

Diabetes Care

THE JOURNAL OF CLINICAL AND APPLIED RESEARCH AND EDUCATION

November 2014 Volume 37, Number 11

In This Issue

2897 In This Issue of *Diabetes Care*

Bench to Clinic Symposia

2899 Natriuretic Peptides, Heart, and Adipose Tissue: New Findings and Future Developments for Diabetes Research
G. Gruden, A. Landi, and G. Bruno

Clinical Care/Education/Nutrition/Psychosocial Research

2909 A Very Low-Carbohydrate, Low-Saturated Fat Diet for Type 2 Diabetes Management: A Randomized Trial
J. Tay, N.D. Luscombe-Marsh, C.H. Thompson, M. Noakes, J.D. Buckley, G.A. Wittert, W.S. Yancy Jr., and G.D. Brinkworth

2919 Prevalence and Predictors of Diabetes After Lung Transplantation: A Prospective, Longitudinal Study
K.L. Hackman, G.I. Snell, and L.A. Bach

2926 Contribution of Liraglutide in the Fixed-Ratio Combination of Insulin Degludec and Liraglutide (IDegLira)
J.B. Buse, T. Vilsbøll, J. Thurman, T.C. Blevins, I.H. Langbakke, S.G. Böttcher, and H.W. Rodbard, on behalf of the NN9068-3912 (DUAL-II) Trial Investigators

2934 Hospital Discharge Algorithm Based on Admission HbA_{1c} for the Management of Patients With Type 2 Diabetes
G.E. Umpierrez, D. Reyes, D. Smiley, K. Hermayer, A. Khan, D.E. Olson, F. Pasquel, S. Jacobs, C. Newton, L. Peng, and V. Fonseca

2940 Adjusting Glucose-Stimulated Insulin Secretion for Adipose Insulin Resistance: An Index of β -Cell Function in Obese Adults
S.K. Malin, S.R. Kashyap, J. Hammel, Y. Miyazaki, R.A. DeFronzo, and J.P. Kirwan

2947 Serum High-Sensitivity C-Reactive Protein Levels Are Associated With High Risk of Development, Not Progression, of Diabetic Nephropathy Among Japanese Type 2 Diabetic Patients: A Prospective Cohort Study (Diabetes Distress and Care Registry at Tenri [DDCRT7])
Y. Hayashino, T. Mashitani, S. Tsujii, and H. Ishii, for the Diabetes Distress and Care Registry at Tenri Study Group

→ 2953 An Early Pregnancy HbA_{1c} \geq 5.9% (41 mmol/mol) Is Optimal for Detecting Diabetes and Identifies Women at Increased Risk of Adverse Pregnancy Outcomes
R.C.E. Hughes, M.P. Moore, J.E. Gullam, K. Mohamed, and J. Rowan

2960 Comparison of Glycemic and Surgical Outcomes After Change in Glycemic Targets in Cardiac Surgery Patients
I. Mulla, K. Schmidt, J. Cashy, A. Wallia, A.-C. Andrei, D. Johnson Oakes, G. Aleppo, C. Li, K.L. Grady, E. McGee, and M.E. Molitch

Epidemiology/Health Services Research

2966 Fetal Exposure to Parental Smoking and the Risk of Type 2 Diabetes in Adult Women
V.W.V. Jaddoe, L.L. de Jonge, R.M. van Dam, W.C. Willett, H. Harris, M.J. Stampfer, F.B. Hu, and K.B. Michels

→ 2974 Severe Hypoglycemia and Mortality After Cardiovascular Events for Type 1 Diabetic Patients in Sweden
T.W.C. Lung, D. Petrie, W.H. Herman, A.J. Palmer, A.-M. Svensson, B. Eliasson, and P.M. Clarke

2982 Cognitive Function and the Risk for Diabetes Among Young Men
G. Twig, I. Gluzman, A. Tirosh, H.C. Gerstein, G. Yaniv, A. Afek, E. Derazne, D. Tzur, A. Karasik, B. Gordon, E. Fruchter, G. Lubin, A. Rudich, and T. Cukierman-Yaffe

2989 Diabetes Risk Among Overweight and Obese Metabolically Healthy Young Adults
G. Twig, A. Afek, E. Derazne, D. Tzur, T. Cukierman-Yaffe, H.C. Gerstein, and A. Tirosh

