

Subject Index

A

Abdominal fat. *See* Visceral fat
Aborigines, Australian
 cardiovascular risk in, 472, 1269
 glucose intolerance in, 1269
Abortion, spontaneous, pre-conception care and, 514
Acanthosis nigricans, insulin resistance and, 885
Acarbose
 as adjuvant to sulfonylurea therapy, 252
 glucose intolerance and, 1190
 ileus and, 1033
 indications for, 94
ACE. *See* Angiotensin-converting enzyme (ACE)
Adherence to diabetes care, patient participation and, 1153
Adipocyte, 1040
 dedifferentiation of, TNF- α and, 1283
Adipose tissue
 metformin and, 160
 subcutaneous distribution of, visceral fat and, 1404
Adolescent
 Eikenella corrodens infection in, 1011
 microalbuminuria in, 369
 β_1 -adrenergic receptor, genetic variations in, 271, 1034
Adult-onset IDDM, immunogenetic markers in, 241
African-Americans
 amputation incidence and proportion in, 48
 in behavioral weight control program, 409
 black South Africans vs., NIDDM in, 1451
 lipoprotein(a) levels in, 1129
 metabolic syndrome in, 414
 mortality of, 1344
Aging. *See also* Elderly patients
 cardiovascular risk and, 587
 diabetes incidence and, 114, 1279
 hypoglycemia and, 544
 pancreatic β -cell function in, 8
Albuminuria. *See also* Macroalbuminuria;
 Microalbuminuria
 ACE gene polymorphism in, 1420
 5-year prospective study of, 171
 incidence of, 486
 as predictor of diabetic complications, 1243
 serum sialic acid and, 130
Alcohol intake, NIDDM and, 509
Aldehyde dehydrogenase, mitochondrial,
 genetic mutation in, 1423
Allergic reaction, to latex, 184, 546
 α -cell function, mitochondrial gene
 abnormalities and, 1166
Altitude, blood glucose meter and, 1430
Amino acid turnover, in gestational diabetes,
 591
Amputation
 of foot, in Pima Indians, 704
 of great toe, foot deformities and ulcers after,
 165
 incidence of, 1006
 in minority subjects, 48
 of lower extremity
 incidence of, 1006
 in Nauruans, 710
 risk factors for, 95, 607
Amylin
 islet, glipizide and, 883
 pathophysiological effects of, 551
Amyloidosis, islet, in congenital generalized
 lipodystrophy, 28

Androgen, glucose intolerance and, in
 postmenopausal women, 1399
Angiopathy, HbA_{1c} threshold for, 183
Angioplasty, percutaneous transluminal, for
 foot ulcer, 1261
Angiotensin-converting enzyme (ACE), genetic
 polymorphism of, albuminuria and, 1420
Angiotensin-converting enzyme (ACE) inhibitor
 genetic mutation of, 543
 ketonuria and, 673
 renal and cardiovascular effects of, 1225
 reversible hyperkalemia and, 781
1,5-Anhydroglucitol, in nondiabetic serum, 940
Antimicrobials, for foot infection, 638
Antiphospholipid syndrome, retinal artery
 occlusion in, 92
Antroduodenal motility, in IDDM, 21
Aortic distensibility, familial NIDDM and, 501
Apolipoprotein(a), nephropathy and, 1036,
 1382
Arginine, vascular responses to, metformin and,
 934
Arterial calcification, in Pima Indians, 968
Asian subjects, nondiabetic, hyperinsulinemia
 in, 39
Atherosclerosis
 in African-Americans, 414
 insulin resistance and, 274
 visceral fat accumulation and, 287, 292
Auditory evoked potentials, in IDDM, 1220
Australian Aborigines
 cardiovascular risk in, 472, 1269
 glucose intolerance in, 1269
Autonomic neuropathy, 751
 cardiac, hyperglycemia and, 880
 disease duration and, 960
 gastric emptying delay in, NMR imaging of,
 1075
 pancreatic polypeptide response to, 778
 subcutaneous insulin infusion for, 90

B

BABY-DIAB Study, 1456
Balloon angioplasty, for foot ulcer, 1261
Behavioral change strategies, in DCCT, 648
Behavioral weight control program,
 effectiveness of, 409
 β -cell. *See also* Islet cell
 aging and, 8
 GAD antibody and, in children with IDDM,
 74
 mitochondrial gene abnormalities and, 1166
Birth date, time-space clustering at, in children
 with IDDM, 328
Black South Africans, NIDDM in, vs. African-
 Americans, 1451
Blindness. *See* Visual loss
Blood cell, red, Na-Li countertransport activity
 in, in non-nephropathic diabetic twins, 32
Blood flow, peripheral, metformin and, 160
Blood glucose
 monitoring of. *See* Glucose meter; Monitoring
 of blood glucose
 in obesity, exercise intensity and, 341
 in postmenopausal women, 333
Body fat
 central, measurement of, 1033
 distribution of, insulin resistance and, 287,
 292, 920
Bone mineral density, hyperinsulinemia and,
 1388
Bovine serum albumin, antibodies to, in
 children with IDDM, 126, 1308

