped establish more than 125 diabetic foot care units in Latin America. These efforts align with International Working Group on the Diabetic Foot (IWGDF) guidelines, promoting prevention and early intervention. This article highlights initiatives from ten countries, including Argentina, Brazil, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Panama, and Paraguay, showcasing diverse approaches to managing diabetes-related foot complications. In several countries, women have been identified as the most vulnerable population to diabetes-related foot disease, facing higher complication rates due to delayed diagnosis and social disparities. While significant progress has been made, barriers such as financial constraints and the lack of a standardized disease code remain. Overcoming these obstacles requires increased investment in primary

care and a focus on reducing social inequalities, especially for Indigenous and underserved populations. With the right strategies, reducing diabetes-related amputations is achievable.

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66. **Progress and challenges in diabetic foot care in South-East Asia and India – Current scenario**

Authors: Ruke M.G., Elavarasan S.S., Devarajan A, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Diabetic foot complications remain one of the leading causes of hospitalization, amputation and even death among people living with diabetes. Though diabetic foot care has seen significant advancements globally, the burden of diabetic foot ulcers remains high worldwide, especially in the South East Asian (SEA) region. This review summarizes the current state of diabetic foot care in India and its neighbouring countries in the SEA region. There is an urgent need to increase awareness among people with diabetes and health care professionals, develop specialized foot clinics, provide improvised access to wound care and offloading devices at affordable costs and enhance the regional collaboration to prevent and effectively treat diabetic foot ulcers. This review highlights the recent advances, challenges, and future directions to manage diabetes and diabetic foot complications.

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67. **Trends of lower-limb complications in patients with type 2 diabetes mellitus during the COVID-19 pandemic**

Authors: Luu I.Y., Hong A.T., Lin F, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: The long-term impact of the COVID-19 pandemic on lower limb complications remains unclear. We aimed to assess the effect of the COVID-19 pandemic on the prevalence of diabetic foot ulcers (DFUs) and the incidence of lower extremity amputation (LEA) in patients with type 2 diabetes.]

Diabetic Ketoacidosis

68. **Intermittently scanned continuous glucose monitoring adoption decreases diabetic ketoacidosis hospitalizations and healthcare costs in adults with type 1 diabetes**
Authors: De Vera Gómez P.R., Jiménez B.R., Sánchez E.M., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: This study analyzed the impact of implementing intermittently scanned continuous glucose monitoring (isCGM) on hospitalization rates for diabetic ketoacidosis (DKA) among

adults with type 1 diabetes mellitus (T1DM). Additionally, it assessed the direct costs and savings associated with these hospital admissions.

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69. **Rare coexistence of pericardial tear and pneumopericardium in diabetic ketoacidosis: a case report**

Authors: Zhu J, Zhang W, Wang R.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

We report the first case of diabetic ketoacidosis (DKA) complicated by concurrent pneumopericardium and pericardial tear in a 47-year-old male with type 2 diabetes. The patient presented with intractable vomiting, Kussmaul respiration, and severe metabolic acidosis (pH 6.98). Chest computed tomography (CT) revealed a 2.5 × 4.0 cm pneumopericardium and a 3-mm linear defect at the left ventricular apex. Transthoracic echocardiography excluded cardiac tamponade, enabling conservative management with insulin therapy, fluid resuscitation, and bicarbonate correction. Pneumopericardium resolved within 4 days, and 12-month follow-up showed stable cardiac function (ejection fraction 60 %), normal pericardial structure on chest CT, and sustained glycemic control (HbA1c 7.2 %). This case highlights CT's critical role in detecting subtle pericardial complications and supports conservative therapy for stable cases, expanding the clinical spectrum of DKA-related thoracic injuries.

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70. **Study recommends SGLT2 inhibitors for people with diabetic foot disease**

NIHR Applied Research Collaboration (ARC)

Publication Date: 2025

People with a history of foot ulcers or amputations should be prescribed SGLT2 inhibitors, according to new research led by a team from Leicester.

Diabetes and pregnancy

71. **Association of gestational thyroid function and thyroid autoimmunity with gestational diabetes: a systematic review and individual participant meta-analysis**

Authors: Osinga J.A.J., Derakhshan A, Karachaliou M, et al.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology
Background: Pregnancy is a state of increased metabolic demand that necessitates major changes in endocrine physiology. Gestational thyroid dysfunction and gestational diabetes are common endocrine conditions of pregnancy that frequently coincide. Although the effects of thyroid hormones on glucose metabolism are well documented, important knowledge gaps remain in terms of the extent and clinical relevance of these effects during pregnancy. The aim of this meta-analysis is to assess the association of thyroid function test results with gestational diabetes and markers of glucose metabolism.

72. **Comparison of maternal characteristics and clinical parameters in Thai pregnant women with and without gestational diabetes mellitus**

Authors: Hanafee A, Suthon S, Innang S, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Objective: Gestational Diabetes Mellitus (GDM) poses a significant risk to maternal and fetal health, yet remains underrecognized in Southeast Asia, particularly in Thailand.

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73. **Global burden of diabetes in reproductive-age women (1990–2021), with projections to 2045: Systematic analysis of the global burden of disease study 2021**

Authors: Huang J, Zheng J, Pan X, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: To assess the global burden of diabetes among reproductive-age women (RAW) from 1990 to 2045.

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74. **Glycaemic control in labour with diabetes: GILD, a scoping study**

Authors: Jones N.W., Mitchell E.J., Walker K.F., et al.

Publication Date: 2025

Journal: Health Technology Assessment

Background: Diabetes in pregnancy is common, affecting 5–10% of pregnant women. Poor glycaemic control in labour is associated with neonatal hypoglycaemia and other adverse outcomes for mother and baby, but tight glucose control is burdensome, intrusive and may not always be necessary. The ideal intrapartum glucose target level is unknown, traditionally ‘tight’ control (target 4–7 mmol/l) has been recommended; however, this increases the risk of maternal hypoglycaemia.
Objective: To determine the feasibility of a randomised clinical trial to compare clinical and cost-effectiveness of permissive versus intensive intrapartum glycaemic control in labour in pregnancies complicated by diabetes.

75. **Healthcare professional classification of “poor glucose control” and perinatal outcomes in pregnancies with diabetes: a retrospective cohort study**

Authors: Gwan A, Ortiz I, Tessier K.M., et al.

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

Introduction: Early birth is often recommended for “poorly controlled” diabetes; however, no guidelines define the glycemic threshold that necessitates delivery. We use natural language processing (NLP) of electronic health records to identify individuals described by healthcare professionals as having “poor glucose control” and to examine the factors and outcomes associated with this categorization.

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76. **Letter to the Editor: High fasting plasma glucose in early pregnancy and adverse pregnancy outcomes in Chinese women: The role of gestational age**

Authors: Sheng L, Zhang M, Zhang L, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

We read with great interest the article by Wu et al. investigating the association between fasting plasma glucose (FPG) in early pregnancy and adverse pregnancy outcomes in Chinese women [1]. This work is a significant contribution to the refinement of gestational diabetes mellitus (GDM) screening strategies. However, several additional concerns merit further discussion.

