

Diabetes

Current Awareness Bulletin

March 2024

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• 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: 18th March @ 11am, 10th April @ 12 noon & 9th May @ 2pm

• 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 April @ 11am & 12th May @ 12 noon

• Quickfire health literacy – getting your message across 30 minutes. Learn about the communication barriers patients may encounter, and ways to ensure they get the most from their care.

Next sessions: 2nd April @ 1pm & 15th May @ 2pm

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

GENERAL

Health disparities in diabetes treatment: The challenge of G6PD deficiency

Authors: Israel A, Raz I, Green I, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To assess the impact of Glucose-6-phosphate dehydrogenase (G6PD) deficiency, an enzymatic deficiency prevalent in individuals of African or Asian descent, on Hemoglobin A1c (HbA1c) levels, diabetes medication purchases, and the cumulative incidence of diabetes related complications.]

The Impact of Comorbid Dementia and Diabetes Mellitus on Hospital Patients' Outcomes: A Systematic Review and Meta-analysis

Authors: Gadsby-Davis K, Garner N, Ergin B.D., et al.

Publication date: 2005

Journal: Diabetes Therapy

[**Introduction**: Previous reviews have demonstrated that dementia and diabetes mellitus, separately, can worsen the hospital outcomes of patients. Unfortunately, there are no

systematic evaluations regarding the hospital outcomes of patients with dementia and diabetes mellitus as a comorbidity. Therefore, our review aimed to determine any differences in hospital length of stay, hospital mortality, and hospital readmission between patients with the comorbidity and patients without.]

The impact of the US election on diabetes

Authors: Hirsch I.B., Schatz D.A.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[The overwhelming support for Donald Trump on Nov 5, 2024, for the US presidential election, came as a surprise to many. The impact of the US election outcome on public health in general, and womens' health in particular, has received much attention. ¹ However, there has been little attention specifically to diabetes and endocrinology and how the incoming administration might manage topics, including costs and access to insulin, regulatory systems for drug and device approval, and both federal and industry funding of biomedical research. There are also general concerns about health insurance, particularly for underserved populations (eg, Medicaid, which is a state programme but supplemented with federal money).]

Children with Diabetes

Achievement of HbA _{1c} targets: real-world data from international paediatric type 1 diabetes registries

Authors: Karges B, Knip M.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[The St Vincent declaration ¹ calls for monitoring and comparing outcomes of diabetes care against treatment goals as a tool for quality control. National diabetes registries serve this purpose. ² In the past decade, lowering HbA _{1c} targets in children with type 1 diabetes ³ was a result of the overall improved HbA _{1c} and, simultaneously, decreased incidence of severe hypoglycaemia. ⁴ In the meantime, advances in diabetes technology have led to increased adoption of continuous glucose monitoring and insulin pump therapy, ⁵ facilitating treatment among young people with type 1 diabetes. With these developments, international HbA _{1c} targets have been established at less than 7·0% (<53 mmol/mol) and, in the UK and Sweden at 6·5% (48 mmol/mol). ⁵ The rationale for the attainment of near-normal glucose concentrations in young people with type 1 diabetes is to avoid acute and chronic complications. ⁵ Setting a lower HbA _{1c} target and consistency among health-care professionals is associated with achieving lower HbA _{1c} levels. ⁵]

Dysglycaemia definitions and progression to clinical type 1 diabetes in children with multiple islet autoantibodies

Authors: Hummel S, Koeger M, Bonifacio E, et al.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[The presymptomatic phase of type 1 diabetes is marked by the presence of two or more islet autoantibodies, classified into normoglycaemia (stage 1) and dysglycaemia (stage 2). 123 These stages guide the indication of therapies such as the anti-CD3 antibody, teplizumab, which is FDA approved for children aged 8 years or older with stage 2 type 1 diabetes. In the past decade, criteria for stage 2 have changed. TrialNet showed efficacy of teplizumab over placebo in delaying the clinical onset of type 1 diabetes and initially required two assessments that confirmed dysglycaemia, which was defined by impaired glucose tolerance (7.8–11.0 mmol/L at 120 min on an oral glucose tolerance test [OGTT]); impaired 30, 60, or 90 min OGTT values (\geq 11·1 mmol/L); or impaired fasting glucose (6·1–6·9 mmol/L) and was later modified to one assessment for people younger than 18 years. ¹ The American Diabetes Association (ADA) has added an impaired HbA 1c concentration and extended the impaired fasting glucose range (5.6-6.9 mmol/L), but excludes impaired intermediate OGTT values altogether in the stage 2 definition. ⁴ The progression rate to clinical type 1 diabetes in individuals with ADA stage 2 remains unclear. To evaluate the suitability of TrialNet and ADA criteria, we analysed progression rates in children with presymptomatic type 1 diabetes identified from a large general population-wide screening programme.⁵]

Intrauterine metformin exposure and adiposity outcomes in children: a systematic review and meta-analysis

Authors: Fu J, Tabbara N, Tomlinson G, et al.

Publication Date: 2025

Journal: BMJ Open

[**Objective**: The study aims to assess the effect of intrauterine metformin exposure on offspring adiposity measures in childhood.]

Treatment regimens and glycaemic outcomes in more than 100 000 children with type 1 diabetes (2013–22): a longitudinal analysis of data from paediatric diabetes registries

Authors: Zimmermann A.T., Lanzinger S, Kummernes S.J., et al.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[**Background**: Advances in paediatric type 1 diabetes management and increased use of diabetes technology have led to improvements in glycaemia, reduced risk of severe hypoglycaemia, and improved quality of life. Since 1993, progressively lower HbA _{1c} targets have been set. The aim of this study was to perform a longitudinal analysis of HbA _{1c},

treatment regimens, and acute complications between 2013 and 2022 using data from eight national and one international paediatric diabetes registries.]

Cardiovascular Disease

Body roundness index as a predictor of all-cause and cardiovascular mortality in patients with diabetes and prediabetes

Authors: Wang P, Fan Y, Gao H, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: There are limited population-based studies examining the correlation between body roundness index (BRI) and mortality in diabetes and prediabetes patients.]

Cardiovascular Health Metrics of Spouses of Indian Women with a History of Gestational Diabetes and Diabetes in Pregnancy: Results from CHIP-F Study

Authors; Gupta Y, Goyal A, Ambekar S, et al.

Publication date: 2025

Jounral: Diabetes Therapy

[**Introduction**: There are limited data on the prevalence of cardiovascular risk factors/diseases (diabetes, obesity, hypertension, and dyslipidemia) and their composite scores reflecting overall cardiovascular health among young (< 50 years old) married couples.]