Bovine serum albumin peptide, in infant
 formula, 1364
Brain function
 in ketoacidosis, 1455
 in NIDDM, 361
Brainstem auditory evoked potentials, in IDDM,
 1220
Brazilians with IDDM, anti-bovine serum
 albumin antibodies in, 126
Bromocriptine (Ergoset), for weight loss, 667
C
Calcification, arterial, in Pima Indians, 968
Calcium
 hyperglycemia and cardiac mass and, 1393
 platelet, in end-stage renal failure, 1062
Cancer. *See site of tumor, e.g.,* Pancreatic
 carcinoma
Capillary HbA_{1c}
 collection of, at home, 1307
 on filter paper, 142
Captopril
 circulating catecholamines and, 236
 ketonuria and, 673
 for nephropathy, economics of, 1051
Carbohydrate
 gastric emptying of, 468
 ingestion of
 energy balance and, 1142
 α -glucosidase inhibitor effects after, 642
 hypoglycemia drugs and, 498
 supplementary, exercise and, 575
Cardiac innervation
 coronary artery disease symptoms and, 231
 disease duration and, 960
 hyperglycemia and, in normal subjects, 880
Cardiac ischemia, death from, sex hormones
 and DHEA-SO₄ in, 1045
Cardiac mass, calcium and, 1393
Cardiovascular disease, 187, 1459. *See also*
 Atherosclerosis
Cardiovascular risk
 ACE inhibitors and vitamin E and, 1225
 in Australian Aborigines, 472, 1269
 cigarette smoking as factor, 112
 in elderly patients, 587
 in Europe, 689
 hyperglycemia as factor, 450
 islet cell antibodies and, 60
 metformin and, 64
 in NIDDM, 1265
 retinopathy and, 1445
 socioeconomic status and, 419, 423
 syndrome X and, 275
 urinary albumin excretion and, 1243
Caretaker, of children with IDDM, insulin dose
 measurement by, 56
Catecholamines, in plasma, captopril and, 236
Caucasians
 in behavioral weight control program, 409
 mortality of, 1344
 non-Hispanic, amputation incidence and
 proportion in, 48
CD8⁺ T-cell activation, in prediabetic twins,
 1177
Cereal, high β -glucan, NIDDM subjects and,
 831
Cerebral infarction, hypoglycemia and, 1001
Cesarean section, infection after, 597
Children. *See also* Children with IDDM;
 Children with NIDDM
 of diabetic parent(s), 822, 827
 islet cell antibodies in, vaccines and, 1456