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77. **Letter to the Editor: High fasting plasma glucose in early pregnancy and increased risk of adverse pregnancy outcomes in Chinese women: the role of gestational age**

Authors: Chen R, Sheng L, Zhang X.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

To the Editor, We read with great interest the prospective cohort study by Gao et al., highlighting the association between fasting plasma glucose (FPG) in early pregnancy and adverse pregnancy outcomes in Chinese women [1]. While this work contributes evidence on early gestational hyperglycemia and its risks, we feel that several aspects deserve closer scrutiny.

78. **Maternal thyroid hypofunction and gestational diabetes risk**

Authors: Lee S.Y.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

Gestational diabetes is estimated to affect 14% of pregnancies globally [1] and is associated with a high treatment burden for patients and an increased risk of pregnancy complications. Hypothyroidism is a common endocrine disorder that occurs in 4% of pregnancies. [2] Uncontrolled maternal hypothyroidism similarly increases the risk of adverse pregnancy outcomes, although the need for treatment of maternal subclinical hypothyroidism is still debated. [2] Hypothyroidism is more prevalent in people with type 2 diabetes compared with those without diabetes and thyroid function in general is thought to affect insulin resistance, insulin secretion, and hepatic glucose production. [3] However, the link between maternal thyroid dysfunction in pregnancy and development of gestational diabetes is not clearly established in currently available literature. In their systematic review and individual participant meta-analysis, Joris A J Osinga and colleagues investigated the association between maternal thyroid function and gestational diabetes risk. [4] With few large clinical trials supporting this potential link, this meta-analysis used individual participant data of 63 548 participants from 25 cohorts worldwide to provide important information and address some of the limitations of previous studies. The authors analysed data and explored several different ways to assess exposure (eg, diagnosis of thyroid dysfunction and individual thyroid hormone concentrations including thyroid-stimulating hormone [TSH], free FT_4, free FT_3, and FT_3:FT_4 ratio) and outcomes (diagnosis of gestational diabetes, oral glucose tolerance test [OGTT], the homoeostatic model assessment for insulin resistance [HOMA-IR], and fasting insulin concentration).

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79. **National trends in offspring birth size in pregnancies with maternal type 1 diabetes in Sweden**

Authors: Sandin S, Järnbert-Pettersson H, Simmons D, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Objective: Despite major medical and public health efforts to reduce excess fetal growth in type 1 diabetes (T1D), large population-based studies assessing the population-level effects are lacking. We assessed temporal trends in the overall distribution of birthweights (BW) and ponderal index (PI) in offspring of T1D mothers, and the impact of maternal BMI.

80. **Pregestational and gestational diabetes mellitus and risk of postpartum kidney disease: A retrospective cohort study**

Authors: Backal A, Vasudevan S, Lee R, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Background: Globally, rates of Pregestational (PGDM) and Gestational Diabetes Mellitus (GDM) are rising, but how they affect the risks of kidney disease in the postpartum period remains poorly understood.

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81. **The prevalence and risk factors of gestational diabetes mellitus recurrence: a systematic review and meta-analysis**

Authors: Liu L, Pang X, Liu J, et al.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

Introduction: Gestational diabetes mellitus (GDM) is a common pregnancy complication, with a significant risk of recurrence in subsequent pregnancies.
Aims: We aimed to explore the incidence and risk factors associated with the recurrence of GDM among women with a history of GDM.

Diabetes mellitus Type 1

82. **Association between daily insulin Dose, cancer Incidence, and mortality in type 1 diabetes patients**

Authors: Yen I.W., Chien J.C., Yang Y.H., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: Insulin is essential for glycemic control in type 1 diabetes but has mitogenic effects that may impact cancer risk. This study examines the relationship between daily insulin dose, cancer incidence, and all-cause mortality to assess its therapeutic benefits and potential risks.

83. **Automated insulin delivery for safe fasting and exercise during Ramadan in patients with type 1 diabetes: The active fast study**

Authors: Baagar K, Ali H, Ata F, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: To evaluate the safe and effective use of the MiniMed™ 780G Advanced Hybrid Closed-Loop system (AHCLS) in adults with type 1 diabetes mellitus (T1DM) during Ramadan fasting combined with structured Moderate-Intensity Exercise (MIE) followed by the non-fasting month (Shawwal) with continued MIE.

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84. **Associations of time in tight range, time in range, and glycated hemoglobin with albuminuria in type 1 diabetes: A cross-sectional study**

Authors: Kim J.Y., Kim S, Park S.H., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: We aimed to establish an independent association between time in tight range (TITR) and the risk of albuminuria, and to compare the relationships of TITR, time in range (TIR), and glycated hemoglobin (HbA1c) with albuminuria in individuals with type 1 diabetes (T1D).

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85. **Beyond glycemic metrics: Real-world benefits of connected insulin pens in type 1 diabetes**

Authors: Chico A, Pazos-Couselo M, Nattero-Chavez L, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

Aims: To determine whether connected insulin pens can improve glucose control, variability and patient-reported outcomes in type 1 diabetes.

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86. **Economic burdens of type 1 diabetes and its complications: A nationwide, longitudinal analysis**

Authors: Chong K.S., Lee Y.H., Chang Y.H., et al.

Publication Date:

Journal: Diabetes Research and Clinical Practice

Aims: To derive the healthcare costs by type 1 diabetes (T1D)-related complications and across time in Asian populations.

87. **Evaluating behavioral goals for eating timing, frequency, and distribution of daily carbohydrate consumption among youth with type 1 diabetes (MyPlan): A single arm pilot and feasibility study**

Authors: Sarteau A.C., Couch S, Kosorok M.R., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: We developed the MyPlan eating behavior intervention and conducted a pilot trial to explore feasibility and diabetes management benefits among adolescents with type 1 diabetes > 1 year and HbA1c 7.5–11 %.]

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88. **Examining out-of-pocket health expenditures of individuals with Type 1 diabetes: The case of Türkiye**

Authors: Ardıç M, Erişen M.A.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Diabetes mellitus and its associated complications are chronic diseases that cause significant morbidity and mortality globally and have a high economic burden. Therefore, we aimed to investigate the devastating out-of-pocket expenses of Type 1 diabetes.]

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89. **Hepatic steatosis with significant fibrosis is associated with preclinical carotid atherosclerosis in patients with type 1 diabetes**

Authors: Claro M, Viñals C, Giménez M, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Evaluate the association between metabolic dysfunction-associated steatotic liver disease (MASLD) scores and preclinical atherosclerosis in type 1 diabetes (T1D).]

90. **Higher population density protects from type 1 diabetes? Dissecting the literature through meta-analysis**

Authors: Tall S, Sylgren I, Virtanen S.M., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Even though urbanization has been repeatedly established in relation to risk of type 1 diabetes in scientific research, meta-analyses or systematic reviews revealing overall trends in the literature have not been published. We performed a meta-analysis to investigate the association between population density and risk of type 1 diabetes and aimed to include all available literature up to February 22, 2025. Eighteen studies in 14 countries with 82,493 type 1 diabetes cases were included in the meta-analysis. We found evidence of an inverse association between population density and risk of type 1 diabetes (risk ratio = 0.86 [95 % CI: 0.81, 0.91], $P < 0.001$, N = 18, adjusted for all available confounders). However, variation in the association between studies and geographic areas was observed. Risk of bias due to uncontrolled confounding in observational studies can never be excluded. In addition, we found high unexplained effect size variation among the included studies in our meta-analysis. Our results are not in line with the view that urbanization would systematically increase the risk of type 1 diabetes and highlight the variability of the association among geographic regions. More studies outside Europe are needed to further establish the potential association.]

