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Diabetes

Current Awareness Bulletin

July 2025

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New training via MS Teams available from the Academy Library:

- **Bitesize searching databases for evidence: a quick guide to help you develop your literature searching skills**
  45 minutes. Learn how to transform a question into a search strategy, and how to find the best evidence in a database.
  Next sessions: 22nd July @ 4pm, 27th August @ 1pm & 25th September @ 9am

- **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: 9th July @1pm, 7th August @ 3pm & 5th September @ 3pm

- **Quickfire health literacy: communicating with patients more effectively**
  30 minutes. Learn about the communication barriers patients may encounter, and ways to ensure they get the most from their care.
  Next sessions: 7th July @ 4pm, 12th August @ 9am & 10th September @ 10am

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. **Bridging household ties and diabetes outcomes: A Turkish perspective**

Author: Miakhail M.A.A.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[I read with great interest the article by Flórez et al. titled “Do household ties matter for diabetes awareness and self-care behaviors? Insights from the Hispanic Community Health Study/Study of Latinos” [1]. I wish to offer a comparative perspective from Turkey, a country similarly known for its close-knit familial bonds.]

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2. **Diabetes and frailty in an ageing world**

Publication Date: 2025

Journal: The Lancet Diabetes & Endocrinology

[Global life expectancy continues to rise, with the latest Eurostat report confirming that the EU has surpassed pre-pandemic levels. With an ageing population comes an increased burden of chronic health conditions. One in five people aged 65 years and older have type 2 diabetes, with numbers predicted to grow in the coming years. This increase is largely driven by lifestyle factors, increasing obesity rates, and improved survival rates of people with diabetes. Managing diabetes in older adults presents distinct challenges that demand a fundamental shift in health-care strategies to optimise outcomes and improve quality of life.]

3. **Introduction and methodology: Standards of Care in Overweight and Obesity—2025**

Author: Bannuru R.R

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

[Obesity is a chronic, relapsing, and progressive disease requiring long-term, interprofessional treatment strategies to improve health outcomes. With over 40% of US adults and nearly 20% of children affected, obesity remains a significant public health concern. Despite the American Medical Association's recognition of obesity as a chronic disease, gaps persist in education, training, and access to effective treatments. These gaps contribute to inadequate obesity management and reinforce stigma and weight bias in healthcare settings. The Standards of Care in Overweight and Obesity—2025, developed by The Obesity AssociationTM, a division of the American Diabetes Association(R), (ADA's Obesity Association), will provide evidence-based recommendations for screening, diagnosis, and management of obesity and related complications. These guidelines will emphasize a complication-centric, risk-reduction approach rather than solely focusing on weight loss. The recommendations will be intended for healthcare professionals, including but not limited to primary care physicians, endocrinologists, obesity medicine physicians, dietitians, and behavioral health specialists, as well as policymakers and insurers. The guideline development will follow a rigorous methodology, incorporating evidence from systematic literature reviews, expert consensus, and public feedback. Recommendations will be graded based on the quality and certainity of supporting evidence, with the goal of annual updates to ensure alignment with the latest research. A stringent conflict-of-interest policy will be maintained to uphold guideline integrity. By promoting personalized and equitable obesity care, these guidelines will aim to bridge existing gaps in clinical practice, enhance treatment accessibility, and improve long-term health outcomes for individuals with overweight or obesity.]

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4. **National trends in per-capita medical expenditures among U.S. adults with diabetes, 2000–2022**

Author: Tang S, Wang Y, Zhou X, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To examine the national trend in per-capita medical expenditures among U.S. adults with diabetes from 2000 to 2022.]

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5. **Netrin 4 is a novel cytokine associated with oxidative stress and insulin resistance in obese individuals**

Author: Dai H, Zhang S, Tian M, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: Netrin 4 (NTN4) has been reported to be involved in a variety of pathophysiological processes, such as the occurrence and development of tumors, viral

replication and infection, and diabetic retinopathy. However, the relationships between NTN4 and metabolic diseases have not been reported.]

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6. **Over 250 million people worldwide unaware they have diabetes, according to new research from the International Diabetes Federation (IDF)**

Author: International Diabetes Federation

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Globally, nearly one in nine adults (589 million) are now living with diabetes. Of these, an estimated 252 million are not yet aware they have the condition, placing them at higher risk of serious complications and early death. Many will be diagnosed when they already have one or more of the associated complications and have missed opportunities to prevent or delay their onset. These alarming findings are from the 11th edition of the International Diabetes Federation's Diabetes Atlas, released today at the start of the organisation's World Diabetes Congress in Bangkok, Thailand.]

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7. **Roux-en-Y gastric bypass, adjustable gastric banding, or sleeve gastrectomy for severe obesity (By-Band-Sleeve): a multicentre, open label, three-group, randomised controlled trial**

The By-Band-Sleeve Collaborative Group

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[**Background**: The health risks of severe obesity can be reduced with metabolic and bariatric surgery, but it is uncertain which operation is most effective or cost-effective. We aimed to compare Roux-en-Y gastric bypass, adjustable gastric banding, and sleeve gastrectomy in patients with severe obesity.]

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8. **Weight stigma and bias: standards of care in overweight and obesity**

Authors: Bannuru R.R

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

[Weight bias involves negative attitudes and stereotypes towards individuals based on their weight, which can be explicit or implicit. This bias contributes to weight stigma, or the mistreatment and social devaluation of individuals based on weight. Weight stigma is linked to adverse physical and mental health outcomes, leading to reduced access and quality of healthcare for individuals with obesity. The American Diabetes Association (ADA)'s Obesity Association developed guidelines on recognizing and addressing weight bias and stigma. All healthcare professionals and staff should receive training on weight bias and stigma to improve care for individuals with obesity. Training should start early and continue throughout

medical education and practice. Multicomponent training that combines education with hands-on learning is recommended to reduce explicit and implicit weight bias. Clinical practices, a potential source of stigmatization for people living with obesity, should be equipped with appropriate furniture and equipment to establish an inclusive environment. Privacy and sensitivity during anthropometric measurements are essential to minimize stigmatization. Healthcare professionals should use person-centered, non-judgmental language and engage individuals in shared decision-making to consider their health and goals. Asking permission to discuss weight and respecting individual preferences is crucial. The ADA's Obesity Association encourages adopting these guidelines to reduce weight bias and stigma, emphasizing education, inclusive clinical environments, and effective communication to improve obesity care.]

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9. **When COVID-19 meets diabetes: A bibliometric analysis**

Authors: He Y, Zheng Q, Zhifang Z, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Coronavirus disease 2019 (COVID-19) survivors are concerned about the likelihood of developing further diseases. This study examines the global trends in scientific research on diabetes associated with COVID-19 from several perspectives. Bibliometric analyses are used to undertake a scientific review of the literature. The Web of Science Core Collection (WoSCC) database was used to acquire bibliographic information on diabetes related to COVID-19 from Jan 2020 to Dec. 2023. The visual map was built via advanced CiteSpace 6.2.R6. 7,348 papers were found. Khunti Kamlesh and Rizzo-Manfredi are the most well-known high-yield authors in this area, and the top ten authors collaborate extensively. Most of these papers came from universities. Harvard Medical School has the most publications, followed by Wuhan University and Huazhong University of Science and Technology. China and the United States are the countries with the most publications. Angiotensin-converting enzymes, chronic disease, intensive care unit, viral infection, and gestational diabetes mellitus were scored 0–11, 2, 3, and 4, respectively. Zhou et al.'s work on this topic, which appeared in the prominent medical journal The Lancet, was cited 1,366 times, highlighting its importance. "clinical characteristics," "diabetes mellitus," "metabolic syndrome," and "angiotensin-converting enzyme" were used as keywords for reference co-citation and clustering data identify. Over the last four years, related investigations have focused primarily on observing clinical aspects. This report is important for developing treatment strategies, directing future research, and guiding clinical practice.]

Children with Diabetes

10. **Knowledge, Attitudes, and Practices in Neonatal Diabetes Mellitus Management: the JEnious-NeOnatal-DIabetes (JENODI) Survey**

Authors: Delvecchio M, Piona C, Chobot A, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: We aimed to explore the knowledge, attitude, and management of neonatal diabetes mellitus (NDM) among members of the International Society for Pediatric and Adolescent Diabetes (ISPAD).]