- pubertal, thyroxine-binding globulin in, 246
- Children with IDDM
 anti-bovine serum albumin antibodies in, 126, 1308, 1364
 dietary intake of, 1370
 GAD antibodies in, 901
 β -cell function and, 74
 hospital admissions for, 431
 incidence of, in Rome and Lazio region, 70
 insulin dosage measurement for, caretaker measurement of, 56
 islet cell antibodies in, 1452
 metabolic control in, 318
 pancreatic size in, 777
 parental diabetes and, 827, 1456
 psychiatric disorders in, 318
 self-care autonomy in, 119
 seric IgA production in, 779
 subcutaneous vs. intramuscular insulin injection in, 1434
 time-space clustering of date at birth in, 328
 zinc deficiency and, 873
- Children with NIDDM
 maternal diabetes and, 822
 parental diabetes and, 827
- Chinese, metabolic syndrome in, 953
- Cholestasis, glibenclamide-induced, 385
- Cholesteryl ester transfer, pancreas-kidney transplantation in, 1108
- Chromosome 1 2q, MODY3 locus on, diabetic complications and, 915
- Cigarette smoking. *See* Smoking
- Clamp technique, advantages of, 278
- Classification of diabetes, 270, 676
- Cognitive function, glycemic control and, 656
- Cold pressor test, pain during, 722
- Colombian Amerindians, lack of diabetes in, 900
- Community setting, rapid HbA_{1c} testing in, 764
- Complement C4, polymorphism of, IDDM susceptibility and, 53
- Complications. *See also* Diabetes Control and Complications Trial (DCCT); EURODIAB IDDM Complications Study; *specific complication*
 avoidance of, 927
 MODY3 locus on chromosome 1 2q and, 915
 studies of, GHb measurement differences in, 726
- Conception, medical care before. *See* Pre-conception care
- Congenital generalized lipodystrophy, islet amyloidosis in, 28
- Congenital malformations, pre-conception care and, 514
- Coronary artery bypass surgery, mortality and morbidity after, 698
- Coronary artery disease
 insulin resistance in, 1
 painful vs. asymptomatic, cardiac innervation and, 231
 retinopathy as predictor of, 1445
- Cortical blindness, hypoglycemia and, 272, 1001
- Cost benefit, of preconception care, 384
- Cost of diabetes, 1416
- Cow's milk protein, bovine serum albumin peptide in, in infant formula, 1364
- Cremona study, 1279
- D**
 DCCT. *See* Diabetes Control and Complications Trial (DCCT)
- Death
 after coronary artery bypass surgery, 698
 diabetes center attendance and, 211
 hypertension and, 305
 from ischemic heart disease, sex hormones and DHEA-SO₄ in, 1045
 in Pima Indians, 107
 from nephropathy, 777, 779
 proteinuria and, 305
 racial differences in, 1344
 sudden, long QT interval and, 1010
- Denmark, IDDM epidemiology, 801
- Depression, NIDDM onset and, 1097
- Dermagraft, for foot ulcers, 350
- DHEA-SO₄, sex hormones and, and death from ischemic heart disease, 1045
- Diabetes center, survival probability and, 211
- Diabetes Control and Complications Trial (DCCT)
 behavioral change strategies in, 648
 patient reactions to, 873
 quality-of-life outcomes in, intensive therapy and, 195
 retinopathy in, 1375
- Diabetes mellitus
 incidence and prevalence of, in Manitoba, 807
 lack of, in Colombian Amerindians, 900
- Diabetes Prevention Trial, 96
- Diet
 after pancreas transplantation, 735
 carbohydrates in. *See* Carbohydrate, ingestion of
 of children with IDDM, 1370
 high fat and high carbohydrate, energy balance and, 1142
 linseed and fish oil in, NIDDM control and, 463
 miglitol and, 559
 self-management of, office-based intervention in, 835
 sucrose and fructose in, metabolic effects of, 1249
 in tropical countries, 1014
 of Wanigela people of Papua New Guinea, 457
- Dipyridamole thallium myocardial scintigraphy, of vascular surgery patient, 355
- DQB1 typing, neonatal diabetes and, 1308
- Drug use, in diabetic patients, 992
- Dyslipoproteinemia, in NIDDM, GLP-I for, 1200
- E**
 Egyptian deserts, diabetes prevalence in, 92
- Eikenella corrodens* infection, 1011
- Elderly patients. *See also* Aging
 cardiovascular risk in, 587
 glucose level and pulmonary function in, 1441
 NIDDM in, 1320, 1326
- Endothelial cells, monocyte binding to, hypertriglyceridemia and, 1122
- Endothelial growth factor, vascular, in aqueous humor, rubeotic glaucoma and, 1306
- Endothelin-1, insulin and, 504
- Energy balance, high-fat/high-carbohydrate diet and, 1142
- Enteral feeding, guar gum in, 899
- Epidemiology of Diabetes Complications Study, renal disease in, 219
- Erectile dysfunction, prevalence of, 133
- Ergoset (bromocriptine), for weight loss, 667
- Erythrocyte, Na-Li countertransport activity in, in non-nephropathic diabetic twins, 32
- Ethnicity. *See specific ethnic group*
- ETS (exercise thallium 201 scintigraphy), false-positive, 185
- EURODIAB IDDM Complications Study
 renal disease in, 219
 socioeconomic status and diabetic complications in, 423
- Europe, cardiovascular risk in, 689
- Exercise
 carbohydrate supplementation and, 575
 intensity of, in obesity, 341
 oxidative stress and, 569
 peripheral vascular resistance and, in young IDDM patients, 1286
- Exercise thallium 201 scintigraphy (ETS), false-positive, 185
- F**
 Familial diabetes. *See also* Children, of diabetic parent(s)
 and 1,5-anhydroglucitol in nondiabetic serum, 940
 aortic distensibility and, 501
 incidence of, 5827
 mitochondrial DNA mutations in, 507
- Fat. *See also* Body fat; Obesity
 abdominal. *See* Visceral fat
 dietary, energy balance and, 1142
- Fat replacers, in nutrition therapy, 1294, 1302
- Fatty acids
 insulin resistance and, 394
 n-3 type of, NIDDM control and, 463
- Fibrinogen, in plasma, 157
- β -fibrinogen gene, as cardiovascular risk factor, 1265
- Fibrocalculous pancreatic diabetes, 1274
- Filter paper, capillary HbA_{1c} on, 142
- Finland, IDDM risk in, HLA-DQB1 genotype and, 795
- Fish oil
 insulin resistance and, 1207
 nephropathy and, 1214
 NIDDM control and, 463
- Food, pancreatic polypeptide response to, 778
- Foot
 amputation of, in Pima Indians, 704
 deformities of, after great toe amputation, 165
 dynamic pressure on, reduction of, 818
 infections of, antimicrobials for, 638
 osteomyelitis in, conservative surgery for, 1257
 ulceration of
 after great toe amputation, 165
 Dermagraft for, 350
 hyperbaric oxygen therapy in, 1338
 PTA for, 1261
 reducing dynamic foot pressure in, 818
- Formula, for infant feeding, bovine serum albumin peptide in, 1364
- Fructose, dietary, metabolic effects of, 1249
- G**
 GAD antibodies
 β -cell function and, in children with IDDM, 74
 in children with IDDM, 901
 disappearance of, in progressive IDDM, 1031
 in Thailand, 674
- Gastric emptying

