

EASD 2022



Review of the European Association for the Study of Diabetes (EASD) Annual Meeting

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AFTER 2 years of virtual meetings, the 58th European Association for the Study of Diabetes (EASD) Annual Meeting took a hybrid form, with 7,716 participants onsite in Stockholm, Sweden, as well as 3,291 participants online. The programme of the congress was developed to cover the most recent developments and breaking news relating to diabetes research, covering the latest innovations and developments in the treatment of Type 1 and Type 2 diabetes (T2D), as well as their complications. Through symposia, debates, prize lectures, oral discussion sessions, and a dedicated e-learning track, a range of topics were discussed.

At the opening ceremony, President Stefano Del Prato reminded the participants not to forget the impact of the pandemic on people with diabetes, which has been identified as a risk factor for severe disease and death from COVID-19, with Type 1 diabetes leading to worse outcomes than T2D. Del Prato pointed out the inequality in the way

the disease is dealt with, leading to higher mortality of the underprivileged, and affecting their daily delivery of care. Since the start of the pandemic, there has been a drop in diagnostic procedures such as measuring HbA1c, blood pressure, and lipids, accompanied by a reduction in the prescription of drugs for treating people with diabetes, thus putting patients at risk. Furthermore, the COVID-19 pandemic has had a significant impact on societies and healthcare systems.

Del Prato emphasised that we need a holistic, patient-centred approach to the management of diabetes. They stated: "Being a physician, being an investigator, being a researcher, means that we should really struggle, do our best, and be committed in order to ensure peace, prosperity, and progress." They stated it is also our duty to keep diabetes in the policy agenda. The EASD is committed to doing this in three ways: advocacy, research, and support. Finally, the pandemic has also had a

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major impact on the activity of scientific and professional organisations such as the EASD. The hybrid format of the meeting is an example of this; however, it has also led to the EASD engaging a broader audience, and expanding reach through social media.

Several prizes were presented at the opening ceremony, recognising contributions to diabetes science. The 54th Claude Bernard Lecture, in recognition of innovative leadership and lifetime achievements in diabetes research, was awarded to Michael Nauck. Next, Maike Sander received the 16th Albert Renold Prize for outstanding achievements in research on the islets of Langerhans. Michael Horowitz was awarded the 37th Camillo Golgi Prize for outstanding contributions in the field of the histopathology, pathogenesis, prevention, and treatment of the complications of diabetes. Further, the 57th Minkowski Prize was awarded to Martin Heni for research contributing to the advancement of knowledge concerning diabetes. Anette-Gabriele Ziegler won the 8th Diabetes Prize for Excellence, which recognises research leading to significant advances in the understanding, prevention, or treatment of diabetes or its complications. Finally, the 1st EASD-Lilly Centennial Anniversary

Prize was awarded to Matthias Tschöp, to recognise their significant contribution through innovative approaches to the development and evolution of treatment and management of diabetes.

This issue of *EMJ Diabetes* includes summaries of highly relevant EASD press releases, covering topics such as dietary changes and risk of death in adults with T2D, anxiety among patients with diabetes, and the management of hyperglycaemia in patients with T2D.

We were delighted to be a part of this congress, and look forward to the next EASD meeting 2023 in Hamburg, Germany. Read on for more scientific highlights in our review of this congress. ●

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Anxiety Amongst Patients with Diabetes

NEW research, presented at the EASD Annual Meeting 2022 in Stockholm, Sweden, shows a burden of mental health issues in people with diabetes, and that the severity of anxiety may be linked to blood sugar management. Previous studies had shown that the rate of mental health disorders, including generalised anxiety disorder, are higher in people with diabetes compared to the general population; however, there has not been much research on the relationship between generalised anxiety and diabetes management.

Evelyn Cox from the Diabetes Research Company, San Francisco, California, USA, and colleagues, conducted an online survey, collecting data between October 2021 and November 2021 on anxiety, blood sugar management metrics, and demographic characteristics among 3,077 adults living with Type 1 or Type 2 diabetes (66% and 34%) in six countries: the UK, Sweden, the Netherlands, Italy, Germany, and France. The participants completed a Generalised Anxiety Disorder Questionnaire, screening for and measuring severity of anxiety. They were also asked for their most recent HbA1c levels, and those with glucose sensors were asked for the percentage of time spent in the target blood sugar range (70–180 mg/dL) on a typical day.

Participants in the Netherlands reported the lowest rates of anxiety (39%), while the UK and Italy reported the highest (51% and 63%, respectively). Males

were less likely to experience anxiety than females (39% versus 57%) and those over the age of 45 years were less likely to experience it than those under the age of 45 years (34% and 59%, respectively). Furthermore, those who spent less than 70% of a day in the target range were almost twice more likely to experience moderate or severe anxiety compared to those who were in the target range 70% of the time or more (22% versus 14%). Those with lower HbA1c (≤ 7) were less likely to report moderate or severe anxiety than those with high HbA1c (> 7).