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11. **A Randomized Phase 3 Study Evaluating the Efficacy and Safety of Alogliptin in Pediatric Participants with Type 2 Diabetes Mellitus**

Authors: Peng X.V., Klingensmith G, Hsia D.S., et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: There is an unmet need for pharmacological therapies for children with type 2 diabetes mellitus (T2DM). We assessed the efficacy and safety of an oral dipeptidyl peptidase-4 inhibitor, alogliptin, 25 mg once daily (QD), as a potential treatment for pediatric patients with T2DM.]

Cardiovascular Disease

12. **Advances in Imaging Techniques for Assessing Myocardial Microcirculation in People with Diabetes : An Overview of Current Techniques, Emerging Techniques, and Clinical Applications**

Authors: Hansen T.W., Ripa R.S.

Publication Date: 2025

Journal: Diabetes Therapy

[Microangiopathy is a key complication of diabetes, adversely effecting several organs including the heart, kidneys, eyes, and nerves. This review focuses on myocardial microvascular dysfunction, a condition characterized by altered vasomotion and long-term structural changes to coronary arterioles, resulting in impaired regulation of blood flow in response to varying oxygen demands of cardiomyocytes. Presence of myocardial microvascular dysfunction is associated with increased risk of cardiovascular disease, even in the absence of obstructive coronary artery disease. Several noninvasive imaging techniques to assess coronary physiology have significantly enhanced our understanding of the myocardial microcirculation. These methods allow for detailed visualization and quantification of blood flow, endothelial function, and inflammation in the microvasculature, providing critical insights into the early stages of microvascular disease in diabetes. A significant area of development is the use of advanced hybrid imaging techniques such as positron emission

tomography/computed tomography (PET/CT) and positron emission tomography/magnetic resonance imaging (PET/MRI). The integration of advanced imaging technologies with artificial intelligence is also a key future direction. Overall, these advancements aim to improve the early detection and management of microvascular complications in diabetes, ultimately enhancing outcomes and quality of life. The aim of this review is to provide an overview of both established and emerging noninvasive imaging techniques for assessing myocardial microvascular dysfunction.]

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13. **Ankle brachial index and brachial-ankle pulse wave velocity as predictor for major adverse limb events and all-cause mortality in diabetes**

Authors: Gupta A, Singh R, Bhadada S.K., et al.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Background**: Ankle-brachial index (ABI) is not a reliable index predicting cardiovascular events, as a significant number of patients with normal ABI do have cardiovascular events. Brachial-ankle pulse wave velocity (BaPWV), a non-invasive vascular assessment index for predicting CV events in normal ABI is not studied in type 2 diabetes (T2D).]

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14. **Association between prediabetes, frailty, and cardiovascular outcomes in the oldest old: A retrospective nationwide cohort study**

Authors: Abo-Molhem M, Burrack N, Lewis M, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To investigate the association between prediabetes, frailty, and the risk of myocardial infarction (MI), stroke, heart failure (HF), and all-cause mortality in the oldest old.]

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15. **Diabetes and hypertension**

Author: Nazarko L.

Publication Date: 2025

Journal: British Journal of Community Nursing

[Over 4 million people in the UK are living with diabetes; the majority have type 2 diabetes and over two-thirds also have hypertension. Diabetes and hypertension increase the risk of complications such as stroke, myocardial infarction and premature death, and they also elevate mortality rates. This article uses a case history approach to illustrate the difficulty and methods for managing diabetes and hypertension in a reluctant patient. Drawing on practical clinical experience, it underscores the complex barriers to effective patient engagement and sustained adherence. The article also explores evidence-based strategies that can improve outcomes despite patient resistance.]

16. **Effect of gastric bypass versus sleeve gastrectomy on the remission of type 2 diabetes, weight loss, and cardiovascular risk factors at 5 years (Oseberg): secondary outcomes of a single-centre, triple-blind, randomised controlled trial**

Author: Hauge J.W., Borgeraas H, Birkeland K.I., et al.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[**Background**: For individuals with obesity and type 2 diabetes, weight loss improves insulin sensitivity and β-cell function and can induce remission of diabetes. However, the long-term comparative effectiveness of standard gastric bypass and sleeve gastrectomy on remission of type 2 diabetes remains unclear. We aimed to compare the effects of gastric bypass and sleeve gastrectomy on type 2 diabetes remission, weight loss, and cardiovascular risk factors 5 years after surgery.]

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17. **Letter to "Daytime napping and risk of incident main adverse cardiovascular events and mortality among adults with type 2 diabetes"**

Authors: Qiao S, Chen Y.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Dear Editor: We read with great interest the article by Yang et al. exploring the association between daytime napping and the risk of major adverse cardiovascular events (MACE) and mortality in individuals with type 2 diabetes [1]. This study provides highlighs the potential risks associated with habitual napping in this vulnerable population. However, we would like to raise several points for further discussion and clarification.]

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18. **The management of cardiovascular risk in people with diabetes: Insights from an audit of health services providing diabetes care**

Authors: Zomer E, Talic S, Pourghaderi A.R., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To assess cardiovascular risk management among Australians with diabetes.]

19. **Oral Semaglutide and Cardiovascular Outcomes in High-Risk Type 2 Diabetes**

Authors: McGuire D.K., Marx N, Mulvagh S.L., et al.

Publication Date: 2025

Journal: New England Journal of Medicine

[**Background**: The cardiovascular safety of oral semaglutide, a glucagon-like peptide 1 receptor agonist, has been established in persons with type 2 diabetes and high cardiovascular risk. An assessment of the cardiovascular efficacy of oral semaglutide in persons with type 2 diabetes and atherosclerotic cardiovascular disease, chronic kidney disease, or both is needed.]

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20. **Osteocalcin is inversely associated with worse adipose tissue distribution and cardiovascular risk in autoimmune diabetes**

Authors: Risi R, Amendolara R, Balena A, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: Osteocalcin (OCN), whose release is impaired in diabetes, is suggested to regulate the adipose tissue (AT), being potentially associated with Cardiovascular risk (CVR). We aimed at evaluating whether OCN serum levels are associated with AT health and CVR in a primary CV prevention population with AD.]

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21. **Persistence with once-weekly glucagon-like peptide 1 receptor agonist therapy decreases the risk of major adverse cardiovascular events: A retrospective analysis of patients with type 2 diabetes mellitus and atherosclerotic cardiovascular disease**

Authors: Dunn T.J., Zhu Y, Gronroos N.N., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To assess the association between remaining persistent with once-weekly glucagon-like peptide-1 receptor agonists (OW GLP-1 RAs) and the risk of major adverse cardiovascular events (MACE) among patients with type 2 diabetes mellitus (T2DM) and atherosclerotic cardiovascular disease (ASCVD).]

22. **The Prevalence of Atherosclerotic Cardiovascular Disease in Patients with Type 2 Diabetes in Jordan: The PACT-MEA Study**

Authors: Haddad J.A., Annabi F.O.A., Abbasi H, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: This study investigated the prevalence and clinical management of atherosclerotic cardiovascular disease (ASCVD) and ASCVD risk in patients with type 2 diabetes (T2D) in Jordan.]

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23. **Real-World Comparisons Between Glucagon-Like Peptide-1 Receptor Agonists and Other Glucose-Lowering Agents in Type 2 Diabetes: Retrospective Analyses of Cardiovascular and Economic Outcomes in England**

Authors: Connolly D, Collins E, Ren H, et al.

Publication Date: 2025

Journal: Diabetes Therapy 2025

[**Introduction**: Clinical trials have demonstrated that glucagon-like peptide-1 receptor agonists (GLP-1RAs) reduce the risk of major adverse cardiovascular events (MACE) in adults with type 2 diabetes (T2D) who have established cardiovascular disease (CVD) or a high risk of CVD. Nevertheless, GLP-1RAs remain underutilized. This real-world, retrospective study compared cardiovascular and economic outcomes between individuals treated with GLP-1RAs and other glucose-lowering agents in England.]

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24. **Relationship between time-varying achieved HbA1c and risk of coronary artery disease events among common haptoglobin phenotype groups with type 2 diabetes: the ADVANCE study**

Authors: Cahill L.E., Warren R.A., Lavallée S.K., et al.

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

[Introduction This study sought to determine whether the association between attaining specific glycated hemoglobin (HbA_{1c}) targets (<7.0% (<53 mmol/mol) and ≥8.0% (≥64 mmol/mol) compared with 7.0%–7.9%) over time and risk of incident coronary artery disease (CAD) was dependent on haptoglobin (Hp) phenotype in the Action in Diabetes and Vascular Disease: Preterax and Diamicron Modified Release Controlled Evaluation (ADVANCE) study.]