- delayed, autonomic neuropathy with, NMR imaging of, 1075
 in NIDDM, 468
 postprandial walking and, 1306
 Genetic mutation
 of glucagon receptor, 546
 mitochondrial, α - and β -cell dysfunction and, 1166
 Genetics
 of adult-onset IDDM, 241
 of familial NIDDM, 507
 of insulin resistance, 396
 of NIDDM, 864
 GÉNID study, 864, 892
 Gestational diabetes mellitus. *See also*
 Pregnancy
 diagnosis of, 12
 glucose and amino acid turnover in, 591
 increased proinsulin-to-insulin ratio after, predictive value of, 17
 lipid levels in, 1351
 NIDDM vs. IDDM after, 653
 recurrent, 1348
 screening for, 12
 GHb. *See* Glycated hemoglobin (GHb)
 Glaucoma, rubeotic, aqueous humor VEGF and, 1306
 Glibenclamide
 GLP-1 and, 857
 liver toxicity of, 385
 Glimepiride
 once-daily, 1194
 response to, after sulfonylurea therapy, 849
 Glipizide, islet cell hormones and, 883
 Glomerular filtration rate, 5-year prospective study of, 171
 GLP-1. *See* Glucagon-like peptide 1
 Glucagon, islet, glipizide and, 883
 Glucagon-like peptide 1
 glibenclamide and, 857
 in IDDM, 580
 for NIDDM dyslipoproteinemia, 1200
 in tablet, 843
 Glucagon receptor, genetic mutation of, in Japanese patient, 546
 β -glucan, cereals high in, NIDDM subjects and, 831
 Glucose intolerance
 acarbose and, 1190
 androgen activity and, in postmenopausal women, 1399
 in Australian Aborigines, 1269
 cigarette smoking and, 112
 lipid metabolism in, 365
 methane-producing status and, 549
 in northern Sudan, 1126
 prevalence of, 663
 pulmonary function and, in elderly patients, 1441
 Glucose measurement
 in blood. *See* Blood glucose
 in urine. *See* Urine glucose, measurement of
 Glucose metabolism
 metformin effect on, 1185
 in obesity, exercise intensity and, 341
 Glucose meter
 accuracy of, 903, 1412
 altitude and, 1430
 in pregnancy, 1031
 temperature and, 771
 Glucose tolerance tests
 glucose effectiveness in, 1018
 oral, 271
 α -Glucosidase inhibitor, after carbohydrate ingestion, 642
 Glycated hemoglobin (GHb)
 assays for, interlaboratory variations in, 730
 cardiovascular risk and, 450
 complications risk and, 726
 in pregnancy, 1455
 Glycemic control
 cognitive function and, 656
 microalbuminuria and, 313
 socioeconomic status and, 423
 sucralose and, 1004
 symptoms and well-being and, 204
 Glycemic targets, 91
 Great toe, amputation of, foot deformities and ulcers after, 165
 Guar gum, in enteral feeding, 899
H
 HbA_{1c}
 capillary
 collection of, at home, 1307
 on filter paper, 142
 rapid testing of, in community, 764
 sulfonamide-induced hemolysis and, 775
 threshold of, for microangiopathy risk, 183
 Health care, structure and costs of, in Finland, 494
 Health maintenance organization, diabetic care in, 601, 786, 1169
 Heart
 mass of, calcium and, 1393
 regional sympathetic denervation of, 1083
 Hemodialysis
 LDL apheresis and oxidation in, 1103
 smoking and, 625
 survival during, 1333
 Hemodynamic response, to arginine, metformin and, 934
 Hemoglobin. *See also* HbA_{1c}
 glycated. *See* Glycated hemoglobin (GHb)
 Hemolysis, sulfonamide-induced, HbA_{1c} levels and, 775
 Hepatitis C virus, prevalence of, in diabetic patients, 998
 Hispanic subjects, amputation incidence and proportion in, 48
 HLA-DQB1, IDDM risk and, 795
 HMO, diabetic care in, 601, 786, 1169
 Homeostasis model assessment (HOMA), prospective analysis of, 1138
 Hormone replacement therapy, plasma lipids and, in postmenopausal women, 480
 Hospital, admission to, for children with IDDM, 431
 Hyperbaric oxygen therapy, for foot ulceration, 1338
 Hyperglycemia
 calcium and, 1393
 cardiovascular nerve function and, in normal subjects, 880
 lispro vs. regular insulin in, 1426
 Hyperglycemic clamp. *See* Clamp technique
 Hyperinsulinemia
 bone mineral density and, 1388
 dense LDL and, 629
 in nondiabetic Asian subjects, 39
 Hyperkalemia
 orange juice-induced, 1457
 reversible, ACE inhibitors and, 781
 Hypertension
 left ventricular wall motion abnormality in, 887
 mortality rate and, 305
 nephropathy and, 401
 Hypertriglyceridemia
 fish oil for, insulin resistance and, 1207
 monocyte binding and, 1122
 Hypoaldosteronism, hyporeninemic, ACE inhibitors and, 781
 Hypoglycemia
 aging and, 544
 cerebral infarction and, 1001
 cortical blindness and, 272, 1001
 counterregulatory, sex differences in, 269
 dietary carbohydrates and, 498
 home blood glucose meter accuracy in, 1412
 in IDDM, 98
 insulin infusion and, 324, 780
 in intensive insulin therapy, frequency of, 181
 Hypotension, orthostatic, 542
I
 IDDM
 adult-onset, immunogenetic markers in, 241
 after gestational diabetes, 653
 antroduodenal motility in, 21
 in child. *See* Children with IDDM
 childhood-onset, time-space clustering of date at birth in, 328
 complement C4 polymorphism and, 53
 erectile dysfunction in, 133
 evoked potentials in, 1220
 GLP-1 in, 580
 hypoglycemia in, 98
 incidence of
 in Denmark, 801
 in Italy, 70, 1454
 of long duration, renal function in, 249
 milk and, 379
 prevention of, 96
 prognosis in, 758
 microalbuminuria and, 313
 recent-onset
 nicotinamide for, 1357
 proinsulin immunoreactivity in, 146
 risk for, HLA-DQB1 genotype and, 795
 seasonal variation in, 1035
 treatment of, 96
 Ileus, acarbose and, 1033
 Immunoglobulin A, in children with IDDM, 779
 Immunology, of IDDM, 550
 Infant formula, bovine serum albumin peptide in, 1364
 Infection
 after cesarean section, 597
 from *Eikenella corrodens*, 1011
 on foot, antimicrobials for, 638
 Inositol, urinary, insulin resistance and, 76
 Inpatient diabetes management, 90
 Insulin
 antibodies and autoantibodies to, in recent-onset IDDM, 146
 endothelin-1 concentration and, 504
 lipoatrophy induced by, 255, 1283, 1289
 in postmenopausal women, 333
 smoking and, 1229
 Insulin antibodies, in pregnancy, metabolic control and, 979
 Insulin infusion
 for autonomic neuropathy, 90
 complications with, 384
 hypoglycemia in, 324, 780
 pump compatibility in, 812