Cardiovascular, Metabolic, and Safety Outcomes with Semaglutide by Baseline Age: Post Hoc Analysis of SUSTAIN 6 and PIONEER 6

Authors: Bain S.C., Belmar N, Hoff S.T., et al.

Publication date: 2025

Journal: Diabetes Therapy

[Introduction: The high risk of cardiovascular events in people with type 2 diabetes increases with age. The cardiovascular effects of once-weekly subcutaneous and once-daily oral semaglutide versus placebo in people with type 2 diabetes at high cardiovascular risk were investigated in the SUSTAIN 6 and PIONEER 6 cardiovascular outcomes trials, respectively. It is unknown whether the effects of semaglutide are age dependent.]

Effect of metformin on the clinical outcomes of stroke in patients with diabetes: a systematic review and meta-analysis

Authors: Liu J, Huang Z, Luo F, et al.

Publication date: 2025

Journal: BMJ Open

[**Objectives**: Stroke is a major cause of death and disability globally, especially among diabetic patients. In this study, we aim to scrutinise the effects of metformin on the clinical outcomes of stroke in diabetic patients.]

Effects of GLP-1 receptor agonists on kidney and cardiovascular disease outcomes: a meta-analysis of randomised controlled trials

Authors: Badve S.V., Bilal A, Lee M.M.Y., et al.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[**Background**: GLP-1 receptor agonists reduce the risk of major adverse cardiovascular events (MACE) and can also have kidney benefits. However, whether GLP-1 receptor agonists improve clinically important kidney outcomes remains uncertain. We aimed to comprehensively assess the effects of GLP-1 receptor agonists on kidney and cardiovascular disease outcomes by performing a meta-analysis of randomised controlled trials.]

Exploring the interplay between systolic blood pressure, cardiovascular disease, and diabetes: A call for further research

Authors: Khan S, Naveed F, Ahmad R, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[I am writing to express my gratitude for the informative research article titled "Cardiovascular disease modifies the relationship between systolic blood pressure and outcomes in people with diabetes" by Anping Cai et al., published in Diabetes Research and Clinical Practice [1]. This study offers valuable insights into the relationship between baseline systolic blood pressure (SBP) and health outcomes in individuals with diabetes. Notably, it highlights the role of pre-existing cardiovascular disease (CVD). It demonstrated a linear relationship between SBP and the risk of major adverse cardiovascular events (MACE) in individuals without CVD. However, in those with pre-existing CVD, no consistent pattern was observed regarding the relationship between SBP and health outcomes.]

Gender differences in the association between insulin resistance assessed by estimated glucose disposal rate and the risk of all-cause and cardiovascular deaths in adults without diabetes

Authors: Wang H, Zhou Z, Liu X, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aim**: We intended to examine the relationship between estimated glucose disposal rate (eGDR) and risks of all-cause and cardiovascular deaths in non-diabetic adults.]

Impact of live microbe intake on cardiovascular disease and mortality in adults with diabetes: A nationwide cohort study

Authors: Li J, Ye J, Zhou Q, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: This study examines the association between dietary intake of live microbes (LM) and the risk of cardiovascular disease (CVD) and cardiovascular mortality in adults with diabetes.]

Long-term weight change, incident cardiovascular disease and all-cause mortality among diabetic adults

Authors: Bai X, Zhang L, Ji X, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[We aimed to explore the impact of weight change from young to middle adulthood on incident cardiovascular disease (CVD) and all-cause mortality in US diabetic adults. All study subjects aged 40–79 years were from the US National Health and Nutrition Examination Survey (NHANES) 1988–2018, and they were non-pregnant and had complete data on self-reported weight at age 25 and 10 years before baseline enrollment over average 29.4 years. CVD events occurring from 10 years ago to baseline enrollment were recorded. Relative to stable non-obesity group, the strongest association was noted for the weight-losing group, followed by the stable-obesity group and weight-gaining group over following 10 years. Referring to the stable-obesity group identified significance for the stable non-obesity group. If total population had maintained non-obese from young to middle adulthood, 12 % of CVD cases could have been averted. Relative to the stable non-obesity group, subjects who maintained obese between young and middle adulthood had an increased risk of all-cause mortality. Our findings indicated that the risk for incident CVD and all-cause mortality was potentially reinforced in diabetic adults who were obese at age 25 but non-obese at midlife and who remained stable obese vis-à-vis those with stable non-obesity.]

The predictive value of estimated glucose disposal rate for all-cause and cardiovascular mortality in the US non-diabetic population aged ≥60 years: A population-based cohort study

Authors: Zhu B, Cao C, Liu W, et al.

Publication date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aims**: This study seeks to evaluate the prognostic significance of eGDR in predicting mortality outcomes within non-diabetic older adults.]

Relationship between glycemic variability and the incidence of postoperative atrial fibrillation following cardiac Surgery: A retrospective study from MIMIC-IV database

Authors: Zhou Z, Zhang H, Gu Y, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: This study aimed to explore the association between glycemic variability (GV) and postoperative atrial fibrillation (POAF) incidence.]

The relevance of remnant cholesterol as a guide for lipid management in Indian subjects undergoing coronary revascularization

Authors: Bansal M, Kasliwal R.R., Chandra P, et al.

Publication date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Background**: The atherogenic potential of remnant cholesterol, which refers to the cholesterol content of triglyceride-rich, non-low-density lipoprotein (LDL) particles in circulation, has gained increasing attention recently. Unfortunately, very limited information is available regarding remnant cholesterol levels in Indian subjects.]

Stepwise cardiovascular risk stratification in patients with type 2 diabetes based on coronary CT assessment

Authors: Wada S, Iwanaga Y, Nakai M, et al.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[**Background**: We aimed to examine the stepwise risk stratification for predicting major adverse cardiovascular events (MACE) in patients with DM and suspected coronary artery disease (CAD).]

YKL-40, cardiovascular events, and mortality in individuals recently diagnosed with type 2 diabetes: A Danish cohort study

Authors: Kjaergaard A.D., Vaag A, Jensen V.H., et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: We investigated the association of the inflammatory biomarker YKL-40 with cardiovascular events (CVEs) and mortality in individuals with type 2 diabetes.]

Eye Diseases

Diabetic macular edema: Variations in observations with intensive treatment optimizing glycemia

Authors: Varughese M.S., Nayak A.U.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[Letter reply - Phu A, Banghart M, Bahrainian M, Liu TYA, Wolf RM, Channa R. Dipeptidyl peptidase 4 inhibitors, sodium glucose cotransporter 2 inhibitors, and glucagon-like peptide 1 receptor agonists do not worsen diabetic macular edema. J Diabetes Complications. 2024 Aug;38(8):108808.]