2996 Maternal Hyperglycemia During Pregnancy Predicts Adiposity of the Offspring
A. Kubo, A. Ferrara, G.C. Windham, L.C. Greenspan, J. Deardorff, R.A. Hiatt, C.P. Quesenberry Jr., C. Laurent, A.S. Mirabedi, and L.H. Kushi

3003 Low Adiponectin Levels and Increased Risk of Type 2 Diabetes in Patients With Myocardial Infarction
S. Lindberg, J.S. Jensen, S.H. Pedersen, S. Galatius, J. Frystyk, A. Flyvbjerg, M. Bjerre, and R. Mogelvang

3009 Early Improvement Predicts Reduced Risk of Incident Diabetes and Improved Cardiovascular Risk in Prediabetic Asian Indian Men Participating in a 2-Year Lifestyle Intervention Program
A. Nanditha, J. Ram, C. Snehalatha, S. Selvam, S. Priscilla, A.S. Shetty, R. Arun, I.F. Godsland, D.G. Johnston, and A. Ramachandran

Emerging Technologies and Therapeutics

→ 3016 Spinal Cord Stimulation and Pain Relief in Painful Diabetic Peripheral Neuropathy: A Prospective Two-Center Randomized Controlled Trial
R. Slagen, N.C. Schaper, C.G. Faber, E.A. Joosten, C.D. Dirksen, R.T. van Dongen, A.G. Kessels, and M. van Kleef

3025 MD-Logic Overnight Control for 6 Weeks of Home Use in Patients With Type 1 Diabetes: Randomized Crossover Trial
R. Nimri, I. Muller, E. Atlas, S. Miller, A. Fogel, N. Bratina, O. Kordonouri, T. Battelino, T. Danne, and M. Phillip

Pathophysiology/Complications

3033 Insulin Sensitivity Is an Important Determinant of Renal Health in Adolescents With Type 2 Diabetes
P. Bjornstad, D.M. Maahs, D.Z. Cherney, M. Cree-Green, A. West, L. Pyle, and K.J. Nadeau

3040 Glucose Counterregulation in Advanced Type 2 Diabetes: Effect of β -Adrenergic Blockade
S. Bokhari, E. Plummer, P. Emmerson, A. Gupta, and C. Meyer

3047 Contributory Factors to Unsteadiness During Walking Up and Down Stairs in Patients With Diabetic Peripheral Neuropathy
J.C. Handsaker, S.J. Brown, F.L. Bowling, G. Cooper, C.N. Maganaris, A.J.M. Boulton, and N.D. Reeves

3054 Quantification of the Glycemic Response to Microdoses of Subcutaneous Glucagon at Varying Insulin Levels
J. El Youssef, J.R. Castle, P.A. Bakhtiani, A. Haidar, D.L. Branigan, M. Breen, and W.K. Ward

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

All articles in *Diabetes Care* are available online at diabetes.org/diabetescare. Cover articles (➔) and ADA Statements are available free of charge. Each cover article is accompanied by a free online slide set that includes a summary of the article's key points and conclusions as well as associated tables and figures. Other articles are available free to print subscribers or can be purchased as e-prints or reprints.

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



Free Article



Slide Set



Podcast



Supplementary Data



Companion Article



Video

ADA's Diabetes Core Update podcast is available at diabetesjournals.org and through iTunes.

- ➔ **3061** Leptin Is Associated With Exaggerated Brain Reward and Emotion Responses to Food Images in Adolescent Obesity
A.M. Jastreboff, C. Lacadie, D. Seo, J. Kubat, M.A. Van Name, C. Giannini, M. Savoye, R.T. Constable, R.S. Sherwin, S. Caprio, and R. Sinha

