

Diabetes Care

THE JOURNAL OF CLINICAL AND APPLIED RESEARCH AND EDUCATION

April 2023 Volume 46, Number 4

The Art of Diabetes Care

659 About the Artist: Giorgio Baldini

In This Issue

660 In This Issue of *Diabetes Care*
M. Bingham

Editor's Note

662 A Special Thanks to the Reviewers of *Diabetes Care*

Editorial

665 Reducing Bias in Academic Publishing: The *Diabetes Care* Approach
S.E. Kahn, C.A.M. Anderson, M.A. Atkinson, G.L. Bakris, J.B. Buse, F.B. Hu, S.S. Rich, M.C. Riddle, and E. Selvin

Review

- 667 Structural Racism as an Upstream Social Determinant of Diabetes Outcomes: A Scoping Review
L.E. Egede, J.A. Campbell, R.J. Walker, and S. Linde

Commentary

678 The Clinical Significance and Implications of Developing Diabetic Retinopathy During the 5 Years Following the Diagnosis of Type 1 Diabetes
E.Y. Chew

Original Research

- 680 Retinopathy During the First 5 Years of Type 1 Diabetes and Subsequent Risk of Advanced Retinopathy
J.I. Malone, X. Gao, G.M. Lorenzi, P. Raskin, N.H. White, D.P. Hainsworth, A. Das, W. Tamborlane, A. Wallia, L.P. Aiello, and I. Bebu, on behalf of The Diabetes Control and Complications Trial (DCCT)-Epidemiology of Diabetes Interventions and Complications (EDIC) Research Group
- 687 Trends in the Prevalence and Treatment of Diabetic Macular Edema and Vision-Threatening Diabetic Retinopathy Among Commercially Insured Adults Aged <65 Years
E.A. Lundeen, M. Kim, D.B. Rein, J.S. Wittenborn, J. Saaddine, J.R. Ehrlich, and C.S. Holliday
- 697 Predictive Value of C-Peptide Measures for Clinical Outcomes of β -Cell Replacement Therapy in Type 1 Diabetes: Report From the Collaborative Islet Transplant Registry (CITR)
D.A. Baidal, C.M. Ballou, M.R. Rickels, T. Berney, F. Pattou, E.H. Payne, F.B. Barton, and R. Alejandro, for the CITR Investigators
- 704 Examining the Acute Glycemic Effects of Different Types of Structured Exercise Sessions in Type 1 Diabetes in a Real-World Setting: The Type 1 Diabetes and Exercise Initiative (T1DEXI)
M.C. Riddell, Z. Li, R.L. Gal, P. Calhoun, P.G. Jacobs, M.A. Clements, C.K. Martin, F.J. Doyle III, S.R. Patton, J.R. Castle, M.B. Gillingham, R.W. Beck, and M.R. Rickels, for the T1DEXI Study Group

714 Exocrine Proteins Including Trypsin(ogen) as a Key Biomarker in Type 1 Diabetes

L. Bakinowska, T. Vartak, T. Phuthego, M. Taylor, K. Chandler, S.T. Jerram, S. Williams, M. Feldmann, D.G. Johnson, K.A. Patel, A.J.K. Williams, A.E. Long, R.D. Leslie, K.M. Gillespie, and the Action LADA Consortium and BOX Study Group

722 Plasma Amino Acids in Early Pregnancy and Midpregnancy and Their Interplay With Phospholipid Fatty Acids in Association With the Risk of Gestational Diabetes Mellitus: Results From a Longitudinal Prospective Cohort

J. Yang, J. Wu, F. Tekola-Ayele, L.-J. Li, A.A. Bremer, R. Lu, M.L. Rahman, N.L. Weir, W.W. Pang, Z. Chen, M.Y. Tsai, and C. Zhang

