

All articles in *Diabetes Care* are available on the World Wide Web at www.diabetes.org/diabetescare. Cover articles (▶) and ADA Statements are available free of charge. Other articles are available free to print subscribers or can be purchased as e-prints or reprints.

Original Research

Clinical Care/Education/Nutrition/Psychosocial Research

1153 Effect of the Look AHEAD study intervention on medication use and related cost to treat cardiovascular disease risk factors in individuals with type 2 diabetes

J.B. Redmon, A.G. Bertoni, S. Connelly, P.A. Feeney, S.M. Glasser, H. Glick, F. Greenway, L.A. Hesson, M.S. Lawlor, M. Montez, B. Montgomery, the Look AHEAD Research Group

1159 Executive functioning, treatment adherence, and glycemic control in children with type 1 diabetes

K. McNally, J. Rohan, J.S. Pendley, A. Delamater, D. Drotar

1163 Effect of ranolazine on A1C and glucose levels in hyperglycemic patients with non-ST elevation acute coronary syndrome

J.W. Chisholm, A.B. Goldfine, A.K. Dhalla, E. Braunwald, D.A. Morrow, E. Karwatowska-Prokopczuk, L. Belardinelli

1169 Health-related quality of life, treatment satisfaction, and costs associated with intraperitoneal versus subcutaneous insulin administration in type 1 diabetes: a randomized controlled trial

S.J. Logtenberg, N. Kleefstra, S.T. Houweling, K.H. Groenier, R.O. Gans, H.J. Bilo

1173 Effects of exenatide and lifestyle modification on body weight and glucose tolerance in obese subjects with and without pre-diabetes

J. Rosenstock, L.J. Klaff, S. Schwartz, J. Northrup, J.H. Holcombe, K. Wilhelm, M. Trautmann

1176 A 24-week, randomized, treat-to-target trial comparing initiation of insulin glargine once-daily with insulin detemir twice-daily in patients with type 2 diabetes inadequately controlled on oral glucose-lowering drugs

S.G. Swinnen, M.-P. Dain, R. Aronson, M. Davies, H.C. Gerstein, A.F. Pfeiffer, F.J. Snoek, J.H. DeVries, J.B. Hoekstra, F. Holleman

Epidemiology/Health Services Research

1179 Insulin resistance predicts mortality in nondiabetic individuals in the U.S.

K.J. Ausk, E.J. Boyko, G.N. Ioannou

1186 Testosterone concentrations in diabetic and nondiabetic obese men

S. Dhindsa, M.G. Miller, C.L. McWhirter, D.E. Mager, H. Ghanim, A. Chaudhuri, P. Dandona

1193 Cost-effectiveness of aspirin use among persons with newly diagnosed type 2 diabetes

R. Li, P. Zhang, L.E. Barker, T.J. Hoerger

▶ **1200** Educational disparities in mortality among adults with diabetes in the U.S.

R. Dray-Spira, T.L. Gary-Webb, F.L. Brancati

▶ **1206** Prediction of type 1 diabetes in the general population

M. Knip, S. Korhonen, P. Kulmala, R. Veijola, A. Reunanen, O.T. Raitakari, J. Viikari, H.K. Åkerblom

1213 Treatment of type 2 diabetes and outcomes in patients with heart failure: a nested case-control study from the U.K. General Practice Research Database

M.R. MacDonald, D.T. Eurich, S.R. Majumdar, J.D. Lewsey, S. Bhagra, P.S. Jhund, M.C. Petrie, J.J.V. McMurray, J.R. Petrie, F.A. McAlister

1219 Maternal glucose at 28 weeks of gestation is not associated with obesity in 2-year-old offspring: the Belfast Hyperglycemia and Adverse Pregnancy Outcome (HAPO) Family Study

D.J. Pettitt, S. McKenna, C. McLaughlin, C.C. Patterson, D.R. Hadden, D.R. McCance

1224 The risk of overall mortality in patients with type 2 diabetes receiving glipizide, glyburide, or glimepiride monotherapy: a retrospective analysis

K.M. Pantalone, M.W. Kattan, C. Yu, B.J. Wells, S. Arrigain, A. Jain, A. Atreja, R.S. Zimmerman

1230 Association between glycemia, serum lipoproteins, and the risk of oral leukoplakia: the population-based Study of Health in Pomerania (SHIP)