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91. **Impact of remnant cholesterol and triglycerides on diabetes foot and disease in type 1 diabetes: A propensity score-matched case-control study**

Authors: Sebastian-Valles F, Santiago-Redondo A, García-Artacho E, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Objective**: Remnant cholesterol is an emerging cardiovascular risk factor; however, its impact on diabetes foot disease (DFD) remains poorly studied. This study evaluates the association between dyslipidaemia and DFD in a cohort of individuals with type 1 diabetes (T1D).]

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92. **Intermittently scanned continuous glucose monitoring adoption decreases diabetic ketoacidosis hospitalizations and healthcare costs in adults with type 1 diabetes**

Authors: De Vera Gómez P.R., Jiménez B.R., Sánchez E.M., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: This study analyzed the impact of implementing intermittently scanned continuous glucose monitoring (isCGM) on hospitalization rates for diabetic ketoacidosis (DKA) among

adults with type 1 diabetes mellitus (T1DM). Additionally, it assessed the direct costs and savings associated with these hospital admissions.]

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93. **More options for young children with type 1 diabetes**

Authors: Boughton C.K.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[Hybrid closed-loop insulin delivery systems are transforming the management of type 1 diabetes. Young children with type 1 diabetes are arguably the most challenging age group to manage, due to inconsistent food intake, unpredictable activity, and inability to reliably communicate symptoms of hypoglycaemia. The management burden on carers is substantial, with many parents of young children with type 1 diabetes not able to work due to their caregiver commitments. Among all age groups, young children also have the highest variability in day-to-day insulin requirements, highlighting the importance of automated insulin delivery systems in this population. [1] At present, two hybrid closed-loop systems, CamAPS FX and Omnipod 5, are approved for use in young children (aged <6 years) with type 1 diabetes.]

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94. **Optimization of insulin management during postprandial and post-absorptive exercise in adults with type 1 diabetes: DiabraAlgo effectiveness in real life**

Authors: Bensaid S, Allix I, Dubois S, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Fear of hypoglycemia limits sports in type 1 diabetes (T1D). This study aimed to evaluate the efficacy of Diabrasport glycemic management algorithms over a week with three real-life exercise sessions.]

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95. **Perception of health system response and lifestyle changes in people with type 1 diabetes during the COVID-19 pandemic in Chile**

Authors: Ibeas C, Alarcón K, Herrera I, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aim**: To explore the perceptions of people with type 1 diabetes (T1D) on healthcare interactions and lifestyle modifications during the COVID-19 pandemic in Chile.]

96. **Revisiting the benefits vs risk profile of sodium-glucose co-transporter inhibitor use in type 1 diabetes. Part B: Risks of sodium-glucose co-transporter inhibitor use in type 1 diabetes and ketoacidosis risk mitigation strategies**

Authors: Ngan J, O'Neal D.N., Lee M.H, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Sodium-glucose co-transporter (SGLT) inhibitors have been evaluated for use in people with type 1 diabetes (T1D). Despite evidence for glycaemic and non-glycaemic benefits in people with T1D as discussed in the accompanying review (Part A), the increased risk of diabetic ketoacidosis (DKA) with this class of medication remains a barrier limiting its widespread use in this population. DKA is a serious and life-threatening complication of diabetes and the excess risk associated with SGLT inhibitor use needs to be addressed before this medication could be considered as part of glycaemia and complications management in people with T1D. Understanding factors that increase DKA risk in the setting of SGLT inhibitors, as well as an appreciation of general DKA risk factors, may facilitate the development of strategies that allow for an acceptable risk versus benefit ratio to permit the use of SGLT inhibitors in people with T1D.]

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97. **Shed light on molecular immunogenetic pathophysiology of type 1 diabetes to improve advanced treatment strategies**

Authors: Moosavi A, Tabrizi Z.A., Eghbali Z, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Type 1 diabetes (T1D) is widely recognized as a chronic autoimmune disease characterized by insufficient insulin production and persistent high blood sugar levels. Generally, the onset of T1D results from a complex network of factors that disrupt β-cell function. These contributing elements are broadly divided into intrinsic factors, such as genetic susceptibility, immune irregularities, and extrinsic triggers, including viral infections, drug toxicities, immune checkpoint inhibitors, and insufficient vitamin D levels. This article aims to provide a comprehensive understanding of the multifaceted mechanisms driving T1D, which often act directly or indirectly by influencing the immune system. This occurs due to a mix of genetic predispositions and immune system malfunctions. The article explores how genetic markers, including HLA-DR3/DR4, PTPN22, and TYK2 variants, influence and modulate immune tolerance. It also discusses emerging treatments, such as Teplizumab-mediated immune modulation, CRISPR-based gene editing, and stem cell-derived β-cell replacement, as well as their efficacy in preserving β-cell function to delay disease progression. By integrating recent therapeutic advancements with a deeper understanding of the molecular aspects of the disease, this article highlights next-generation treatments' potential to significantly improve the management of T1D. Future investigations should focus on precision medicine approaches to achieve greater success in long-term treatments.]

98. **Subtypes of disordered eating and their diabetes-related and psychosocial concomitants in adults with type 1 diabetes**

Authors: Priesterroth L.S., Grammes J, Kubiak T.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: To identify subtypes of disordered eating behaviors (DEB) in type 1 diabetes, describing their behavioral patterns, clinical features, psychosocial well-being, and diabetes-related complications.]

Diabetes mellitus Type 2

99. **Age different effects of SGLT2 inhibitors on body composition in individuals with type 2 diabetes: A retrospective cohort study**

Authors: Miyoshi K, Aoyama T, Kameda S, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Purpose**: This study investigates the long-term impact of sodium-glucose cotransporter 2 inhibitors (SGLT2i)on body composition in individuals with type 2 diabetes (T2D), with a focus on age-related differences. We evaluated changes in body mass index (BMI), body fat percentage, skeletal muscle mass and skeletal muscle mass index (SMI) over 4.4 years on average.]

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100. **Association between dipeptidyl peptidase-4 inhibitors and glucagon-like peptide-1 receptor agonists and COVID-19 infection and adverse outcomes: a cohort study**

Authors: Thompson W, Yu B, Porter J, et al.

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

[**Introduction**: People with type 2 diabetes (T2DM) have an elevated risk of adverse outcomes from COVID-19. Dipeptidyl peptidase-4 inhibitors (DPP4is) and glucagon-like peptide-1 receptor agonists (GLP1RAs) might have favorable effects on COVID-19 outcomes.]

