

MOPH Qatar Diabetes Newsletter

28th Feb 2018

Welcome to MOPH Qatar Diabetes Newsletter. <http://www.nfind.uk/delta>

In this daily early morning report we will provide you with a snapshot of news from across the world. We aim to keep you informed of innovation, clinical trials, the latest medical reports and all new developments in diabetes care. Being thus informed, MOPH would be in a strong position take what this report shows it each day and use the information for even better decision making.

Diabetes Challenge

Diabetes diagnoses have more than doubled in 20 years, UK analysis suggests

A new analysis, compiled by the charity Diabetes UK, appears to show that the number of diagnoses has shot up since 1998, at which point it is estimated 1.8 million over 16s were diagnosed with diabetes. The number of adults and older teens with diabetes in the UK has more than doubled over the past 20 years, with 3.7 million people aged 17 or older now known to be living with the disease, campaigners say.

<http://www.theguardian.com/society/2018/feb/27/diabetes-diagnoses-have-more-than-doubled-in-20-years-uk-analysis-suggests>

Additional sources: (Daily Mail) (Daily Mail) (The Sun) (Daily Mirror) (Independent)

On A Sugar High: Incidence Of Diabetes Grows in Mideast

The International Diabetes Federation reports that social and economic changes have coincided with increased rates of diabetes in adults throughout the region. In 2011, 32.6 million adults aged 20-79 were diagnosed with diabetes in the Middle East and North Africa, according to the International Diabetes Federation, or 9.1 percent of the total population. The number rose to 38.7 million adults in 2017, or 9.6 percent, and is expected to more than double to 82 million by 2045. Saudi Arabia has the highest rate of diabetes per adults in the region at 18.2 percent. "In the last 20 to 30 years, obesity started to become a major problem in the Gulf region," Dr. Abdulrazzaq Ali Al Madani, President of the Emirates Diabetes Society, told The Media Line. "The economic boom changed the lifestyle [of people in the Gulf]. People became more sedentary, eating more and gaining more weight...[so] it increased diabetes."

<http://www.themedialine.org/student-journalists/54104/>

Medical Research

Working Nights May Raise Diabetes Risk

Night-shift work is linked to an increased risk for Type 2 diabetes, a new study has found. British and American researchers used a large health database to compare diabetes prevalence in 47,286 night-shift workers with that of 224,928 day workers. The database included information on age, sex, race, family history of diabetes, alcohol use, sleep duration, body mass index and other health and behavioral characteristics, as well as diagnoses of diabetes. The more often people worked nights, the more likely they were to have diabetes. Compared with day workers, people who occasionally worked night shifts were 15 percent more likely to have diabetes; those who rotated shifts with some night work were 18 percent more likely; and those who worked irregular shifts with frequent

night shifts were 44 percent more likely to have Type 2 diabetes.

<http://www.nytimes.com/2018/02/21/well/working-nights-may-raise-diabetes-risk.html>

Additional sources: ([Diabetes.co.uk](#)) ([Information About Diabetes.com](#)) ([UPI.com](#)) ([U.S. News & World Report](#)) ([Chicago Tribune](#))

Landmark Pune study on diabetes begins testing the third generation

Research by Chittaranjan Yajnik, head of the Diabetes Research Centre at KEM hospital, showed that mothers with low Vitamin B12 and excess folate levels (level of folic acid) predispose their babies to adiposity and insulin resistance that are key risk factors for diabetes. That landmark research helped in explaining why diabetes was so widely prevalent in India, even among malnourished populations, when, globally, the disease was very commonly associated with obesity. The participants have been followed now over three generations and practical intervention-based outcomes based on the findings are now being followed up with the latest generation

<http://indianexpress.com/article/lifestyle/health/landmark-pune-study-on-diabetes-begins-testing-the-third-generation-5072061/>

Additional sources: ([Indian Express](#))

International Textbook of Diabetes Mellitus, 4th Ed., Excerpt #114: Diabetes and Sleep Apnea Part 4

OSA and dysglycemia have similar risk factors (namely obesity) and hence it is not surprising that these conditions co-exist. However, not all obese patients have both conditions and many patients have one and not the other. Hence, understanding this association and the mechanisms that underpin this relationship is important to understand the pathogenesis of OSA and T2DM.