25. **Reply to “Daytime napping and risk of incident main adverse cardiovascular events and mortality among adults with type 2 diabetes”**

Authors: Yang X.H., Liu Y, Jiang X.X., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[To the Editor: We would like to thank Qiao S et al. [1] for their thoughtful comments on our recent publication [2]. Their four points on the role of sleep quality, the potential confounding effects of undiagnosed obstructive sleep apnea (OSA), the influence of frailty as a marker of disease burden, and multiple comparisons in subgroup analyses are valuable and much appreciated. Below, we provide our responses to each of these points.]

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26. **Semaglutide and walking capacity in people with symptomatic peripheral artery disease and type 2 diabetes (STRIDE): a phase 3b, double-blind, randomised, placebo-controlled trial**

Authors: Bonaca M.P., Catarig A.M., Houlind K, et al.

Publication Date: 2025

Journal: 2025

[**Background**: Peripheral artery disease is a highly morbid type of atherosclerotic vascular disease involving the legs and is estimated to affect over 230 million individuals globally. Few therapies improve functional capacity and health-related quality of life in people with lower limb peripheral artery disease. We aimed to evaluate whether semaglutide improves function as measured by walking ability as well as symptoms, quality of life, and outcomes in people with peripheral artery disease and type 2 diabetes.]

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27. **Systematic Literature Review of the Impact of Type 2 Diabetes and Heart Failure Guideline Adherence on Clinical and Economic Outcomes**

Authors: Vianini E, Pandey A, Rolland C, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: Type 2 diabetes mellitus (T2DM) is associated with comorbidities, particularly in the cardiovascular, renal, and metabolic (CVRM) spectrum. Given the complexity of CVRM spectrum diseases and the treatment landscape, treatment guidelines have been established to assist physicians in selecting the most appropriate treatment based on not only patients' primary disease but also their comorbidities. However, the impact of adherence to treatment guidelines on associated outcomes remains unclear.]

28. **Trends and Disparities in Diabetes Mellitus and Atrial fibrillation Related Mortality in the United States: 1999–2020**

Authors: Sohail M.U., Khan T.M., Sajid M, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[The co-occurrence of diabetes mellitus (DM) and atrial fibrillation (AF) poses growing health risks in the United States (U.S.), with diabetes patients having a 34 % higher risk of AF. This study examines trends in DM and AF related mortality among individuals aged ≥ 25 years in the U.S. from 1999 to 2020. Data from the CDC WONDER database were analyzed calculating age-adjusted mortality rates (AAMRs) per 100,000 and annual percent change (APC), stratified by age, sex, race/ethnicity, urbanization, and region. Between 1999 and 2020, 419,036 deaths were recorded among U.S. adults (≥25 years) with comorbid AF and DM. The AAMR rose from 4.83 in 1999 to 15.91 in 2020, with an APC increase of 15.01 from 2018 to 2020. Older adults (≥65) had higher AAMRs than younger adults (25–64). Men (11.23) had higher rates than women (7.16). NH American Indian/Alaskan Natives (9.54) and Whites (9.16) had the highest AAMRs, while NH Asian/Pacific Islanders (6.04) had the lowest. Non-metropolitan areas (10.32) exceeded metropolitan areas (8.53). The Western U.S. (9.87) had the highest regional AAMR. Rising DM and AF-related deaths highlight a growing burden, particularly in men, NH American Indian/Alaskan Natives and Whites, and rural populations, necessitating targeted interventions.]

Diabetic Neuropathy

29. **CASPAR: a retrospective cohort study of the high-concentration capsaicin topical system in patients with painful diabetic peripheral neuropathy of the feet**

Authors: Überall M, Quandel T, Engelen S, et al.

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

[**Introduction**: Painful diabetic peripheral neuropathy (pDPN), a common complication of diabetes, is challenging to treat and negatively impacts quality of life (QoL). Many patients either fail to achieve adequate pain relief with current treatments or suffer from systemic side effects with oral options. This study used data from the German Pain e-Registry (GPeR) to evaluate the high-concentration capsaicin topical system (HCCTS) for treating pDPN of the feet.]

30. **Editorial for CASPAR: a retrospective cohort study of the high-concentration capsaicin topical system in patients with painful diabetic peripheral neuropathy of the feet**

Author: Sharma S.

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

[Diabetes peripheral neuropathy (DPN) is, by far, the most prevalent microangiopathic complication of diabetes mellitus with a lifetime prevalence of around 50%.[1] While it can manifest in several ways, including peripheral symmetric sensory-predominant neuropathy, autonomic neuropathy, focal/multifocal neuropathies, and motor neuropathy, painful diabetes peripheral neuropathy (DPNP) is, by far, the most distressing in terms of patient-led symptoms and poor quality of life by causing sleep disturbance, anxiety, and depression.[2] Approximately 30–50% of subjects with DPN will have some symptoms of DPNP in their lifetime, often presenting as lancinating, stabbing, burning, electric shock-like sensations in a stocking and glove distribution. Pathophysiologically, it is a small-fiber neuropathy affecting the thinly myelinated Aδ and unmyelinated C nerve fibers causing peripheral neural hyperexcitability with further central sensitization.[3] While risk factors for DPN, including dysglycemia, obesity, dyslipidemia, and smoking, are well established, specifically factors that modulate the development or worsening of DPNP are yet to be fully established.[4]]

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31. **Serum Neurofilament Light Chain and Structural and Functional Nerve Fiber Loss in Painful and Painless Diabetic Polyneuropathy**

Authors: Määttä L.L., Andersen S.T., Parkner T, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To explore associations between the axonal protein neurofilament light chain (NfL) and severity of diabetic polyneuropathy (DPN) and pain.]

Eye Diseases

32. **Acceptability, applicability, and cost-utility of artificial-intelligence-powered low-cost portable fundus camera for diabetic retinopathy screening in primary health care settings**

Authors: Chen Y, Song F, Zhao Z, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To evaluate the acceptability, applicability, and cost-utility of AI-powered portable fundus cameras for diabetic retinopathy (DR) screening in Hong Kong, providing a viable alternative screening solution for resource-limited areas.]

33. **Assessment of arterial stiffness in patients with diabetic retinopathy: A systematic review and meta-analysis**

Authors: Kazantzis D, Papathanasiou K, Machairoudia G, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: Diabetic retinopathy (DR) is a common microvascular complication of diabetes mellitus (DM). A number of studies have investigated if patients with diabetic retinopathy present altered arterial stiffness compared to diabetic individuals without retinopathy.

Objectives: To compare arterial stiffness parameters in participants with diabetic retinopathy (DR) compared to participants with diabetes without retinopathy.]

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34. **Prediction of retinopathy risk: A prospective cohort study in China**

Authors: Xu x, Wang D, Alam U, et al.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Aim**: To identify risk factors for retinopathy and to develop a nomogram for individualised risk prediction in a multi-ethnic Chinese cohort.]

Kidney Disease

35. **Clinical Profile and Treatment Patterns in Individuals with Type 2 Diabetes and Chronic Kidney Disease Who Initiate a GLP-1 Receptor Agonist: A Multinational Cohort Study**

Authors: Pladevall-Vila M, Ziemiecki R, Johannes C.B., et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: Novel therapies are emerging for the prevention of chronic kidney disease (CKD) progression in patients with type 2 diabetes (T2D). Within the FOUNTAIN platform (NCT05526157; EUPAS48148), this real-world study aimed to characterize cohorts of adults with CKD and T2D starting therapy with a glucagon-like peptide-1 receptor agonist (GLP-1 RA) in Europe, Japan, and the United States (US) during 2012-2021.]

36. **Comparative performance of CKD-EPI equations in people with diabetes: An international pooled analysis of individual participant data**

Authors: Kazantzis D, Papathanasiou K, Machairoudia G, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aim**: This study assessed the concordance and misclassification of chronic kidney disease (CKD) stages between directly measured glomerular filtration rate (mGFR) and estimates of GFR (eGFR) using the creatinine-based CKD-EPI-2009 and the CKD-EPI-2021 equations in individuals with diabetes.]