Cardiovascular and Metabolic Risk

- 3069** Early Atherosclerosis Relates to Urinary Albumin Excretion and Cardiovascular Risk Factors in Adolescents With Type 1 Diabetes: Adolescent Type 1 Diabetes cardio-renal Intervention Trial (AdDIT)
O. Maftei, A.S. Pena, T. Sullivan, T.W. Jones, K.C. Donaghy, F.J. Cameron, E. Davis, A. Cotterill, M.E. Craig, R. Gent, N. Dalton, D. Daneman, D. Dunger, J. Deanfield, and J.J. Couper, on behalf of the AdDIT Study Group
- 3076** Brain Iron Overload, Insulin Resistance, and Cognitive Performance in Obese Subjects: A Preliminary MRI Case-Control Study
G. Blasco, J. Puig, J. Daunis-i-Estadella, X. Molina, G. Xifra, F. Fernández-Aranda, S. Pedraza, W. Ricart, M. Portero-Otín, and J.M. Fernández-Real
- 3084** Increased Serum Calcium Levels and Risk of Type 2 Diabetes in Individuals at High Cardiovascular Risk
N. Becerra-Tomás, R. Estruch, M. Bulló, R. Casas, A. Díaz-López, J. Basora, M. Fitó, L. Serra-Majem, and J. Salas-Salvadó
- 3092** Longitudinal Development of Left Ventricular Diastolic Function in Patients With Type 2 Diabetes
L. Venskutonyte, C. Jarnert, L. Rydén, and B. Kjellström
- 3098** Beneficial Effect of Pistachio Consumption on Glucose Metabolism, Insulin Resistance, Inflammation, and Related Metabolic Risk Markers: A Randomized Clinical Trial
P. Hernández-Alonso, J. Salas-Salvadó, M. Baldrich-Mora, M. Juanola-Falgarona, and M. Bulló
- 3106** Sulfonylurea Use and Incident Cardiovascular Disease Among Patients With Type 2 Diabetes: Prospective Cohort Study Among Women
Y. Li, Y. Hu, S.H. Ley, S. Rajpathak, and F.B. Hu
- 3114** High-Intensity Statin Therapy Alters the Natural History of Diabetic Coronary Atherosclerosis: Insights From SATURN
B. Stegman, R. Puri, L. Cho, M. Shao, C.M. Ballantyne, P.J. Barter, M.J. Chapman, R. Erbel, P. Libby, J.S. Raichlen, K. Uno, Y. Kataoka, S.E. Nissen, and S.J. Nicholls

Novel Communications in Diabetes

- 3121** Efficacy and Safety of Oral Methazolamide in Patients With Type 2 Diabetes: A 24-Week, Placebo-Controlled, Double-Blind Study
R.W. Simpson, G.C. Nicholson, J. Proietto, A. Sarah, K.M. Sanders, G. Phillips, J. Chambers, R. MacGinley, N. Orford, K. Walder, G. Krippner, K. Skoff, and V.J. Wacher

Review

- 3124** Hyperosmolar Hyperglycemic State: A Historic Review of the Clinical Presentation, Diagnosis, and Treatment
F.J. Pasquel and G.E. Umpierrez

Erratum

- 3132** Increased Cardiometabolic Risk Factors and Inflammation in Adipose Tissue in Obese Subjects Classified as Metabolically Healthy. *Diabetes Care* 2014;37:2813–2821
J. Gómez-Ambrosi, V. Catalán, A. Rodríguez, P. Andrada, B. Ramírez, P. Ibáñez, N. Vila, S. Romero, M.A. Margall, M.J. Gil, R. Moncada, V. Valentí, C. Silva, J. Salvador, and G. Frühbeck

Issues and Events

- 3133** Issues and Events

e-Letters – Observations

- e233** Improvement in Clinical Symptoms of Scleredema Diabeticorum by Frequency-Modulated Electromagnetic Neural Stimulation: A Case Report
A. Gandolfi, A. Pontara, G. Di Terlizzi, N. Rizzo, R. Nicoletti, M. Scavini, G. Galimberti, and E. Bosi
- e235** Gestational Diabetes Mellitus and Life Insurance: What Is the Impact of Gestational Diabetes Mellitus on Life Insurance Premiums?
A.S.Y. Zheng, T. O'Leary, and R.G. Moses
- e236** Cost of a Community-Based Diabetic Retinopathy Screening Program
M.M. Byrne, D.F. Parker, S.L. Tannenbaum, M.A. Ocasio, B.L. Lam, I. Zimmer-Galler, and D.J. Lee