<http://www.diabetesincontrol.com/international-textbook-of-diabetes-mellitus-excerpt-114-diabetes-and-sleep-apnea-part-4/>

Study suggests new strategy against vascular disease in diabetes

Cardiovascular problems from atherosclerosis - plaque-like lesions forming in artery walls - are the major cause of death in people with type 2 diabetes and metabolic syndrome. People with metabolic syndrome exceed the normal range for several clinical measurements: blood pressure, blood sugar levels, harmful lipids, body mass index, and belly fat. The researchers studied mice with metabolic syndrome. The mice were obese and had impaired glucose tolerance, a sign of pre-diabetes. In the study, an insulin-mimicking synthetic peptide called S597 was shown to both reduce blood sugar levels and slow the progression of atherosclerotic lesions. Insulin, even when it controls diabetes, does not prevent atherosclerosis.

<http://medicalxpress.com/news/2018-02-strategy-vascular-disease-diabetes.html>

Earlier diabetes diagnosis linked to heart disease, stroke

Being diagnosed 10 years earlier amounted to a 20 to 30 percent higher risk of all-cause mortality, and a 60 percent higher risk of dying of heart disease. The results were just as strong for both men and women. "Evidence is accumulating," the authors write, "to suggest that earlier onset of type 2 diabetes is associated with an increased risk of complications and comorbidities compared with later onset, and that the development and progression of complications might be more aggressive in those with earlier onset." "As such," the authors continue, "increased clinical attention is imperative for individuals with earlier-onset type 2 diabetes."

<http://www.medicalnewstoday.com/articles/321025.php>

A new study suggests younger type-2 diabetes is bad for the heart

A new study suggests younger-onset type 2 diabetes increases the risk of death from heart attack and stroke. The earlier a person is diagnosed with type 2 diabetes, the higher their risk of dying from heart attack and stroke, an Australian study has found. The concerning finding has prompted calls for more "aggressive" prevention and intervention to prevent the delay the onset of T2D in young

people.

<https://healthtimes.com.au/hub/diabetes/23/news/aap/a-new-study-suggests-younger-type2-diabetes-is-bad-for-the-heart/3196/>

Workers with diabetes retire two years later according to Finnish study

A total of 12,726 people, born between 1934 and 1944 and part of the Helsinki Birth Cohort Study, were monitored to see how health impacted their working life. Finnish researchers reviewed the records between 1971 and 2011 to see how many people had developed diabetes and who had retired. Within women, 49% of those with diabetes transitioned into old-age pension, rather than retiring early. This was a higher figure than the 40% of those without diabetes. Likewise, in men, 41% with diabetes transitioned into old-age pension compared with 33% of those without diabetes. In terms of the average retirement age, average retirement age was over two years later in those with diabetes. Within women the average retirement age was 61.4 years-old or those with diabetes and 59.5 years-old for those without the condition. In men, average retirement was at 60.1 years-old in those with diabetes and 57.6 in those without.

<http://www.diabetes.co.uk/news/2018/feb/workers-with-diabetes-retire-two-years-later-according-to-finnish-study-94601573.html>

Diabetes study in Whyalla

"In Australia, about 30% of the adult Indigenous population has diabetes, and the numbers continue to rise. Diabetes is increasing in Aboriginal children, teenagers and young adults, with rising rates of diabetes in pregnancy. The reason for this is not fully understood. Whilst diet, exercise levels and weight gain are known to contribute to diabetes, they do not fully explain the high rate of diabetes and why some people get very sick. The Aboriginal Diabetes Study aims to: Better understand the problem of diabetes and its complications. Better predict the development of diabetes complications. Improve diabetes care to Aboriginal people and prevent complications. All Aboriginal and Torres Strait Islander people aged 15 years and over – with and without diabetes – are invited to participate.

<http://www.whyllanewsonline.com.au/story/5240057/diabetes-study-in-whyalla/>

Study people with heavy thighs unlikely to become diabetic

The findings published in a recent edition of the Indian Journal of Endocrinology and Metabolism suggests that thigh circumference can predict diabetes. "Big tummy with thin thighs is equal to high risk of diabetes and slim tummy with big thighs is equal to low risk of diabetes," the study said.