P. Meisel, M. Dau, W. Sümnick, B. Holtfreter, M. Houshmand, M. Nauck, T. Kocher

1233 Transcription factor 7-like 2 (TCF7L2) polymorphism and hyperglycemia in an adult Italian population-based cohort

R. Gambino, S. Bo, L. Gentile, G. Musso, G. Pagano, P. Cavallo-Perin, M. Cassader

1236 Association of A1C levels with vitamin D status in U.S. adults: data from the National Health and Nutrition Examination Survey

J. Kositsawat, V.L. Freeman, B.S. Gerber, S. Geraci

1239 Parity, breastfeeding, and the subsequent risk of maternal type 2 diabetes

B. Liu, L. Jorm, E. Banks

Emerging Treatments and Technologies

1242 Evaluation of an algorithm to guide patients with type 1 diabetes treated with continuous subcutaneous insulin infusion on how to respond to real-time continuous glucose levels: a randomized controlled trial

A.J. Jenkins, B. Krishnamurthy, J.D. Best, F.J. Cameron, P.G. Colman, S. Farish, P.S. Hamblin, M.A. O'Connell, C. Rodda, K. Rowley, H. Teede, D.N. O'Neal

1249 Real-time hypoglycemia prediction suite using continuous glucose monitoring: a safety net for the artificial pancreas

E. Dassau, F. Cameron, H. Lee, B.W. Bequette, H. Zisser, L. Jovanović, H.P. Chase, D.M. Wilson, B.A. Buckingham, F.J. Doyle III

1255 DURATION-1: exenatide once weekly produces sustained glycemic control and weight loss over 52 weeks

J.B. Buse, D.J. Drucker, K.L. Taylor, T. Kim, B. Walsh, H. Hu, K. Wilhelm, M. Trautmann, L.Z. Shen, L.E. Porter, for the DURATION-1 Study Group

1262 Hyperglycemia-induced platelet activation in type 2 diabetes is resistant to aspirin but not to a nitric oxide-donating agent

P. Gresle, S. Marzotti, G. Guglielmini, S. Momi, S. Giannini, P. Minuz, P. Lucidi, G.B. Bolli

Table of Contents continues on page v

1269 The cost-effectiveness of continuous glucose monitoring in type 1 diabetes
E.S. Huang, M. O'Grady, A. Basu, A. Winn, P. John, J. Lee, D. Meltzer, C. Kollman, L. Laffel, W. Tamborlane, S. Weinzimer, T. Wysocki, the Juvenile Diabetes Research Foundation Continuous Glucose Monitoring Study Group

1275 Online diabetes self-management program: a randomized study
K. Lorig, P.L. Ritter, D.D. Laurent, K. Plant, M. Green, V.B.B. Jernigan, S. Case

1282 Novel use of glucagon in a closed-loop system for prevention of hypoglycemia in type 1 diabetes
J.R. Castle, J.M. Engle, J.E. Youssef, R.G. Massoud, K.C.J. Yuen, R. Kagan, W.K. Ward

1288 Oral insulin: a comparison with subcutaneous regular human insulin in patients with type 2 diabetes
C. Kapitza, E. Zijlstra, L. Heinemann, M.C. Castelli, G. Riley, T. Heise

1291 Novel assay of metformin levels in patients with type 2 diabetes and varying levels of renal function: clinical recommendations
A. Frid, G.N. Sterner, M. Löndahl, C. Wiklander, A. Cato, E. Vinge, A. Andersson

1294 The role of adjunctive exenatide therapy in pediatric type 1 diabetes
V.S. Raman, K.J. Mason, L.M. Rodriguez, K. Hassan, X. Yu, L. Bomgaars, R.A. Heptulla

1297 Variation of interstitial glucose measurements assessed by continuous glucose monitors in healthy, nondiabetic individuals
Juvenile Diabetes Research Foundation Continuous Glucose Monitoring Study Group

1300 Switching to once-daily liraglutide from twice-daily exenatide further improves glycemic control in patients with type 2 diabetes using oral agents
J.B. Buse, G. Sesti, W.E. Schmidt, E. Montanya, C.-T. Chang, Y. Xu, L. Blonde, J. Rosenstock, for the Liraglutide Effect Action in Diabetes (LEAD)-6 Study Group

Pathophysiology/Complications

1304 Long-term metformin use is associated with decreased risk of breast cancer
M. Bodmer, C. Meier, S. Krähenbühl, S.S. Jick, C.R. Meier