underdelivery in, 812
 Insulin receptor substrate 1 gene, NIDDM and, 446

Insulin resistance
 acanthosis nigricans and, 885
 atherosclerosis and, 274
 body fat distribution and, 287, 292, 920
 candidate genes for, 396
 in coronary artery disease, 1
 dyslipidemia and, 387, 390
 fatty acids and, 394
 fish oil and, 1207
 maternal diabetes effect on, 822
 miglitol and, 559
 upper-body fat and, 920
 urinary *myo*- to *chiro*-inositol ratio and, 76

Insulin response, of nondiabetic Mexican-American subjects, 67

Insulin secretion, metformin and, 781

Insulin therapy, 784. *See also* Insulin infusion; Lispro

administration of, 908
 dosage of, measurement of, by caretakers of children with IDDM, 56
 in elderly patient, 1326
 injection site of
 in child, 1434
 lispro vs. regular insulin in, 1437
 intensive. *See* Intensive insulin therapy
 in kidney/islet transplant patient, 236
 lispro vs.

in incidental hyperglycemia, 1426
 injection site and, 1437

metformin with, 671
 new forms of, 550
 for NIDDM, intraperitoneal vs. subcutaneous, 1237

subcutaneous vs. intramuscular injection of, in child, 1434
 10-year study of, 744

Intensive insulin therapy
 after oral agent failure, in NIDDM, 896
 hypoglycemic episodes in, frequency of, 181
 quality of life and, 195

IRS-1 (insulin receptor substrate-1) gene, NIDDM and, 446

Islet cell. *See also* β -cell
 hormones in, glipizide and, 883

Islet cell amyloidosis, in congenital generalized lipodystrophy, 28

Islet cell antibodies
 cardiovascular risk and, 60
 in children with IDDM, 1452
 proinsulin secretion and, 659
 vaccines and, in offspring of diabetic parents, 1456

Islet cell transplantation, insulin therapy after, 236

Italy
 albuminuria in, 43
 IDDM incidence in, 1454
 in children, 70

J
 Japanese children, with IDDM, antibodies to bovine serum albumin in, 1308

Japanese people
 IDDM in, prognosis of, 758
 NIDDM in
 ACE gene polymorphism in, albuminuria and, 1420
 β_3 -adrenergic receptor in, genetic variation in, 271, 1034

glucagon receptor mutation in, 546
 obesity and ketoacidosis in, 671

K

Ketoacidosis

brain dysfunction in, 1455
 obesity and, 671

Ketonuria, captopril and, 673

Kidney transplantation
 cholesteryl ester transfer and, 1108
 insulin therapy after, 236
 in Pima Indians, 1333

Koreans, adult-onset IDDM in, immunogenetic markers in, 241

L

Labor, premature, β -sympathomimetic therapy for, 899

Lactic acidosis, phenformin and, 1449

Latex allergy, 184, 546

LDL. *See* Low density lipoprotein

Linseed oil, NIDDM control and, 463

Lipid(s), in serum
 gestational diabetes and, 1351
 retinopathy and, 1291

Lipid metabolism
 insulin resistance and, 387, 390
 metformin effect on, 1185
 in NIDDM and IGT patients, 365
 in postmenopausal women, hormone replacement therapy and, 480

Lipid peroxidation, circulating products of, smoking and, 1233

Lipoatrophy, insulin-induced, 255, 1283, 1289

Lipodystrophy, congenital generalized, islet amyloidosis in, 28

Lipoprotein. *See* Low density lipoprotein

Lipoprotein(a)
 in African-Americans with NIDDM, 1129
 nephropathy and, 1036

Lispro
 postprandial blood glucose control and, 945
 regular insulin vs.
 in incidental hyperglycemia, 1426
 injection site and, 1437

