Clinical News

Action Briefs

■ The American Diabetes Association (ADA) is currently working on a new Web project that will greatly enhance the association’s online offerings for its professional members. This project, known as the Diabetes Knowledge Environment, will accommodate the association’s CE and non-CE initiatives and create a fluid continuum of online information and materials for health care professionals. The benefits of the Knowledge Environment will include:
- Easier navigation and usability of existing ADA content and information
- Delivery of CE credits for Internet-based learning
- Access to new materials, educational activities, and tools for research, practice, and professional development

The Knowledge Environment is tentatively scheduled for release in June 2007. Look for an update in the next Professional Section Quarterly.

■ In October 2006, ADA held a consensus development conference on IFG and IGT in Chicago. A consensus panel of experts in diabetes, endocrinology, and metabolism reviewed the evidence and conference discussions, and has written a statement to provide guidance to health professionals and the public on a number of questions related to IFG and IGT. The consensus statement will be published and available free in the March issue of Diabetes Care (http://care.diabetesjournals.org or http://dx.doi.org/10.2337/dc07-9920). The consensus panel includes the following individuals: David M. Nathan, Mayer Davidson, Ralph A. DeFronzo, Robert J. Heine, Robert R. Henry, Richard Pratley, and Bernard Zinman.

■ Shaping America’s Health, an ADA-chartered association, cosponsored a consensus development conference with the North American Association for the Study of Obesity. The conference, titled “Assessing the Medical Risk of Overweight/Obesity: Should Waist Circumference Be Measured in Clinical Practice?” was held in Washington, D.C., on December 18 and 19. A consensus statement based on the conference, which will be published in the May or June issue of Diabetes Care, will address the following questions:
- What does waist circumference measure?
- What are the biological mechanisms that underlie the association between waist circumference and metabolic and cardiovascular risk?
- What is the power of waist circumference to predict adverse health outcomes? How does its predictive power compare to BMI? Does waist circumference added to BMI improve predictability?
- What are the implications for clinical practice?

Podcasting the Link

Make the Link has developed a series of podcasts called “Diabetes & You.” The podcasts are available on diabetes.org and on iTunes and other podcast directories, and each podcast features a discussion.

Clinical News continued on page 8
With compelling and dramatic evidence of an alarming rise in diabetes throughout the country, one would expect policymakers—including the Bush Administration and Congress—to confront the human and economic costs of the disease.

Instead, in 2006 policymakers responded to the diabetes epidemic with inaction or, at times, worse:

Even though nearly 21 million Americans have diabetes and another 54 million Americans have pre-diabetes, Congress and the Administration continued to significantly underfund federal diabetes research and prevention programs.

Even though in 2002 diabetes cost the country $132 billion in direct and indirect costs, consuming one in ten health care dollars, the U.S. Senate came perilously close to passing legislation—the “Health Insurance Marketplace Modernization Act” (S.1955)—that would have eliminated diabetes health coverage guarantees for millions of Americans.

Even though the Centers for Disease Control and Prevention (CDC) has estimated that one in three Americans born in 2000 will develop diabetes in their lifetime if current trends continue, President Bush vetoed bipartisan legislation that would have expanded federal support for embryonic stem cell research, which offers great hope for a cure and better treatments for diabetes.

Throughout the year, lawmakers heard from diabetes advocates about these issues and their impact on diabetes. I know that our advocates played a key role in the Senate’s passage of stem cell research legislation in July and the defeat of S.1955 in May.

We must do more, however, to help change the way those in Washington address diabetes.

Our great challenge in 2007 is to create an environment where legislators from both parties and all parts of the country reach the conclusion that they cannot ignore the greatest public health crisis of the next quarter century.

In 2007, we need to aggressively and repeatedly urge members of the 110th Congress to take action against the growing diabetes epidemic.

They need to start by addressing the woeful federal resources directed toward diabetes research and funding.

In fiscal year 2006, Congress passed a budget that slashed NIH’s National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) by $9 million and cut the budget for CDC’s Division of Diabetes Translation (DDT) for the first time ever. NIDDK is the primary government agency that conducts research into a cure and better treatments for diabetes. DDT leads the government’s effort to provide comprehensive prevention and treatment programs in communities throughout the United States.

Congress adjourned in December failing to pass a budget for the new fiscal year (FY2007). This means that federal diabetes research and prevention at NIDDK and CDC will be funded at the same level as the previous fiscal year. The Bush administration had proposed cutting diabetes research at NIH by $11 million and prevention efforts at CDC for the second consecutive year. The decision of Congress to maintain the previous year’s funding levels means the Administration’s cuts won’t be enacted. However, it also means Congress failed to enact the increases for which ADA has advocated.

Significantly increasing the federal commitment to diabetes research and prevention remains ADA’s leading priority. We all need to urge members of Congress to pass a new budget that increases NIH diabetes research funding by 8 percent ($148.4 million) and CDC diabetes prevention by $20.8 million—one dollar for every American with diabetes. Although non-defense dollars are scarce in the current fiscal environment, the amounts requested reflect the real burden that diabetes imposes on America. We simply cannot let policymakers shirk their responsibility to fund diabetes sufficiently.

This year, we will also ask Congress to reauthorize two important NIH programs that are vital in the fight against diabetes: the Special Diabetes Program for Indians and the Special Type 1 Research Program. Each should be reauthorized for five more years at $2 million per program per year.