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Cox concluded: "It is crucial that people with diabetes who experience challenges with their mental health reach out to their healthcare providers or mental healthcare practitioners for support." There is a need for a more integrated approach to diabetes management and mental health support in order to improve blood sugar metrics while minimising anxiety. ●



Revolutionising Care for Diabetic Foot Ulcers with Early Surgical Intervention

EARLY percutaneous surgical intervention leads to improved outcomes compared to conservative treatment for patients with diabetic foot ulcers, according to new study data presented at EASD Annual Meeting 2022, held both virtually and live in Stockholm, Sweden, between 19th–24th September.

The study, led by Adrian Heald, Salford Royal NHS Foundation Trust, UK, enlisted a total of 33 patients diagnosed with diabetic foot ulcers±neuropathy, without an associated abscess, between April 2019 and April 2021. Of these 33 patients, 19 underwent a percutaneous orthopaedic procedure performed under local anaesthetic to adjust the foot mechanics, alleviate ulcer pressure, and ultimately improve healing. Tendo-Achilles lengthening was performed for those with a tight Achilles tendon plus ulcers on the foot sole (n=9) and toe tendon release was performed for those with ulcers at the toe apex and damaged flexor tendons (n=10). The remaining 14 patients were treated conservatively with combined medical and podiatric management.

Participants were followed-up for 1 year, and the authors found that all candidates in the percutaneous surgery group achieved ulcer resolution compared with only three out of 14 patients in the conservative management cohort. Additionally, there were no admissions for sepsis secondary to infected diabetic foot ulcers in the surgery group, compared with seven admissions in the conservative management group.

Furthermore, the results revealed that ulcer recurrence and amputation rates were lower in the surgery group (10%) than the conservative treatment group (66%) for both outcome measures. This improvement in outcomes was also reflected in death rates, with six deaths occurring in the conservative management group versus none in the surgery group.

Not only did the percutaneous surgical intervention yield improved outcomes across all measures, the cost of care for the surgical management group was 88% lower than the cost of care for the conservative management group. This is crucially important for patients and health services alike, with the high morbidity and mortality associated with diabetic foot ulcers and the rising costs of healthcare.

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Whilst the study included only a small number of patients, Heald concluded by urging other diabetic multidisciplinary foot teams to explore this treatment option. ●





Updates on EASD and ADA Recommendations for Managing Hyperglycaemia in Type 2 Diabetes

Updates on recommendations for the management of hyperglycaemia have recently been announced by the European Association for the Study of Diabetes (EASD) and the American Diabetes Association (ADA). These recommendations update previous guidelines reported in 2018 and 2019 with changes including a shift in focus to patient-centred care, equity of care, and managing weight loss.

The new recommendations provide additional guidance on how to consider social determinants of health to improve equity of care and provide effective management of hyperglycaemia. Furthermore, they delve deeper into the importance of weight loss citing evidence from randomised controlled trials on the value of glucose-lowering medications in supporting weight loss. The report includes various recommendations for beneficial physical activity, including light exercise, resistance training, additional daily steps, 150 minutes of moderate to vigorous exercise per week, and strength training 2–3 times per week. It furthermore includes recommendations that patients should sleep between 6–9 hours per night.

Updates on glucose-lowering therapies are also provided, these include advice on higher doses of dulaglutide and

semaglutide and specific information for comorbid conditions, such as atherosclerotic cardiovascular disease, heart failure, and chronic kidney disease.

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The general consensus of the recommendations highlights the importance of including patients in their own diabetes care, increasing considerations of social and economic circumstances, asking patients how they feel about their side effects to different potential medications, and encouraging them to play a more active role in determining care management plans. The recommendations also noted the potential benefits of implementing more aggressive and proactive treatment considering the potential use of combination therapy in first instance. ●

Red and Processed Meats Increase Type 2 Diabetes Risk

RED and processed meats are linked to a higher risk of Type 2 diabetes (T2D), according to new research that was presented at the EASD Annual Meeting 2022 in Stockholm, Sweden.

The most common form of diabetes, T2D, occurs when the pancreas cannot make enough insulin or the insulin that it does produce does not work properly. Being overweight or obese are two of the main risk factors, and T2D incidence is projected to increase; however, there are existing guidelines that recommend a specific plant-based diet and advise limiting animal product consumption.

Annalisa Giosuè, Department of Clinical Medicine and Surgery, University of Naples Federico II, Italy, and colleagues, reviewed 13 meta-analyses into links between diabetes and animal-based food, as animal proteins are not nutritionally equal. These meta-analyses included 175 estimates of how certain animal products may increase or reduce the risk of developing T2D.

Consuming 100 g/day of meat has a 20% increase of T2D risk, while 100 g/day of red meat (beef, lamb, and pork) saw a 22% increase and 50 g/day of processed meats (bacon, sausages, and deli meat) a 30% increase. However, white meats (chicken and turkey) only saw a 4% increase, while 100 g/day of fish and an egg a day had no association due to the low quality of evidence.