Handgrip strength and risks of diabetic vascular complications: Evidence from Guangzhou Diabetic Eye Study and UK cohorts

Authors: Zhong P, Yang S, Liu R, et al.

Publication date: 2025

Journal: British Journal of Ophthalmology

[**Purpose**: The purpose is to investigate the association between handgrip strength (HGS) and the risk of future diabetic complications in multicountry cohorts.]

Patient and practitioner perceptions around use of artificial intelligence within the English NHS diabetic eye screening programme

Authors: Wahlich C, Chandrasekaran L, Chaudhry U.A.R., et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[Aims: Automated retinal image analysis using Artificial Intelligence (AI) can detect diabetic retinopathy as accurately as human graders, but it is not yet licensed in the NHS Diabetic Eye

Screening Programme (DESP) in England. This study aims to assess perceptions of People Living with Diabetes (PLD) and Healthcare Practitioners (HCP) towards Al's introduction in DESP.]

Kidney Disease

Effects of GLP-1 receptor agonists on kidney and cardiovascular disease outcomes: a meta-analysis of randomised controlled trials

Authors: Badve S.V., Bilal A, Lee M.M.Y., et al.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[**Background**: GLP-1 receptor agonists reduce the risk of major adverse cardiovascular events (MACE) and can also have kidney benefits. However, whether GLP-1 receptor agonists improve clinically important kidney outcomes remains uncertain. We aimed to comprehensively assess the effects of GLP-1 receptor agonists on kidney and cardiovascular disease outcomes by performing a meta-analysis of randomised controlled trials.]

Glucagon-like Peptide-1 receptor agonists versus dipeptidyl-peptidase 4 inhibitors in advanced chronic kidney disease and end stage kidney disease: Real world effectiveness and persistence of therapy

Authors: Sidra F.N.U., Agarwal S, Pastor P.L., et al.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[**Background**: Atherosclerotic cardiovascular disease is the leading cause of death in people with type 2 diabetes (T2D) and chronic kidney disease (CKD) or end-stage kidney disease (ESKD). Glucagon-Like Peptide-1 receptor agonists (GLP-1RA) reduce cardiovascular events, improve glycemic control, promote weight loss, and slow progression of nephropathy. Despite these benefits and professional society treatment guidelines recommendations, GLP-1RAs remain under-utilized in people with advanced CKD and ESKD due to tolerability and safety concerns.]

Risk Evaluation of Progression of Proteinuria and Renal Decline Based on a Novel Subgroup Classification in Chinese Patients with Type 2 Diabetes

Authors: Wang K, Qian Q, Bian C, et al.

Publication date: 2025

Journal: Diabetes Therapy

[**Introduction**: Type 2 diabetes mellitus (T2DM) is a highly heterogeneous disease with a varying risk of complications. The recent novel subgroup classification using cluster analysis contributed to the risk evaluation of diabetic complications. However, whether the subgroup

classification strategy could be adopted to predict the risk of onset and progression of diabetic kidney disease (DKD) in Chinese individuals with T2DM remains to be elucidated.]

Risk of renal complications and death in young and middle-aged Swedes with parental type 1 diabetes: a nation-wide, prospective cohort study

Authors: Fredriksson M, Persson E, Möllsten A, et al.

Publication date: 2025

Journal: BMJ Open Diabetes Research and Care

[**Introduction**: This study aimed to investigate if individuals with childhood-onset type 1 diabetes having a parent with the same condition (parental diabetes) had worse metabolic control and an increased risk of death and renal failure compared with those with parents without type 1 diabetes (sporadic diabetes).]

Slowly progressive subtype of childhood-onset type 1 diabetes as a high-risk factor for end-stage renal disease: A cohort study in Japan

Authors: Yokomichi H, Mochizuki M, Suzuki S, et al.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aim**: To compare the incidence of end-stage renal disease (ESRD) between slowly progressive type 1 diabetes and acute-onset type 1 diabetes.]

Liver Disease

Hepatic effects of GLP-1 mimetics in diabetic milieu: A mechanistic review of involved pathways

Authors: Yaribeygi H, Kashian K, Moghaddam K.I., et al.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[Patients with diabetic are at a higher risk of developing hepatic disorders compared to nondiabetic individuals. This increased risk can be attributed to the diabetic environment, which triggers and exacerbates harmful pathways involved in both diabetic complications and hepatic disorders. Therefore, it is important to consider the use of antidiabetic agents that offer benefits beyond glycemic control and have positive effects on liver tissues. Glucagon-like peptide-1 (GLP-1) mimetics are a novel class of antidiabetic medications known for their potent blood sugar-lowering effects. Emerging evidence suggests that these drugs also have favorable effects on the liver. However, the precise effects and underlying mechanisms are not yet fully understood. In this review, we aim to provide a mechanistic perspective on the liver benefits of GLP-1 mimetics and outline the mediating mechanisms involved.]

Type 2 diabetes and the minor allele of *PNPLA3* consistently identify high-risk metabolic dysfunction associated steatotic liver disease

Author: Younossi Z.M., Estep J.M., Felix S, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: Association of genetic factors with non-invasive tests (NITs) for MASLD has not been well established.]

Complications (find here atherosclerosis, claudication, diabetic foot Diabetic Foot, ulcers etc)

Conservative surgery for forefoot osteomyelitis may increase reulceration-free survival compared to minor amputation in diabetes-related foot disease

Authors: Víquez-Molina G, Rojas-Bonilla J.M., Aragón-Sánchez J.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[This study suggests that conservative surgery may improve reulceration-free survival in patients with diabetes-related forefoot osteomyelitis, compared to minor amputation. By excluding patients with prior surgeries, the analysis more accurately reflects the benefits of conservative surgery. These findings highlight the importance of preserving foot structure to maintain biomechanics and reduce reulceration risk.]

The impact of cold application on pain and comfort during the process of diabetic foot care

Authors: Turan M, Özbay H, Avşar M.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background and Aim**: Given the significance of pain management in the context of diabetic foot ulcer (DFU) care, particularly in terms of ensuring patient adherence to treatment regimens, this study was undertaken to ascertain the impact of cold washing on pain and comfort levels during diabetic foot care.]

Measurement of plantar pressure differences in the contralateral limb when using offloading modalities for diabetic foot ulcerations

Authors: Ngui I.R.Y., Bowden J, Jones S.L., et al.