1309 Progression of cerebral atrophy and white matter hyperintensities in patients with type 2 diabetes
J. de Bresser, A.M. Tiehuis, E. van den Berg, Y.D. Reijmer, C. Jongen, L.J. Kappelle, W.P. Mali, M.A. Viergever, G.J. Biessels, on behalf of the Utrecht Diabetic Encephalopathy Study Group

1315 Age at onset and the risk of proliferative retinopathy in type 1 diabetes
K. Hietala, V. Harjutsalo, C. Forsblom, P. Summanen, P.-H. Groop, on behalf of the FinnDiane Study Group

1320 Urinary liver-type fatty acid-binding protein predicts progression to nephropathy in type 1 diabetic patients
S.E. Nielsen, T. Sugaya, P. Hovind, T. Baba, H.-H. Parving, P. Rossing

► **1325** Explanations for the lower rates of diabetic neuropathy in Indian Asians versus Europeans
C.A. Abbott, N. Chaturvedi, R.A. Malik, E. Salgami, A.P. Yates, P.W. Pemberton, A.J.M. Boulton

1331 Alterations in retinal microvascular geometry in young type 1 diabetes
M.B. Sasongko, J.J. Wang, K.C. Donaghue, N. Cheung, P. Benitez-Aguirre, A. Jenkins, W. Hsu, M.-L. Lee, T.Y. Wong

1337 High-normal serum uric acid increases risk of early progressive renal function loss in type 1 diabetes: results of a 6-year follow-up
L.H. Ficociello, E.T. Rosolowsky, M.A. Niewczas, N.J. Maselli, J.M. Weinberg, A. Aschengrau, J.H. Eckfeldt, R.C. Stanton, A.T. Galecki, A. Doria, J.H. Warram, A.S. Krolewski

1344 Renal hyperfiltration is a determinant of endothelial function responses to cyclooxygenase 2 inhibition in type 1 diabetes
D.Z.I. Cherney, J.A. Miller, J.W. Scholey, R. Nasrallah, R.L. Hébert, M.G. Dekker, C. Slorach, E.B. Sochett, T.J. Bradley

Cardiovascular and Metabolic Risk

1347 Derivation and validation of a new cardiovascular risk score for people with type 2 diabetes: the New Zealand Diabetes Cohort Study
C.R. Elley, E. Robinson, T. Kenealy, D. Bramley, P.L. Drury

► **1353** Long-term trends in cardiorespiratory fitness and the incidence of type 2 diabetes
S.S. Sawada, I.-M. Lee, H. Naito, J. Noguchi, K. Tsukamoto, T. Muto, Y. Higaki, H. Tanaka, S.N. Blair

1358 Prognostic value of coronary computed tomographic angiography in diabetic patients without known coronary artery disease
M. Hadamitzky, F. Hein, T. Meyer, B. Bischoff, S. Martinoff, A. Schömig, J. Hausleiter

1364 Childhood size and life course weight characteristics in association with the risk of incident type 2 diabetes
E.H. Yeung, C. Zhang, G.M.B. Louis, W.C. Willett, F.B. Hu

1370 Validity of a single-factor model underlying the metabolic syndrome in children: a confirmatory factor analysis
V. Martínez-Vizcaino, M.S. Martínez, F.S. Aguilar, S.S. Martínez, R.F. Gutiérrez, M.S. López, P.M. Martínez, F. Rodríguez-Artalejo

1373 Serum 25-hydroxy vitamin D and insulin resistance, metabolic syndrome, and glucose intolerance among Arab Americans
N.R. Pinelli, L.A. Jaber, M.B. Brown, W.H. Herman

1376 Independent metabolic syndrome variants predict new-onset coronary artery disease
D. Vaidya, R.A. Mathias, B.G. Kral, L.R. Yanek, L.C. Becker, D.M. Becker

1379 Association of vitamin D with insulin resistance and β -cell dysfunction in subjects at risk for type 2 diabetes
S. Kayaniyil, R. Vieth, R. Retnakaran, J.A. Knight, Y. Qi, H.C. Gerstein, B.A. Perkins, S.B. Harris, B. Zinman, A.J. Hanley

1382 Glucose intolerance and cardiometabolic risk in adolescents exposed to maternal gestational diabetes: a 15-year follow-up study
W.H. Tam, R.C.W. Ma, X. Yang, A.M. Li, G.T.C. Ko, A.P.S. Kong, T.T.H. Lao, M.H.M. Chan, C.W.K. Lam, J.C.N. Chan

