



# DIABETES IS PRIMARY

TIMELY NEWS FOR THE MULTIDISCIPLINARY CARE TEAM

## from the American Diabetes Association

By Max Bingham, PhD

### FROM THE JOURNALS.....

#### Focus on Diabetes Distress

Patients with diabetes tend to have quite a bit to think about in terms of managing their disease. The result? Diabetes distress, the often-hidden anxieties, stress, and depression that can accompany the disease. It is surprisingly common, chronic, and associated with poor glycemic control and problems with self-care. Can anything be done about it? Yes, according to a series of studies that have appeared in recent months.

#### Diabetes Distress Can Be Reduced, According to Trial Data

Two approaches that target either emotional or educational/behavioral aspects of diabetes distress can result in meaningful reductions in patients with type 1 diabetes, according to Fisher et al. (*Diabetes Care*, doi.org/ctkd). Moreover, the effects were seen 3 months after intervention and were maintained through 9 months from baseline. The findings come from the T1-REDEEM (Reducing Distress and Enhancing Effective Management for T1D Adults) study, in which both interventions consisted of a 1-day workshop followed by four follow-up online meetings. Both approaches also resulted in modest reductions in A1C.

"Ours and related studies indicate that diabetes distress is highly prevalent, it is not a comorbidity or complication, and it is distinct from clinical depression," author Lawrence Fisher said. "It is simply part of managing the burdens, fears, and concerns linked to dealing with diabetes over time. Thus, we suggest that addressing the emotional/behavioral side of diabetes should be a crucial component of comprehensive clinical care and not a reason for referral."

#### Analysis Supports Distress Interventions

Specifically tailored psychological interventions work to reduce diabetes distress, according to a systematic

review and meta-analysis by Schmidt et al. (*Diabetic Medicine*, doi.org/ctkf). Such approaches were also found to reduce A1C, and as a result, the authors suggest that rigorous studies are now warranted to establish the full potential of such interventions and that implementation in clinical practice could help reduce diabetes distress and improve glycemic control. They caution, however, that inadequate power from the small sample sizes in the nine studies they included might have inflated effect sizes.

#### Intervention to Prevent Diabetes Distress? So Far, So Good

We learn from Hood et al. (*Diabetes Care*, doi.org/gdzqjv) that an approach called the Penn Resilience Program (PRP) has so far managed to prevent the development of diabetes distress in adolescents with type 1 diabetes. The authors compared their approach to an advanced diabetes education program and found that the diabetes-tailored PRP was associated with substantially lower levels of diabetes distress. Although the research continues, with further reports expected for year 2 and year 3 outcomes, the authors describe their preventive approach as promising.

#### Ethnic Minorities May Be More Likely to Experience Diabetes Distress

Diabetes distress may be more prevalent among ethnic minority groups than among Caucasians in the Netherlands, according to a study by Özcan et al. (*Diabetes Care*, doi.org/ctkg). Using cross-sectional data from the Dutch Diabetes Pearl cohort, the authors found that 5.8% of Caucasians experienced diabetes distress, whereas study participants who were members of minority groups (Asian, Turkish, Moroccan, African, Latin American, and Hindustani-Surinamse populations) had much higher rates, ranging from 9.6 to 31.7%. Even after adjusting for potential confounding factors, the relationship held, suggesting that minority ethnicity is independently associated with increased diabetes distress.

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## ADA NEWS

### AMERICAN DIABETES ASSOCIATION UPDATES POSITION STATEMENT ON TYPE 1 DIABETES IN ADOLESCENTS

The American Diabetes Association (ADA) has issued an updated position statement on type 1 diabetes in children and adolescents. The statement by Chiang et al. (*Diabetes Care*, doi.org/ctkv), includes recommendations on diagnosis, care, and numerous other aspects of type 1 diabetes, but the main focus is on innovations that have emerged since the original position statement was issued in 2005. These include not only rapidly developing areas of diabetes technology such as continuous glucose monitoring, improvements in insulin pumps, and artificial pancreas systems, but also new developments in lifestyle management.

While highlighting the particular needs of youth and the development of new technologies, the authors stress that future research should focus specifically on young people with type 1 diabetes, noting that it is unclear how much, if any, of the relevant research carried out in adults is applicable to children and adolescents.

“With advances in technology, including insulin delivery systems, continuous glucose monitoring systems, and programs incorporating comprehensive treatment teams that understand the critical role of food, mindset, and exercise, we hope that more and more children will achieve these [diabetes management] goals and [that they will] lead to improved quality of life in both the short and long term,” author Desmond Schatz said.