Congress and the Administration also must strengthen and protect diabetes health coverage. Americans with diabetes narrowly dodged a bullet when the Senate defeated S.1955. We must remain vigilant against attempts to pass similar legislation, but we also need to urge Congress and the Administration to work to ensure that all Americans with diabetes have access to health care that is adequate and affordable.

Finally, Congress and the Administration need to complete the task of enacting the Stem Cell Research Enhancement Act into law. President Bush’s veto of the bill was a devastating setback, but as U.S. Senator Orrin Hatch, a Republican from Utah, said, “the hope offered by stem cell research is too great to ignore.”

We have an ambitious legislative agenda for 2007. But if adopted by Washington lawmakers, it would have a significant impact in the fight against diabetes.

Becoming a Diabetes Advocate is easy. Make sure your voice—and those of your friends and family—is heard on these important issues. Sign up at advocacy.diabetes.org.
Living with diabetes presents countless challenges, from the mundane to the monumental. People who have diabetes must continually pay attention to their treatment regimen, which essentially affects every aspect of their lives. To make matters worse, strictly following the regimen does not always guarantee success. Blood glucose levels may still be out of whack or complications may still develop. That’s why so many patients feel frustrated, fed up, overwhelmed, or burned out. The distress brought on by problems in living with diabetes can trigger a negative cascade of diminished motivation, less-active self-care, higher blood glucose levels, increased risk of complications, and poorer quality of life.

Coping effectively with the myriad challenges of life with diabetes can enhance motivation and activate a positive cascade. We can help our patients build better diabetes-specific coping skills.

Ask Good Questions
Asking good questions is the key to success. And the best questions are ones that help us understand our patients’ priorities and resources. When we join our clinical expertise with our patients’ expertise in living with diabetes, we can create a diabetes care plan that is tailored to the particular patient. Questions like these can help us focus on the patient’s needs: “How are things going with your diabetes?” “What issues would you like to work on today?” “What concerns you most about your diabetes?” “What is the hardest thing for you right now about living with diabetes?”

Be Specific
Helping patients identify very specific problems with diabetes, or sticking points, facilitates diabetes-specific coping. These sticking points (such as feeling deprived of a cherished treat) can activate the negative cascade of frustration, less-active diabetes care, and diminished health and quality of life. However, resolving these sticking points can have the opposite effect, triggering a positive cascade.

Patients often describe their challenges in coping with their diabetes in broad terms. They may say that everything about it bothers them or that their diet is their major difficulty. But I have found that with encouragement, patients can usually identify more specific sticking points. Try asking your patients to identify their problems so specifically that you could take photographs or make videos of it.

Focus on Successes
Sometimes a problem situation goes more smoothly than expected, and figuring out what helped can be tremendously beneficial. One of the best questions to ask is “How come that worked so well?” This typically works better than focusing on what is going wrong and trying to make it right. It is also more enjoyable for patient and health care provider alike.

Enlist Family Support
Diabetes is a family disease: The demands of diabetes and its management affect everyone who loves, lives with, or cares for a person who has diabetes. And the behavior of family members affects the way people take care of their diabetes. You can help facilitate positive family involvement by asking your patients to answer these questions: “What does your family do that makes it easier for you to care for your diabetes?” “What does your family do that makes it harder for you to care for your diabetes?” and “Realistically, what could your family do to make it easier for you to care for your diabetes?”

Build Emotional Strength
Coping effectively with diabetes requires emotional strength, and I have found that the fundamental elements of this strength are hope and humor. Hope is a bulwark against the stresses and strains of daily life with diabetes, as well as the stresses and strains of caring for people with diabetes. Draw upon any source of hope and help your patients do the same. Think of the improvements being made in diabetes care. Think about the wonderful successes you have had with certain patients. Think about the fortitude and creativity many patients display.

Humor is also wonderful. Along with hope, it’s the closest thing to magic in the world. Humor helps keep things in perspective; it protects people from feeling overwhelmed. The essence of humor is taking a bad situation and exaggerating its awfulness to the point it is so ridiculous it becomes funny. Fortunately or unfortunately, life with diabetes presents us with plenty of material for humor. Help patients find sources of humor in their daily lives with diabetes. These experiences are rare for most people, but that they exist at all can have a powerful salutary effect, relieving distress in the moment and enhancing motivation for diabetes care in the long run.

Help Them Cope
Diabetes is sometimes too much for a person to cope with, even with the help and support of a health care team and family. When this happens, direct the patient to the help he or she needs. If the patient is suffering from depression or another psychological disorder, this might mean referral for specialized mental health services. Getting help can also mean referring the patient to a diabetes education program that includes coping skills training.

When we help our patients cope more effectively with the myriad challenges of life with diabetes, we activate a positive cascade of enhanced motivation, more active self-care, improved metabolic outcomes, and better quality of life.
INTRA-ABDOMINAL ADIPOSITY (IAA)*...
A MAJOR CARDIOMETABOLIC RISK FACTOR

Adipose tissue is an active endocrine organ, secreting proteins with local and systemic effects.