101. **Association between long-term fine particulate matter exposure and incident type 2 diabetes in a low-exposure Danish cohort: An AIRCARD analysis**

Authors: Mayntz S.P., Mohamed R.A., Mejldal A, et al.

Publication Date: 2025

Authors: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aim**: The global burden of type 2 diabetes (T2D) continues to rise, with evidence suggesting that air pollution may contribute to its pathogenesis. This study examines the association between long-term exposure to fine particulate matter ($PM_{2.5}$) and the risk of developing T2D in a cohort of older Danish men living in a low-exposure setting.]

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102. **Associations of age at T2D detection with hemoglobin A1c in a national inception cohort of U.S. Veterans with diabetes**

Authors: Avramovic S, Li X, Enquobahrie D.A., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: To investigate associations of age at type 2 diabetes (T2D) detection with HbA1c.]

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103. **Biphasic effects of SGLT-2 inhibitors on sleep quality in older people with type 2 diabetes: A longitudinal analysis**

Authors: Veizi B.G.Y., Demircan S.K.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: Sodium-glucose cotransporter-2 (SGLT-2) inhibitors are widely used in type 2 diabetes mellitus (T2DM) due to their cardiometabolic benefits. However, their effects on sleep quality remain unclear. This study examines the biphasic effects of SGLT-2 inhibitors on sleep quality in older adults with T2DM.]

104. **Effectiveness of probiotic therapy as an adjunct in the management of periodontal disease in type 2 diabetics: A systematic review and *meta*-analysis**

Authors: Yuqi W, Hangying X, Ruyi Y, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice
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[**Background**: Periodontal disease and diabetes mellitus are chronic diseases with a high global prevalence and are closely associated. Adjunctive probiotic therapy has garnered increasing attention in the management of type 2 diabetes mellitus (T2DM) with periodontal disease.
Objective: This review elucidates the effect of probiotic therapy on inflammatory markers, periodontal parameters, and glycated hemoglobin (HbA1c) in people with both T2DM and periodontal disease.]

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105. **Effect of type-2 diabetes mellitus in long-term mortality in older adults: The NEDICES cohort study**

Authors: Corbatón-Anchuelo A, Vega-Quiroga S, Bermejo-Pareja F, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To describe the mortality associated with type-2 diabetes mellitus (T2DM) in a Spanish elderly population during a 22-year period.]

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106. **Genetic determinants of variable anti-diabetic therapy responses across diverse populations with type 2 diabetes mellitus: a systematic review and meta-analysis**

Authors: Ahmad F, Abubakar S, Alwi S.S.S., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aim**: This study explores the relationship between gene polymorphisms and glycemic responses across ethnic populations and identifies optimal therapy combinations for glycemic control. However, the definition of glycemic response varied across included studies (e.g., HbA1c <7 %, or >0.5 % reduction), which may affect the comparability and interpretation of pooled data.]

107. **The global burden of early-onset type 2 diabetes mellitus caused by high body-mass index from 1990 to 2021 and projection to 2050**

Authors: Liang L, Lin Y, Liu Z, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: This study aims to analyze the burden, trends, and health inequality associated with early-onset type 2 diabetes mellitus (T2DM) caused by high Body-Mass Index (BMI) and to projected to 2050.]

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108. **GLP-1 receptor agonists and hospitalization due to infections in patients with type 2 diabetes: A nationwide cohort study**

Authors: Wang J.L., Lee C.C., Ko W.C., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Glucagon-like peptide 1 receptor agonists (GLP-1RAs) demonstrate pleiotropic effects, notably encompassing anti-inflammatory properties. We aim to compare the association of GLP-1RAs versus dipeptidyl peptidase-4 inhibitors (DPP4is) with hospitalization due to various infectious diseases.]

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109. **Hospitalisation and mortality before and during the COVID-19 pandemic in individuals with cardiorenal–metabolic diseases in the UK: a retrospective cohort study**

Author: Shabnam S.

Publication Date: 2025

Journal: The Lancet Primary Care

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[This study assessed the sex-specific effect of the pandemic on hospitalisations and mortality among individuals in England with type 2 diabetes, cardiovascular disease, and chronic kidney disease. Prioritising care for groups at increased risk of severe outcomes and improving resilience are crucial for ensuring continuity of care during future public health crises.]

110. **Imo-induced changes in gut hormones and glucose metabolism: A key to improving insulin sensitivity in type 2 diabetes**

Authors: Naseem S, Rizwan M.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Isomalto-oligosaccharides (IMO) are prebiotic oligosaccharides that have shown promise in improving insulin sensitivity and glucose metabolism, making them potential therapeutic agents for Type 2 Diabetes (T2D). IMO selectively stimulates beneficial gut microbiota, particularly *Bifidobacterium and Lactobacillus*, leading to the production of short-chain fatty acids (SCFAs) like acetate, propionate, and butyrate. These SCFAs play a pivotal role in enhancing the release of gut hormones such as GLP-1 (Glucagon-like peptide-1) and PYY (Peptide YY), which improve insulin secretion and promote satiety, thus improving glucose homeostasis. Clinical studies have reported that IMO supplementation can lower HbA1c by 0.5% and reduce postprandial glucose spikes, demonstrating its efficacy in glycemic control. Additionally, IMO promotes insulin sensitivity by reducing inflammation and enhancing adiponectin levels. Although the current findings are promising, further research is needed to determine optimal dosing, long-term safety, and the role of individual gut microbiomes in tailoring IMO interventions. Future studies focusing on personalized nutrition strategies and the synergistic effects of IMO with other lifestyle interventions could enhance its applicability as a key component in T2D management.]

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111. **Impact of COVID-19 on clinical characteristics in type 2 diabetes patients: A prospective, longitudinal, observational study**

Authors: Azim T, Khan A.H., Sadiq F, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: This prospective longitudinal study aimed to evaluate the impact of COVID-19 on glycemic control and hematological parameters in patients with pre-existing type 2 diabetes.]

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112. **Incremental risk of developing type 2 diabetes mellitus (T2D) starts at low Body Mass Index (BMI) in Asian Indians: Analysis from India Heart Watch (IHW)**

Authors: Guptha L.S., Gupta R, Sharma K.K., et al.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Introduction**: A Body Mass Index (BMI) of 23 kg/m^2 is recognized as an appropriate threshold for Asian Indians to diagnose overweight and obesity, conditions associated with an increased risk of developing type 2 diabetes (T2D). We assessed the incremental risk of T2D beginning at a BMI of 18.5 kg/m^2, which is below the specified threshold.]

113. **Intellectual developmental disability and all-cause and cause-specific mortality among individuals with type 2 diabetes mellitus**

Authors: Lee J.H., Mark Park Y.M., Han K, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Individuals with intellectual developmental disabilities (IDD) face unique challenges in managing type 2 diabetes mellitus (T2DM), but evidence on their impact on mortality is limited. This study assessed the association between IDD and mortality in T2DM using nationwide Korean data.]

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114. **Physical activity and albuminuria in individuals recently diagnosed with type 2 diabetes**

Authors: Norlén T, Olesen T.B., Domazet S.L., et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: We aimed to investigate the association between objectively measured physical activity and the presence and development of albuminuria in individuals recently diagnosed with type 2 diabetes at baseline.]