Publication date: 2025

Journal: Journal of Foot and Ankle Research

[**Background**: This study investigated the effect of various offloading devices commonly used for the management of diabetic foot ulcerations on peak plantar pressure and pressure–time integral of the contralateral limb.]

Outcome evaluation and cost-effectiveness analysis for an integrated multidisciplinary diabetic limb salvage program: a combined observational and simulation study

Authors: Ge L, Sun Y, Tan E, et al.

Publication date: BMJ Open Diabetes Research and Care 2025;13: e004688

[**Introduction**: To compare the clinical outcomes and healthcare utilization of patients enrolled in the multidisciplinary Diabetic Foot in Primary and Tertiary (DEFINITE) Care program with a matched historical cohort and estimate the program's long-term cost-effectiveness using simulation.]

Placenta-derived biomaterials vs. standard care in chronic diabetic foot ulcer healing: A systematic review and meta-analysis

Authors: Ruiz-Muñoz M, Martinez-Barrios F.J., Lopezosa-Reca E.

Publication date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Introduction**: This study explored the effectiveness of current placenta-derived biomaterials therapies in ulcer healing in DFU compared to standard of care (SOC).]

Diabetic Ketoacidosis

SQuID (subcutaneous insulin in diabetic ketoacidosis): Clinician acceptability

Authors: Griffey R.T., Schneider R.M., Girardi M, et al.

Publication date: 2025

Journal: Academic Emergency Medicine

[**Background**: We previously implemented the SQuID protocol (subcutaneous insulin in diabetic ketoacidosis [DKA]) demonstrating safe, effective treatment of low- to moderate-severity DKA in a non-intensive care unit setting. Since success and sustainability of interventions rely on staff buy-in, we assessed acceptability of SQuID among emergency department (ED) and inpatient clinicians.]

SQuID (subcutaneous insulin in diabetic ketoacidosis) II: Clinical and operational effectiveness

Authors: Griffey R.T., Schneider R.M., Girardi M, et al.

Publication date: 2025

Journal: Academic Emergency Medicine

[**Objective**: We previously demonstrated safe treatment of low- to moderate-severity (LTM) diabetic ketoacidosis (DKA) using the SQuID protocol (subcutaneous insulin in DKA) in a non-intensive care unit (ICU) observation setting, with decreased emergency department length of stay (EDLOS). Here, we expand eligibility to include sicker patients and admission to a regular medical floor and collected more detailed clinical data in a near-real-time fashion.]

Diabetes and pregnany

Cardiovascular Health Metrics of Spouses of Indian Women with a History of Gestational Diabetes and Diabetes in Pregnancy: Results from CHIP-F Study

Authors: Gupta Y, Goyal A, Ambekar S, et al.

Publication date: 2025

Journal: Diabetes Therapy

[**Introduction**: There are limited data on the prevalence of cardiovascular risk factors/diseases (diabetes, obesity, hypertension, and dyslipidemia) and their composite scores reflecting overall cardiovascular health among young (< 50 years old) married couples.]

WeChat mini-program, a preliminary applied study of the gestational blood glucose management model for pregnant women with gestational diabetes mellitus

Authors: Wang Q, Zhang K, Zhang X, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: The mHealth has been increasing in pregnancy. However, the WeChat miniprogram based gestational glucose management model for gestational diabetes mellitus (GDM) during pregnancy has not been established.]

Diabetes Mellitus Type 1

Comparison of the glycemia risk index and time in range in a case series of using automated insulin delivery to improve glycemic control in people with type 1 diabetes and end stage kidney disease on hemodialysis

Authors: Ayers A.T., Ho C.N., Hussain S, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[To whom it may concern: We recently read with interest the article "Case series of using automated insulin delivery to improve glycaemic control in people with type 1 diabetes and end stage kidney disease on haemodialysis" [1] by Chaudhry et al., published in the November 2024 issue of *Diabetes Research and Clinical Practice*. This paper used time in range (TIR) to assess improved glycemic control. In the *Journal of Diabetes Science and Technology*, we recently published papers related to two different aspects of the Chaudhry paper: a consensus report on the use of continuous glucose monitoring (CGM) in patients with chronic kidney disease (CKD) and diabetes [2], and a paper outlining our development of the glycemia risk index (GRI) as a tool to measure glycemic control [3]. GRI and TIR both illustrate the quality of glycemia from a 14-day CGM tracing. However, TIR does not account for variability, but GRI incorporates TIR and glycemic variability. The improved outcome for users of automated insulin delivery (AID) systems might have been at least in part due to decreased glycemic variability.]

Ethnic disparities in HbA1c and hypoglycemia among youth with type 1 diabetes: beyond access to technology, social deprivation and mean blood glucose

Authors: Pemberton J.S., Fang Z, Chalew S.A., et al.

Publication date: 2025

Journal: BMJ Open Diabetes Research and Care

[Introduction: The UK national pediatric diabetes audit reports higher HbA1c for children and young people (CYP) with type 1 diabetes (T1D) of Black ethnicity compared with White counterparts. This is presumably related to higher mean blood glucose (MBG) due to lower socioeconomic status (SES) and less access to technology. We aimed to determine if HbA1c ethnic disparity persists after accounting for the above variables.]

Factors influencing the acceptability of automated insulin delivery systems in youths with type 1 diabetes and their parents

Authors: Franceschi R, Pertile R, Marigliano M, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: New technology has been reported as a factor driving people to choose an automatic insulin delivery system (AIDs) and to sustain its acceptance. We aimed to explore the role of

continuous glucose monitoring (CGM) technology (instant scanning vs. real-time) and insulin treatment modality to determine the future acceptance of AIDs among T1D individuals.]

Men with type 1 diabetes had a more than 7-fold odds of elevated depressive symptoms compared to men without diabetes

Authors: Driscoll K.A., Rasmussen C.R.G., O'Donnell H, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: To examine: 1) differences in prevalence of elevated depressive symptoms between individuals with type 1 diabetes (T1D) and without any type of diabetes overall and by sex; and 2) associations between depressive symptoms and HbA1c, self-management behaviors, and cardiovascular health.

Research Design and Methods: Adults (n = 414) with T1D (mean age = 52 ± 9 years, mean duration = 38 ± 9 years; mean HbA1c = 7.8 ± 1.1 mg/dL or 177 mmol/L; 55 % female) and without any type of diabetes (n = 488; mean age = 51 ± 9 years; 51 % female) from the fourth study visit of CACTI, an observational study, completed questionnaires about depressive symptoms and dietary intake. Only adults with T1D completed a questionnaire about diabetes self-management. Hierarchical logistic regression models were used to examine demographic and clinical characteristics associated with depressive symptoms.]

