CLUES TO THE NEWS

WHAT: American Diabetes Association’s 76th Scientific Sessions
WHERE: Ernest N. Morial Convention Center, New Orleans, LA
WHEN: Friday, June 10 – Tuesday, June 14, 2016

EMBARGOES: All science being presented at the Association’s 76th Scientific Sessions (this applies to all information included in the abstract supplement of Diabetes) is embargoed and remains confidential/not for public information or release until the time of presentation at the 76th Scientific Sessions. All abstracts scheduled for oral presentation are embargoed until the time of presentation at the 76th Scientific Sessions. All abstracts presented as Posters in the Poster Hall or Publish-Only are embargoed until 10:00 a.m. CT, Saturday, June 11, 2016. The Embargo Policy applies to all abstracts regardless of whether information is obtained from another source. Failure to abide by the Embargo Policy may result in suspension of media credentials at the 76th Scientific Sessions as well as future meetings and may also impact the ability to receive advance press materials for future meetings. Any abstracts in violation of the Embargo Policy will be withdrawn from the Scientific Sessions.

Please note: Abstracts are available for review online under embargo beginning on Friday, June 3, 2016, at 5:00 p.m. ET. The early availability of the abstracts is for the sole purpose of assisting attendees in creating their itineraries for the meeting; all science remains confidential/not for public information until the time of scientific presentation, and the Embargo Policy will be enforced. Media found to be in violation of the Embargo Policy will have their credentials revoked, and they will be barred from future Scientific Sessions.

NOTE: All abstracts presented in the Association’s News Briefings are embargoed until the conclusion of the author’s scientific presentation, as noted at the top of each press release.

The American Diabetes Association’s 76th Scientific Sessions, to be held June 10-14, 2016, at the Ernest N. Morial Convention Center in New Orleans, is the world’s largest scientific meeting focused on diabetes. The 2016 Scientific Sessions is expected to attract more than 16,000 attendees and offers researchers and health care professionals from around the world the opportunity to share ideas and learn about the significant advances in diabetes research, treatment and care. During the five-day meeting, attendees receive exclusive access to more than 2,500 original research presentations, participate in provocative and engaging exchanges with leading diabetes experts, and can earn Continuing Medical Education (CME) or Continuing Education (CE) credits for educational sessions. The program is grouped into eight theme areas: Acute and Chronic Complications; Behavioral Medicine, Clinical Nutrition, Education and Exercise; Clinical Diabetes/Therapeutics; Epidemiology/Genetics; Immunology/Transplantation; Insulin Action/Molecular Metabolism; Integrated Physiology/Obesity; and Islet Biology/Insulin Secretion. Margaret A. Powers, PhD, RD, CDE, President, Health Care & Education, will deliver her address on Saturday, June 11, and Desmond Schatz, MD, President, Medicine & Science,
will present his address on Sunday, June 12. The top eight abstracts of this year’s Scientific Sessions will be presented on Tuesday, June 14, in the Presidents Oral Session. In total, the 2016 Scientific Sessions includes 378 abstracts in 50 oral sessions, 2,021 poster presentations including 59 moderated poster discussions, and 335 published-only abstracts. The Association’s 2016 Scientific Achievement Awards and Lectures are:

- **Barbara B. Kahn, MD**, Banting Medal for Scientific Achievement, the Association’s highest honor. Kahn will deliver the Banting Medal Lecture, “Adipose Tissue, Inter-organ Communication and the Path to T2D,” on Sunday, June 12.
- **Tamas L. Horvath, DVM, PhD**, Outstanding Scientific Achievement Award, will present his OSAA Lecture, “Hunger-promoting Hypothalamic Neurons Control System Metabolism and Drive Complex Behaviors and Longevity,” on Monday, June 13.
- **Sheri R. Colberg-Ochs, PhD, FACSM**, Outstanding Diabetes Educator, will present her Lecture, “From Froot Loops® to Fitness—My Journey as an Educator and PWD,” on Saturday, June 11.
- **Edward W. Gregg, PhD**, Kelly West Award for Outstanding Achievement in Epidemiology, will deliver his Lecture, “The Changing Tides of the Diabetes Epidemic—Smooth Sailing or Troubled Waters Ahead?” on Sunday, June 12.

Additional scientific research will be presented during 110 Symposia and nine Professional Interest Group sessions. The 76th Scientific Sessions also includes presence from more than 130 corporate and organizational exhibitors in nearly 100,000 square feet of exhibit space.

### Scientific Highlights

**Could Long-Term Use of a Common Diabetes Drug Also Protect Against Alzheimer’s Disease?**

People with type 2 diabetes are at higher risk for developing Alzheimer’s and other neurodegenerative diseases than people without diabetes. What if we already had a safe, effective therapy to reduce that risk? This study (72-OR) explores whether a low-cost, commonly used diabetes drug can offer significant neurological benefits in addition to good glucose control.