Liver toxicity, of glibenclamide, 385

Locus of control, physical activity and, 1118

Low-density lipoprotein
 oxidation of, apheresis and, 1103
 visceral fat and hyperinsulinemia and, 629

Lower extremity. *See also* Foot entries

amputation of
 incidence of, 1006
 in Nauruans, 710
 risk factors for, 95, 607

M

Macroalbuminuria. *See also* Albuminuria
 in NIDDM, in Italian subjects, 43

Malnutrition
 slowly progressive IDDM in, 178
 in tropical countries, 1014

Manitoba, IDDM epidemiology, 807

Maternal diabetes, offspring insulin resistance and, 822

Mauritania, diabetes prevalence in, 761
 Menopause. *See* Postmenopausal women

Metabolic control, in children with IDDM, 318

Metabolic syndrome
 in African-Americans, 414
 in Hong Kong Chinese, 953
 Metformin, 1039

adipose tissue metabolism and, 160
 as adjuvant to sulfonylurea therapy, 252
 cardiovascular risk and, 64
 exogenous insulin with, 671
 glucose and lipid metabolism and, 1185
 insulin secretion and, 781
 peripheral blood flow and, 160
 upper-body fat-associated insulin resistance and, 920

and vascular responses to arginine, 934

Methane-producing status, glucose intolerance and, 549

Mexican-American subjects, nondiabetic, insulin response of, 67

Mexico City Diabetes Study, 1138

Michigan Neuropathy Screening Instrument, reproducibility of, 904

MICRO-HOPE Study, 1225

Microalbuminuria
 in adolescents with IDDM, 369

erythrocyte Na^+/H^+ exchange and, 995

glycemic control and prognosis in, 313

in NIDDM, 79

in Italian subjects, 43

serum sialic acid and, 130, 435

Microangiopathy, HbA_{1c} threshold for, 183

Miglitol, insulin sensitivity and, 559

Milk
 bovine serum albumin peptide in, 1364
 IDDM and, 379

Mitochondria, genetic mutation in

of aldehyde dehydrogenase, 1423

α - and β -cell dysfunction and, 1166

of tRNA, 1304

Mitochondrial diabetes, neuroimaging in, 739

Mitral valve prolapse, prevalence of, 672

MODY3 locus on chromosome 12q, diabetic complications and, 915

Monitoring of blood glucose, 908. *See also*

Glucose meter

accuracy of, 903, 1412

laboratory comparison with, 168

altitude and, 1430

in pregnancy, meter accuracy in, 268

standardization of, 676

triglycerides in, 1305

Monocyte, binding of, to endothelial cells, hypertriglyceridemia and, 1122

Mortality. *See* Death

Myocardial infarction, acute, thrombolytic therapy for, 1135

Myocarditis, in IDDM, 375

N

Na^+/H^+ exchange, in erythrocytes, microalbuminuria and, 995

Na^+/K^+ -ATPase, neuropathy and, 564

Nauruans, lower-extremity amputation in, 710

Neonatal diabetes, DQB1 typing and, 1308

Nephropathy, 1038. *See also* Hemodialysis

ACE inhibitors and vitamin E and, 1225

apolipoprotein(a) level in, 1382

captopril for, economics of, 1051

in Europe vs. U.S., 219

fish oil in, 1214

hypertension and, 401

lipoprotein(a) and apolipoprotein(a)