*As measured by increased waist circumference.
INCREASED ACTIVITY OF THE ENDOCANNABINOID SYSTEM (ECS) IS ASSOCIATED WITH INCREASED WAIST CIRCUMFERENCE\textsuperscript{1,2}

INCREASED WAIST CIRCUMFERENCE, A MARKER FOR IAA, IS AN ESTABLISHED CARDIOMETABOLIC RISK FACTOR\textsuperscript{3}
\begin{itemize}
  \item Significantly increases the risk of myocardial infarction, death from cardiovascular disease, and all-cause mortality\textsuperscript{4}
  \item Has been found to be an independent predictor of type 2 diabetes\textsuperscript{5}
\end{itemize}

ADIPOSE TISSUE IS A HIGHLY ACTIVE ENDOCRINE ORGAN\textsuperscript{6}
\begin{itemize}
  \item Fat cells (adipocytes) produce adiponectin\textsuperscript{6}
    \begin{itemize}
      \item In type 2 diabetes and obesity, adiponectin levels are reduced\textsuperscript{6}
    \end{itemize}
\end{itemize}

TARGETING THE ECS MAY PLAY A POTENTIAL ROLE IN THE CONTROL OF MAJOR CARDIOMETABOLIC RISK FACTORS SUCH AS IAA\textsuperscript{*}

References
\begin{enumerate}
  \item Kershaw EE, Flier JS. Adipose tissue as an endocrine organ. \textit{J Clin Endocrinol Metab}. 2004;89:2548-2556.
\end{enumerate}
Diabetes Professional Education

Upcoming Professional Education Meetings

54th Annual Advanced Postgraduate Course
February 23–25, 2007
New York Marriott Marquis
New York, New York
www.diabetes.org/pg07

Join your colleagues and the world's leading experts in New York for cutting-edge clinical research in diabetes treatment and management. The 54th Annual Advanced Postgraduate Course offers the latest advances in diabetes management in general sessions and intensive workshops.

Go to www.diabetes.org/pg07 for more information and to register online. For questions regarding registration, please contact the ADA Meeting Registration Department at 800-680-0954 (domestic and Canada) or 972-349-7623 (international).

RESEARCH SYMPOSIUM: TRANSLATING ISLET BIOLOGY INTO DIABETES THERAPY
March 14–17, 2007
Evergreen Marriott Conference Resort
Stone Mountain, Georgia
www.diabetes.org/beta07

AMERICAN DIABETES ASSOCIATION / PRI-MED LIVE CME PROGRAMS
The American Diabetes Association has teamed up with Pri-Med, a leading provider of live, print, and online CME, to present several live CME programs focused on critical issues in diabetes care.

To learn more, visit www.pri-med.com/ada. (See also article, page 7.)

22nd Annual Southern Regional Conference on Diabetes, Obesity, and Cardiovascular Disease
May 24–27, 2007
Omni Orlando Resort at ChampionsGate
ChampionsGate, Florida
http://www.diabetes.org/src/default.jsp

Join ADA and your colleagues in Orlando to hear the latest in diabetes, obesity, and cardiovascular disease management. General sessions, tracks, and interactive workshops will be presented by leading experts. The program goals are to provide state-of-the-art, practical information about the management of diabetes so as to enhance the quality of care provided to all people with diabetes and to improve diabetes patient outcomes. The sessions are designed for the entire diabetes care team. Continuing education credit will be available.

67th Scientific Sessions
June 22–26, 2007
McCormick Place Convention Center
Chicago, Illinois
scientificsessions.diabetes.org

9th International Congress of the Immunology and Diabetes Society and American Diabetes Association Research Conference
November 14–18, 2007
Loews Miami Beach Resort
Miami, Florida

For more information about these upcoming events, visit our Web site at www.diabetes.org or contact:
American Diabetes Association
1701 North Beauregard Street
Alexandria, VA 22311
1-800-232-3472, select option 1
FAX: 703-549-1715 or 703-683-1351
E-mail: professionaleducation@diabetes.org

Insulin Administration in the Hospital

An archived webcast of “Insulin Administration in the Hospital” is now available online. This program discusses the importance of glycemic control in the hospital and the development of an insulin protocol that can be tailored to meet various patient needs. Information about intravenous insulin use, transitioning the patient to subcutaneous insulin, and hospital discharge issues will provide the information needed for developing a successful hospital protocol.

At the end of this activity, participants will be able to:
■ Identify effective methods for utilizing insulin therapy in the hospital setting
■ Implement appropriate individualized insulin therapy regimens to obtain glycemic control of patients with diabetes
■ Discuss the benefits of using insulin to improve outcomes in patients with cardiovascular disease

You can view the archived webcast at http://www.diabetes.org/for-health-professionals-and-scientists/insulin-administration.jsp. To receive continuing education credit, take the test that is available after you view the webcast. You will receive a certificate if you earn a score of 75% or above.

Free continuing education credit will be available for physicians, family physicians, nurses, nurse practitioners, pharmacists, and dietitians. For more information about this educational activity, e-mail grandroundscep@diabetes.org. This activity is supported by an unrestricted educational grant from sanofi-aventis.

American Diabetes Association®
Care • Care • Commitment®
ADA and Pri-Med CME Programs

The American Diabetes Association has teamed up with Pri-Med—a leading provider of live, print, and online CME—to present two live CME programs focused on critical issues in diabetes care. The programs are being held in select cities over the course of the next year.

Pri-Med Clinical Focus in Diabetes “Risk Assessment and Management of the Diabetes Patient”—These intensive half-day programs focus on a single topic critical to helping primary care practitioners manage the complex diabetes patient. Participate in case-based learning, engage with expert faculty, and interact with fellow physicians in an intimate group setting at three-hour clinical sessions to be held in several cities across the country. Earn up to three free AMA PRA Category 1 Credits.

Pri-Med Diabetes in Depth “Cardiometabolic Risk: Evaluation, Education, Prevention, Treatment”—This program will be held in three cities and will focus on clinically relevant practice and patient-care issues in diabetes diagnosis and treatment. Participants can attend seven evidence-based sessions with national experts, colleagues, and faculty while exploring the overall indicators of heart disease and type 2 diabetes.