Performance of a safety protocol for scuba diving in people with type 1 diabetes: 20 years of "Diabete Sommerso®" experience

Authors: Gamarra E, Trimboli P, Careddu G, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice 2025, 219: 111945.

[**Background and aims**: Scuba diving for people with diabetes was discouraged due to hypoglycemia risks. However, evolving guidelines now enable safe diving for people with diabetes. Among them, the Diabete Sommerso® safety protocol. This study aims to describe data from 20 years of DS activities and evaluate the performance of the protocol in avoiding metabolic complications.]

Risk of renal complications and death in young and middle-aged Swedes with parental type 1 diabetes: a nation-wide, prospective cohort study

Authors: Fredriksson M, Persson E, Möllsten A, et al.

Publication date: 2025

Journal: BMJ Open Diabetes Research and Care

[**Introduction**: This study aimed to investigate if individuals with childhood-onset type 1 diabetes having a parent with the same condition (parental diabetes) had worse metabolic

control and an increased risk of death and renal failure compared with those with parents without type 1 diabetes (sporadic diabetes).]

Serological markers of exocrine pancreatic function are differentially informative for distinguishing individuals progressing to type 1 diabetes

Authors: Williams M.D., Grace C.R., Posgai A.L., et al.

BMJ Open Diabetes Research and Care 2025;13: e004655

[**Introduction**: Altered serum levels of growth hormones, adipokines, and exocrine pancreas enzymes have been individually linked with type 1 diabetes (T1D). We collectively evaluated seven such biomarkers, combined with islet autoantibodies (AAb) and genetic risk score (GRS2), for their utility in predicting AAb/T1D status.]

Slowly progressive subtype of childhood-onset type 1 diabetes as a high-risk factor for end-stage renal disease: A cohort study in Japan

Authors: Yokomichi H, Mochizuki M, Suzuki S, et al.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aim**: To compare the incidence of end-stage renal disease (ESRD) between slowly progressive type 1 diabetes and acute-onset type 1 diabetes.]

Diabetes mellitus Type 2

Association between use of sodium-glucose co-transporter-2 inhibitor and the risk of incident dementia: a population-based cohort study

Authors: Abdullah Z, Cui Y, Platt R.W., et al.

Publication date: 2025

Journal: BMJ Open Diabetes Research and Care

[**Objectives**: To assess the association between sodium-glucose co-transporter-2 inhibitor (SGLT-2i) use and the risk of incident dementia compared with dipeptidyl peptidase-4 inhibitors (DPP-4i) use among individuals with type 2 diabetes.]

Association of Novel Clinical and Behavioural Markers with HbA1c Improvement: A Latent Class Analysis of 912 Patients with Type 2 Diabetes Mellitus

Authors: Gan Y, Kwan Y.H., Seah J.Y.H., et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: The escalating prevalence of Type 2 Diabetes Mellitus (T2DM) overwhelms healthcare systems. Lifestyle interventions enhancing patient monitoring and adherence vary in efficacy, emphasizing the need to understand differential response across patient subgroups. This study aimed to segment patients with T2DM into distinct latent classes and identify characteristics associated with optimal 12-month glycated haemoglobin (HbA1c) reduction.]

Balanced diets are associated with a lower risk of type 2 diabetes than plant-based diets

Authors: Kang B, Yin X, Chen D, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background & Aims**: Plant-based diets benefit human health, while the deficient in some nutrients limits its application. We aimed to examine whether balanced diets could be better in reducing diabetes risk than plant-based diets.]

Decoding the disproportionate risk factor landscape of global type 2 diabetes burden in adults: An attribution analysis from 1990 to 2050

Authors: Huang Y, Wang J, Xu L, et al.

Publication date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Introduction**: Limited systematic assessments of risk factor contributions to the global burden of type 2 diabetes (T2D) across subpopulations hinder targeted policies and resource allocation.]

Diabetes complications in people with alcohol use disorder and type 2 diabetes

Authors: Cook S, Saxena S, Mathur R, et al.

Publication date: 2024

Journal: BJGP Open

[**Background**: People living with alcohol use disorder (AUD) who develop Type 2 Diabetes (T2DM) may be at higher risk of diabetes-complications.

Aim: Our aims were to compare diabetes-monitoring and incidence of diabetes-complications between people with and without AUD prior to T2DM diagnosis attending primary care in England.]

Effects of lifestyle interventions on the prevention of type 2 diabetes and reversion to normoglycemia by prediabetes phenotype: A systematic review and meta-analysis of randomized controlled trials

Authors: Chai X, Wang Y, Yin X, et al.

Publication date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Objective**: To explore the effects of lifestyle interventions on the prevention of type 2 diabetes (T2D) and reversion to normoglycemia by prediabetes phenotype.]

Efficacy of flash glucose monitoring on HbA1c in type 2 diabetes: An individual patient data meta-analysis of real-world evidence

Authors: Heer R.S., Lovegrove J, Welsh Z.

Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: There is a growing body of evidence demonstrating the benefit of flash glucose monitoring in type 2 diabetes mellitus (T2DM). This individual patient data *meta*-analysis aimed to investigate the impact of commencing flash glucose monitoring on HbA1c in people living with T2DM treated with insulin in a real-world setting.]

Evaluation of a type 2 diabetes remission programme

Authors: Han J, Shan D.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[We are writing in response to the recent Article by Jonathan Valabhji and colleagues regarding the NHS Type 2 Diabetes Path to Remission Programme. ¹ While we commend the authors for their substantial effort in conducting this real-world implementation study, we believe that certain aspects of the interpretation of the results and discussion warrant further consideration. Specifically, in our opinion, there are some conclusions that seem somewhat overstated or lack sufficient nuance, particularly in the discussion of the remission rates and weight loss outcomes.]