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115. **Total and specific potato intake and risk of type 2 diabetes: results from three US cohort studies and a substitution meta-analysis of prospective cohorts**

Authors: Mousavi S.M., Gu X, Imamura F, et al.

Publication Date: 2025

Journal: BMJ

[**Objectives**: To investigate the associations between total and individual potato intake and risk of type 2 diabetes (T2D), estimate the effect on T2D risk of replacing potatoes with whole grains and other major carbohydrate sources, and conduct a dose-response and substitution meta-analysis of prospective cohort studies.]

116. **Type 2 Diabetes Mellitus Remission, Dream or Reality? A Narrative Review of Current Evidence and Integrated Care Strategies**

Authors: Corrao S, Falcone F, Mirarchi L, et al. *D*

Publication Date: 2025

Journal: Diabetes Therapy

[Type 2 diabetes mellitus (T2DM) is a global health priority, with an estimated 629 million people projected to be affected by the year 2045. T2DM significantly increases the risk of atherosclerotic cardiovascular disease and other complications. Hyperglycaemia imprints early molecular and cellular changes, often termed "metabolic memory", predisposing individuals to long-term microvascular and macrovascular complications, even after glycaemic normalisation. T2DM remission is increasingly recognised as an achievable target, offering substantial benefits such as reduced morbidity, improved quality of life, and preservation of beta-cell function. Among therapeutic options, metabolic surgery (MS) demonstrates the most significant impact, particularly for long-term outcomes. MS induces profound hormonal changes, including increased glucagon-like peptide 1 (GLP-1) levels and improved bile acid metabolism, alongside reductions in ectopic fat in the liver and pancreas, which improve insulin sensitivity and secretion. However, intensive lifestyle and pharmacological interventions, such as GLP-1 receptor agonists and glucose-dependent insulinotropic polypeptide/glucagon-like peptide 1 dual agonists like tirzepatide, also show promise, particularly when implemented early in the disease course. Predictors of sustained remission include younger age, shorter diabetes duration, lower baseline HbA1c, absence of insulin use, fewer medications and greater total weight loss percentage. Emerging tools such as the DiaRem score, machine learning models, and biomarkers like FGF-21 enhance patient stratification and predict remission likelihood. This narrative review explores the mechanisms and therapeutic options for T2DM remission, evaluates their impact on long-term outcomes and highlights the importance of early, multidisciplinary, and personalised interventions to optimize remission and improve metabolic health.]

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117. **Type 2 diabetes in South Asians**

Authors: Misra A, Sattar N, Ghosh A, et al.

Publication Date: 2025

Journal: BMJ

[Type 2 diabetes poses a substantial public health challenge in South Asia, marked by distinctive features in its pathogenesis, phenotype, and management. This review explores the characteristics of type 2 diabetes in South Asians who tend to develop the condition at a younger average age and lower body mass index than white populations. Prevalence is high and varies across the region, with recent increases in youth onset type 2 diabetes. Environmental influences are driving greater sedentary behavior, and dietary shifts towards processed foods are leading to higher body weights. This is concerning because South Asians show greater abdominal obesity, ectopic fat accumulation (particularly hepatic fat), and lower skeletal muscle mass than white people of a similar age and body mass index. These features, coupled with rapid β cell dysfunction, contribute to earlier onset and accelerated glycemia progression (greater aggregated hyperglycemia than white people), contributing to more

retinopathy, cardiovascular disease, and chronic kidney disease. Management of type 2 diabetes in the region is hindered by delayed diagnosis, inadequate healthcare access, and economic barriers limiting sustainable glucose, lipid, and blood pressure management. Evidence supports lifestyle and dietary weight loss as viable approaches to prevention and diabetes remission, respectively, though sustained remission is untested. Recently introduced drugs (sodium-glucose cotransporter 2 inhibitors and newer glucagon-like peptide 1 receptor agonists) offer promise in weight management and cardiovascular and kidney protection, but are often inaccessible owing to cost constraints. Future efforts should prioritize affordable and innovative solutions, strengthen healthcare systems, and implement population wide preventive measures that account for the region's socioeconomic complexities, and practical contextual research.]

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118. **Type 2 diabetes, prediabetes, and MASLD: who and when to screen and how to treat?**

Authors: Byrne C.D., Targher G, Buchanan R.M.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[In 2023, consensus was reached that a diagnosis of metabolic dysfunction-associated steatotic liver disease (MASLD) [1] could be assigned if a person showed evidence of hepatic steatosis with no aetiological factors other than the presence of one metabolic syndrome trait (as defined by Alberti and colleagues [2]). Although non-alcoholic fatty liver disease (as the condition was previously referred to) has been considered a multisystem disease [3] for the past decade, the new nomenclature and diagnostic criteria focus attention on metabolic dysfunction, which is a welcome step forward. Multiple metabolic syndrome traits are common in patients with MASLD and these patients have an increased risk of major adverse liver outcomes, major adverse cardiovascular events, extrahepatic cancers, and all-cause mortality, with the risk increasing with the number of metabolic syndrome traits. 4 5 6]

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119. **The potential of ^{1}H NMR spectroscopy for diabetes diagnosis: a review of current applications and future directions**

Authors: Schiavone A, Bergoza L, Edrada-Ebel R.A., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[By 2045, it is estimated that approximately 783 million, will be living with diabetes. The incidence of diabetes as well other types of is increasing annually and is associated with many adverse outcomes. Early prediction of the risk of hyperglycaemia and intervention are thus important to reduce adverse outcomes. Studies have revealed a correlation between the levels of amino acids, fatty acids, triglycerides, and other metabolites and the occurrence of diabetes. The development of high-throughput technologies used in metabolomics has enabled the detection of changes in the levels of small-molecule metabolites, which can help reflect the overall physiological and pathological status of the body and explore the underlying mechanisms of the development of diabetes. Thus, this review aims to explore the role of

metabolomics as promising alternative for hyperglycaemia diagnoses using NMR, as a guide for researchers, as well as for routine method diagnostic users and to provide data for the development of strategies to manage diabetes.]

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120. **The utility of common predictive models for detecting undiagnosed diabetes and prediabetes defined by HbA1c in a Chinese population**

Authors: Wang S, Yip B.H.K., Poon P.K.M., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To evaluate the Hong Kong Primary Care Office (HKPCO) strategy against international guidelines from China, UK, US, Canada and Australia for identifying high-risk individuals requiring diagnostic testing for diabetes mellitus (DM) and pre-DM.]

Glucose monitoring and control

121. **Association between body roundness index and new-onset stroke risk in middle-aged and older adults with varying glucose metabolism status: A longitudinal study using CHARLS data**

Authors: Liu H, Xu F, Zhang M, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: The body roundness index (BRI), a novel anthropometric measure of adiposity, has not been thoroughly investigated for stroke prediction across different glucose metabolism status (GMS) in Chinese populations.]