For more information and to register, visit www.pri-med.com/ada.

Multimedia/Distance Learning: Managing Diabetes and Its Comorbidities

The American Diabetes Association presents a series of distance learning activities focusing on hypertension and chronic kidney disease. Each archived webcast features a slide presentation followed by an interactive question-and-answer session, and free continuing education credit is available.

■ Managing Hypertension in Adults with Diabetes
  Supported by an unrestricted educational grant from Merck & Co.
  View the webcast at www.diabetes.org/hypertension.

■ Prevention and Management of Chronic Kidney Disease in the Diabetes Patient
  Supported by an unrestricted educational grant from Abbott Laboratories.
  View the two-part archived webcast series at www.diabetes.org/kidney.

Free continuing education credit is available for physicians, family physicians, nurse practitioners, nurses, dietitians, and pharmacists. For more information, visit www.diabetes.org/professionaleducation or e-mail professionaleducation@diabetes.org.

Women & Diabetes Web Site

Today, almost 21 million children and adults in the U.S. have diabetes—including 9.7 million women, for whom diabetes presents unique challenges. The disease can create difficulties during a woman’s child-bearing years, especially during pregnancy, and later in life women with diabetes are more likely to have a heart attack than those without the disease. Consider the following statistics:

■ Diabetes is a leading cause of death among middle-aged women.
■ In women with diabetes 45–64 years of age, the death rate is almost three times the rate of women without diabetes.
■ The prevalence of diabetes is at least 2 to 4 times higher among African American, Hispanic, Native American, and Asian/Pacific Islander women than among white women.

Based on these alarming statistics, the Women and Diabetes Workgroup has launched a women’s health Web site. Features include:

■ Women’s Health Issues
■ Frequently Asked Questions about Women and Diabetes
■ ADA Consumer Health Resources
■ ADA Health Care Professional Resources
■ Legislative Issues and Women’s Health
■ Research Related to Women and Diabetes
■ Women’s Health Calendar of Events
■ Related Links on Women’s Health
■ Media Coverage of Women’s Health

You can visit the Women and Diabetes Web site at www.diabetes.org/women. To share your thoughts and ideas about how best to address women’s health issues, contact the Women and Diabetes Workgroup by sending an e-mail to askada@diabetes.org.

67th Scientific Sessions Late-Breaking Abstracts

Late-breaking abstracts for the 67th Scientific Sessions can be submitted until April 4. If you have any questions related to abstract submissions, please send them to abstracts@diabetes.org.

Diabetes and Antipsychotic Medications

The Diabetes and Antipsychotic Medications clinical education program—presented by John W. Newcomer, MD, of Washington University in St. Louis, Missouri—explores the increased risk factors of diabetes in patients taking antipsychotic medications. The program is intended to broaden awareness and promote the prevention and timely treatment of diabetes.

As part of this program, ADA is offering a Diabetes and Antipsychotic Professional Education continued on page 12
and interview with an expert on a particular topic. The podcasts are available on diabetes.org/makethelink. Some recent titles include:

- Diabetes: The Heart of the Matter—Dr. James Galloway discusses the risk of heart complications with patient Larry Scott, who has diabetes and heart disease.
- Lower Your Risk for Heart Disease and Stroke—Dr. John Buse, ADA’s President-Elect of Medicine and Science, provides people with diabetes important ways to lower their risks for heart disease and stroke.

**UN Designates Diabetes Day**

Last December, the United Nations General Assembly formally recognized the global threat of diabetes by passing a resolution designating November 14 as World Diabetes Day. The resolution calls on all countries to develop national policies for the prevention, treatment, and care of diabetes and hopes to raise awareness of the disease and its complications.

It was the first time that a noninfectious disease was recognized as being as grave a threat as infectious diseases, such as HIV and malaria. As a United Nations Day, World Diabetes Day will be observed every year starting in 2007.

The movement to get the resolution passed was spearheaded by the International Diabetes Federation as part of its Unite for Diabetes campaign. The ADA, along with all of the other organization members of the IDF, supported the resolution. According to the latest IDF figures, an estimated 246 million people around the world will have diabetes in 2007—almost 6% of the population.

**Every 21 Seconds: Ads Target Congress**

The ADA recently launched a dramatic ad campaign to draw attention to the fight against diabetes and the need for specific legislative action to address the diabetes epidemic. The ads combine stark images with harsh statistics to reinforce the severity of the epidemic and the need for Congress to take action now. One ad shows a coffin and the headline “224,092 Americans die from diabetes-related illnesses each year.” Another shows a prothetic leg and states “82,000 Americans lost a leg because of diabetes last year.”

The ads show that time is of the essence: The disease hits another American every 21 seconds.

In January, the House of Representatives passed the Stem Cell Research Enhancement Act and defeated a motion that would have restricted research into somatic cell nuclear transfer.

The ADA has led a vigorous campaign in support of stem cell research and has urged Congress to make funds available for research using animal, human, adult, and embryonic stem cells. The Senate will hold hearings on the subject in February.