e-Letters – Comments and Responses

- e238** Comment on Wędrychowicz et al. Like-Triple Diabetes as First Manifestation of MODY2 in an Overweight Teenager With Transient Multiple Antibodies. *Diabetes Care* 2014;37:e66–e67
F.M.A. Giuffrida, S.A. Dib, and A.F. Reis
- e240** Comment on Breiner et al. Does the Prevailing Hypothesis That Small-Fiber Dysfunction Precedes Large-Fiber Dysfunction Apply to Type 1 Diabetic Patients? *Diabetes Care* 2014;37:1418–1424
P.R.J. Vas, S. Sharma, and G. Rayman
- e242** Response to Comment on Breiner et al. Does the Prevailing Hypothesis That Small-Fiber Dysfunction Precedes Large-Fiber Dysfunction Apply to Type 1 Diabetic Patients? *Diabetes Care* 2014;37:1418–1424
A. Breiner, L.E. Lovblom, B.A. Perkins, and V. Bril
- e243** Comment on Ågren et al. Increased Incorporation of Antiplasmin Into the Fibrin Network in Patients With Type 1 Diabetes. *Diabetes Care* 2014;37:2007–2014
D.C. Rijken and S. Uitte de Willige
- e244** Response to Comment on Ågren et al. Increased Incorporation of Antiplasmin Into the Fibrin Network in Patients With Type 1 Diabetes. *Diabetes Care* 2014;37:2007–2014
A. Ågren, G. Jörneskog, G. Elgue, P. Henriksson, H. Wallen, and B. Wiman
- e245** Comment on Home et al. Insulin Therapy in People With Type 2 Diabetes: Opportunities and Challenges? *Diabetes Care* 2014;37:1499–1508
I. Conget, R. Aronson, S. Lee, O. Cohen, and Y. Reznik

- e247** Response to Comment on Home et al. Insulin Therapy in People With Type 2 Diabetes: Opportunities and Challenges? *Diabetes Care* 2014;37:1499–1508
P. Home, M. Riddle, W.T. Cefalu, C.J. Bailey, R.G. Bretzel, S. del Prato, D. Leroith, G. Scherthaner, L. van Gaal, and I. Raz
- e248** Comment on Brethauer et al. Bariatric Surgery Improves the Metabolic Profile of Morbidly Obese Patients With Type 1 Diabetes. *Diabetes Care* 2014;37:e51–e52
A. Tang, K.-L. Milner, K. Tonks, L.V. Campbell, and J.R. Greenfield
- e250** Comment on Brethauer et al. Bariatric Surgery Improves the Metabolic Profile of Morbidly Obese Patients With Type 1 Diabetes. *Diabetes Care* 2014;37:e51–e52
R.J.W. Middelbeek and F.M. Brown
- e251** Response to Comments on Brethauer et al. Bariatric Surgery Improves the Metabolic Profile of Morbidly Obese Patients With Type 1 Diabetes. *Diabetes Care* 2014;37:e51–e52
J.P. Kirwan, S.A. Brethauer, A. Aminian, R.J. Rosenthal, S.R. Kashyap, and P.R. Schauer



The American Diabetes Association (ADA) is the nation's leading voluntary health organization supporting diabetes research, information, and advocacy. Its mission is to prevent and cure diabetes and to improve the lives of all people affected by diabetes. ADA is the leading publisher of comprehensive diabetes information. Its huge library of books and periodicals covers every aspect of diabetes and diabetes care.

To join ADA: Call 1-800-806-7801 or visit professional.diabetes.org/membership

To subscribe to ADA journals: Call 1-800-DIABETES or go to diabetesjournals.org

To order ADA books: Call 1-800-232-6733 or visit shopdiabetes.org

To access ADA's library of professional resources: Go to professional.diabetes.org

For more information about diabetes or ADA programs and services: Call 1-800-DIABETES. E-mail: AskADA@diabetes.org or visit diabetes.org

To locate an ADA/NCQA Recognized Provider of quality diabetes care in your area: Visit recognition.ncqa.org

To join the fight to increase funding for diabetes research, end discrimination, and improve insurance coverage: Call 1-800-DIABETES or visit diabetes.org/advocacy

To find out how you can get involved with the programs in your community: Call 1-800-DIABETES or visit diabetes.org/in-my-community

To find out about important research regarding diabetes: Go to diabetes.org/research-and-practice

To make a donation or memorial contribution: Call 1-800-DIABETES or visit diabetes.org/donate