733 Proteomic Predictors of Incident Diabetes: Results From the Atherosclerosis Risk in Communities (ARIC) Study

M.R. Rooney, J. Chen, J.B. Echouffo-Tcheugui, K.A. Walker, P. Schlosser, A. Surapaneni, O. Tang, J. Chen, C.M. Ballantyne, E. Boerwinkle, C.E. Ndumele, R.T. Demmer, J.S. Pankow, P.L. Lutsey, L.E. Wagenknecht, Y. Liang, X. Sim, R. van Dam, E.S. Tai, M.E. Grams, E. Selvin, and J. Coresh

742 Safety and Efficacy of the Omnipod 5 Automated Insulin Delivery System in Adults With Type 2 Diabetes: From Injections to Hybrid Closed-Loop Therapy

G.M. Davis, A.L. Peters, B.W. Bode, A.L. Carlson, B. Dumais, T.E. Vienneau, L.M. Huyett, and T.T. Ly

- 751 Growing Income-Related Disparities in Cardiovascular Hospitalizations Among People With Diabetes, 1995–2019: A Population-Based Study
B.R. Shah, P.C. Austin, C. Ke, L.L. Lipscombe, A. Weisman, and G.L. Booth

757 Pharmacokinetics and Pharmacodynamics of a Novel U500 Insulin Aspart Formulation: A Randomized, Double-Blind, Crossover Study in People With Type 1 Diabetes

E. Svehlíkova, N.L. Ashcraft, C. Gatschelhofer, D. Gerring, V. Höller, J. Jezek, B. Lackner, F. Lawrence, V. Pillai, M. Ratzer, M. Urschitz, M. Wolf, and T.R. Pieber

765 Effect of Mini-Dose Ready-to-Use Liquid Glucagon on Preventing Exercise-Associated Hypoglycemia in Adults With Type 1 Diabetes

R. Aronson, M.C. Riddell, V. Conoscenti, and M.K. Junaidi

773 Insulin Deficiency From Insulin Gene Mutation Leads to Smaller Pancreas

J.J. Wright, J.M. Williams, L.R. Letourneau-Freiberg, B. Kandasamy, D. Reyes, A.G. Kanegusuku, L. Philipson, S.A.W. Greeley, M.A. Hilmes, A.C. Powers, J. Virostko, and D.J. Moore

- 777 Structural Brain Alterations in Key Somatosensory and Nociceptive Regions in Diabetic Peripheral Neuropathy
D. Selvarajah, G. Sloan, K. Teh, I.D. Wilkinson, F. Heiberg-Gibbons, M. Awadh, A. Kelsall, M. Grieg, S. Pallai, and S. Tesfaye

786 Association of Elevated Arterial Stiffness With Cardiac Target Organ Damage and Cardiac Autonomic Neuropathy in Young Adults With Diabetes: The SEARCH for Diabetes in Youth Study
E.M. Urbina, S. Isom, D. Dabelea, R. D'Agostino Jr., S.R. Daniels, L.M. Dolan, G. Imperatore, E. Lustigova, S. Marcovina, A. Mottl, C. Pihoker, and A.S. Shah

Keep up with the latest information for *Diabetes Care* and other ADA titles via Facebook (/ADAPublications) and Twitter (@ADA_Pubs and @DiabetesCareADA).

All articles in *Diabetes Care* are available online at diabetesjournals.org/care. Featured articles (➡) and select content are available free of charge. Other articles are available free to print subscribers or can be purchased as e-prints or reprints.

ADA's Diabetes Core Update and *Diabetes Care* "On Air" podcasts are available at diabetesjournals.org and through iTunes.

Icons shown below appear on the first page of an article if more information is available online.