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122. **The association of weight status with glycemic control, diabetes related complications and anti-hyperglycemic medication use in patients with type 2 diabetes mellitus: The results of the Australian National Diabetes Audit (ANDA) 2015–2022**

Authors: Szwarcbard N, Xiang A, Gasevic D, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Type 2 diabetes has reached pandemic proportions; and obesity is considered one of its main drivers. We investigated the association of weight status with glycemic control, diabetes related complications and anti-hyperglycemic medication use among adults living with type 2 diabetes mellitus (T2DM).]

123. **Continuous Glucose Monitoring Among People with and without Diabetes Mellitus and Sleep Apnoea**

Authors: Govere E, Drakopanagiotakis F, Panou T, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[The association of sleep apnoea with insulin resistance and type 2 diabetes mellitus (T2DM) is well studied. However, little is known on the impact of sleep apnoea on glycaemic variability (GV). Continuous glucose monitoring (CGM) systems shed light on GV not only during sleep but throughout the day among people with or without diabetes mellitus (DM) and obstructive sleep apnoea syndrome (OSAS). In this narrative review, we aimed to summarise the evidence on the role of CGM in assessing GV among individuals with sleep apnoea. Articles related to CGM use among individuals with OSAS were included. Emerging data suggests a significant impact of OSAS on glucose metabolism during sleep and wakefulness. Of note, OSAS affects GV irrespective of glycaemic status. Moreover, the severity of OSAS has been associated with increased GV. As GV triggers oxidative stress, it contributes to adverse outcomes in people with diabetes and/or OSAS. Interestingly, a beneficial effect of continuous positive airway pressure (CPAP) treatment on blood glucose and on GV in individuals with both T2DM and OSAS has emerged, but evidence is conflicting. Additionally, among pregnant women with gestational diabetes and sleep-disordered breathing, CGM could detect nocturnal hyperglycaemic episodes, improving glycaemic control and perinatal outcomes. Future studies are needed to investigate the exact impact of OSAS treatment on GV.]

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124. **Diabetes risk assessment in adult population without diabetes employing continuous glucose monitoring: A novel approach**

Authors: Pazos-Couselo M, Lado-Baleato Ó, Izquierdo V, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Time above range obtained through continuous glucose monitoring (CGM) is a useful marker for identifying individuals at higher risk of developing diabetes. We aimed to determine the optimal cutoff for the percentage of time glucose exceeds a threshold to predict diabetes onset.]

125. **Evaluating the Impact of mySugr® Mobile Health Application on Glycemic Control in People with Diabetes Mellitus in India: A Real-World Data Analysis**

Authors: Mohan V, Kalra S, Augustine A, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: The rising prevalence of diabetes has driven extensive research into effective management strategies, emphasizing the importance of integrating self-management routines into daily life. This study presents real-world observations on the impact of the mySugr® app, used in conjunction with the Accu-Chek® Instant blood glucose monitoring device, on glycemic control and patient satisfaction in India.]

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126. **Intermittently scanned continuous glucose monitoring adoption decreases diabetic ketoacidosis hospitalizations and healthcare costs in adults with type 1 diabetes**

Authors: De Vera Gómez P.R., Jiménez B.R., Sánchez E.M., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: This study analyzed the impact of implementing intermittently scanned continuous glucose monitoring (isCGM) on hospitalization rates for diabetic ketoacidosis (DKA) among adults with type 1 diabetes mellitus (T1DM). Additionally, it assessed the direct costs and savings associated with these hospital admissions.]

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127. **Joint effect of nicotine use and diabetes distress on glycemic control in young adults with type 1 diabetes**

Authors: Plaitano E.G., Stanger C.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[Nicotine inhibits glucose metabolism. In this national cross-sectional analysis of 388 young adults with type 1 diabetes and above target glycemic control, vaping was the most common route of nicotine use, and heavy nicotine use plus higher type 1 diabetes distress was related to worse objective measures of glycemic control.]

128. **The outcome of abnormal glucose metabolism and its clinical features in patients with Cushing's disease after curative surgery**

Authors: Cui Q, Li Y, Liu X, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: To investigate the outcomes of abnormal glucose metabolism and its clinical characteristics in patients with Cushing's disease (CD) who achieved biochemical remission after surgery.]

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129. **Real-world initiation of continuous glucose monitoring (CGM) in adults with type 1 diabetes leads to increased body mass index - A brief report from IMI-SOPHIA study**

Authors: Soto-Hernaez J, McCrimmon R.J., Pearson E.R., et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[Continuous glucose monitoring (CGM) has beneficial effects on glycaemic control in adults with type 1 diabetes (T1D), but the potential effects on body mass index (BMI) remain unclear. This study underscores a trend of increasing BMI within two years after CGM initiation.]

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130. **Time Trends of Body Mass Index and its Impact on Glycemic Control Among Finnish Patients with Type 2 Diabetes**

Authors: Wang Z, Lavikainen P, Wikström K, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: Obesity prevalence has increased in Finland and is prevalent in patients with type 2 diabetes (T2D). Also, hyperglycemia in patients with T2D is partially attributed to obesity. We aimed to examine the time trends of body mass index (BMI) and glycated hemoglobin (HbA1c) control across different BMI categories among Finnish patients with T2D.]

Hyperglycaemia

131. **Assessing the stress hyperglycemia ratio in hyperlipidemia patients to predict all-cause mortality: A retrospective cohort study**

Authors: Hu B, Yang Z, Yuan L, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: The Stress Hyperglycemia Ratio (SHR) reflects stress-related hyperglycemia and is linked to poor outcomes in various diseases. This study explores the association between SHR and all-cause mortality in hyperlipidemia patients and its value in enhancing predictive models.]

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132. **Incidental hyperglycemia in women at reproductive age and its association with thyrotropin levels: A population-based cohort study in China**

Authors: Yang Y, Lyu X, Fu J, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To evaluate the incidence of hyperglycemia and its association with thyroid dysfunction in reproductive-aged women.]

Hypoglycaemia

133. **Glycemic variability and iatrogenic hypoglycemia: how to resolve**

Authors: Monnier L, Colette C, Renard E, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: Lowering plasma glucose to near normal levels without consideration of the within-day glycemic variability is a potential risk factor for iatrogenic hypoglycemia in type 1 diabetes.

Objective: To know below which threshold the glycemic variability should be brought for minimizing or eliminating the risk of hypoglycemia in type 1 diabetes treated with SAP (Sensor Augmented Pump) or AID (Automated Insulin Delivery).]

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134. **Efficacy of Polyethylene Glycol Loxenatide in Combination with Basal Insulin in Patients with Type 2 Diabetes Mellitus: A Retrospective Real-World Study**
Liu X, Zhang Y, Zhao L.L., et al. *Diabetes Therapy* 2025, 16(8): 1581-1592.
[**Introduction**: Patients with type 2 diabetes mellitus (T2DM) who cannot achieve normal glycosylated hemoglobin (HbA1c) levels are sometimes given the combined therapeutic

regimen of polyethylene glycol loxenatide (PEG-Loxe) + basal insulin. The aim of this study was to investigate the efficacy and safety of PEG-Loxe combined with basal insulin in patients with T2DM.]