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37. **Diabetes Educators: Understanding the Role of Finerenone in Chronic Kidney Disease Associated with Type 2 Diabetes Mellitus**

Authors: Komé A.M., Yang A, Gee P, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[People living with type 2 diabetes mellitus (T2DM) are at risk of developing diabetes-related complications such as chronic kidney disease (CKD). Screening for CKD is considered the standard of diabetes care, but less than half of people living with diabetes in the United States receive guideline-directed kidney disease testing. Despite recent pharmacologic advances for the treatment of this condition, insufficient screening delays both diagnosis and treatment of diabetes-related CKD and increases the risk of poor outcomes. The nonsteroidal mineralocorticoid receptor antagonist finerenone is an orally administered drug that, when taken with the maximum tolerated dose of a renin-angiotensin-aldosterone system inhibitor, can provide kidney and cardiovascular benefits for people living with T2DM-related CKD. Yet, uptake of this drug has been slow. Increasing awareness of finerenone may encourage its use in clinical practice. Diabetes educators are healthcare professionals (HCPs) with extensive diabetes care experience who encourage diabetes self-management and provide patients with education on the prevention of diabetes-related complications. Diabetes educators bridge knowledge and care gaps among other HCPs by facilitating communication between members of the care team and raising awareness on the importance of CKD prevention and screening. Additionally, diabetes educators reinforce the clinical evidence behind available treatments to promote adherence to guidelines. Here, the evidence for finerenone in T2DM-related CKD and the role of the diabetes educator from both patient and HCP perspectives are reviewed.Graphical abstract available for this article.]

38. **GLP-1 receptor agonists: even for kidney transplant recipients with pre-existing diabetes?**

Authors: Cortinovis M, Perico N, Remuzzi G.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[GLP-1 receptor agonists were initially approved for glycaemic control in type 2 diabetes and, subsequently, for bodyweight loss in obesity. Following large-scale trials demonstrating that some GLP-1 receptor agonists reduced the risk of major cardiovascular events in patients with type 2 diabetes and of major kidney disease events in patients with type 2 diabetes and chronic kidney disease, interest has extended beyond glycaemic control to cardiorenal protection. 12 Although diabetic kidney disease is the leading indication for kidney transplantation in high-income countries, there is little evidence supporting the use of GLP-1 receptor agonists in kidney transplant recipients, primarily because of their general exclusion from randomised controlled trials. Patients living with a kidney transplant, especially those with pre-existing diabetes, might benefit from the kidney and cardiovascular protective effects of GLP-1 receptor agonists. However, these patients could be at increased risk of drug-related complications. The incidence of acute pancreatitis, for example, was reported to be higher in kidney transplant recipients than in the general population. [3] Moreover, because of their need for chronic immunosuppression, patients living with a kidney transplant could theoretically have an increased likelihood of developing medullary thyroid cancer, a condition for which GLP-1 receptor agonists carry a black-boxed warning. Thus, the benefit-to-risk ratio of GLP-1 receptor agonists in kidney transplant recipients warrants careful consideration.]

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39. **GLP-1 receptor agonists in kidney transplant recipients with pre-existing diabetes: a retrospective cohort study**

Authors: Orandi B.J., Chen Y, Li Y, et al.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[**Background**: Given the cardiovascular, renal, and survival benefits of GLP-1 receptor agonists for diabetes, these agents could be effective among kidney transplant recipients. However, kidney transplant recipients are distinct from GLP-1 receptor agonist trial participants, with longer diabetes duration and severity, greater end-organ damage, increased cardiovascular risk, and multimorbidity. We examined GLP-1 receptor agonist real-world effectiveness and safety in kidney transplant recipients with diabetes.]

Liver Disease

40. **Sodium-Glucose Cotransporter2 inhibitors and associated Liver-Related outcomes in diabetes patients**

Authors: Yen F.S., Wei J.C.C., Wang C, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Metabolic dysfunction-associated steatotic liver disease (MASLD) is associated with poorer liver-related outcomes in type 2 diabetes (T2D) patients. We compared risk of liver-related outcomes and all-cause mortality between sodium-glucose cotransporter-2 inhibitor (SGLT-2i) users and nonusers in T2D patients.]

Complications (atherosclerosis, claudication, diabetic foot, ulcers, etc)

41. **Effectiveness of adding glucagon-like peptide-1 receptor agonist on diabetes complications and mortality among basal insulin-treated people with type 2 diabetes: A real-world Korean study**

Authors: Ha K.H., Kim W, Kim D.H., et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: To compare the effectiveness of adding a glucagon-like peptide-1 receptor agonist (GLP-1RA) on composite of diabetes-related complications and mortality with that of adding short-acting insulin (SAI) or shifting to premixed insulin among basal insulin (BI)-treated individuals with type 2 diabetes mellitus (T2DM) in South Korea.]

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42. **Advanced radiation-crosslinked CM-chitosan/gelatin hydrogel for diabetic ulcer treatment with reducing application frequency**

Authors: Li H, Chen X, Fan Y, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: The study aims to assess whether a radiation-crosslinked carboxymethyl-chitosan/gelatin hydrogel can exhibit superior healing properties in diabetic wounds through collagen synthesis, epithelial maturation, inflammation regulation and angiogenesis, and determine if it can be applied on alternate days to reduce patient compliance pressure.]

43. **Association of the triglyceride glucose index with sudden cardiac death in the patients with diabetic foot ulcer**

Authors: Chen Y, Zhao J, Sun Y, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: This study examines the relationship between the TyG index and the risk of sudden cardiac death (SCD) in the patients with diabetic foot ulcer (DFU).]

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44. **Cost effectiveness of topical wound oxygen therapy for chronic diabetic foot ulcers**

Authors: Kerr M, Wild D, Edmonds M, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: To estimate the cost effectiveness of Topical Wound Oxygen therapy (TWO2) for chronic diabetic foot ulcers.]

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45. **Economic burden of podiatric care for diabetic foot ulcers in the Czech Republic: A prospective multicenter study**

Authors: Fejfarová V, Koliba M, Piťhová P, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: Diabetic foot (DF), especially DF ulcers (DFUs) are a relatively frequent and financially burdensome late-stage complication of diabetes. However, data on the costs of podiatric care in the Czech Republic are scarce. The aim of this prospective multicenter study was to determine the total costs associated with long-term podiatric care in selected foot clinics across the Czech Republic.]

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46. **Impact of diabetes on long-term mortality following major lower limb amputation: A population-based cohort study in Wales**

Authors: Hayes J, Rafferty J.M., Cheung W.Y., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: Major lower limb amputation is associated with high morbidity and mortality, particularly among patients with diabetes. Previous studies suggest variable mortality rates, but none have investigated the impact of diabetes in Wales.]

Overactive Bladder

47. **Association between different triglyceride glucose index-related indicators and overactive bladder**

Authors: Huang Y, Wang K, Wang W, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Overactive bladder (OAB) is a syndrome marked by urinary urgency. Given the crucial role of metabolic anomalies in the pathogenesis of OAB, the aim of this study was to investigate the associations between different triglyceride glucose index (TyG)-related indicators and OAB.]

Diabetes and pregnancy

48. **Ethnic differences in skinfold thickness trajectories in children in the born in bradford 1000 cohort study provide modest support for the adipose tissue compartment hypothesis**

Authors: Petherick E.S., Smith L, Cézard G, et al.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Background**: South Asian populations have high susceptibility to cardiometabolic diseases, with high adiposity for a given Body Mass Index implicated. This study tested the adipose tissue overflow hypothesis that, compared to White Europeans, South Asians have smaller, peripheral subcutaneous adipose tissue depots.]

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

Authors: Gao M, Li N, Wang H, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To identify any cut-off point to define hyperglycemia and optimal gestational time for hyperglycemia screening in early pregnancy.]

50. **Low uptake of screening for retinopathy during pregnancy with pre-existing diabetes: A population-based cohort study**

Authors: Alharbi A.M., Halperin I.J., Shah B.R.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To determine the frequency of eye screening during pregnancy for people with pre-existing diabetes, and to examine what factors were associated with screening.]

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51. **Predictors of Composite Maternal and Fetal Outcomes among Pregnant Women with Early-Onset Type 2 Diabetes: A Cross-Sectional Study**

Authors: Jotic A.Z., Stoiljkovic M.M., Milicic T.J., et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: The most common form of pregestational diabetes in pregnancy is type 2 diabetes, requiring strict metabolic monitoring owing to the risk of adverse pregnancy outcomes. Our study aimed to identify predictors of composite maternal outcome (CMO) and fetal outcome (CFO) separately in pregnant women with early-onset type 2 diabetes (PwEOT2D).]

Diabetes mellitus Type 1

52. **Disparities in technology utilization among youth with type 1 diabetes across diverse racial and socioeconomic backgrounds**

Authors: Al Nofal A, Hassan D, Rajjo T, et al.

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

[**Background**: Previous studies have demonstrated disparities in the utilization of diabetes technology among youth with type 1 diabetes (T1D) based on race and socioeconomic status (SES). Few studies have examined these differences on a national scale or among youth with commercial health insurance.