**Medicare Expands Coverage for Diabetes**

As of January 1, 2007, Medicare, the federal health insurance program for people age 65 and older and for individuals with disabilities, will cover more services for people with diabetes.
Grant Application Deadlines

July 15, 2007 (for January 1, 2008, funding), or January 15, 2008 (for July 1, 2008, funding)

- Research Award
- Clinical Research Award
- Career Development Award
- Junior Faculty Award
- Innovation Award

January 15, 2008 (for July 1, 2008, funding)

- Innovation Award in Geriatric Endocrinology
- Medical Scholars Program Award
- Physician Scientist Training Award
- Henry Becton Innovation Award
- Mentor-Based Minority Postdoctoral Fellowship Award
- Distinguished Clinical Scientist Award
- Mentor-Based Postdoctoral Fellowship Award – New deadline

All applicants must apply online at www.diabetes.org/research.

Takeda Pharmaceuticals North America Continues Sponsorship of Training Awards

Takeda Pharmaceuticals North America, Inc. (TPNA), generously pledged $1.44 million to continue sponsorship of the American Diabetes Association-Takeda Pharmaceuticals Cardiovascular Complications in Diabetes Postdoctoral Fellowship Program, and to begin funding a new fellowship program in the area of beta-cell biology.

In July 2006, the American Diabetes Association-Takeda Pharmaceuticals Cardiovascular Complications in Diabetes Postdoctoral Fellowship Program provided grant funding to support the training of four scientists in an environment conducive to beginning a career in diabetes research and cardiovascular disease:

**Mentor:** Morris J. Birnbaum, MD, PhD

**Postdoctoral Fellow:** Abigail Dean, MD

University of Pennsylvania
Philadelphia, PA

Regulation of cardiomyocyte growth and metabolism

**Mentor:** Mitchell A. Lazar, MD, PhD

**Fellow:** Mohammed Qatanani, PhD

University of Pennsylvania
Philadelphia, PA

The role of human resistin in the development of diabetes and atherosclerosis

**Mentor:** Marian Rewers, MD

**Fellow:** Adam Kretowski, MD, PhD

University of Colorado Health Science Center
Aurora, CO

Premature cardio disease in type 1 diabetes

**Mentor:** Steven E. Shoelson, MD, PhD

**Fellow:** Tatjana Ignjatovic, PhD

Joslin Diabetes Center
Boston, MA

Obesity-induced inflammation: Bench to bedside approaches to understand and treat insulin resistance, type 2 diabetes and associated cardiovascular disease

The new donation from TPNA will continue to support this program, as well as initiate an American Diabetes Association-Takeda Pharmaceuticals Beta Cell Postdoctoral Fellowship Program. Applications for the American Diabetes Association-Takeda Pharmaceuticals Beta Cell Postdoctoral Fellowship Program will be available on the ADA Web site (www.diabetes.org/research) in February 2007, with funding beginning July 1, 2007. ▲
THE ENDOCANNABINOID SYSTEM:
A NEW FOCUS FOR UNDERSTANDING THE DEVELOPMENT OF CARDIOMETABOLIC RISK FACTORS INCLUDING INTRA-ABDOMINAL ADIPOSITY*

The activation of CB₁ receptors located in adipose tissue, the liver, skeletal muscle, and the brain
INCREASED ACTIVITY OF THE ENDOCANNABINOID SYSTEM:

CONTRIBUTES TO THE DEVELOPMENT OF INTRA-ABDOMINAL ADIPOSY* AND OTHER CARDIOMETABOLIC RISK FACTORS

• The recently characterized endocannabinoid system is composed of signaling molecules and cannabinoid receptors (eg, CB1).  

• Increased activity of this system affects food intake, energy expenditure, regulation of body weight, and glucose and lipid metabolism.

HAS BOTH PERIPHERAL AND CENTRAL EFFECTS ON CARDIOMETABOLIC RISK

In peripheral sites (ie, adipose tissue, the liver, and skeletal muscle)

• Increased activity at CB1-receptor sites is associated with cardiometabolic risk factors such as dyslipidemia and insulin resistance.

In central sites (ie, the brain)

• Increased activity at CB1-receptor sites is associated with intra-abdominal adiposity* and increased weight.

*As measured by waist circumference.
†From human and/or animal data.

References
Professional Quarterly

**Professional Education** continued from page 7

Medications Toolkit. The kit will include CD-ROMs, including an archived webcast, professional tools, and patient education tools; a wall chart of the recommended screening and monitoring schedules; and a letter from the Planning Committee. To pre-order your free professional toolkit today, e-mail your mailing address (no post office boxes) to psychiatricpatientcep@diabetes.org. The toolkit will be mailed in spring 2007.

Free continuing education credit will be available for physicians, psychologists, nurse practitioners, nurses, and pharmacists. For more information about this educational activity, contact psychiatricpatientcep@diabetes.org.

This activity is supported by an unrestricted educational grant from Bristol-Myers Squibb Company.

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**Research Symposium: Translating Islet Biology into Diabetes Therapy**

**March 14–17, 2007**  
**Evergreen Marriott Conference Resort**  
**Stone Mountain, Georgia**

You are invited to attend a research symposium on beta-cell function in the treatment of diabetes. The research symposium, titled Translating Islet Biology into Diabetes Therapy, will include lectures by world-renowned leaders in the field, as well as oral and poster presentations. Focusing on the emerging science and clinical implications of translating islet biology into diabetes therapy, this conference will address evidence-based expert opinion on what is known and not known about how beta-cells function and what additional research is needed. The conference presenters will explore these key topics: the pathogenesis of beta-cell dysfunction, current and future clinical applications, and prevention or reversal of beta-cell dysfunction.

This activity is intended for scientists, physicians, and other health care professionals with an interest in beta-cell function. It will provide a valuable opportunity for collaboration with other investigators in the field. No continuing education credit will be awarded for this activity.