**Blood Glucose Control and Mortality Risk**

Following the release of the ACCORD study, which found an increased risk for mortality in some people under tight glycemic control, the issue of whether or not to aggressively manage blood glucose levels has come under scrutiny, particularly for older adults who may be more vulnerable. This retrospective analysis (173-OR) further informs the debate by providing a comparison of mortality risks among those treated to reach lower blood glucose levels vs. those treated to reach more moderate blood glucose levels.

**Dog v. Machine: Can Dogs Match a Meter in Detecting Hypoglycemia?**

In recent years, anecdotal reports suggesting service dogs can smell/sniff out hypoglycemia in their owners have been increasing. This study (76-OR) compared continuous glucose monitoring and capillary blood glucose monitoring (finger sticks) with the ability of service dogs to accurately detect low blood glucose levels by scent.
What’s New in the World of Insulin?
Insulin has come a long way since it was first extracted from pig and cow pancreases. The advancement of synthetic human insulin in the 1980s ushered in an era of engineered (analog) insulins designed to contain desirable properties that allow people with diabetes more freedom to make insulin choices based on their individual lifestyles. These studies (237-241 OR) highlight the latest safety and efficacy data for a range of new insulin products.

Blurred Lines: Are We Properly Classifying the Different Types of Diabetes?
Diabetes is a complex set of diseases, most commonly classified as type 1 or type 2. Researchers are increasingly noting areas of genetic and non-genetic overlap among the various types of diabetes, and some wonder if the current diagnosis and classification system can accurately predict disease outcome and/or appropriate therapies to prescribe. This cluster analysis (359-OR) examined if it would make more sense to classify types of diabetes based on genetic profiles and metabolite function.

Stem Cell Transplants in Mice: Searching for Relief for Diabetic Neuropathy
Up to 70 percent of people with diabetes have some form of neuropathy, an often-painful family of nerve disorders that can lead to amputations. Unfortunately, there’s only so much doctors can do to help sufferers, and researchers have yet to find a cure. This study (3-OR), using mice with diabetes, explored stem cell transplants as a possible means to arrest or even reverse neuropathy.

Detecting Foot Ulcers
Foot ulcers, the most common reason for hospitalizations in people with diabetes, can lead to infections and, if left untreated, amputations. However, if detected early enough, such complications can be avoided. This study (141-OR) investigated if heat-sensing pads used at home could help detect foot ulcers earlier, and thus, improve patient outcomes.

Making Patients HypoAware
One reason severe hypoglycemia (low blood glucose levels) is so dangerous is that people with diabetes may not recognize the symptoms as they are occurring quickly enough to treat it or prevent it from getting worse. The longer a person has diabetes, the greater their risk for experiencing this dangerous condition. Is this a problem that can be improved with better education? This cluster, randomized, controlled trial (285-OR) examined the effectiveness of an education program to increase patients’ knowledge and awareness of hypoglycemia.

Youth with Diabetes

Diabetes Complications in Youth
Diabetes in youth is still predominantly type 1, though the incidence of type 2 diabetes is rising. Researchers examined the prevalence and impact of early complications for youth with both type 1 and type 2 diabetes (306-OR). Both groups are at risk for a range of diabetes complications, however, there are some significant differences in how severely the complications develop in youth.
The Impact of Stress on Teens with Diabetes

Having type 1 diabetes only makes the teen years more stressful. This study (156-OR) evaluated the impact of stress from major life events—such as the hospitalization of a family member, bad report cards and fighting between parents—on teens’ abilities to perform daily diabetes care to effectively manage their A1C levels.

Preventing DKA in Teens with Type 1 Diabetes

Diabetic ketoacidosis (DKA) is a serious condition that can lead to coma or even death, and it can occur particularly frequently in teens with type 1 diabetes who are unable or unwilling to manage their blood glucose levels well. This study (288-OR) assessed the potential of community-based interventions to help prevent teens from repeatedly being hospitalized for DKA. Learn what was most effective.

Are Young Children Who Experience Stressful, Negative Life Events At Greater Risk for Type 1 Diabetes?

Stress can cause many kinds of health problems and has been suspected as a precursor to islet autoimmunity and as a trigger for type 1 diabetes. Could stressful life events affect the health of children as young as 3 months to six years old? Results from The Environmental Determinants of Diabetes in the Young (TEDDY) study (374-OR) may provide some answers.

Examining the Brains of Youth with Type 2 Diabetes

Research suggests that youth with type 2 diabetes develop changes in brain structure and demonstrate poorer cognitive function than their peers who do not have diabetes. This study (376-OR) investigated if youth with type 2 diabetes might also be losing gray matter, a possible explanation for the poorer cognitive scores, and which parts of the brain were most affected.

Minority Populations

Race and Gender Trends in Cardiovascular Mortality

In recent years, the U.S. has seen an encouraging decrease in cardiovascular mortality. Is this decline consistent among adults with diabetes? How do race and gender affect cardiovascular death rates? This study (91-OR) takes a close look.

Does Ideal Cardiovascular Health Also Prevent Diabetes?