Aim: To investigate differences in the fill rates of insulin pumps and continuous glucose monitors (CGMs) among commercially insured children with T1D across diverse racial and SES groups.]

53. The NGAL as a prognostic biomarker of kidney injury in children and adolescents with type 1 diabetes mellitus: A systematic review and meta-analysis

Authors: Gkiourtzis N, Stoimeni A, Michou P, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Aims**: A major complication of type 1 diabetes is diabetic kidney disease (DKD). Albuminuria and impaired glomerular filtration rate are the main characteristics of DKD. Neutrophil gelatinase-associated lipocalin (NGAL) levels may rise even in the early stages of DKD, even in patients with normoalbuminuria. We present the first systematic review and meta-analysis examining the prognostic role of NGAL exclusively in pediatric patients with type 1 diabetes.]

Diabetes mellitus Type 2

54. Adiposity at the core of the rising tide of young-onset type 2 diabetes worldwide

Authors: Sattar N, Misra A.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[Young onset type 2 diabetes (YT2D) is a more aggressive form of diabetes, leading to more life years lost, and causing greater morbidity and suffering than when it develops at older ages. Its levels are starting to rise in many parts of the world. As such, YT2D deserves far greater clinical attention.]

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55. **Combining GLP-1 Receptor Agonists and SGLT2 Inhibitors in Type 2 Diabetes Mellitus: A Scoping Review and Expert Insights for Clinical Practice Utilizing the Nominal Group Technique**

Authors: Yepes-Cortés C.A., Cardenas-Moreno I.C., Daza-Arnedo R, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: Treating type 2 diabetes has shifted from a gluco-centric approach to broader cardio-renal-metabolic strategy, driven by the use of disease-modifying medications. Traditionally, diabetes management has relied on stepwise medication addition based on failures in glucose control. However, the benefits and risks of combining glucagon-like peptide-1 receptor agonists (GLP1-RAs) and sodium-glucose cotransporter 2 inhibitors (SGLT2is) remain inadequately understood.]

56. **Combining SGLT2is, GLP1-RAs and nsMRAs in Diabetes: A Scoping Review of Current and Future Perspectives**

Authors: Stougaard E.B., Curovic V.R., Hansen T.W.

Publication Date: 2025

Journal: Diabetes Therapy

[Combination therapy is a cornerstone of modern type 2 diabetes management, extending beyond traditional goals of glucose, blood pressure, and lipid control to focus on therapies protecting the heart and kidneys. The introduction of sodium-glucose cotransporter-2 inhibitors (SGLT2is), glucagon-like peptide receptor agonists (GLP-1RAs), and nonsteroidal mineralocorticoid receptor antagonists (nsMRAs) has reshaped clinical guidelines in recent decades. However, the effects of combining these drug classes remain uncertain. This review evaluates the current evidence on combination therapies involving SGLT2is, GLP-1RAs, and nsMRAs in type 1 and type 2 diabetes, thereby focusing on treatments that in type 2 diabetes have shown cardio-renal protection, while exploring future research directions. In type 2 diabetes, much of the evidence comes from post hoc analyses of trials that primarily examine the effects of single drugs compared with placebo. This limits the ability to draw definitive conclusions about the efficacy and safety of combination therapy. Nonetheless, observational studies indicate that combining SGLT2is and GLP-1RAs may offer superior cardiovascular and mortality benefits compared with monotherapy. Data on kidney outcomes remain limited, but SGLT2is appear particularly effective when kidney protection is the primary goal, regardless of concurrent treatment. The use of nsMRAs is still emerging, and studies investigating their combination with SGLT2is and GLP-1RAs are scarce. In type 1 diabetes, combination therapies have primarily focused on glucose control and safety, with several randomized controlled trials investigating the effects of combining treatments such as SGLT2is and GLP-1RAs with insulin. No current studies have estimated the effects on heart and kidneys. Ongoing and planned studies aim to fill critical gaps in our understanding of combination therapy for type 1 diabetes. These studies hold the promise of determining whether similar risk reductions, as observed in type 2 diabetes, can be achieved, offering hope for improved outcomes in this high-risk population. Currently, in type 2 diabetes, only one ongoing study is testing combination with an SGLT2i and a nsMRA.]

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57. **Comparison of SGLT2 and DPP4 inhibitors on clinical outcomes in COPD patients with diabetes: A nationwide cohort study**

Authors: Chang T.C., Liang Y.C., Lai C.C., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Background**: This study aimed to evaluate the association between sodium-glucose cotransporter 2 inhibitor (SGLT2i) use and the risk of exacerbation and mortality among patients with chronic obstructive pulmonary disease (COPD) and diabetes mellitus (DM).]

58. **Correlation of glycosylated apolipoprotein A1 and glycosylated low-density lipoprotein cholesterol levels with glucose homeostasis and the risk of developing type 2 diabetes mellitus**

Authors: Gu J.X., Hong T.T., Zhang A.M., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Introduction**: This study explored the relationship between Glycosylated apolipoprotein A-1 (G-apoA1) and glycosylated low-density lipoprotein cholesterol (G-LDL-C) levels and the risk of developing type 2 diabetes mellitus (T2DM).]

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59. **The Eatwell Guide and its use in primary care**

Author: Winter G.

Publication Date: 2025

Journal: Practice Nursing

[George Winter discusses the claimed benefits of the high-carbohydrate, low-fat diet promoted by the Eatwell Guide, and its application to people at risk of type 2 diabetes.]

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60. **Early-onset type 2 diabetes and frailty**

Authors: Maltese G, Karalliedde J, Misra S, et al.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[The global prevalence of type 2 diabetes among children, adolescents, and younger adults is rapidly rising. [1] Recent findings from the UK Prospective Diabetes Study 30-year follow-up confirm that type 2 diabetes diagnosed at a young age has an aggressive phenotype and is associated with a higher risk of diabetes complications, shorter life expectancy, and poorer glucose management. [2]]

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61. **Follow-up on type 2 diabetes remission: sleeve gastrectomy versus gastric bypass**

Authors: Salminen P, Peterli R.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[Chronic diseases require a lifetime of long-term follow-up. Randomised controlled trials are considered the most robust design for evaluating health-care interventions. However, there are substantial logistical, methodological, and monetary challenges to extending follow-up in RCTs and obtaining 5-year follow-up inherently takes more than 5 years to observe. In *The Lancet Diabetes & Endocrinology*, the Oseberg trial by Jostein Wågen Hauge and colleagues [1] provides long-term results of metabolic bariatric surgery comparing sleeve

gastrectomy and Roux-en-Y gastric bypass in a secondary analysis at 5 years. The authors are to be congratulated on both completion of the long-term follow-up and the high retention rate of 85% (93 of 109 patients). The initial target sample size was 125 patients with additional exclusions based on predefined exclusion criteria before randomisation. [2] To our knowledge, there are three randomised controlled trials with similarly high 5-year follow-up rates comparing sleeve gastrectomy and gastric bypass with reported type 2 diabetes remission: the Dutch SleeveBypass trial (follow-up rate 77·4%), [3] the Swiss SM-BOSS trial (94·5%), [4] and the Finnish SLEEVEPASS trial (80·4%), [5] with the SM-BOSS [6] and SLEEVEPASS [7] trials also reporting 10-year outcomes. In these trials, remission of type 2 diabetes was a secondary endpoint, with the 5-year merged data of the SLEEVEPASS and SM-BOSS trials having 135 patients with type 2 diabetes compared with the 93 patients in the Oseberg trial 5-year report. [1]]

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62. The gut–bone axis: implications of gut hormone-based therapies for bone health

Authors: Muskiet M.H.A., Winter E.M., Rensen P.C.N., et al.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[Historical trends and future projections of the number of people with overweight and obesity suggest alarming parallel increases in serious and potentially fatal comorbidities, particularly type 2 diabetes and atherosclerotic cardiovascular disease. This trajectory emphasises the urgent need to address this growing health crisis. Cardiometabolic diseases can have detrimental effects on bone health, leading to fractures, morbidity and mortality, and reduced quality of life. [1] Despite these known relationships, bone health is often underestimated and overlooked in this context. This oversight could be due to the under-recognised negative impact of fractures in general, as well as the long-held belief that obesity protects against fractures due to the cushioning effect of subcutaneous fat against the impact of falls and the typically higher bone mineral density (BMD) of people with obesity. [1] However, when BMI exceeds 25 kg/m ^{2} , the skeleton's ability to adapt is limited, resulting in reduced bone quality (encompassing both the bone microstructure and the properties of bone components) known as the BMD paradox, which increases fracture risk. This decline is driven by several factors, including dietary imbalances, sedentary behaviour (with reduced mechanical loading and sarcopenia), weight distribution, negative effects of marrow adipose tissue on bone and muscle, and, often, comorbid type 2 diabetes. [1] In type 2 diabetes, hyperglycaemia inhibits osteoblast-mediated bone formation, contributing to low bone turnover, whereas advanced glycation end-product accumulation, inflammation, and oxidative stress deteriorate the bone microstructure and material properties. Crucial gaps remain in identifying specific signalling pathways and driver genes, underscoring the need for further investigations. The rising prevalence of people with a high BMI, increasing rates of type 2 diabetes, and a greater fall risk in people with obesity and type 2 diabetes has contributed to a substantial rise in fractures.]