For more information, contact Shirley Ash at 703-549-1500, ext. 2214, or sash@diabetes.org. For registration, contact Meeting Services, 703-549-1500, ext. 2516, meetings@diabetes.org. Or visit www.diabetes.org/beta07 for complete details and to register online.

**Wednesday, March 14, 2007**  
**8:00 PM–8:45 PM**  
**Plenary: Beta-cells Confronting Diabetes: Opie in 1900 and Onward**  
Chair: Paul E. Harris, PhD, Columbia University Medical Center, New York, New York  
Speaker: Gordon C. Weir, MD, Joslin Diabetes Center, Boston, Massachusetts

**Thursday, March 15, 2007**  
**8:00 AM–8:30 AM**  
**Session I**  
Chair: Guy Rutter, MD, Imperial College, London, England

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![Lilly](image)

This activity is supported, in part, by unrestricted educational grants from Eli Lilly and Company and Amylin Pharmaceuticals, Inc.
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<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter, Institution</th>
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<tbody>
<tr>
<td>2:15 PM–2:45 PM</td>
<td>Transcriptional Regulation of Beta-cell Development</td>
<td>Doris A. Stoffers, MD, PhD, University of Pennsylvania Medical Center, Philadelphia</td>
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<tr>
<td>2:45 PM–3:15 PM</td>
<td>Islet Neogenesis</td>
<td>Susan Bonner-Weir, PhD, Joslin Diabetes Center, Boston, Massachusetts</td>
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<td>3:15 PM–3:45 PM</td>
<td>Beta-cell Replication</td>
<td>Anil Bhushan, PhD, UCLA Larry Hillblom Islet Research Center, Los Angeles, California</td>
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<td>4:15 PM–4:30 PM</td>
<td>Oral Presentation: Thioredoxin-interacting Protein: A Critical Link Between Glucose Toxicity and Beta-cell Death</td>
<td>Anath Shalev, University of Wisconsin—Madison</td>
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<td>4:30 PM–5:00 PM</td>
<td>Islet Adaptation and Maladaptation to Insulin Resistance</td>
<td>Steven Kahn, MB, ChB, University of Washington</td>
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<td>5:00 PM–5:30 PM</td>
<td>Uncoupling Proteins, ROS and Beta-cell Function</td>
<td>Sheila Collins, PhD, CIIT Centers for Health Research, Research Triangle Park, North Carolina</td>
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<tr>
<td>5:30 PM–6:15 PM</td>
<td>Debate on Fatty Acid Effects on Beta-cell Function</td>
<td>Fatty Acids Are Good for You Guenther H. Boden, MD, Temple University Health Science, Philadelphia, Pennsylvania Fatty Acids Are Bad for You Vincent Poitout, DVM, PhD, University of Montreal, Quebec, Canada</td>
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<td>6:15 PM–6:45 PM</td>
<td>Future Directions in Islet Biology</td>
<td>Claes B. Wolheim, MD, University Medical Center, Geneva, Switzerland</td>
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<td>6:45 PM–7:15 PM</td>
<td>Future Directions in Clinical Therapeutics</td>
<td>Peter C. Butler, MD, UCLA Larry Hillblom Islet Research Center, Los Angeles, California</td>
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<td>7:15 PM–7:45 PM</td>
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<td>8:00 PM–8:30 PM</td>
<td>Modulation of AMPK as a Therapeutic Approach</td>
<td>Guy Rutter, MD, Imperial College, London, England</td>
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<tr>
<td>8:30 PM–9:00 PM</td>
<td>The Renin Angiotensin System: Is It Still a Therapeutic Target to Prevent Diabetes?</td>
<td>Mark E. Cooper, MD, PhD, Baker Medical Research Institute, Melbourne, Australia</td>
</tr>
<tr>
<td>9:00 PM–9:30 PM</td>
<td>Diabetes Prevention: TZDs and the Impact on the Beta-cell</td>
<td>Jack L. Leahy, MD, University of Vermont, Burlington</td>
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<tr>
<td>9:30 PM–10:00 PM</td>
<td>Diabetes Therapy: Direct Drug Effects on Islets vs. Indirect Modulation of Islet Function</td>
<td>J. Leibl, MD, University of Washington, Tennessee</td>
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<tr>
<td>10:15 PM–10:45 PM</td>
<td>Oral Presentation: Survivin Regulates B-cell Mass After Birth</td>
<td>Rachel A. Altura, Children’s Research Institute, Columbus, Ohio</td>
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<tr>
<td>10:45 PM–11:00 PM</td>
<td>Oral Presentation: Survivin Regulates B-cell Mass After Birth</td>
<td>Rachel A. Altura, Children’s Research Institute, Columbus, Ohio</td>
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<tr>
<td>11:00 AM–11:30 AM</td>
<td>Glucagon and the Liver</td>
<td>Ralph A. DeFronzo, MD, University of Texas Health Science Center, San Antonio</td>
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<tr>
<td>11:30 AM–11:45 AM</td>
<td>Future Directions in Islet Biology</td>
<td>Claes B. Wolheim, MD, University Medical Center, Geneva, Switzerland</td>
</tr>
<tr>
<td>11:45 AM–12:00 PM</td>
<td>Future Directions in Clinical Therapeutics</td>
<td>Peter C. Butler, MD, UCLA Larry Hillblom Islet Research Center, Los Angeles, California</td>
</tr>
</tbody>
</table>
67th Scientific Sessions—Program Sessions Overview