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135. **Insights on Hospitalisations from the Phase 3a ONWARDS 1-6 Trials of Once-Weekly Insulin Icodec**

Authors: Philis-Tsimikas A, Krogsdahl Bache J, Fu A, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: The ONWARDS programme assessed the efficacy and safety of once-weekly insulin icodec (icodec) versus once-daily basal insulin comparators in type 2 diabetes (T2D) or type 1 diabetes (T1D). This post hoc exploratory analysis of ONWARDS 1-6 assessed the impact of icodec during and around hospitalisation.]

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136. **Perceptions of Suboptimal Insulin Dosing from People with Diabetes and Healthcare Professionals in Germany**

Authors: Ponce-Ibarra A, Hennies N, Newson R.S., et al.

Publication Date: 2026

Journal: Diabetes Therapy

[**Introduction**: Despite advancements in diabetes therapeutics and innovations, suboptimal dosing continues to be a barrier to glycaemic control for people with diabetes (PwD). This study aimed to understand the extent of suboptimal insulin dosing and the factors underlying this behaviour from the perspective of PwD and healthcare professionals (HCPs) in Germany.]

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137. **Safety and Efficacy of Inhaled Technosphere® Insulin in the Postprandial Period With Modified Initial Dose Conversion**

Authors: Jacobson C, Kaiserman K.B., Ulloa J, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: A post hoc analysis from a 90-day proof-of-concept study demonstrated increased efficacy and no new safety concerns for an ultra-rapid-acting inhaled insulin, Technosphere® Insulin (TI), when a higher modified conversion dose was compared to the conversion dose in the current US prescribing insert (approx. 2 × vs approx. 1.3 × TI per rapid-acting insulin analogue [RAA] unit [U] across the 1-24 U range). This post hoc analysis evaluates the safety and efficacy of the modified conversion dose in the postprandial period.]

Management of diabetes (diet, exercise, lifestyle)

138. **Association Between Baseline Diabetes Therapy-Related Quality of Life (DTR-QOL) and Subsequent Risk of All-Cause Mortality: A Prospective Cohort Study (Diabetes Distress and Care Registry at Tenri [DDCRT 26])**

Authors: Nishioka Y, Hayashino Y, Kurosawa K, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: We aimed to examine a cohort of people with diabetes to prospectively determine the association between diabetes therapy-related quality of life (DTR-QOL) and the subsequent risk of all-cause mortality.]

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139. **Body composition during major incretin-based weight loss**

Authors: Dirksen C, Madsbad S.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[We have witnessed weight loss of 13–15% with the glucagon-like peptide-1 (GLP-1) receptor agonist semaglutide and up to 18–23% with the dual GLP-1/glucose-dependent insulinotropic polypeptide (GIP) receptor agonist tirzepatide in people with obesity but without diabetes. [1] In people with type 2 diabetes, weight loss seems to be somewhat lower, at 8–9% with semaglutide and 11–13% with tirzepatide. [1] This magnitude of weight loss has raised concerns about the risk of an unproportional loss of lean mass, particularly skeletal muscle which constitutes about 55% of the lean mass, which could reduce the long-term benefit of weight loss. [2]]

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140. **Effectiveness of general practitioner-delivered nutrition care on dietary and health outcomes in adults with chronic conditions: a systematic review**

Authors: Asher K.E., Somerville M, Ball L, et al.

Publication Date: 2025

Journal: BMJ Open

[**Objectives**: To evaluate the effectiveness of nutrition care delivered by general practitioners (GPs) compared with usual or no care on dietary and health outcomes in adults with diet-related chronic conditions or risk states and to examine which intervention components are associated with effectiveness.]

141. **The growing deaths from non-communicable diseases attributable to sugar-sweetened beverages among young and middle-aged adults: Analysis and projection based on Global Burden of Disease Study 2021**

Authors: Liu C, Wang H, Hua L, et al.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Introduction**: Despite rising global health concerns about sugar-sweetened beverages (SSBs), their long-term impact on non-communicable disease (NCD) death across demographic groups and socioeconomic contexts remains poorly understood.]

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142. **Intermittent fasting strategies and their effects on body weight and other cardiometabolic risk factors: systematic review and network meta-analysis of randomised clinical trials**

Authors: Semnani-Azad Z, Khan T.A., Chiavaroli L, et al.

Publication Date: 2025

Journal: BMJ

[**Objective**: To assess the effect of intermittent fasting diets, with continuous energy restriction or unrestricted (ad-libitum) diets on intermediate cardiometabolic outcomes from randomised clinical trials.]

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143. **Real-world implementation of a clinic-community Food is Medicine intervention for patients with type 2 diabetes**

Authors: Radtke M.D., Xiao L, Chen W.T., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To evaluate the impact of a real-world implementation of a Food is Medicine intervention on improvements in health outcomes for patients in a rural area.]

Mental health and diabetes

144. **Joint effect of nicotine use and diabetes distress on glycemic control in young adults with type 1 diabetes**

Authors: Plaitano E.G., Stanger C.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[Nicotine inhibits glucose metabolism. In this national cross-sectional analysis of 388 young adults with type 1 diabetes and above target glycemic control, vaping was the most common route of nicotine use, and heavy nicotine use plus higher type 1 diabetes distress was related to worse objective measures of glycemic control.]

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145. **Medical costs and health care utilization in Dutch diabetes patients with high levels of diabetes-distress**

Authors: Schmidt C.B., Keijsper E, Bosmans J.E., et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: Diabetes-distress is prevalent in persons with diabetes. However, studies on the association between diabetes-distress, costs and healthcare utilization are scarce. We aim to explore whether diabetes-distress is related to healthcare utilization and medical costs.]

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146. **Subtypes of disordered eating and their diabetes-related and psychosocial concomitants in adults with type 1 diabetes**

Authors: Priesterroth L.S., Grammes J, Kubiak T.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: To identify subtypes of disordered eating behaviors (DEB) in type 1 diabetes, describing their behavioral patterns, clinical features, psychosocial well-being, and diabetes-related complications.]

Pharmacological management of diabetes

147. **Association of metformin treatment with changes in metal dynamics in individuals with type 2 diabetes**

Authors: Otowa-Suematsu N, Sakaguchi K, Yamada T, et al.

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

[**Introduction**: The metal-chelating activity of metformin, which has long been known but of unclear clinical relevance, has recently been implicated in the pleiotropic effects, including antitumorigenic and anti-inflammatory actions, of the drug. However, whether metformin actually influences metal dynamics in humans has remained unknown. We here investigate whether metformin influences serum metal levels in individuals with type 2 diabetes.]

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148. **The Clock is Still Ticking: Tirzepatide and the Myth of Halting the Natural History of Type 2 Diabetes**

Authors: Fadini G.P.

Publication Date: 2025

Journal: Diabetes Therapy

[Prediabetes is a growing global health concern. In 2021, the global prevalence of impaired glucose tolerance (IGT) among adults aged 20–79 was estimated at 9.1% (464 million individuals), projected to rise to 10.0% (638 million) by 2045. Similarly, prevalence of impaired fasting glucose (IFG) was 5.8% (298 million) in 2021, with projections reaching 6.5% (414 million) by 2045. High-income countries currently exhibit the highest prevalence rates, but the most significant relative increases are anticipated in low-income nations [1].]