63. **A Randomized Trial of Automated Insulin** Delivery **in Type 2 Diabetes**

Authors: Kudva Y.C., Raghinaru D, Lum J.W., et al.

Publication Date: 2025

Journal: New England Journal of Medicine

[**Background**: Automated insulin delivery (AID) systems have been shown to be beneficial for patients with type 1 diabetes, but data are needed from randomized, controlled trials regarding their role in the management of insulin-treated type 2 diabetes.]

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64. **SGLT-2 inhibitors on cardiac autonomic function in individuals with and without type 2 diabetes mellitus**

Authors: Özel H.F., Alpay S, Asker E, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[Sodium-glucose cotransporter-2 (SGLT-2) inhibitors have emerged as key therapeutic agents in managing 6type 2 diabetes mellitus (T2DM) and obesity, offering benefits that extend beyond glycemic control. This review examines the role of SGLT-2 inhibitors in modulating cardiac autonomic function, with a particular focus on heart rate variability (HRV) as a biomarker of autonomic balance. These agents improve metabolic profiles through enhanced glucosuria, natriuresis, and weight loss, while concurrently reducing blood pressure. Importantly, they also attenuate sympathetic nervous system overactivity and promote parasympathetic modulation, which may lower the risk of adverse cardiovascular events. The underlying mechanisms include not only the metabolic effects but also anti-inflammatory and antioxidative actions, which together contribute to improved endothelial function and vascular health. Advanced HRV analyses, encompassing traditional time and frequency domain methods as well as nonlinear approaches, have proven valuable in detecting early autonomic dysfunction in high-risk populations. Some studies suggest that SGLT-2 inhibitors may be associated with improvements in HRV parameters, such as increased SDNN and RMSSD and a reduced LF/HF ratio. However, findings are inconsistent across studies, and further research is needed to determine the extent and mechanisms of these potential effects. Although these findings are promising, further standardized, long-term studies are essential to clarify the mechanisms and optimal therapeutic strategies involving SGLT-2 inhibitors in the management of autonomic dysfunction. Future research should also explore the synergistic potential of combining SGLT-2 inhibitors with other cardiometabolic therapies to enhance cardiovascular outcomes in individuals with and without T2DM.]

65. **Type 2 diabetes and accelerated ageing in skeletal muscle**

Authors: Henson J, Baker L.A., Watson E, et al.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[The pursuit for the elixir of eternal youth has fascinated scientists for centuries. Yet, natural ageing—marked by the gradual decline of biological, physiological, psychological, and behavioural processes—is widely accepted as one of life's unfortunate but inevitable facts. Although some age-related changes are innocuous (eg, greying hair), others can increase the risk of chronic disease or disability. However, not all of these outcomes are directly caused by the ageing process itself. For instance, the presence of chronic diseases such as type 2 diabetes and obesity can accelerate the ageing process in multiple organs (eg, brain, heart, liver, and kidneys), leading to gradual losses in physiological integrity and reduced muscle function.]

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66. **Urogenital side effects in male subjects with type 2 diabetes treated with SGLT-2 inhibitors: A single centre, longitudinal observation**

Authors: Del Zoppo A, Rovera C, Petralli G, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Objective**: SGLT-2 inhibitors (SGLT-2i) provide good glycaemic control and weight loss, ensuring clinically relevant cardiorenal benefits in subjects with and without type 2 diabetes (T2D); however, their use is related to an enhanced risk of urogenital infections, mainly in female subjects. We performed a prospective observation to assess incidence of urogenital complications in male sex new users of gliflozins.]

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67. **Divergence in prediabetes guidelines – A global perspective**

Authors: Pragati G, Paolo P.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[The global landscape of prediabetes diagnostic guidelines varies significantly, reflecting diverse healthcare priorities, population characteristics, and resource availability. Major international organisations, including the World Health Organisation (WHO), European Association for the Study of Diabetes (EASD), Italian Society of Diabetes (SID), American Diabetes Association (ADA), International Diabetes Federation (IDF), Diabetes UK, and Chinese Diabetes Society (CDS), adopt differing criteria for defining and diagnosing prediabetes. These discrepancies arise from variations in diagnostic tests—oral glucose tolerance test (OGTT), fasting plasma glucose (FPG), and glycated haemoglobin (HbA1c)—as well as differences in prevalence estimates, screening policies, and healthcare infrastructure. Ethnic variability in glucose metabolism further complicates standardisation, as some

diagnostic tools, such as HbA1c, perform differently across populations. Additionally, individuals diagnosed via different criteria exhibit distinct metabolic risks and may respond differently to interventions. This heterogeneity poses challenges for global research, policy-making, and equitable access to care. While complete international harmonisation may be impractical, emerging diagnostic approaches, such as the 1-hour plasma glucose (1-h PG) test, offer a promising step toward improving diagnostic consistency. A hybrid model integrating universal standards with population-specific adaptations may offer a more effective global strategy for prediabetes identification and prevention.]

Glucose monitoring and control

68. **High fat-induced the upregulation of LOX-1 in RF/6A cells under high glucose condition**

Authors: Li Q, Zhang M, Gao Q, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Objective**: To investigate the effect of ox-LDL on the expression of lectin-like receptor of ox-LDL (LOX-1) and intercellular adhesion molecule-1 (ICAM-1) in RF/6A cells under high-glucose condition.]

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69. **Hypomagnesemia induces impaired glucose metabolism and insulin resistance in patients with Gitelman syndrome**

Author: Xin Y, Yin Y, Zhu L, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: To investigate the contributing factors of impaired glucose metabolism in patients with Gitelman syndrome (GS).]

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70. **The relationship between longitudinal changes in triglyceride-glucose-body mass index and new-onset diabetes in middle-aged and elderly adults: Evidence from a nationwide Chinese cohort study**

Authors: Deng W, Han Y, Deng Z.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Objective**: This study investigates the association between changes in TyG-BMI and the risk of diabetes mellitus (DM) in middle-aged and elderly adults in China, as prior research has mainly focused on single baseline measurements.]

71. **Towards equitable access of innovative technologies such as continuous glucose monitoring and artificial intelligence for diabetes management**

Authors: Jenkins A.J., Kodani N, Anjana R.M., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[Globally ≈422 million people live with diabetes, with rising incidence and prevalence. Most common are Type 2 diabetes, Type 1 diabetes, which affects ≈9-million people, and gestational diabetes occurring in ≈15 % of pregnant women [1]. The personal and socioeconomic costs are high, particularly if acute complications (e.g. glucose extremes and infections) and chronic complications (ocular, renal, neural and cardiovascular damage) occur. Multiple factors contribute to health outcomes, including weight, lifestyle, blood pressure, lipids, diabetes education, health literacy and access to clinical care, medicines and technology such as continuous glucose monitors (CGM), insulin pumps and artificial intelligence (AI) [2]. As ≈81 % of people with diabetes globally live in less advantaged regions [1] consideration of their circumstances is key.]

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72. **The use of continuous glucose monitoring in people living with obesity, intermediate hyperglycemia or type 2 diabetes**

Authors: Battelino T, Lalic N, Hussain S, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[A global trend towards increased obesity, intermediate hyperglycemia (previously termed prediabetes) and type 2 diabetes, has prompted a range of international initiatives to proactively raise awareness and provide action-driven recommendations to prevent and manage these linked disease states. One approach, that has shown success in managing people already diagnosed with type 2 diabetes mellitus, is to use continuous glucose monitoring (CGM) devices to help them manage their chronic condition through understanding and treating their daily glucose fluctuations, in assocation with glucose-lowering medications, including insulin. However, much of the burden of type 2 diabetes mellitus is founded in the delayed detection both of type 2 diabetes mellitus itself, and the intermediate hyperglycemia that precedes it. In this review, we provide evidence that using CGM technology in people at-risk of intermediate hyperglycemia or type 2 diabetes mellitus can significantly improve the rate and timing of detection of dysglycemia. Earlier detection allows intervention, including through continued use of CGM to guide changes to diet and lifestyle, that can delay or prevent harmful progression of early dysglycemia. Although further research is needed to fully understand the cost-effectiveness of this intervention in people at-risk or with early dysglycemia, the proposition for use of CGM technology is clear.]

