

# CONTENTS *Annals of Internal Medicine*

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## ARTICLES

### Effects of Aerobic Training, Resistance Training, or Both on Glycemic Control in Type 2 Diabetes. A Randomized Trial 357

R.J. Sigal, G.P. Kenny, N.G. Boulé, G.A. Wells, D. Prud'homme, M. Fortier, R.D. Reid, H. Tulloch, D. Coyle, P. Phillips, A. Jennings, and J. Jaffey

Aerobic or resistance exercise improves glycemic control in type 2 diabetes, but no studies show whether combined aerobic and resistance training have similar effects. Sigal and colleagues randomly assigned 251 adults with type 2 diabetes to aerobic training, resistance training, combined training, or a sedentary control group. They found better reduction in hemoglobin A<sub>1c</sub> values in patients in the combined training program than in patients in the aerobic training or resistance training programs. The sedentary control group had worse glucose control than the aerobic or resistance training groups, and adverse events were more common in the exercise groups.

Summary for Patients 1-16

### Documentation of Contraception and Pregnancy When Prescribing Potentially Teratogenic Medications for Reproductive-Age Women 370

E.B. Schwarz, D.A. Postlethwaite, Y.Y. Hung, and M.A. Armstrong

Women of childbearing age sometimes receive prescriptions for potentially teratogenic drugs. Schwarz and coworkers assessed pregnancy rates and frequency of documented contraceptive counseling with prescriptions of class D or X teratogenic drugs filled by 488 175 women in 2001. Prescriptions for class D or X drugs were no more likely to be accompanied by documented claims for contraceptive services or for a subsequent pregnancy than were prescriptions for class A or B drugs.

Summary for Patients 1-38

### Changes in Triglyceride Levels and Risk for Coronary Heart Disease in Young Men 377

A. Tirosh, A. Rudich, T. Shochat, D. Tekes-Manova, E. Israeli, Y. Henkin, I. Kochba, and I. Shai

Triglyceride levels measured at a single time point may not reliably indicate risk for coronary heart disease (CHD). Tirosh and colleagues measured triglyceride levels and performed stress electrocardiography 5 years apart on 13 593 young Israeli male career soldiers and did coronary angiography if the stress test was abnormal. They identified 158 new cases

of incident CHD. The changes in triglycerides between the 2 measurements strongly predicted incident CHD after adjustment for CHD risk factors and lifestyle variables. A decrease in initially elevated triglyceride levels was associated with a decrease in CHD risk, and CHD risk was lowest when triglyceride levels at both time points were low.

Summary for Patients 1-45

## REVIEWS

### Systematic Review: Comparative Effectiveness and Safety of Oral Medications for Type 2 Diabetes Mellitus 386

#### Mellitus

S. Bolen, L. Feldman, J. Vassy, L. Wilson, H.C. Yeh, S. Marinopoulos, C. Wiley, E. Selvin, R. Wilson, E.B. Bass, and F.L. Brancati

Clinicians may use any of multiple oral diabetes agents to treat their diabetic patients. In their systematic review, Bolen and colleagues summarize the evidence of benefits and harms of oral agents used for treating adults with type 2 diabetes. They found that compared with newer, more expensive agents (thiazolidinediones,  $\alpha$ -glucosidase inhibitors, and meglitinides), older agents (second-generation sulfonylureas and metformin) have similar or superior effects on glycemic control, lipid levels, blood pressure, and body weight. They found scant and inconclusive evidence about effects of agents on clinical end points, such as cardiovascular disease.

### Meta-analysis: Effect of Prophylactic Hematopoietic Colony-Stimulating Factors on Mortality and Outcomes of Infection 400

L. Sung, P.C. Nathan, S.M.H. Alibhai, G.A. Tomlinson, and J. Beyene

Sung and colleagues performed a meta-analysis to determine whether prophylactic colony-stimulating factors (CSFs) decrease mortality, infections, and febrile neutropenia compared with placebo or no therapy in patients receiving chemotherapy or undergoing stem-cell transplantation. Among 148 trials, the short-term all-cause mortality rate was similar between the prophylactic CSF and control groups, as were the risks for infection-related death with CSFs and placebo or no therapy. However, use of CSFs did reduce documented infections, microbiologically documented infections, and episodes of febrile neutropenia compared with the other groups.

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**UPDATE**

**Update in Critical Care**

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M. Osborne

This Update in Critical Care features 7 articles published in 2006. Topics include insulin therapy, sepsis, acute lung injury, infectious diseases, and end-of-life care.

**CLINICAL GUIDELINES**

**Glycemic Control and Type 2 Diabetes Mellitus: The Optimal Hemoglobin A<sub>1c</sub> Targets. A Guidance Statement from the American College of Physicians**

417

A. Qaseem, S. Vijan, V. Snow, J.T. Cross, K.B. Weiss, and D.K. Owens, for the Clinical Efficacy Assessment Subcommittee of the American College of Physicians

The Institute of Medicine has designated glycemic control in diabetes mellitus as a priority for improvement. In this guidance statement, the American College of Physicians' Clinical Efficacy Assessment Subcommittee assesses and summarizes the available guidelines from various organizations to help internists and other primary care physicians effectively manage glycemic control in type 2 diabetes mellitus.

Summary for Patients

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**EDITORIALS**

**Exercise Training for Diabetes: The "Strength" of the Evidence**

423

W.E. Kraus and B.D. Levine

In this issue, Sigal and colleagues randomly assigned 251 patients with diabetes age 39 to 70 years to 1 of 4 exercise programs to determine whether changes in glucose control could be ascribed to the exercise interventions. Their observed differences in hemoglobin A<sub>1c</sub> values are clinically significant—not only for diabetes treatment but also for cardiovascular risk. This study's results should stimulate all clinicians to include exercise assessment and counseling into every clinic visit.

**Triglycerides and Coronary Heart Disease Revisited (Again)**

425

M.H. Criqui

In this issue, Tirosh and colleagues examined the association of triglyceride levels with incident CHD in 13 953 men age 26 to 45 years. Their results are striking: Triglycerides were strongly associated with CHD risk. The results complement the growing body of evidence that triglycerides have an independent effect on the incidence of CHD and emphasize the importance of "rediscovering" triglycerides as a cardiovascular risk factor.

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**"Doctor, How CERTain Are We That This Diabetes Medication Is Best for Me?"**

L.M. Pogach

Uncertainty about oral antiglycemic agents affects informed decision making. We cannot be sure about the long-term safety of these medications when data are not available. We are obligated to provide patients with a careful assessment of the known risks and benefits of medications, as well as the expected benefit of lowering hemoglobin A<sub>1c</sub>. Bolen and colleagues' review provides an unbiased starting point for shared decision making between physicians and patients with diabetes.

**ON BEING A DOCTOR**

**Seeking Asylum from Torture: A Doctor's View**

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S.S. Crosby

Asylum seekers have suffered atrocities that are impossible for most of us to comprehend. As a physician, I evaluate and document injuries, scars, and mental health problems and then render an opinion on whether the signs and symptoms corroborate the applicant's allegation of torture. In my experience, the most pernicious scars are those that cannot be seen—those that remain scorched into the mind and soul.

**AD LIBITUM**

**Fresh Skin & Old Scars**

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J.D. Freeman

**Loss**

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C. Ruser

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J. Fisher Wilson

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