Evaluation of a type 2 diabetes remission programme

Author: Quimby K.R.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[The Article by Jonathan Valabhji and colleagues advances the feasibility of the National Health Service (NHS) Type 2 Diabetes Path to Remission (T2DR) programme. ¹ Findings from the Barbados Diabetes Remission Study-2 (BDRS2), published in 2021 and 2022, are other examples of translation of a clinic-run type 2 diabetes remission protocol to community settings. 23 Whereas formal 1-year follow-up was stymied by the COVID-19 pandemic, these studies reported that induction of remission at 12 weeks is possible in the real world, specifically through community health workers in faith-based organisations and to individual participants via social media platforms. BDRS2 had an all-Black study population. The mean weight loss was 6 kg, accompanied by a remission rate of 60% (HbA 1c <6.5%). This is less than the approximately 10 kg weight loss in the NHS T2DR study and greater than the approximately 30% remission rate. This supports Valabhji and colleagues' observations that Black people attained remission with comparatively less weight loss. Valabhji and colleagues also noted that remission rates were lower in the community compared with the clinic setting. Although remission in BDRS-2 was comparable to the clinic-run BDRS-1, ⁴ we also examined the relationship of implementation outcomes, such as fidelity, to remission rates within BDRS-2, and found that participant compliance with the dietary intervention was poor, despite the clinical effectiveness (unpublished data).]

Evaluation of a type 2 diabetes remission programme – Authors' reply

Authors: Barron E, Valabhji J, Bakhai C.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[We would like to thank the authors of these Correspondences for their considered responses to our findings. Jiashu Han and Dan Shan raise some important points concerning our analysis of remission, implementation of the study, and interpretation of the results. Some of these points are beyond the scope of our study, which focused on quantitative evaluation. Our quantitative analyses were complemented by independent qualitative evaluations of the programme, commissioned by the National Institute for Health and Care Research. ¹ These have now been published separately and assess the psychological and socioeconomic barriers reported by participants, particularly during food introduction, including emotional eating behaviours, the impact of life events on concordance, challenges making healthy food choices when preparing family meals, cultural acceptability, the costs of healthy food, and variable access to opportunities for physical activity. 234 Various strategies have been suggested for overcoming these, including tailoring support to participants' individual circumstances, flexibility in allowing pauses from the programme in response to life events, strengthening provision of peer support, opportunities for family involvement, and the linking of programme delivery with locally commissioned services.]

High one-hour plasma glucose is an intermediate risk state and an early predictor of type 2 diabetes in a longitudinal Korean cohort

Authors: Im M, Kim J, Ryang S, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[Aims: Because one-hour post-load plasma glucose (1h-PG) \geq 155 mg/dL (8.6 mmol/L) has been proposed as an early marker for future diabetes but lacks sufficient longitudinal confirmation of its risk, we aimed to evaluate the risk of T2D based on 1h-PG and track changes of insulin sensitivity and β -cell function over time by 1h-PG in a longitudinal cohort.]

Mechanism of TGIF1 on glycolipid metabolism disorders in mice with type 2 diabetes

Authors: Bai F, Zheng L, Tao L, et al.

Publication date: 2025

Journal: BMJ Open Diabetes Research and Care

[**Introduction**: Type 2 diabetes (T2D) is a chronic condition characterized by high levels of blood glucose resulting from the inefficiency of insulin. This study aims to explore the mechanism of TGFB-induced factor homeobox 1 (TGIF1) in the glycolipid metabolism of mice with T2D.]

Prognostic importance of baseline and changes in serum uric acid for macro/microvascular and mortality outcomes in individuals with type 2 diabetes: The Rio de Janeiro type 2 diabetes cohort

Authors: Cardoso C.R.L., Da Silva Pereira L, Leite N.C., et al.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: To investigate the associations between baseline/changes in serum uric acid (sUA) and the risks for cardiovascular/microvascular outcomes and mortality in a type 2 diabetes cohort.]

Retraction: Circulating long non-coding RNAs NKILA, NEAT1, MALAT1, and MIAT expression and their association in type 2 diabetes mellitus

Author: American Diabetes Association

Publication date: 2025

Journal: BMJ Open Diabetes Research and Care

[This article has been retracted by the journal due to peer review manipulation and concerns that the ethical approval supplied by the authors is inconsistent with the research described.]

Temporal incremental healthcare costs associated with complications in Hong Kong Chinese patients with type 2 diabetes: A prospective study in Joint Asia diabetes evaluation (JADE) Register (2007–2019)

Authors: Lui J.N.M, Lau E.S.H., Li A.Q.Y., et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: We examined incremental healthcare costs (inpatient and outpatient) related to complications in Chinese patients with type 2 diabetes (T2D) during the year of occurrence and post-event years, utilizing the Joint Asia Diabetes Evaluation (JADE) Register cohort of Hong Kong Chinese patients with T2D between 2007 and 2019.]

Glucose monitoring and control

Publisher Correction to: Criteria for Personalised Choice of a Continuous Glucose Monitoring System: An Expert Opinion

Authors: Di Molfetta S, Rossi A, Boscari F, et al.

Publication date: 2025

Journal: Diabetes Therapy

[The original version of this article unfortunately contained a mistake. The affiliation for Daniela Bruttomesso was incorrect.]

Treatment Patterns and Glycaemic Control Between 2015 and 2019 in Tianjin, China: A Real-World Study of Adults with Type 2 Diabetes

Authors: Zhang Q, Fan Y, Liu X, et al.

Publication date: 2025

Journal: Diabetes Therapy

[Introduction: Diabetes is associated with a high economic burden in China; therefore, strategies to prevent diabetes, improve glycaemic control, delay disease-related complications and maintain quality of life are essential. This study was conducted to evaluate trends in treatment patterns and glycaemic control in people with type 2 diabetes (T2D) in real-world clinical practice in Tianjin, China.]

Hyperglycaemia

Cambridge risk score, new hyperglycemia, and complications in surgical patients without diabetes

Authors: Lee H, Hartfield P.J., Thorgerson A, et al.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: Our study examined the association between the Cambridge Risk Score (CRS), new hyperglycemia (NH), and complications in patients undergoing elective surgery.]

Comparing ADA and IDF diagnostic criteria for intermediate hyperglycaemia and diabetes in the SHiDS study

Authors: Zhang Y, Liu S, Cao B, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: This study aimed to assess the prevalence of IH and diabetes, as well as insulin secretion, insulin sensitivity, and related curve patterns in subjects with different glucose tolerance categories according to the diagnostic criteria established by the American Diabetes Association (ADA) and the more recently published International Diabetes Federation (IDF) guidelines.]