**Acute and Chronic Complications**

**Case Studies**
Neuropathy and the Diabetic Foot (Includes Roger Pecoraro Lecture)

**Current Issues**
Hyperbaric Oxygen Therapy for the Diabetic Foot—Myth or Reality?

**Symposia**
Non-Hypoglycemia Factors That Modify the Development of Hypoglycemia
Glucose Variability, Risk Analysis, and Prediction of Hypoglycemia
Diabetic Foot Wound Healing
Diabetic Neuropathy—Challenges in Diagnosis and Management
Diabetic Retinopathy
In Vivo Metabolism of Lipids and Lipoproteins
Evaluating Cardiac Ischemia and Macrovascular Disease in Patients with Diabetes
Proteinuria Reduction—Disease Marker or Outcome Predictor?
Hot Topics in Renal Disease
ABC Transporters in the Regulation of Lipids

**Behavioral Medicine, Clinical Nutrition, Education, Exercise**

**Case Studies**
Practical Implementation of New Technology

**Current Issues**
Smoking Cessation—New Insights to an Old Problem
Controversies in Using the Glycemic Index

**Symposia**
Prevalence of Obstructive Sleep Apnea in Type 2 Diabetes
The Changing Role of Educators—Meeting Patients’ Needs for Ongoing Follow-Up
Enhancing Patient-Provider Communication for Self-Management
National Standards for Diabetes Self-Management Education
National Diabetes Education Program
Clinical Strategies for Vulnerable Populations
Changing Perceptions of Vegetarianism—Health Benefits of a Plant-Based Diet
Type 2 Diabetes—The Importance of Physical Activity
The Obese Adolescent

**Clinical Diabetes/Therapeutics**

**Current Issues**
How Important Is Glucose Variability for Long Term Outcomes?
Weight Gain in Pregnancy with Obesity—How Much Is Too Much?
Pros and Cons of GLP Agonists versus DPP IV Inhibitors
Coronary Artery Calcification—is It a Clinically Relevant Marker for the Development of Coronary Artery Disease?
Link Between Alzheimer’s and Diabetes—is There a Correlation?

**Symposia**
Transitional Programs for the Older Teen/Young Adult
Prevention of Type 2 Diabetes
Hyperglycemia and Adverse Pregnancy Outcome (HAPO), Highlights
Pay for Performance
Continuous Glucose Monitoring—Clinical Issues
Dyslipidemia in Pregnancy—Implications for the Mother and Fetus (includes Norbert Freinkel Lecture)
Fighting for Federal Dollars, Access to Care, and Ending Discrimination: Why Diabetes Health Care Professionals Must Lead the Way
Current Issues in Measuring Quality of Care
Perinatal Programming of Obesity—Does It Start in the Brain?
Glycemic Control in Children—Effects on Brain Structure and Function
Continuous Glucose Monitoring—Approvals, Payments, and Health Outcomes
Insulin Initiation in Type 2 Diabetes
Hospital Management of Diabetes
Beyond Health Care Practitioners—Diabetes Health Care Extenders
Issues with Obesity and Type 2 Diabetes in Adolescence
Clinical Relevance of Beta Cell ATP-dependent Potassium Channel Pumps and Continuous Glucose Monitoring in Pediatrics
Role of Molecular Genetics in the Diabetes Clinic
Use of Insulin in the Intensive Care Unit—Who? And What Are the Targets?

**Obesity—Prevention and Treatment in Patients with Diabetes Issues with Acute Treatment**

**Epidemiology/Genetics**

**Current Issues**
Is There Good Evidence for the Thrifty Gene Hypothesis?

**Symposia**
Epidemiological Advances in Gestational Diabetes
Integrative Approaches to Diabetes Gene Discovery
Diabetes in the African Diaspora
Microbial Symbionts and Metabolic Syndrome
Mouse Genetics
Human Genetics
New Frontiers in Type 2 Diabetes Risk

**Immunology/Transplantation**

**Current Issues**
Clinical Significance of Beta Cell Function in Those with Long-Standing Type 1 Diabetes?

**Symposia**
General Immunomodulatory Therapies for Type 1 Diabetes—Ready for Prime Time
To Measure Is to Know, Following Beta Cell Mass/Function Pre- and Post-Transplant
Type 1 Diabetes Apparitions? Immunological Assays for Prediction and Follow-up
Islet Transplantation—Is the Liver the Best Place?
Antigen-Specific Immunotherapeutic Approaches

**Insulin Signaling/Insulin Action**

**Symposia**
Systems Biology
Greasing the Skids—Movin’ Fat
Skeletal Muscle Glucose Metabolism
Insulin Signaling—Outside, Looking In
More Target Practice or the Real Deal? Novel Modulators of Insulin Action
Orphan and Adopted Nuclear Receptors and Insulin Action
Current Status of Metabolokione Biology

**Integrated Physiology/Obesity**

**Symposia**
Aging with the Spectre of Diabetes in the 21st Century
Surgical Intervention in Obesity
Gene-Environment Interactions and Metabolism in Obesity and Type 2 Diabetes
Calorie-bomics—Fat in the Balance
The Metabolically Fit, Obese Individual Revisited
Effect of Adipose Tissue Dysregulation on Metabolic Homeostasis and Insulin Action
Mitochondrial Dysgenesis, PPARs, and Lipotoxicity—The Nuts and Bolts of Insulin Resistance
Metabolic Benefits of Mitochondrial Activation through Exercise Training
Non-Alcoholic Steatohepatitis (NASH) and Insulin Resistance
No Metabolic Gain Without Pain: Metabolic Benefits of Weight Loss through Exercise Training or Caloric Restriction
Obesity—is It All in Your Head?
Comorbidities Associated with Obesity and Insulin Resistance
AMP Kinase—A Multi-organ Fuel Sensor