<http://indianexpress.com/article/lifestyle/health/study-reveals-people-with-heavy-thighs-unlikely-to-become-diabetic-5071806/>

Study reveals New Monogenic Form of diabetes in India

The study was carried out was based on a comprehensive genomic analysis of 289 individuals from India which included 152 clinically diagnosed MODY cases and 137 normal glucose tolerance subjects (NGT). None of the NGT subjects showed any genetic variants associated with MODY. Among the 152 clinically diagnosed MODY subjects, MODY 3 was found to be the commonest MODY which is in keeping with studies in Europe and UK. However, surprisingly, the second commonest MODY detected in India was MODY 12, (ABCC8 MODY). Moreover, 13 of the 14 known forms of MODY were detected in Indians. However, of great interest was the discovery of a novel MODY gene, the NKX6-1 gene which was found to be associated with MODY. Functional assessment of the NKX6-1 variant showed that they were functionally impaired, confirming that they were indeed the cause of MODY'

<https://health.economictimes.indiatimes.com/news/industry/study-reveals-new-monogenic-form-of-diabetes-in-india/62992860>

Additional sources: ([Pharmabiz](#))

Lupin plant could help treat heart disease, diabetes - study

A team of researchers from Spain and Australia have shown that seed-proteins, or conglutins, in narrow-leafed lupins can provide alternative therapies for diseases such as cardiovascular disease, cancer, type 2 diabetes and hypertension. The study, recently published in the Journal of Functional Foods evaluated the effects of conglutins in 14 healthy and 14 diabetic patients. It found the proteins could help reverse harmful effects of inflammatory diseases.

<http://www.radionz.co.nz/news/country/350857/lupin-plant-could-help-treat-heart-disease-diabetes-study>

Study Shows Long-Term Effects Of Diabetes And Prediabetes On The Brain

One of the largest studies on the connection between blood sugar and brain function has found that people with prediabetes and diabetes experience worse long-term cognitive decline than people with normal blood sugar levels. The results underscore just how dangerous impaired blood sugar is for overall health, from heart to brain – but the study also suggests that there's a possible good news side to this story.

<http://www.forbes.com/sites/daviddisalvo/2018/01/28/study-shows-how-diabetes-and-prediabetes-impact-your-brain-over-time/>

Clinical Trials

Novo's pioneering diabetes pill impresses in its first big study

The world's largest diabetes drugmaker, Novo Nordisk, presented the first successful data from a large final-stage study of a pill it hopes will transform the diabetes market. The oral form of the drug, known generically as semaglutide, is crucial for ensuring the group's long-term growth, as price pressure mounts in a crowded market targeting the world's 450 million diabetics.

<http://www.cnbc.com/2018/02/22/novos-pioneering-diabetes-pill-impresses-in-first-big-study.html>

Additional sources: (Newsmax) (Asian Age) (Zenopa)

Trulicity Aids Diabetes Control When Added to an SGLT-2 Inhibitor

Dulaglutide (Trulicity, Eli Lilly and Company) significantly improved HbA1C when added to ongoing type-2 diabetes treatment with a sodium-glucose cotransporter-2 (SGLT-2) inhibitor, according to results from the phase 3b AWARD-10 trial. The data were published online in The Lancet Diabetes & Endocrinology and released by Lilly. Dulaglutide is a once-weekly, injectable glucagon-like peptide-1 (GLP-1) receptor agonist approved to improve blood glucose in adults with type-2 diabetes.

<http://www.ptcommunity.com/news/20180226/trulicity-aids-diabetes-control-when-added-sgl-2-inhibitor>

Hypertension drug could prevent the onset of Type 1 diabetes, study says

A study published in the Journal of Clinical Investigation has revealed that a common drug used to treat hypertension is capable of preventing the onset of type 1 diabetes. The drug, methyldopa has been used for treating hypertension among pregnant women and children for many years, and this new study conducted by researchers at the University of Colorado has indicated that this drug can be used for treating diabetes as well. "We can now predict with almost 100 percent accuracy who is likely to get type 1 diabetes. The goal with this drug is to delay or prevent the onset of the disease among those at risk," said Aaron Michels from the University of Colorado, reports Science Daily.