Video



Podcast



Supplementary Data



Companion Article

- ➡ 794 Polygenic Scores Help Reduce Racial Disparities in Predictive Accuracy of Automated Type 1 Diabetes Classification Algorithms
A.J. Deutsch, L. Stalbow, T.D. Majarian, J.M. Mercader, A.K. Manning, J.C. Florez, R.J.F. Loos, and M.S. Udler
- 801 Effects of Semaglutide on Albuminuria and Kidney Function in People With Overweight or Obesity With or Without Type 2 Diabetes: Exploratory Analysis From the STEP 1, 2, and 3 Trials
H.J.L. Heerspink, E. Apperloo, M. Davies, D. Dicker, K. Kandler, J. Rosenstock, R. Sørrig, J. Lawson, N. Zeuthen, and D. Cherney
- 811 Diabetes Stigma and Clinical Outcomes in Adolescents and Young Adults: The SEARCH for Diabetes in Youth Study
K.B. Eitel, A.J. Roberts, R. D'Agostino Jr., C.E. Barrett, R.A. Bell, A. Bellatorre, A. Cristello, D. Dabelea, L.M. Dolan, E.T. Jensen, A.D. Liese, E.J. Mayer-Davis, K. Reynolds, S.M. Marcovina, and C. Pihoker
- 819 Increased Resting-State Functional Connectivity as a Compensatory Mechanism for Reduced Brain Volume in Prediabetes and Type 2 Diabetes
J. Jing, C. Liu, W. Zhu, Y. Pan, J. Jiang, X. Cai, Z. Zhang, Z. Li, Y. Zhou, X. Meng, J. Cheng, Y. Wang, H. Li, Y. Jiang, H. Zheng, S. Wang, H. Niu, W. Wen, P.S. Sachdev, T. Wei, T. Liu, and Y. Wang
- 828 Gastrointestinal Consequences of Type 2 Diabetes Mellitus and Impaired Glycemic Homeostasis: A Mendelian Randomization Study
J. Chen, S. Yuan, T. Fu, X. Ruan, J. Qiao, X. Wang, X. Li, D. Gill, S. Burgess, E.L. Giovannucci, and S.C. Larsson
- ➡ 836 Plasma Lipidomic n-6 Polyunsaturated Fatty Acids and Type 2 Diabetes Risk in the EPIC-Potsdam Prospective Cohort Study
M. Prada, F. Eichmann, C. Wittenbecher, O. Kuxhaus, and M.B. Schulze
- 845 Glomerular Hyperfiltration Predicts Kidney Function Decline and Mortality in Type 1 and Type 2 Diabetes: A 21-Year Longitudinal Study
D. Moriconi, L. Sacchetta, M. Chiriacò, L. Nesti, G. Forotti, A. Natali, A. Solini, and D. Tricò
- 854 Initiation of Continuous Glucose Monitoring Is Linked to Improved Glycemic Control and Fewer Clinical Events in Type 1 and Type 2 Diabetes in the Veterans Health Administration
P.D. Reaven, M. Newell, S. Rivas, X. Zhou, G.J. Norman, and J.J. Zhou
- 864 Performance of the Dexcom G6 Continuous Glucose Monitoring System During Cardiac Surgery Using Hypothermic Extracorporeal Circulation
D. Herzig, M. Vettoretti, D.P. Guensch, A. Melmer, D. Schürch, J. Roos, A.M.C. Goerg, G. Krutkyte, L. Cecchini, A. Facchinetti, A.P. Vogt, and L. Bally
- 868 Effects of Intensive Systolic Blood Pressure Lowering on End-Stage Kidney Disease and Kidney Function Decline in Adults With Type 2 Diabetes Mellitus and Cardiovascular Risk Factors: A Post Hoc Analysis of ACCORD-BP and SPRINT
Y.M.K. Tawfik, B.W. Van Tassel, D.L. Dixon, W.L. Baker, J. Fanikos, and L.F. Buckley

- 874 Low-Carbohydrate Diet Scores and Mortality Among Adults With Incident Type 2 Diabetes
Y. Hu, G. Liu, E. Yu, B. Wang, C. Wittenbecher, J.E. Manson, E.B. Rimm, L. Liang, K. Rexrode, W.C. Willett, F.B. Hu, and Q. Sun