Hyperglycaemia

73. Prescription patterns and the cost of antihyperglycemic drugs in patients with diabetes mellitus in Iran from 2014 to 2019

Authors: Rezaee M, Nasehi M.M., Aminzade Z, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Introduction**: Diabetes mellitus (DM) is characterized by high blood glucose levels and abnormalities in metabolism. In 2021, 15.14% of adult Iranians had DM. The purpose of this study is to provide policymakers with actionable insights to enhance resource allocation and improve diabetes care by evaluating the prescription patterns and costs of antidiabetic medications in Iran from 2014 to 2019 in 2.5 million patients.]

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74. The use of continuous glucose monitoring in people living with obesity, intermediate hyperglycemia or type 2 diabetes

Authors: Battalions T, Lalic N, Hussain S, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[A global trend towards increased obesity, intermediate hyperglycemia (previously termed prediabetes) and type 2 diabetes, has prompted a range of international initiatives to proactively raise awareness and provide action-driven recommendations to prevent and manage these linked disease states. One approach, that has shown success in managing people already diagnosed with type 2 diabetes mellitus, is to use continuous glucose monitoring (CGM) devices to help them manage their chronic condition through understanding and treating their daily glucose fluctuations, in assocation with glucose-lowering medications, including insulin. However, much of the burden of type 2 diabetes mellitus is founded in the delayed detection both of type 2 diabetes mellitus itself, and the intermediate hyperglycemia that precedes it. In this review, we provide evidence that using CGM technology in people at-risk of intermediate hyperglycemia or type 2 diabetes mellitus can significantly improve the rate and timing of detection of dysglycemia. Earlier detection allows intervention, including through continued use of CGM to guide changes to diet and lifestyle, that can delay or prevent harmful progression of early dysglycemia. Although further research is needed to fully understand the cost-effectiveness of this intervention in people at-risk or with early dysglycemia, the proposition for use of CGM technology is clear.]

Insulin therapies

75. **Developing insulin safety across a system**

Publication Date: 2025

Specialist Pharmacy Service

[Strategies, signposting and initiatives to support safer use of insulin.]

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76. **Healthcare utilization and costs in adults with type 2 diabetes treated with first or second-generation basal insulins in England**

Authors: Holden N, Diribe O, Palmer K, et al.

Publication Date: 2025

Journal: BMJ Open Diabetes Research and Care

[**Introduction**: The prevalence of people with type 2 diabetes (T2D) on basal insulin (BI) is rising to improve glucose control and minimize complications. However, limited evidence exists regarding the economic impact of second-generation BI analogs compared with first-generation BI in the United Kingdom.]

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77. **The impact of ideglira in treatment simplification in older adults with type 2 diabetes mellitus already on insulin therapy: The stop study**

Authors: De Fano M, Mazzieri A, Fanelli C.G., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aim**: The STOP study is a proof-of-concept, aimed at evaluating the effectiveness and safety of IdegLira in deintensifying diabetes therapy in elderly insulin-treated persons with T2DM.]

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78. **Tips for successful use of commercial automated insulin delivery systems: An expert paper of the Italian working group on diabetes and technology**

Author: Di Molfetta S, Rossi A, Assaloni R, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[In recent years, automated insulin delivery (AID) systems have transformed diabetes care with demonstrated benefits in glucose control, hypoglycemia risk, and psychosocial outcomes. Given that different systems show peculiarities in terms of components, approved indications of use, type of algorithm, modifiable settings, and additional features, with this expert paper, we aim to provide healthcare professionals with device-specific recommendations for the optimization of insulin therapy and diabetes self-management with the five commercial AID systems most commonly used in Italy. In detail, we provide educational tips and suggestions

for adjustment of insulin dosing parameters to address specific glucose patterns as depicted by continuous glucose monitoring data and effectively manage physical activity or exercise.]

Management of diabetes (diet, exercise, lifestyle)

79. **The effect of flaxseed supplementation on anthropometric indices, blood pressure, and lipid profile in diabetic patients: A GRADE-assessed systematic review and meta-analysis of randomized controlled trials**

Authors: Musazadeh V, Nezamoleslami S, Faghfouri A.H., et al.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Background and aims**: Numerous clinical studies have suggested that flaxseed supplementation may be effective in diabetic patients, but the findings are controversial. Therefore, this study aimed to examine the effects of flaxseed on blood pressure, anthropometry, and lipid profile parameters in diabetic patients.]

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80. **Food Insecurity, Diabetes Self-Management and Support for Self-Management in High-Income Countries: A Qualitative Systematic Review and Synthesis (2008 to 2024)**

Author: Douglas F, MacIver E, Kennedy C.

Publication Date: 2025

Journal: Health and Social Care in the Community

[People living with diabetes and food insecurity in high-income countries have poorer health-related outcomes than those who are food secure. Diabetes is a significant global health challenge. At the same time, the prevalence of household food insecurity continues to increase. This qualitative systematic review and synthesis explored the lived experience of diabetes self-management and support for self-management for people living with diabetes and food insecurity in high-income countries. Keywords and search terms were developed using the PICo framework with searches conducted between January 2008 and August 2024. Titles and abstracts were screened against inclusion and exclusion criteria, and the methodological quality of included papers was assessed using the Critical Appraisal Checklist for Qualitative Research and CERQual. Findings from 18 articles (detailing 17 studies) identified four interlinked themes: structural challenges, day-to-day challenges, ways of being for people living with food insecurity and diabetes, and self and support for self-management needs. Structural challenges (poverty, sociocultural and discrimination) were identified as the main determinants of the day-to-day challenges for people living with diabetes and food insecurity. Those challenges included the following: (i) limited access to suitable foods and food management resources; (ii) stress, (iii) poverty and diabetes stigma, (iv) limited informal support, (v) perceived lack of appropriate support from healthcare practitioners, and limited knowledge, confidence and understanding and access to information. The resulting ways of being for people affected were characterised by experiences of subsisting, avoiding, balancing and prioritising. Self and support for self-management needs were characterised by two themes improve[ing] clinical conversations and, support beyond health services. People living

with diabetes and food insecurity are adopting methods of self-management, due to economic necessity, which may not be appropriate from a healthcare perspective, and which may be impacting their short and long-term health. There is an urgent need to address these issues in the post COVID-19 pandemic context for effective diabetes prevention and management.]

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81. **Malnutrition-related diabetes mellitus: Rushing toward "type 5" amid unresolved questions and limited evidence**

Authors: Misra A, Joshi S, Mithal A.

Publication Date: 2025

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

[**Aim**: To critically evaluate the historical context, diagnostic ambiguity, epidemiological relevance, and recent proposals to reclassify malnutrition-related diabetes mellitus (MRDM) amid changing nutritional landscapes and existing metabolic data.]

Mental health and diabetes

82. **Association of antidiabetic medications with depression risk and All-Cause mortality in type 2 Diabetes: A TriNetX-Based cohort study**

Authors: Chen I.C., Pai Y.W., Lin J.F., et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: Individuals with type 2 diabetes face elevated risks of depression and all-cause mortality. This study aimed to compare the associations of different glucose-lowering drugs—metformin, GLP-1 receptor agonists (GLP-1 RA), DPP-4 inhibitors (DPP-4i), and SGLT-2 inhibitors (SGLT-2i)—with these risks.]

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83. **The burden of depression among patients with type 2 diabetes: An umbrella review of systematic reviews**

Authors: Wulandari N, Lamuri A, Van Hasselt F, et al.

Publication Date: 2025

Journal: Journal of Diabetes and Its Complications

[**Objective**: Depression is common among patients with type 2 diabetes (T2D) which is a major global health concern. This umbrella review aims to explore differences in reported depression prevalence among people with type 2 diabetes and to identify the factors contributing to the variation.]

84. **Loneliness and social isolation as risk factors for type 2 diabetes onset: A systematic review and meta-analysis**

Author: Ezzatvar Y, Caballero O, Duclos-Bastias D, et al.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: This study sought to analyze the association of social isolation and loneliness with the risk of type 2 diabetes onset.]