The American Heart Association’s definition of “ideal Cardiovascular Health (ideal CVH)” includes key health factors such as controlling blood pressure and blood glucose levels, eating a healthy diet, not smoking and maintaining a healthy weight, and was developed to help prevent heart attacks and strokes. Since diabetes and heart disease share many risk factors, this study (87-OR) tested the hypothesis that the AHA’s ideal CVH could also be effective in preventing diabetes among participants in the Jackson Heart Study, a large, prospective, epidemiologic investigation of cardiovascular disease among African Americans.
Type 2 Diabetes and Asian Americans
Do Asians have the same risk factors for developing type 2 diabetes as non-Hispanic whites? And do those risk factors vary among Asian American subgroups? Little research has been done to investigate the prevalence and risk factors for type 2 diabetes among the diverse Asian American subgroups including Indians, Chinese, Filipino, Japanese, Korean, Vietnamese and others from the continent of Asia. This study (90-OR) analyzed how diabetes affects this highly diverse population that is rapidly growing in the United States.

Disparities in Medication Compliance and A1C Among Minorities and Whites: Does Providing Free Care Close the Gap?
People in ethnic and minority groups often exhibit reduced medication compliance and worse blood glucose control than whites. Do these differences continue to occur if there is equal, free access to medications for all, regardless of socioeconomic status? This retrospective analysis (86-OR) examined compliance and blood glucose control among minorities and whites with type 2 diabetes in the U.K.’s National Health Service, from January 2004 to July 2015.

Diabetes and Kidney Disease

Intensive Diabetes Treatment and Its Impact on the Kidney
The ACCORD study evaluated the use of intensive blood glucose and blood pressure control, as well as a combination of lipid-lowering therapies, to reduce the incidence of cardiovascular events and mortality in people with type 2 diabetes at high risk for heart problems. ACCORDION (535-P), the next phase of ACCORD, examined how these treatments affected the kidney.

Slowing Kidney Disease Progression in American Indians
American Indians have the highest rate of diabetes in the world and one of the highest rates of chronic kidney disease and renal failure. In this study (536-P), long-term use of losartan, a medication initially developed to treat high blood pressure, was tested to determine if it could slow the progression of early kidney disease in American Indians with type 2 diabetes.

What Protects Some People with Type 1 Diabetes From Kidney Disease?
Typically, the longer a person lives with diabetes, the more likely they are to develop serious complications, such as eye, nerve, kidney and heart disease. However, in the Joslin Medalist Study, researchers found that roughly half of 1,000 people living with type 1 diabetes for 50 years or more had not developed any serious complications. In this next phase of the study, researchers took a closer look at Medalists who had no serious complications in order to identify the common characteristics that may be preventing diabetes-related conditions, even when they experienced persistently high blood glucose levels. This analysis of the Joslin Medalist Study data (533-P) compared participants who had developed diabetic nephropathy (kidney disease), a common and sometimes fatal complication, with participants who did not.
A Simple Solution for Helping Pregnant Women Achieve Weight Goals?
Maintaining a healthy weight during pregnancy is important for every expectant mother. However, for pregnant women with gestational diabetes, a healthy weight is critical in order to avoid both short- and long-term complications for the mother and the baby. This study (165-OR) tested the effectiveness of one method of education to encourage women with gestational diabetes to stay within the Institute of Medicine’s weight guidelines.

Look AHEAD to a More Active Life
Everybody knows that losing weight can greatly improve your health if you are overweight or obese and have diabetes. However, can it prolong your active years and ward off disabilities as you age? An analysis of data from the Look AHEAD study (169-OR) assessed long-term disability vs. active life expectancy vs. total life expectancy.

Paying People to Lose Weight: Does It Work?
Since the landmark Diabetes Prevention Program trial validated lifestyle intervention (losing weight and increasing physical activity) could substantially reduce the risk for developing type 2 diabetes—even in high-risk populations—researchers have been searching for programs that could effectively and efficiently scale this success. This trial (268-OR) examined if offering a diverse group of Medicaid patients monetary incentives increased their participation in a diabetes prevention program.

The Economics of Diabetes

Estimating Progressive Diabetes Costs
The longer a person has diabetes, the more money they spend on health care expenses. Understanding the trajectory of diabetes-related costs can help estimate the economic benefits of prevention programs, particularly because costs typically increase as a result of diabetes-related complications. This study (109-OR) analyzed the diabetes-related expenses of more than 400,000 adults with type 2 diabetes—nine years before and after diagnosis—from 2001-2013.

The True Cost of High Deductible Health Plans
One way of keeping health insurance premiums low is to raise deductibles. Do higher out-of-pocket plans affect the health care habits of people with diabetes? This study (114-OR) of more than 12,000 people with diabetes compared their health care usage under a low-deductible plan for one year with their usage under a high-deductible plan for two years after an employer-mandated switch. Are high-deductible plans cheaper or more expensive? And which plan yielded improved patient outcomes?

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