<http://www.ibtimes.sg/hypertension-drug-could-prevent-onset-type-1-diabetes-study-says-24595>

Lifestyle and Diet

Exercise Reduces Risk of Diabetes: Study

People who engage in higher levels of physical activity in their leisure time reduce their risk of developing Type 2 diabetes. Researchers at the U.K.'s University of Birmingham found that walking, jogging and running are linked to a lower risk in individuals who are at high risk. They also found that low-intensity physical activity helps as well, which makes it possible for older people to improve their health and reduce the risk of diabetes.

<https://www.newsmax.com/health/health-news/exercise-diabetes-risk-reduce/2018/02/26/id/845481/>

Additional sources: ([KLAS](#)) ([Inquirer Lifestyle](#)) ([Yahoo News Singapore](#)) ([Science Daily](#))

Study pinpoints areas in Flint that need better food

A Michigan State University researcher has pinpointed areas in Flint, Mich., that have unequal access to healthy, affordable food, and he plans to use the information to improve those areas most affected – low-income and minority neighborhoods. Sadler is preparing a follow-up study that will combine this survey with medical data on diabetes management in Flint neighborhoods. His working hypothesis is that diabetic residents in areas with the poorest access to healthy foods have the most trouble managing their diabetes.

<http://msutoday.msu.edu/news/2018/study-pinpoints-areas-in-flint-that-need-better-food/>

Red wine compound "could help tooth decay and gum disease fight"

Red wine has previously been linked to a range of supposed health benefits, from helping the heart to lowering the risk of diabetes. Now a new study suggests it contains chemicals that can help in the fight against tooth decay and gum disease. Researchers found compounds from the drink, known as polyphenols, helped fend off harmful bacteria in the mouth. But experts warned that the findings do not offer a "green light" to drink more red wine.

<http://www.bbc.com/news/health-43126438>

Additional sources: ([Reuters](#))

Going vegan can prevent overweight people from diabetes

Going vegan can prevent overweight adults from developing type 2 diabetes, an 'important' new study has concluded. Following a plant-based diet can boost insulin sensitivity - considered the driving factor of the potentially deadly condition, in fat people. And scientists also found being vegan, which is soaring in popularity, can improve beta-cell function - which store and release insulin. It is believed the benefits of the diet, consisting of fruits, vegetables and legumes, stems from tackling bulging waistlines and aiding weight loss. The study, led by researchers at the Physicians Committee for Responsible Medicine, Washington DC, adds to the health benefits of a vegan diet. Dr Hana Kahleova, lead author of the trial conducted on patients without diabetes, said: 'The study has important implications for diabetes prevention.

<http://www.dailymail.co.uk/health/article-5387293/Going-VEGAN-prevent-diabetes.html>

Additional sources: ([NDTV](#))

Nutrition may help overcome genetic risk of diabetes: Study

Now Indian scientists have found that good nutrition can actually modify the risk of diabetes posed by presence of certain faulty genes. New research has revealed that good nutrition – in the form of B12 and folic acid supplements – has a beneficial impact on genes associated with Type 2 diabetes. The study has been led by scientists at the Hyderabad-based Centre for Cellular and Molecular Biology (CCMB), a laboratory of the Council of Scientific and Industrial Research (CSIR).

<http://www.netindian.in/news/2018/02/23/00045420/nutrition-may-help-overcome-genetic-risk-diabetes-study>

The Apple Watch can detect diabetes with an 85% accuracy, Cardiogram study says

According to Cardiogram founder Brandon Ballinger's latest clinical study, the Apple Watch can detect diabetes in those previously diagnosed with the disease with an 85 percent accuracy. The study is part of the larger DeepHeart study with Cardiogram and UCSF. This particular study used data from 14,000 Apple Watch users and was able to detect that 462 of them had diabetes by using the Watch's heart rate sensor, the same type of sensor other fitness bands using Android Wear also integrate into their systems.

<http://techcrunch.com/2018/02/07/the-apple-watch-can-detect-diabetes-with-an-85-accuracy-cardiogram-study-says/>

Drugs and Treatment

Blood pressure drug helps prevent onset of diabetes: Study

A drug commonly used to control high blood pressure may also help prevent the onset of type 1 diabetes in up to 60 per cent of those at risk for the disease, a study has found. The drug, methyldopa, has been used for over 50 years to treat high blood pressure in pregnant women and children, according to the study published in the Journal of Clinical Investigation.