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While 30 g/day of cheese and 200 g/day of full-fat dairy products had no effect on T2D risk, 200 g/day of milk was associated with a 10% reduction in T2D risk and 100 g/day of yoghurt a 6% decrease. Further, consuming 200 g/day of total dairy saw a 5% reduction and 200 g/day of low-fat dairy a 3% reduction.

Giosuè concluded by saying that more "research is needed to achieve high quality of evidence required to give solid recommendations." However, the researchers' review shows that regularly consuming certain dairy products in moderation could reduce T2D risk. ●



Dietary Changes Lower Risk of Death for Adults with Type 2 Diabetes

THE RISK of death for people diagnosed with Type 2 diabetes (T2D) can be lowered by eating a diet high in omega-3, n-3 polyunsaturated fatty acids, wholegrains, fibre, and fish.

The systematic study and meta-analysis, which was first presented at 2022's EASD Annual Meeting in Stockholm, Sweden, examined 107 previously published prospective observational studies which focused on the impact of dietary factors and the risk of premature death for adults with T2D. Carried out by researchers in Germany, all dietary factors (including foods and food groups, macronutrients, micronutrients, secondary plant compounds, dietary patterns, and supplements) were investigated, along with the risk of death from all adults with Type 2 diabetes (>18 years) to June 2022.

Researchers included 72 studies in 45 meta-analyses, which compared the effects of high versus low intake, and evaluated the relationship between death from any cause and dietary factors across an average period of 10 years. The number of participants included in these studies varied, from 1,073 to 84,816.

The analyses concluded that there is a moderate certainty regarding the evidence of a protective association between patients with T2D eating diets rich in wholegrain, fibre, fish, omega-3, and n-3 polyunsaturated fatty acids, and premature death. Adding a single

serving of 20 g per day of wholegrain from foods including rice, breakfast cereals, and bread was associated with around a 16% reduction in death, and an increase in fish consumption gave a 5% lower risk of premature death. Adding 5 g per day of dietary fibre (for instance, a medium-sized pear), and an increase of 0.1 g per day of n-3 polyunsaturated fatty acids from sources such as walnuts, flax seeds, and vegetable oil, lowered the risk of death by 14% and 13%, respectively.

Lead study author Janett Barbaresko, German Diabetes Center, Düsseldorf, Germany, commented: "Our rigorous assessment of the best currently available evidence indicates with reasonable certainty that eating a diet rich in wholegrains, fibre, fish, and polyunsaturated fatty acids, as well as consuming more vegetables and plant proteins, may help people with T2D live longer."

A limitation stressed by researchers is the lack of evidence regarding other dietary factors, including foods such as dairy, tea, and meat, and micronutrients including caffeine and vitamin D, in patients with T2D. This emphasises the need for more comprehensive studies to be carried out, so that clinicians can better understand the impact which dietary factors have on those with T2D, and the progression of their disease. ●

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COVID-19 Anxiety in Patients with Pancreas or Islet Transplants

PATIENTS who had pancreas or islet transplants to treat Type 1 diabetes experienced high rates of stress and anxiety due to fear of becoming severely ill with COVID-19 during lockdown. These transplants involve transplanting β -cells, insulin-producing cells from the pancreas, which allows the patients to make insulin again. Nearly half of patients who had a transplant did not leave their house during the duration of the study, which was presented at EASD Annual Meeting 2022 in Stockholm, Sweden.

Researcher Cyril Landstra, Department of Internal Medicine, Leiden University Medical Centre, the Netherlands, and their team conducted a study with 323 participants, including 51 transplant recipients and 272 patients who had not had a transplant. They were asked to fill in a detailed survey about how lockdown affected them, their behaviour prior to the lockdown, physical activity, weight, and levels of anxiety, stress, and fear of COVID-19 infection in the spring of 2020, 8–10 weeks into lockdown.

The fear of contracting COVID-19 was 70% higher in transplant recipients than those who did not have a transplant. Additionally, glycaemic control worsened in transplant recipients, while it improved in patients who did not

have a transplant. Those who had a transplant were three times more likely to stop going out for groceries than those who did not (52.1% versus 18.3%) and were also three times more likely not to leave their house at all (45.8% versus 14.0%). Furthermore, 26.8% of transplant recipients reported increased insulin use, 29.2% increased anxiety, 33.3% increased stress, 40.0% less physical activity, and 41.7% weight gain since the start of lockdown.

"Nearly half of patients who had a transplant did not leave their house during the duration of the study"

While COVID-19 vaccines are now available, they do not work as well in patients who have received pancreas and islet transplants; therefore, the findings are still important to this day. Landstra said: "It's important that patients and healthcare professionals are aware of these unintended consequences and also that patients are aware that they can reduce their risk of severe COVID-19 through better diabetes self-management and a healthy lifestyle." ●