- 885 Trends in the Prevalence of Lean Diabetes Among U.S. Adults, 2015–2020
T.P. Adesoba and C.C. Brown

Meta-analysis

- ➡ 890 Global Diabetes Prevalence in COVID-19 Patients and Contribution to COVID-19–Related Severity and Mortality: A Systematic Review and Meta-analysis
R. Li, M. Shen, Q. Yang, C.K. Fairley, Z. Chai, R. McIntyre, J.J. Ong, H. Liu, P. Lu, W. Hu, Z. Zou, Z. Li, S. He, G. Zhuang, and L. Zhang

e-Letters – Observations

- e89 Endoscopic Duodenal-Jejunal Bypass Liner Treatment for Type 2 Diabetes and Obesity: Glycemic and Cardiovascular Disease Risk Factor Improvements in 1,022 Patients Treated Worldwide
R.E.J. Ryder, K. Laubner, M. Benes, M. Haluzik, L. Munro, H. Frydenberg, J.P. Teare, A. Ruban, S. Fishman, E. Santo, R. Stengel, C. De Jonge, J.W. Greve, R.V. Cohen, C.M. Aboud, G.J. Holtmann, G. Rich, J.J. McMaster, T. Battelino, P. Kotnik, J.P. Byrne, J.C. Mason, J. Bessell, J. Bascomb, L. Kow, J. Collins, J. Chisholm, P.N. Pferschy, H. Sourij, M.L. Cull, M.C. Wyres, R. Drummond, B. McGowan, S.A. Amiel, M. Yadagiri, P. Sen Gupta, J. Aberle, and J. Seufert
- e92 Higher Prevalence of Hypoglycemia and Unsafe Driving Practices in Adults With Type 1 Diabetes
A.L. Saunders, C. Bodine, J. Snell-Bergeon, G.P. Forlenza, and V.N. Shah
- e94 Diabetes During Pregnancy Among Immigrants in Sweden: A National Cohort Study of All Pregnant Women in Sweden
P. Wändell, X. Li, N. Saleh Stattin, A.C. Carlsson, C. Crump, J. Sundquist, and K. Sundquist

e-Letters – Comments and Responses

- e97 Comment on Lee et al. Relation of Change or Substitution of Low- and No-Calorie Sweetened Beverages With Cardiometabolic Outcomes: A Systematic Review and Meta-analysis of Prospective Cohort Studies. *Diabetes Care* 2022;45:1917–1930
A.M. Buziau, G.A.M. Blokland, C.G. Schalkwijk, J.L.J.M. Scheijen, P.I.H.G. Simons, S.J.P.M. Eussen, P.C. Dagnelie, M.M.J. van Greevenbroek, A. Wesselius, C.D.A. Stehouwer, and M.C.G.J. Brouwers
- e99 Response to Comment on Lee et al. Relation of Change or Substitution of Low- and No-Calorie Sweetened Beverages With Cardiometabolic Outcomes: A Systematic Review and Meta-analysis of Prospective Cohort Studies. *Diabetes Care* 2022;45:1917–1930
J.J. Lee, T. Khan, and J.L. Sievenpiper

Erratum

- 898** Erratum. 10. Cardiovascular disease and risk management: *Standards of Care in Diabetes—2023*. Diabetes Care 2023;46(Suppl. 1):S158–S190
N.A. ElSayed, G. Aleppo, V.R. Aroda, R.R. Bannuru, F.M. Brown, D. Bruemmer, B.S. Collins, S.R. Das, M.E. Hilliard, D. Isaacs, E.L. Johnson, S. Kahan, K. Khunti, M. Kosiborod, J. Leon, S.K. Lyons, M.L. Perry, P. Prahalad, R.E. Pratley, J.J. Seley, R.C. Stanton, and R.A. Gabbay, on behalf of the American Diabetes Association

Issues and Events

- 899** Issues and Events