<http://www.deccanchronicle.com/lifestyle/health-and-wellbeing/170218/blood-pressure-drug-helps-prevent-onset-of-diabetes-study.html>

Additional sources: (The Asian Age)

Foot screening could identify heart irregularities

A specialised type of foot check aimed at diagnosing a heart problem could reduce the risk of people with diabetes experiencing stroke, a study has found. The Northern Diabetes Footcare Network is urging for the introduction of an annual foot pulse-test in the UK to diagnose Atrial Fibrillation (AF), which can cause irregular heart rate and lead to a greater risk of stroke if not treated. The call comes following the publication of the results of a three-month pilot foot pulse-test which suggested that the health service in the North East could benefit from a saving of £500,000. The cost of a stroke is £23,315 per person, which is what the calculations in the Podiatry and Atrial Fibrillation Case Finding are based on.

<http://www.diabetes.co.uk/news/2018/feb/foot-screening-could-identify-heart-irregularities-95116926.html>

Study examines safety, efficacy of ertugliflozin in type 2 diabetes

Canadian researchers conducted a Phase III randomized trial involving 461 adults with inadequately controlled type 2 diabetes and found that those who received ertugliflozin 5mg/day or 15mg/day experienced a -0.9% and a -1% mean change in glycated HbA1C from baseline to week 52, respectively, compared with the placebo group. The findings in Diabetes, Obesity and Metabolism revealed that the ertugliflozin group also had reductions in fasting plasma glucose, systolic blood pressure and body weight.

<http://www.smartbrief.com/branded/457532E6-AEC2-4285-8176-65F4AFA26F1A/C5F5C107-1093-4689-9F19-7B158AC558CA>

Notts woman successfully undergoes pioneering diabetes treatment

A woman thought to be the first to have undergone a pioneering diabetes treatment at one of the city's hospitals says it has been a success. Sue King underwent a treatment involving a small balloon inserting water into the intestines, which is being trialled in the city. This helps to combat a yet-to-be-identified hormone, which is known to be present in the intestines, that causes issues for insulin created by the body. Those with diabetes currently rely on drugs to control their blood sugar level, but this treatment is designed to restore the body's ability to regulate its blood sugar level. As well as reducing that reliance, it is also hoped the treatment will reduce costs in the long run.

<http://www.nottinghampost.com/news/health/notts-woman-successfully-undergoes-pioneering-1265158>

Diabetic kids learn how to inject themselves with “fun, intuitive” insulin kit

Discussed at this year's Design Indaba, product designer Renata Souza has created a prototype colourful insulin pen and illustrated tattoo kit, which aims to teach children with type one diabetes how to inject themselves and reduce the stigma of the disease.

<http://www.designweek.co.uk/issues/26-february-4-march-2018/diabetic-kids-learn-inject-fun-intuitive-insulin-tattoo-kit/>

Additional sources: (Dezeen)

Preventing a million diabetic foot amputations

People with diabetes who develop neuropathy don't feel pain when they are injured, so they may not notice soft tissue damage in the foot (or elsewhere) until the damage is quite extensive. Many of these people also have peripheral artery disease (PAD) as a result of poor blood circulation to the

legs. PAD reduces a person's ability to fight infection and puts them at a higher risk of developing foot ulcers. People with diabetes have a 25% chance of getting foot ulcers. And if a person develops a foot ulcer they are at an increased risk of amputation because of infection and other related complications. Diabetes is one of the main causes of lower-limb amputation.

<http://theconversation.com/preventing-a-million-diabetic-foot-amputations-90257>

Roche's Sinking Diabetes Unit Looks Toward a Monster for a Boost

Roche Holding AG has enlisted a little green monster with a gap-toothed smile to help rescue its diabetes business after a decade of declining sales. The gremlin is the mascot of mySugr, an Austrian startup Roche bought for 70 million Swiss francs (\$75 million) last June. The deal gave Roche's struggling diabetes unit a chance to own a cutting-edge technology in at least one area of care: smartphone apps. The harmless character masks a menacing reality for Roche. As the number of people with diabetes swells to nearly half a billion, insurers are cutting prices of the blood-sugar monitoring equipment that patients rely on. Instead of selling its business, as some competitors have done, Roche is betting on a digital turnaround.