phenotypes and, 1036

in long-duration IDDM, 249

mortality from, in Pima Indians, 777, 779

orange juice-induced hyperkalemia in, 1457

platelet calcium in, 1062

pregnancy and, 1067

- renal replacement therapy in, survival during, 1333
 serum sialic acid and, 130, 435
 socioeconomic status and, 423
 tissue factor pathway inhibitor activity in, 441
- Netherlands
 diabetes incidence in, 214
 hospital admissions in, for children with IDDM, 431
- Neuroimaging, in mitochondrial diabetes, 739
- Neuropathy
 autonomic. *See* Autonomic neuropathy
 cardiac
 coronary artery disease symptoms and, 231
 hyperglycemia and, in normal subjects, 880
 Michigan Neuropathy Screening Instrument reproducibility in, 904
 Na⁺-K⁺-ATPase and, 564
 pathophysiology of, 553
 peripheral
 postural rearrangement in, 372
 tolrestat for, 1091
 regional sympathetic, cardiac, 1083
 urinary albumin excretion and, 1243
- Nicotinamide, for recent-onset IDDM, 1357
- NIDDM
 after gestational diabetes, 653
 brain function in, 361
 in child. *See* Children with NIDDM
 depression and, 1097
 dyslipoproteinemia in, GLP-1 for, 1200
 in elderly, 1320, 1326
 etiology of, 1311
 genetic markers of, 864
 high- β -glucan cereals and, 831
 IRS-1 gene and, 446
 in Italian subjects, micro- and macroalbuminuria in, 43
 oral agent failure in, intensive insulin therapy after, 896
 prevalence of, 547
 prevention of, 785, 972
 recent-onset, altered taste sensation in, 768
 serum sialic acid and albuminuria in, 130
 treatment of, 295, 784, 906, 1311
- Nutrition. *See* Diet
- Nutrition therapy
 enteral, guar gum in, 899
 fat replacers in, 1294, 1302
 n-3 fatty acids, NIDDM control and, 463
- O**
- Obesity, 1311
 glucose and insulin metabolism in, exercise intensity and, 341
 insulin resistance and, 287, 292
 ketoacidosis and, 671
 pathogenesis of, 551
 treatment of, 676. *See also* Weight loss
 visceral. *See* Visceral fat
- Orange juice, hyperkalemia induced by, 1457
- Osteomyelitis, conservative surgery for, 1257
- Outpatient diabetic care, in HMO, 601
- Oxidation, LDL apheresis and, 1103
- Oxidative stress
 exercise-induced, 569
 vascular complications and, 257, 1165
- Oxygen therapy, hyperbaric, for foot ulceration, 1338
- P**
- Pain, during cold pressor test, 722
- Pancreas
 β -cell function in, aging and, 8
 size of, in children with IDDM, 777
 Pancreatic carcinoma, in Sardinia, 184
 Pancreatic diabetes, fibrocalculous, 1274
 Pancreatic polypeptide, response of, to autonomic neuropathy and food, 778
- Pancreatic transplantation
 cholesteryl ester transfer and, 1108
 diet after, 735
 prevalence of, 97
- Pancreatic diabetes. *See also* Familial diabetes
 offspring diabetes and, 822, 827, 1456
- Patient participation, regimen adherence and, 1153
- Percutaneous transluminal balloon angioplasty, for foot ulcer, 1261
- Peripheral blood flow, metformin and, 160
- Peripheral neuropathy
 postural rearrangement in, 372
 tolrestat for, 1091
- Peripheral vascular resistance, exercise and, in young IDDM patients, 1286
- Peripheral vasomotion, impaired, 715
- Phenformin, lactic acidosis and, 1449
- Physical activity, locus of control and, 1118
- Pima Indians
 arterial calcification in, 968
 foot amputation in, 704
 mortality in
 causes of, 107
 from nephropathy, 777, 779
 renal replacement therapy in, 1333
- Platelet calcium, in end-stage renal failure, 1062
- Postmenopausal women
 glucose and insulin levels in, 333
 glucose intolerance in, androgen activity and, 1399
 hormone replacement in, plasma lipids and, 480
- Posture, in peripheral neuropathy, 372
- Pre-conception care
 congenital malformations and miscarriage and, 514
 cost benefit of, 384
- Pregnancy. *See also* Gestational diabetes
 mellitus; Pre-conception care
 blood glucose meters in, accuracy of, 268, 1031
 in diabetic woman, insulin antibodies in, 979
 glycosylated hemoglobin in, 1455
 nephropathy and, 1067
- Prevalence studies
 of albuminuria, 486
 of amputation
 in African-American subjects, 48
 in minority subjects, 48
 of coronary heart disease risk, in Australian Aborigines, 1269
 of diabetes
 aging and, 114, 1279
 in Egyptian deserts, 92
 in Manitoba, 807
 in Mauritania, 761
 in Netherlands, 214
 in northern Sudan, 1126
 parental history and, 827, 1456
 of erectile dysfunction, 133
 of glucose intolerance, 663
 in Rio de Janeiro, 663
- of hepatitis C virus, 998
 HOMA model in, 1138
 of IDDM
 in Denmark, 801
 in Italy, 70, 1454
 of mitral valve prolapse, 672
 of NIDDM, 547
 of pancreatic transplantation, 97
 of pulmonary function, 1441
 of retinopathy, 1045, 1375
- Prevention trials, in NIDDM, 972
- Prognosis of IDDM, microalbuminuria and, 313
- Progressive IDDM, GAD antibodies in, 1031
- Proinsulin immunoreactivity, in recent-onset IDDM, 146
- Proinsulin secretion, islet cell antibodies and, 659
- Proinsulin-to-insulin ratio, after gestational diabetes, predictive value of, 17
- Protein turnover, in gestational diabetes, 591
- Proteinuria, mortality rate and, 305
- Psychiatric disorders, in children with IDDM, 318
- PTA (percutaneous transluminal balloon angioplasty), for foot ulcer, 1261
- Pulmonary function, in elderly patients, glucose level and, 1441
- Pupillary response, disease duration and, 960
- Q**
- QT interval, sudden death and, 1010
- Quality of life, intensive therapy and, 195
- R**
- Rancho Bernardo Study, 1441
- Recent-onset IDDM
 nicotinamide treatment for, 1357
 proinsulin immunoreactivity in, 146
- Recent-onset NIDDM, altered taste sensation in, 768
- Red blood cell, Na-Li countertransport activity in, in non-nephropathic diabetic twins, 32
- Referrals, to rehabilitation service, for patients with visual loss, 175
- Rehabilitation, of patients with visual loss, 175, 902
- Renal disease. *See* Nephropathy
- Renal replacement therapy, survival during, 1333
- Research, policy advocacy and, 1165
- Retinal artery, occlusion of, in antiphospholipid syndrome, 92
- Retinopathy. *See also* Visual loss
 epidemiological studies of, 552
 as predictor of coronary artery disease, 1445
 serum lipids and, 1291
 socioeconomic status and, 423
 urinary albumin excretion and, 1243
 VA study of, 1375
 Wisconsin epidemiological study of, 1045
- Rheological response, to arginine, metformin and, 934
- Rio de Janeiro, glucose intolerance prevalence in, 663
- S**
- Scintigraphy
 dipyridamole thallium myocardial, of vascular surgery patient, 355
 exercise thallium 201, false-positive, 185
- Screening, for gestational diabetes mellitus, 12
- Seasonal variation, in IDDM, 1035