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149. **Comparative clinical outcomes of adults with obstructive sleep apnea and comorbid obesity receiving tirzepatide versus bariatric metabolic surgery: A Multi-Institutional propensity score matched study**

Authors: Wu J.Y., Lin Y.M., Hsu W.H., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: This study compared clinical outcomes of tirzepatide versus bariatric metabolic surgery (BMS) in adults with obstructive sleep apnea (OSA) and obesity.]

150. **Comparative outcomes of adding SGLT2 inhibitors versus incretin-based therapies to insulin in type 2 diabetes**

Authors: Yen F.S., Wei J.C.C., Huang Y.H., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To compare the risks of cardiovascular events and major microvascular complications associated with adding sodium-glucose cotransporter-2 (SGLT2) inhibitors versus dipeptidyl peptidase-4 (DPP-4) inhibitors or glucagon-like peptide-1 receptor agonists (GLP-1 RAs) to insulin therapy in patients with type 2 diabetes (T2D).]

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151. **Correction: Effcacy of Polyethylene Glycol Loxenatide in Combination with Basal Insulin in Patients with Type 2 Diabetes Mellitus: A Retrospective Real-World Study**

Authors: Liu X, Zhang Y, Zhao L.L., et al.

Publication Date: 2025

Journal: Diabetes Therapy

[This corrects "Efficacy of Polyethylene Glycol Loxenatide in Combination with Basal Insulin in Patients with Type 2 Diabetes Mellitus: A Retrospective Real-World Study." Diabetes Ther. 2025 Aug;16(8):1581-1592. doi: 10.1007/s13300-025-01737-4.]

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152. **Effects of retatrutide on body composition in people with type 2 diabetes: a substudy of a phase 2, double-blind, parallel-group, placebo-controlled, randomised trial**

Authors: Coskun T, Wu Q, Schloot N.C., et al.

Publication Date: 2025

Journal*:* Lancet Diabetes & Endocrinology

[**Background**: Retatrutide, a glucose-dependent insulinotropic polypeptide, glucagon-like peptide-1, and glucagon receptor agonist, has demonstrated robust glucose and bodyweight reductions in participants with type 2 diabetes. This substudy assessed percent change from baseline to week 36 in total body fat mass versus placebo and dulaglutide.]

153. **GLP-1 receptor agonists and the brain: could these medications boost more than metabolism?**

Author: Kirsten, Lawson

Publication Date: 2025

The Mental Elf

[Some of my earliest blogs (Kirsten Lawson – 4/4 – National Elf Service) were about the interface between physical health and mental health and it remains a keen interest of mine. With the well known evidence relating to earlier mortality for people with mental illness and the significant comorbidity of chronic physical health conditions and mental illness (see my earlier blogs for further detail), this remains a vital area for understanding and improvement. There has been a lot of work done in relation to the link between diabetes and mental illness (Search for "tag diabetes AND mental health" – National Elf Service) and the link between metabolic and psychiatric conditions appears to be bidirectional (Nouwen et al. 2010) meaning that if you have a metabolic disorder you are more likely to have a mental illness and if you have a mental illness you are more likely to have a metabolic disorder. It is really important that by treating one end of this spectrum we don't impact the other. Glucagon-Like Peptide 1 drugs aren't new. These drugs have been used to treat diabetes since early 2000s, but the interest in them has increased since their approved licence for weight loss. There have however been some concerns from international organisations and the World Health Organization regarding increased risk of suicidality, self-injury, and psychiatric adverse events in people prescribed GLP1-RAs. Formal research in relation to GLP1-RAs and psychiatric effects is limited to date and this blog reports on Pierret et al.'s meta-analysis of randomised placebo-controlled trials to evaluate psychiatric, cognitive, and quality of life outcomes with GLP1-RA treatment, published in JAMA in May 2025.]

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154. **Healthcare and prescription medication affordability in adults with diabetes in the United States, 2020–2023**

Authors: Kim D, Danpanichkul P, Wijarnpreecha K, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To examine the current affordability of healthcare and prescription medicine for adults with diabetes.]

155. **Medications for adults with type 2 diabetes: a living systematic review and network meta-analysis**

Authors: Nong K, Jeppesen B.T., Shi Q, et al.

Publication Date: 2025

Journal: BMJ

[**Objective**: To provide up-to-date evidence on key benefits, harms, and uncertainties regarding medications for adults with type 2 diabetes.]

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157. **Oral Semaglutide as an Opportunity for an Appropriate Therapeutic Switch in People with Type 2 Diabetes: A Delphi Consensus**

Authors: Bruglia M, Cardini F, Di Luzio R, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: The expanding range of therapeutic options for type 2 diabetes (T2D) calls for a reassessment of clinical scenarios in which existing glucose-lowering therapies might be substituted with the oral glucagon-like peptide 1 receptor agonist (GLP-1 RA) semaglutide (OS). In light of the numerous unresolved questions, a panel of experts was convened to develop practical guidance for clinicians using the Delphi consensus method.]

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158. **Pharmacokinetics and pharmacodynamics of empagliflozin in paediatric patients aged 10-17 years with type 2 diabetes mellitus**

Authors: Rascher J, Cheng S, Johnston C, et al.

Publication Date: 2025

Journal: British Journal of Clinical Pharmacology

[**Aims**: To characterize the pharmacokinetics (PK) and PK/pharmacodynamics (PD) regarding glycosylated haemoglobin (HbA1c) lowering using the paediatric data from DINAMO and to assess differences compared with adults.]

Guidelines

159. **GLP-1 medicines for weight loss and diabetes: what you need to know**

Author: Medicines and Healthcare products Regulatory Agency

Publication Date: 2025

Gov.UK

[Guidance on the safe and effective use of GLP-1 medicines for weight loss and diabetes.]

Prevention of diabetes (diet, exercise, lifestyle)

160. **Addressing the prediabetes epidemic in India: Challenges and strategies for prevention – A narrative review**

Author: Sowmya R, Supriya V, Rajkumar M, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Prediabetes is a global health concern, with India ranking second in terms of diabetes burden. The rapid transition from prediabetes to diabetes, driven by urbanization and globalization, underscores the need for effective intervention programs to prevent the diabetes epidemic. This narrative review explores the prevalence of prediabetes and its demographic determinants in India, the challenges in addressing prediabetes, the necessity for culturally tailored intervention programs and future directions for a population-based approach. A review of systematic reviews, peer-reviewed studies, national health surveys, and diabetes prevention trials was considered. Key reports from the World Health Organization and American Diabetes Association were also included via PubMed and Google Scholar databases. Prediabetes prevalence varies across India and is influenced by demographic disparities and inconsistencies in diagnostic criteria. Low screening prioritization, poor health literacy, limited research intensity and policy gaps hinder detection and intervention efforts. A multisectoral population-based approach that strengthens primary health care services and implements cost effective interventions is critical to curb the diabetes epidemic. Enhancing research, leveraging digital innovations and adopting global diabetes prevention models in the Indian context can improve prediabetes management and reduce the future burden of diabetes.]

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