### Emotional Reactions, Distress Also Linked to Prediabetes Diagnosis

Distress and other negative emotions appear to also affect individuals with prediabetes. In a qualitative analysis of structured interviews with 21 individuals who recently received a diagnosis of prediabetes, Strachan et al. (*Health and Social Care in the Community*, doi.org/ctkj) richly illustrate some of the major emotional concerns accompanying the diagnosis. They highlight four major themes: distress and concern, downplaying the risks of type 2 diabetes, guilt and shame, and (we suggest, surprisingly) a reception to self-compassion as an approach to coping with prediabetes. The authors say that focusing on the latter theme may offer an opportunity for individuals to self-regulate and improve their health. They say further that health care professionals should be aware of the negative emotions associated with prediabetes and that unambiguous communication is important for avoiding distress associated with uncertainty.

### Language Matters in Diabetes Care

When it comes to diabetes, how you communicate may be as important as what you communicate. According to a recently published review by Lloyd et al. (*Diabetic Medicine*, doi.org/ctkp), poor language practices in a clinical setting can result in patients feeling stigmatized, being disengaged with self-management practices, and having both low satisfaction with care and poor clinical outcomes. Conversely, good communication skills, and particularly positive language, can result in benefits for patients in terms of psychosocial well-being and optimal self-management. The authors also touch on the issues of language barriers and cultural differences and their effects on diabetes self-management.

The review comes from a working group established by NHS England and Diabetes UK to address the issue of language and how it might be used to improve clinical outcomes and quality of life for people with diabetes. The group also used its review as the basis for an NHS-published guide titled, “Language Matters: Language and Diabetes.” The guide, which includes numerous

*continued on p. 292* →



## TREATMENTS + THERAPIES

### Early Type 1 Diabetes Diagnosis Linked to Reduced Life Expectancy and Heart Risks

Being diagnosed with type 1 diabetes at a younger age is associated with a shorter life expectancy and a substantially increased risk for developing cardiovascular disease, according to Rawshani et al. (*The Lancet*, doi.org/ctkr). As a result, the authors suggest, people with type 1 diabetes should be offered cardioprotective medications and other treatments much earlier than is currently considered standard care. They cite blood pressure and glycemic control, as well as smoking cessation, as examples of approaches that should be considered early on.

The findings come from a cohort study of individuals in the Swedish National Diabetes Registry and controls from the general Swedish population. The study included ~27,000 individuals with type 1 diabetes and ~135,000 matched control subjects. After stratifying participants into five age ranges, the authors estimated excess risk for all-cause mortality and also a range of cardiovascular outcomes. They found that patients diagnosed with the disease at age 0-10 years were four times more likely to die early from any cause and seven times more likely to die from a cardiovascular cause. Reduction in life expectancy was 18 years for women and 14 years for men when diabetes was diagnosed before the age of 10 years. For specific cardiovascular outcomes, risk was much greater compared to control subjects and to those in whom diabetes was diagnosed at a much later age.

“These are disappointing and previously unknown figures,” lead author Araz Rawshani said. “The study suggests that we must make an even greater effort to aggressively treat patients diagnosed at an early age to reduce the risk of complications and premature death. . . . We know with certainty that if we maintain good blood sugar control in these patients, we can lower the risk of cardiovascular damage. This makes it important to carefully consider both evidence-based medications and modern technological aids for blood sugar measurements and insulin administration in patients diagnosed with type 1 diabetes at an early age.”

### Insulin Pens and Diabetes Drugs Added to Safety Watch List

The U.S. Food and Drug Administration (FDA) has updated its watch list of products that have new safety information or possible signs of serious risk. Although potential safety issues for many of the products listed remain under FDA evaluation, the agency has not recommended that health care providers stop prescribing any of them.

The updated list includes 13 insulin pen products (included for “product use error”) and several sodium–glucose cotransporter 2 inhibitors (in relation to risk of Fournier’s gangrene). A number of metformin products (relating to serious skin reactions) were also included on the list, according to reports (wb.md/2n1shbe). The update was created from the FDA Adverse Event Reporting System. The full list is available on the FDA website at bit.ly/2oDaibZ.

### FROM THE JOURNALS, continued from p. 291

practical examples of language use designed for better outcomes, is available on the NHS England website (bit.ly/2l3OZPi).

### Insurance Gaps Continue to Affect Type 1 Diabetes Outcomes

Gaps in private health insurance coverage for adults with type 1 diabetes can lead to increases in A1C and an increase in the use of acute care services, according to Rogers et al. (*Health Affairs*, doi.org/ctx). Of the ~168,000 adults included in their analysis, around one-fourth experienced an interruption in coverage of >30 days, and these individuals were five to seven times more likely to use emergency care services (depending

on how long their coverage was interrupted) compared to periods when they had insurance coverage. The authors also found a 3.6% relative increase in A1C for each coverage interruption, and coverage interruption was associated with self-reported lower perceived health status and lower satisfaction with life.

“While we expected gaps in coverage to affect health in some way, the size of the effect and the frequency of gaps were striking,” lead author Mary Rogers said in a statement (bit.ly/2Q08O8t). “This problem is not going away. If anything, fragmented care is likely to increase with projected trends. . . . Providing access to medical services for people with chronic conditions is a problem that America has not yet fully resolved.”