- Self-management
 in children, 119
 dietary, office-based intervention in, 835
- Sex hormones, and death from ischemic heart disease, 1045
- Sialic acid, in serum
 microalbuminuria and, 130, 435
 nephropathy and, 130
- Smoking
 cardiovascular risk and, 112
 circulating lipid peroxidation products and, 1233
 glucose tolerance and, 112
 hemodialysis survival and, 625
 plasma insulin and, 1229
- Socioeconomic status, diabetic complications and, 419, 423
- Sodium-lithium countertransport activity, in non-nephropathic diabetic twins, 32
- Sucralose, glycemic effect of, 1004
- Sucrose, dietary, metabolic effects of, 1249
- Sudan, northern, diabetes prevalence in, 1126
- Sulfonamides, hemolysis induced by, HbA_{1c} levels and, 775
- Sulfonylurea therapy
 acarbose vs. metformin as adjuvant to, 252
 failure of, metformin effect on glucose and lipid metabolism in, 1185
 glimepiride response after, 849
 liver toxicity of, 385
- Supplies for diabetes care, cost of, 1416
- Sympathetic neuropathy, cardiac, 1083
- β -sympathomimetic therapy, for premature labor, 899
- Syndrome X, cardiovascular risk and, 275
- T**
- T-cell activation, in prediabetic twins, 1177
- Taiwanese, NIDDM in, IRS-1 gene and, 446
- Taste sensation, alterations in, 768
- Temperature, glucose meter measurements and, 771
- TGF (transforming growth factor)- β 1, plasma elevation of, in NIDDM, 1113
- Thailand, GAD antibody in, 674
- Thrombolytic therapy, for acute myocardial infarction, 1135
- Thyroxine-binding globulin, in pubertal diabetic children, 246
- Tissue factor pathway inhibitor, in nephropathy, 441
- Toe, great, amputation of, foot deformities and ulcers after, 165
- Tolrestat, for peripheral neuropathy, 1091
- Torsade de pointes, long QT interval and, 1010
- Transforming growth factor- β 1, plasma elevation of, in NIDDM, 1113
- Transplantation, of pancreas. *See* Pancreatic transplantation
- Triglyceride monitoring, 1305
- Troglitazone, for NIDDM, 151
- Tropics, malnutrition in, 1014
- Tumor necrosis factor- α , adipocyte dedifferentiation and, 1283
- Twin(s)
 diabetic, non-nephropathic, erythrocyte Na-Li countertransport activity in, 32
 prediabetic, CD8⁺ T-cell activation in, 1177
- U**
- Ulcers, on foot. *See* Foot, ulceration of
- Uremia, platelet calcium in, 1062
- V**
- Vaccines, in offspring of diabetic parents, islet cell antibodies and, 1456
- Vascular disease. *See also* Cardiovascular entries
 complement C4 polymorphism and, 53
 mortality and, 305
 oxidative stress and, 257, 1165
 in Pima Indians, 968
- Vascular endothelial growth factor, in aqueous humor, rubeotic glaucoma and, 1306
- Vascular surgery, dipyridamole thallium myocardial scintigraphy before, 355
- Vasomotion, peripheral, impaired, 715
- VEGF (vascular endothelial growth factor), in aqueous humor, rubeotic glaucoma and, 1306
- Ventricle, left, wall motion abnormality in, 887
- Veterans Affairs Glycemic Control and Complications in Type II Diabetes Study, 1357
- Victoria, Australia, GHb assay variations in, 730
- Visceral fat
 dense LDL and, 629
 insulin resistance and, 287, 292
 relation of, to subcutaneous adipose tissue distribution and insulin and glucose levels, 1404
 7-year changes in, 983
- Visual loss. *See also* Retinopathy
 cortical, 272, 1001
 patient rehabilitation in, 175, 902
- Visually evoked potentials, in IDDM, 1220
- Vitamin E, renal and cardiovascular effects of, 1225
- W**
- Walking, postprandial, gastric emptying and, 1306
- Wanigela people of Papua New Guinea, diet of, 457
- Weight loss. *See also* Obesity
 behavioral program for, 409
 bromocriptine (Ergoset) for, 667
 strategies for, 613
- Well-being, glycemic control and, 204
- Wisconsin Epidemiologic Study of Diabetic Retinopathy, 1045
- Women, postmenopausal. *See* Postmenopausal women
- Women with diabetes, pregnancy in. *See* Pregnancy, in diabetic woman
- Y**
- Young adults with IDDM
 anti-bovine serum albumin antibodies in, 126
 peripheral vascular resistance in, exercise and, 1286
- Z**
- Zinc deficiency, childhood IDDM and, 873