Differences in target organ damage in individuals with intermediate hyperglycemia and type 2 diabetes identified by 1-hour plasma glucose during an oral glucose tolerance test

Authors: Cefalo C.M.A., Riccio A, Fiorentino T.V., et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[Aims: The International Diabetes Federation (IDF) has recently recommended determination of 1-hour glucose during an oral glucose tolerance test (OGTT) to diagnose intermediate hyperglycemia (IH) and type 2 diabetes (T2D). Herein, we investigated the implications of IDF recommendation for characterizing the risk of cardiovascular target organ damage including left ventricular mass normalized by body surface area (LVM index [LVMI]), and myocardial mechano-energetic efficiency normalized by LVM (MEEi) in individuals with IH and T2D. **Methods**: LVMI, and MEEi were assessed in 1847 adults classified on the basis of fasting, 1-hour and 2- hour glucose during an OGTT according to the IDF recommendation as having normal glucose tolerance (NGT, n = 736), isolated impaired fasting glucose (iIFG, n = 105), IH (n = 676), and newly diagnosed T2D (n = 330). **Results**: As compared with NGT group, individuals with either IH or T2D exhibited significantly higher LVMI (97 ± 26, 109 ± 30, and 116 ± g/m2, P < 0.001, respectively), and a decrease in MEEi (0.42 ± 0.11, 0.37 ± 0.10, and 0.35 ± 0.11 ml/sec*g-1, P < 0.001, respectively). LVMI, and MEEi did not differ between NGT

and iIFG groups. **Conclusion**: The thresholds of 1-hour post-load glucose proposed by IDF as diagnostic criteria for IH and T2D are capable of detecting individuals at risk of cardiovascular target organ damage.]

Hypoglycaemia

Ethnic disparities in HbA1c and hypoglycemia among youth with type 1 diabetes: beyond access to technology, social deprivation and mean blood glucose

Authors: Pemberton J.S., Fang Z, Chalew S.A., et al.

Publication date: 2025

Journal: BMJ Open Diabetes Research and Care

[Introduction: The UK national pediatric diabetes audit reports higher HbA1c for children and young people (CYP) with type 1 diabetes (T1D) of Black ethnicity compared with White counterparts. This is presumably related to higher mean blood glucose (MBG) due to lower socioeconomic status (SES) and less access to technology. We aimed to determine if HbA1c ethnic disparity persists after accounting for the above variables.]

Insulin Thereapies

Diabetes specialist nurse support, training and 'virtual' advice reduces district nurse visits and improves outcomes for people with diabetes requiring visits for insulin administration

Authors: Gilligan L, Page E, Hall J, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical

[**Aims**: We evaluated the effectiveness of a community diabetes specialist nurse (cDSN) working with district nurses (DNs) to optimise insulin therapy on DN workload and patient outcomes.]

Exploring insulin resistance and pancreatic function in individuals with overweight and obesity: Insights from OGTTs and IRTs

Authors: Liu X, Zhou H, Liu Y, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[To investigate insulin resistance and pancreatic β -cell function in overweight or obese people under the same glucose tolerance conditions.

The subjects were categorized based on the results of the oral glucose tolerance test (OGTT) and the BMI classification criteria. Basal and postprandial glucose concentrations, insulin concentrations, pancreatic β -cell function (HOMA- β), the insulin resistance index (HOMA-IR),

and the insulin early secretion index (Δ I30/ Δ G30) were compared between the different weight groups. Among individuals with similar glucose tolerances, those in the obese group presented higher HOMA- β , HOMA-IR, and Δ I30/ Δ G30 values than did those in the normal weight and overweight groups. Additionally, in individuals with normal glucose tolerance and early diabetes, OGTT 1-h plasma glucose concentrations demonstrated a stronger correlation with early insulin secretion across different body weights. When the same glucose-tolerant population was grouped by weight, OGTTs were significantly less different than IRTs. Therefore, integrating both tests is the optimal approach. In individuals with preobesity, there is an increase in pancreatic β -cell function to maintain normal blood glucose levels. As the disease progresses, obesity substantially increases insulin resistance, which acts as a disease-promoting factor. Furthermore, OGTT 1-h plasma glucose concentrations are strongly correlated with insulin secretion in normal or early diabetic populations.]

Factors influencing the acceptability of automated insulin delivery systems in youths with type 1 diabetes and their parents

Authors: Franceschi R, Pertile R, Marigliano M, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: New technology has been reported as a factor driving people to choose an automatic insulin delivery system (AIDs) and to sustain its acceptance. We aimed to explore the role of continuous glucose monitoring (CGM) technology (instant scanning vs. real-time) and insulin treatment modality to determine the future acceptance of AIDs among T1D individuals.]

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

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

Publication date: 2025

Journal: Diabetes Therapy

[**Introduction**: Appropriate glycemic control is paramount for people with type 1 diabetes (PwT1D) by the effective delivery of exogenous insulin. However, glycemic variability and the risk of severe hypoglycemia must be reliably controlled.]

Mental Health and Disabetes

Impact of visit-to-visit glycated hemoglobin variability on diabetes distress and its subscales

Authors Hong S.H., Jee Y, Sung Y.A., et al.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: This study aimed to investigate the correlations between glycated hemoglobin (HbA1C) variability and diabetes distress (DD) and its subscales in older patients with type 2 diabetes mellitus.]

Men with type 1 diabetes had a more than 7-fold odds of elevated depressive symptoms compared to men without diabetes

Authors: Driscoll K.A., Rasmussen C.R.G., O'Donnell H, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: To examine: 1) differences in prevalence of elevated depressive symptoms between individuals with type 1 diabetes (T1D) and without any type of diabetes overall and by sex; and 2) associations between depressive symptoms and HbA1c, self-management behaviors, and cardiovascular health.

Research Design and Methods: Adults (n = 414) with T1D (mean age = 52 ± 9 years, mean duration = 38 ± 9 years; mean HbA1c = 7.8 ± 1.1 mg/dL or 177 mmol/L; 55 % female) and without any type of diabetes (n = 488; mean age = 51 ± 9 years; 51 % female) from the fourth study visit of CACTI, an observational study, completed questionnaires about depressive symptoms and dietary intake. Only adults with T1D completed a questionnaire about diabetes self-management. Hierarchical logistic regression models were used to examine demographic and clinical characteristics associated with depressive symptoms.]

Pharmacological management of diabetes

Dapagliflozin improves the dysfunction of human umbilical vein endothelial cells (HUVECs) by downregulating high glucose/high fat-induced autophagy through inhibiting SGLT-2

Authors: Lin L, Zhong S, Zhou Y, et al.

Publication date: 2025

Journal: Journal of Diabetes and Its Complications

[**Objective**: To investigate the effect of Dapagliflozin (Da) on the disorders of human umbilical vein endothelial cells (HUVECs) induced by high glucose and high fat (HG/HF).]