Pharmacological management of diabetes

85. **Comparing Efficacy of Chiglitazar, Pioglitazone, and Semaglutide in Type 2 Diabetes: A Retrospective Study**

Authors: Li W, Wang Y, Liu C, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: Type 2 diabetes (T2D) is a complex chronic metabolic disease characterized by insulin resistance, dyslipidemia, inflammation, and visceral fat accumulation, leading to complications, such as cardiovascular disease and kidney damage. Emerging metabolic regulators, including chiglitazar, semaglutide, and pioglitazone, have gained prominence in managing T2D and associated metabolic disorders. However, their relative efficacy and optimal clinical applications remain unclear. This study's objective was to compare the effects of chiglitazar, semaglutide, and pioglitazone on glycemic control, lipid metabolism, insulin resistance, inflammatory response, liver function, kidney function, and dawn phenomenon intensity in T2D participants, and to explore their relative efficacy and clinical value.]

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86. **Correction to Lancet Diabetes Endocrinol 2025. Published online February 17.**

Authors: Munshi M, Kahkoska AR, Neumiller JJ, et al

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[Munshi M, Kahkoska AR, Neumiller JJ, et al. Realigning diabetes regimens in older adults: a 4S Pathway to guide simplification and deprescribing strategies. Lancet Diabetes Endocrinol 2025; published online Feb 17]

87. **Efficacy and safety of once-weekly tirzepatide in Japanese patients with obesity disease (SURMOUNT-J): a multicentre, randomised, double-blind, placebo-controlled phase 3 trial**

Authors: Kadowaki T, Kiyosue A, Shingaki T, et al.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[**Background**: Data on tirzepatide in Asian patients with obesity are limited. This study aimed to gain a better understanding of tirzepatide for treatment of Japanese patients with obesity disease (BMI ≥25 kg/m ^{2} with excessive fat accumulation) as defined by the Japanese Society for the Study of Obesity.]

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88. **Glucagon-Like Peptide 1 Receptor Agonists and Mental Health: A Systematic Review and Meta-Analysis**

Authors: Aureliane C.S., Mizuno Y, Saunders P, et al.

Publication Date: 2025

Journal: JAMA Psychiatry

[**Importance**: People with obesity and diabetes have poorer psychiatric and cognitive outcomes and lower quality of life (QOL) compared with those without. Glucagon-like peptide 1 receptor agonists (GLP1-RAs) are treatments for diabetes and obesity that may also influence psychiatric outcomes.

Objective: To conduct a meta-analysis of randomized placebo-controlled trials to evaluate psychiatric, cognitive, and QOL outcomes with GLP1-RA treatment.]

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89. **Long- and Short-Term Cost-Effectiveness of Once-Weekly Semaglutide versus Dulaglutide for the Treatment of Type 2 Diabetes in China: A Hypothetical Modeling Exercise**

Authors: Hu Y, Zou H, Shen Y, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: This study aimed to evaluate the long- and short-term cost-effectiveness of once-weekly semaglutide versus dulaglutide for treating patients with type 2 diabetes uncontrolled with metformin after the renewal of China's national reimbursement drug list.]

90. **Once-Weekly Semaglutide Versus Sodium-Glucose Co-transporter 2 Inhibitors: Real-World Impact on Weight, HbA1c, and Healthcare Resource Utilization in Type 2 Diabetes (PAUSE)**

Authors: Amamoo J, Doshi R, Noone J, et al.

Publication Date: 205

Journal: Diabetes Therapy

[**Introduction**: Clinical trials have demonstrated greater glycemic control and weight loss with once-weekly (OW) semaglutide versus other anti-diabetes medications, including sodium-glucose co-transporter 2 inhibitors (SGLT2is) in adults with type 2 diabetes (T2D), yet real-world evidence is limited.]

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91. **PIONEER REAL Italy: Real-World Usage of Once-Daily Oral Semaglutide in Adults with Type 2 Diabetes**

Authors: Manti R, De Cosmo S, Desenzani P, et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: The PIONEER REAL Italy study examined the clinical outcomes associated with oral semaglutide in real-world settings.]

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92. **Promising treatment options with tirzepatide for Japanese individuals with obesity disease**

Authors: Nauck M.A., Lim S.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[Obesity is a common health problem affecting a considerable (and growing) proportion of adult populations worldwide. [1] Although overweight and obesity are usually diagnosed by anthropometry, such as calculating indices representing increased body fat mass (eg, BMI), or, in particular, increased visceral fat mass (eg, waist circumference), the major threat is related to comorbidities associated with increasing degrees of obesity. [2] Generally speaking, lifestyle interventions including intensive behavioural weight reduction programmes and previous generations of weight-loss medications have not prevented the number of people with obesity from rising between 2009 and 2022 worldwide, including in Japan. [3] Incretin-based medications that result in major and clinically relevant bodyweight reductions are now available, including the first approved glucose-dependent insulinotropic polypeptide (GIP) and glucagon-like peptide-1 (GLP-1) receptor co-agonist, tirzepatide, which has been widely studied in multinational clinical trials. These trials suggest superior weight reduction compared with selective GLP-1 receptor agonists like liraglutide and semaglutide. [4]]

93. **A Randomized Phase 3 Study Evaluating the Efficacy and Safety of Alogliptin in Pediatric Participants with Type 2 Diabetes Mellitus**

Authors: Peng X.V., Klingensmith G, Hsia D.S., et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: There is an unmet need for pharmacological therapies for children with type 2 diabetes mellitus (T2DM). We assessed the efficacy and safety of an oral dipeptidyl peptidase-4 inhibitor, alogliptin, 25 mg once daily (QD), as a potential treatment for pediatric patients with T2DM.]

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94. **Realigning diabetes regimens in older adults: a 4S Pathway to guide simplification and deprescribing strategies**

Authors: Munshi M, Kahkoska A.R., Neumiller J.J., et al.

Publication Date: 2025

Journal: Lancet Diabetes & Endocrinology

[Treating older people with diabetes is challenging due to multiple medical comorbidities that might interfere with patients' ability to perform self-care. Most diabetes guidelines focus on improving glycaemia through addition of medications, but few address strategies to reduce medication burden for older adults—a concept known as deprescribing. Strategies for deprescribing might include stopping high-risk medications, decreasing the dose, or substituting for less harmful agents. Accordingly, glycaemic management strategies for older adults with type 1 and type 2 diabetes not responding to their current regimen require an understanding of how and when to realign therapy to meet patient's current needs, which represents a major clinical practice gap. With the gap in guidance on how to deprescribe or otherwise adjust therapy in older adults with diabetes in mind, the International Geriatric Diabetes Society, an organisation dedicated to improving care of older individuals with diabetes, convened a Deprescribing Consensus Initiative in May, 2023, to discuss Optimization of diabetes treatment regimens in older adults: the role of de-prescribing, de-intensification and simplification of regimens. The recommendations from this group initiative are discussed and described in this Review.]

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95. **Risk factors for bone fractures in type 2 diabetes and the impact of once-weekly exenatide: insights from an EXSCEL post-hoc analysis**

Authors: Maddaloni E, Coleman R.L., Holman R.R.

Publication Date: 2025

Journal: Diabetes Research and Clinical Practice

[**Aims**: We investigated bone fracture predictors in people with T2D enrolled in the EXenatide Study of Cardiovascular Event Lowering (EXSCEL) and evaluated the effects of once-weekly exenatide (EQW) on incident bone fractures.]

96. Tirzepatide Was Associated with Improved Health-Related Quality of Life in Adults with Obesity or Overweight and Type 2 Diabetes: Results from the Phase 3 SURMOUNT-2 Trial.

Authors: Hunter Gibble T, Cao D, Zhang X.M., et al.

Publication Date: 2025

Journal: Diabetes Therapy

[**Introduction**: In SURMOUNT-2, a phase 3, randomized clinical trial, tirzepatide treatment resulted in clinically meaningful reduction in bodyweight among people with obesity or overweight and T2D. The current analysis evaluated the effects of tirzepatide treatment on self-reported health-related quality of life (HRQoL) outcomes among SURMOUNT-2 participants.]

Prevention of diabetes (diet, exercise, lifestyle)

97. The effectiveness of telemedicine in the prevention of type 2 diabetes mellitus: a systematic review and meta-analysis of interventions

Authors: Suhlrie L, Ayyagari R, Mba C, et al.

Publication Date: 2025

Journal: Diabetes & Metabolic Syndrome: Clinical Research & Reviews

[**Objective**: To evaluate the effectiveness of telemedicine-delivered diet and/or exercise interventions to prevent type 2 diabetes (T2D) in people at risk.]

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