1385 Optimal definitions for abdominal obesity and the metabolic syndrome in Andean Hispanics: the PREVENCIÓN study
J. Medina-Lezama, C.A. Pastorius, H. Zea-Diaz, A. Bernabe-Ortiz, F. Corrales-Medina, O.L. Morey-Vargas, D.A. Chirinos, E. Muñoz-Atahualpa, J. Chirinos-Pacheco, J.A. Chirinos, on behalf of the PREVENCIÓN Investigators

Reviews/Commentaries/ADA Statements

1389 Reviews

Hypoglycemia, diabetes, and cardiovascular events
C.V. Desouza, G.B. Bolli, V. Fonseca

1395 Position Statement

Aspirin for primary prevention of cardiovascular events in people with diabetes: a position statement of the American Diabetes Association, a scientific statement of the American Heart Association, and an expert consensus document of the American College of Cardiology Foundation

M. Pignone, M.J. Alberts, J.A. Colwell, M. Cushman, S.E. Inzucchi, D. Mukherjee, R.S. Rosenson, C.D. Williams, P.W. Wilson, M.S. Kirkman

Editorials

1403 Editorial (see Knip et al., p. 1206)

Enhancing the understanding of pre-type 1 diabetes in the general population

O. Simell, W.E. Winter, D. Schatz

1406 Erratum

1407 Issues and Updates

Diabetes Care Electronic Pages

Available at <http://care.diabetesjournals.org>

Perspectives on the News

e73 Neuropathy, retinopathy, and glucose-lowering treatments

Z.T. Bloomgarden

Online Letters: Observations

e79 Screening of silent myocardial ischemia in type 2 diabetic patients: a randomized trial comparing isotopic and echocardiographic stress tests

S. Jacqueminet, O. Barthélémy, C.L. Feuvre

e80 Relationship between glycated hemoglobin and metabolic syndrome of type 1 and type 2 diabetes: a factor analysis study

F.M.A. Giuffrida, C.F.C. Sallum, M.A.L. Gabbay, M.B. Gomes, A.C. Pires, S.A. Dib

e81 Continuous subcutaneous insulin infusion is better than multiple daily insulin injections in reducing glucose variability only in type 1 diabetes with good metabolic control

G. Lepore, A. Corsi, A.R. Dodesini, I. Nosari, R. Trevisan

e82 Improved glycemic control with the multi-receptor tyrosine kinase inhibitor pazopanib

S. Böhm, D. Hess, S. Gillessen, M. Brändle

Online Letters: Comments and Responses

e83 Insulin assay standardization: leading to measures of insulin sensitivity and secretion for practical clinical care: response to Staten et al.

L. Heinemann

e84 Insulin assay standardization: leading to measures of insulin sensitivity and secretion for practical clinical care: response to Heinemann

M.A. Staten, W.G. Miller, R.R. Bowsher, M.W. Steffes, for the Insulin Standardization Workgroup

About the American Diabetes Association

The American Diabetes Association 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. The American Diabetes Association 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 the American Diabetes Association: Call 1-800-806-7801 or log on to www.diabetes.org/membership

To become a professional member or to access ADA's resources for health care professionals: Go to <http://professional.diabetes.org>

To subscribe to American Diabetes Association journals: Call 1-800-342-2383 or go to www.diabetesjournals.org

To order American Diabetes Association books: Call 1-800-232-6733 or log on to <http://store.diabetes.org>

To access ADA's library of professional resources: Go to <http://professional.diabetes.org>

For more information about diabetes or ADA programs and services: Call 1-800-342-2383. E-mail: AskADA@diabetes.org or log on to www.diabetes.org

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

To find an ADA Recognized Education Program in your area: Call 1-800-342-2383 or go to http://professional.diabetes.org/erp_zip_search.aspx

To join the fight to increase funding for diabetes research, end discrimination, and improve insurance coverage: Call 1-800-342-2383 or visit www.diabetes.org/how-to-help/action

To find out how you can get involved with the programs in your community: Call 1-800-342-2383 or visit www.diabetes.org/community-events/programs

To find out about an important research project regarding type 2 diabetes: Log on to www.diabetes.org/news-research/research/recent/co-supported-research.html

To make a donation or memorial contribution: Call 1-800-342-2383 or visit www.diabetes.org/how-to-help/ways-to-donate-give