The era of GLP-1 receptor agonists: costs versus benefits

Author: The Lancet Diabetes & Endocrinology.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[Randomised controlled trials and real word evidence have consistently shown that GLP-1 receptor agonists are effective and acceptably safe for the treatment of type 2 diabetes and obesity, leading to the approval of semaglutide for these two indications (Ozempic and Wegovy, respectively, both manufactured by NovoNordisk). This year, semaglutide (Wegovy) was also approved for preventing the risk of cardiovascular events in patients with established cardiovascular disease and either obesity or overweight. Furthermore, more recent data, including a systematic review and meta-analysis of large clinical trials published in this journal, indicate that semaglutide reduces the risk of kidney failure and death in people with type 2 diabetes and chronic kidney disease.]

Evaluating the causal effect of using glucagon-like peptide-1 receptor agonists on the risk of autoimmune diseases

Authors: Sun Y, Zhou Q, Onzere L.E., et al.

Publication date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Objective**: To investigate the causal association of using glucagon-like peptide-1 receptor (GLP1R) agonists with autoimmune diseases.]

Oral Semaglutide Use in Type 2 Diabetes: A Pooled Analysis of Clinical and Patient-Reported Outcomes from Seven PIONEER REAL Prospective Real-World Studies

Authors: Rudofsky G, Amadid H, Braae U.C., et al.

Publication date: 2025

Journal: Diabetes Therapy

[Introduction: Oral semaglutide is a glucagon-like peptide 1 receptor agonist (GLP-1RA) approved for improving glycemic control in adults with type 2 diabetes (T2D). The PIONEER REAL program evaluates clinical and patient-reported outcomes of oral semaglutide treatment as part of routine clinical practice across 13 countries. Here, data from Canada, Denmark, Italy, the Netherlands, Sweden, Switzerland, and the UK are pooled and analyzed to address treatment satisfaction as well as glycated hemoglobin (HbA1C) and body weight changes in relevant subgroup analyses.]

Post Hoc Analysis of SURPASS-1 to -5: Efficacy and Safety of Tirzepatide in Adults with Type 2 Diabetes are Independent of Baseline Characteristics

Authors: De Block C, Peleshok J, Wilding J.P.H., et al.

Publication date: 2025

Journal: Diabetes Therapy

[Introduction: Newer incretin-based therapies for type 2 diabetes (T2D) have the potential to substantially reduce glycated hemoglobin (HbA1c) and weight with a low associated risk of hypoglycemia. This study aimed to assess the percentage of participants randomized to tirzepatide or comparator who achieved the composite endpoint of HbA1c \leq 6.5% and weight reduction \geq 10% without hypoglycemia across prespecified baseline characteristics: T2D duration (\leq 5, > 5-10, or > 10 years), sex, HbA1c (\leq 8.5% or > 8.5%), age (< 65 or \geq 65 years), and body mass index (< 30, 30 to < 35, or \geq 35 kg/m²).]

The promise and hope of GLP-1 receptor agonists

Authors: Sumithran P, Ard J.

Publication date: 2025

Journal: Lancet Diabetes & Endocrinology

[GLP-1 receptor agonists were originally developed for the treatment of type 2 diabetes, and later of obesity, but there is growing evidence that their benefits extend far beyond reductions in blood glucose and bodyweight. Several agents in the GLP-1 receptor agonist class have been shown to reduce the risk of major adverse cardiovascular events (MACE) and the progression of chronic kidney disease in people with type 2 diabetes. ¹ Moreover, in 2023, the SELECT trial ² found that 2·4 mg semaglutide per week reduced MACE by 20% over a mean period of 3·3 years in people with pre-existing cardiovascular disease and overweight or obesity but without type 2 diabetes.]

Real-world experience of adjunct weekly semaglutide in Type 1 diabetes. Is it worth it?

Authors: Cohen N, Yeung A, Jenkins A.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[Many adults with Type 1 diabetes (T1D) do not meet recommended HbA1c targets, are overweight or obese and insulin resistant, which increases risk of adverse outcomes 1 2 3. To improve glycaemia, weight and potentially other risk factors there is interest in adjunct treatments such as GLP-1 agonists, with some positive clinical trials [4]. Currently its use is off-label due to side-effects, including increased risk of diabetic ketoacidosis [5] and early worsening of diabetic retinopathy [6].]

Real-world safety of dapagliflozin plus metformin in patients of type 2 diabetes mellitus in China: Post-hoc analysis of the DONATE study

Authors: Guo L, Wang J, Li L, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aim**: DONATE (NCT03156985) is a large-scale real-world study investigating the safety of dapagliflozin in Chinese type 2 diabetes mellitus (T2DM) patients. This post-hoc analysis aims to further evaluate the real-world safety of dapagliflozin plus metformin.]

Use of, time to, and type of first add-on anti-hyperglycaemic therapy to metformin in Australia, 2018-2022

Authors: Milder T.Y., Lin J, Pearson S.A., et al.

Publication date: 2025

Journal: British Journal of Clinical Pharmacology

[**Aims**: The aim of this study was to examine contemporary trends in the use of, time to, and type of first add-on anti-hyperglycaemic therapy to metformin in Australia.]

Guidelines

Elective peri-operative management of adults taking glucagon-like peptide-1 receptor agonists (GLP-1)

Author: Association of Anaesthetists of Great Britain and Ireland (AAGBI)

Publication date: 2025

[Glucagon-like peptide-1 receptor agonists, dual glucose-dependent insulinotropic peptide receptor agonists and sodium-glucose cotransporter-2 inhibitors are used increasingly in patients receiving peri-operative care. These drugs may be associated with risks of peri-operative pulmonary aspiration or euglycaemic ketoacidosis. We produced a consensus statement for the peri-operative management of adults taking these drugs.]

GLP-1 and dual GIP/GLP-1 receptor agonists: potential risk of pulmonary aspiration during general anaesthesia or deep sedation (Gov.UK Drug Safety Update)

Author: Medicines and Healthcare products Regulatory Agency (MHRA)

Publication date: 2025

[Healthcare professionals should be aware of the potential risk of pulmonary aspiration in patients using GLP-1 or dual GIP/GLP-1 receptor agonists who undergo surgery or procedures with general anaesthesia or deep sedation.]

Prevention of diabetes

Responses to lifestyle interventions among individuals with distinct pre-diabetes phenotypes: A systematic review and Meta-Analysis

Authors: Rong J, Ho M, Zhou D, et al.

Publication date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To assess responses to lifestyle interventions (LIs) among individuals with distinct prediabetes phenotypes (isolated impaired fasting glucose [i-IFG], isolated impaired glucose tolerance [i-IGT], and combined IFG + IGT) for reducing diabetes incidence, reversing prediabetes, and improving glycemic control and insulin sensitivity.]

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