## MARKETPLACE .....

### Freestyle Libre Approved for 14-Day Wear, Found to Be Cost-Effective

The U.S. Food and Drug Administration (FDA) has approved a 14-day version of Abbott's Freestyle Libre flash continuous glucose monitoring device, making the device one of the longest-lasting glucose sensors available. The 10-day version of the sensor was previously approved by the FDA in September 2017. According to the company, the longer-wear sensor will be rolled out in coming months ([bit.ly/2NLLb6K](http://bit.ly/2NLLb6K)).

Meanwhile, in a separate analysis (*Diabetes*, [doi.org/ctkq](https://doi.org/ctkq)), the 10-day version of the device was found to be cost-effective compared to standard self-monitoring of blood glucose with test strips. The analysis included patients with type 1 or type 2 diabetes and found that the device improved adherence to American Diabetes Association (ADA) monitoring recommendations and was cost-effective in terms of direct costs for the device and reductions in costs associated with hypoglycemia and all-cause resource use. The full poster, which was presented at the ADA's 78th Scientific Sessions in June, is available at [bit.ly/2ClS90Q](http://bit.ly/2ClS90Q).

### Android Version of InPen Insulin Pen/Mobile Application Wins Approval

Companion Medical has announced that an Android-compatible version of its InPen insulin pen/mobile application product has received FDA approval and will launch in late 2018 (<https://prn.to/2oEw8fv>). The iOS version of the app and pen has been commercially available in the United States since December 2017. A review of one user's experience can be found in this issue of *Diabetes Spectrum* (p. 354). The company has also announced that it will launch the InPen in Europe in 2019 (<https://prn.to/2Ceij0X>).

### New Mobile App on Diabetes Care Offers Continuing Medical Education Credits

An ASCEND (Academy for Science and Continuing Education) diabetes care professional education program is now available online ([bit.ly/2LVzmV5](http://bit.ly/2LVzmV5)) and as a mobile app on iOS devices. The professional education curriculum covers the full spectrum of diabetes care, but focuses mainly on type 2 diabetes, with the aim of improving diabetes care worldwide. The program and app, which received financial support from Novo Nordisk, offer continuing medical education credits. The free app can be downloaded from [apple.co/2Q4XQhU](http://apple.co/2Q4XQhU).



## CONFERENCE SPOTLIGHT

### A Roundup for Diabetes: 2018 European Society of Cardiology Congress

#### ***Little Net Cardioprotective Benefit From Daily Aspirin and No Overall Benefit From Omega-3 Fatty Acid Supplementation in People With Diabetes***

Daily aspirin prevents serious first-time vascular events in people with diabetes but at a cost of increased risk of bleeding events, according to reports from the ASCEND collaboration (Bowman et al., *New England Journal of Medicine*, doi.org/ctks). Thus, the authors suggest that there is no clear net benefit from aspirin for primary prevention of cardiovascular events in diabetes. In addition, low-dose aspirin therapy has previously been suggested to prevent cancer, but the authors also saw no benefit for cancer prevention. The outcomes were presented in August at the 2018 European Society of Cardiology (ESC) Congress in Munich, Germany.

Omega-3 fatty acid supplementation was also found to have no overall effect on the risk of primary vascular events in patients with diabetes, according to Bowman et al. (*New England Journal of Medicine*, doi.org/ctkt). They write that their findings, along with previous outcomes of relevant randomized trials, do not support recommendations for routine dietary supplementation with omega-3 fatty acids to prevent first-time vascular events. The results also come from the ASCEND collaboration and were presented at the ESC 2018 conference.

The study used a factorial design to compare both aspirin and omega-3 fatty

acid supplements to placebo for primary prevention of cardiovascular events in diabetes at the same time. Just under 15,500 participants were randomized between 2005 and 2011, with average follow-up of 7.4 years. In both study outcomes, there was no evidence of interactions between the interventions.

“We have shown conclusively in ASCEND that aspirin reduces the risk of vascular events in primary prevention, as it does in people who already have cardiovascular disease, but these benefits are counterbalanced by the number of major bleeds caused by aspirin,” author Jane Armitage said. “This is an important finding with implications for many millions of people who have diabetes but have not yet had cardiovascular events. Current clinical guidelines vary in their recommendations about the use of aspirin for primary prevention because of a previous lack of clear evidence. The results of ASCEND now provide much needed clarity.”

In relation to the omega-3 fatty acids outcomes, author Louise Bowman said, “Our large, long-term randomized trial shows that fish oil supplements [omega-3 fatty acids] do not reduce the risk of cardiovascular events in patients with diabetes. This is a disappointing finding, but it is in line with previous randomized trials in other types of patients at increased risk of cardiovascular events, which also showed no benefit of fish oil supplements. There is no justification for recommending fish oil supplements to protect against cardiovascular events.”

To learn more about ADA's continuing education opportunities, including Diabetes Is Primary events in your community, please visit [professional.diabetes.org/ce](http://professional.diabetes.org/ce).