**Islet Biology/Insulin Secretion**

**Current Issues**
ER Stress in the Beta-Cell

**Symposium**
Beta-Cell Regeneration, Replication, and Neogenesis
Development of the Pancreas and Islets
KATP—Permanent Neonatal Diabetes from Bench to Bedside
Glucagon Secretion—Bench to Bedside
Second Messengers, Mitochondrial Metabolism, and Exocytosis
Clinical News continued from page 8

Some highlights include:
- an increase in payments to doctors for common services, including consultations on the patient’s health and referrals to certified self-management education programs and for medical nutrition therapy
- coverage for self-management education programs and for medical nutrition therapy services
- one-time ultrasound screenings for patients new to Medicare and at risk for abdominal aortic aneurysms

A tip sheet from the Centers for Medicare and Medicaid Services (CMS) that reviews some of these services can be found at http://www.diabetes.org/uedocuments/PartnerTipSheet112206.pdf.

AHA & ADA Issue Joint Guidelines

The American Heart Association (AHA) and the American Diabetes Association (ADA) have issued a joint statement in support of lifestyle and medical interventions to help prevent heart disease in people with diabetes. The joint guidelines emphasize a more aggressive approach to preventing and treating CVD risk factors and are part of ongoing collaboration by the two organizations to help prevent CVD in patients with diabetes. Heart disease is the number one killer of people with diabetes, and people with diabetes have twice the risk of heart disease and stroke as the general population.

While traditional lifestyle approaches have focused on weight loss, these new guidelines state that the major focus of lifestyle interventions should be on improving glycemic control and addressing other major CVD risk factors. However, weight control, nutrition education, and physical activity are the keys to long-term success, and the aggressive use of lifestyle modifications can reduce or delay the need for medical intervention.

Major medical interventions—such as the use of statins, ACE inhibitors, and other drugs—to help people with diabetes manage lipids, blood pressure, and blood glucose levels are recommended to significantly reduce CVD risk factors.

The statement was published in the January issues of Diabetes Care and Circulation: Journal of the American Heart Association.

CheckUp America

A new cardiometabolic risk initiative called CheckUp America will launch in March. The goal of the initiative is to increase awareness of the various cardiometabolic risk factors and the connection to diabetes and heart disease. In conjunction with the launch, look for TV and radio PSAs and ads in professional journals and consumer publications. Materials such as tear pads and pamphlets will be available for health care professionals and consumers. Existing materials are at CheckUpAmerica.org (for patients) and diabetes.org/CMR (for health care professionals).

Recommendations continued from page 1

Nephropathy
- Individuals with diabetes and earlier stages of chronic kidney disease should reduce protein intake to 0.8–1.0 g/kg body wt per day. Those in the later stages should reduce it to 0.8 g/kg body wt per day.

Neuropathy
- The painful symptoms of distal symmetric polyneuropathy (DPN) often require treatment. A table of pharmacological agents to treat DPN pain has been added. The value of many of these medications has been demonstrated, but none are specifically licensed for the treatment of DPN.

Celiac disease
- Patients with type 1 diabetes are at increased risk for celiac disease, an immune-mediated disorder. Information on how to treat children diagnosed with type 1 diabetes and celiac disease has been added this year. Those who become symptomatic should be screened, and those with positive antibodies should be evaluated by a gastroenterologist. If the diagnosis is confirmed, patients should consult a dietitian and be placed on a gluten-free diet.

Diabetes care in the hospital
- Prandial and basal insulin should be given as scheduled, but premeal hyperglycemia should be addressed with correction doses or supplemental insulin.

Preconception care
- The latest research indicates that ACE inhibitors should be discontinued before conception.

Diabetes care in the school and day care setting
- The family, school nurse, and diabetes health care team should work together to develop a 504 plan.

Emergency and disaster preparedness
- New recommendations on emergency and disaster preparedness have been added. A waterproof and insulated disaster kit should include items essential to diabetes care, a list of contacts for national organizations (such as ADA), copies of relevant medical information (especially medications; prescription numbers can facilitate getting medications refilled at chain pharmacies throughout the country), and recent lab tests. The disaster kit should be renewed and replenished twice a year.

The Clinical Practice Recommendations can be accessed online at no cost by visiting http://care.diabetesjournals.org. Print copies of the Clinical Practice Recommendations can be ordered at http://store.diabetes.org.
Criteria for the Diagnosis of Diabetes

Symptoms of diabetes and a casual plasma glucose 200 mg/dl (11.1 mmol/l)

- Casual is defined as any time of day without regard to time since last meal.
- The classic symptoms of diabetes include polyuria, polydipsia, and unexplained weight loss.

OR

Fasting plasma glucose 126 mg/dl (7.0 mmol/l)

- Fasting is defined as no caloric intake for at least 8 h.

OR

2-h plasma glucose 200 mg/dl (11.1 mmol/l) during an oral glucose tolerance test

- The test should be performed as described by the World Health Organization, using a glucose load containing the equivalent of 75-g anhydrous glucose dissolved in water.

ADA, “Standards of Medical Care in Diabetes—2007,” Diabetes Care (30), Suppl. 1, 2007