<http://www.bloomberg.com/news/articles/2018-02-26/roche-s-sinking-diabetes-unit-looks-toward-a-monster-for-a-boost>

New video and leaflets designed to help young diabetes patients in Worcestershire take control of their own health and treatment

Funded by the Bournville Charitable Trust, a video has been produced involving real patients which aims to allay some of the fears and answer some of the questions about moving from paediatric to adult diabetes services in Worcestershire. It is thought to be just the second initiative of its kind in the country. The film shows a young local diabetes patients discussing some of the issues which concern them about the management of their condition and them meeting two other patients, who have gone through the process themselves. The filming was done at Worcester Countryside Centre and Kidderminster Hospital and Treatment Centre. One of the patients who has moved onto adult services is 27-year-old University of Worcester student Chris Bright. He was diagnosed with type 1 diabetes aged eight but took the decision that he would not let the condition rule his life but made it fit around his lifestyle.

http://www.worcesternews.co.uk/news/16047602.Extra_support_for_Worcestershire_teenagers_with_diabetes/

First medicine to treat neonatal diabetes

The European Medicines Agency's (EMA) Committee for Medicinal Products for Human Use (CHMP) has recommended granting a marketing authorisation in the European Union (EU) for Amglicia (glibenclamide), a medicine indicated for the treatment of neonatal diabetes mellitus (NDM), for use in newborns, infants and children.

<https://www.wired-gov.net/wg/news.nsf/articles/First+medicine+to+treat+neonatal+diabetes+26022018113700?open>

"I just pray" - Tongan diabetes sufferers face death sentence as Kingdom won't fund costly dialysis centre

It's believed up to 15,000 Tongans have diabetes, but the Pacific nation is putting its resources into reducing critical levels of largely-preventable type-two diabetes and shying away from efforts in managing Type 1 diabetes

<https://www.tvnz.co.nz/one-news/world/just-pray-tongan-diabetes-sufferers-face-death-sentence-kingdom-wont-fund-costly-dialysis-centre>

Diabetes monitor is "game changer"

A new method of measuring blood glucose levels in people with diabetes is a significant advance in the management of the disease, according to an independent assessment by University of Manchester, Manchester University NHS Foundation Trust and Derby Teaching Hospitals experts.

The FreeStyle Libre flash glucose monitor has been available on prescription in the United Kingdom from November 2017. It works through a white disc adhered to the arm which connects remotely to a small monitoring device. It is designed to replace the recommended 4-10 painful finger-stick blood glucose tests required each day for the self-management of diabetes. The disc is replaced every 14 days and can also be purchased by people with diabetes.

<http://www.manchester.ac.uk/discover/news/diabetes-monitor-is-game-changer/>

Additional sources: (The Engineer)

Liva Healthcare aims to bring human touch to digital diabetes management

A healthcare platform that connects patients with lifestyle and disease management coaches is being trialled by the NHS as a possible means of preventing and managing diabetes. Liva Healthcare is one of several solutions being piloted as part of the NHS ...

<https://www.digitalhealth.net/2018/02/liva-healthcare-brings-human-touch-diabetes-management-prevention/>

Low statin use in people with diabetes despite cardioprotective effects

Nearly 2 out of 5 people with diabetes who could benefit from statin therapy to lower their risk of future heart attack, stroke and related death were not prescribed one, according to a research letter published in the Journal of the American College of Cardiology. The analysis also showed wide variation in statin use across cardiology practices included in the study. Previous studies have shown that taking a statin can significantly cut the risk of a future cardiovascular event in people with diabetes.

<https://knowridge.com/2018/02/low-statin-use-in-people-with-diabetes-despite-cardioprotective-effects-study-shows/>

Glucose and Insulin

Burning more fat and less glucose could lead to diabetes

Making muscles burn more fat and less glucose can increase exercise endurance, but could simultaneously cause diabetes, says a team of scientists from Baylor College of Medicine and other institutions. Mouse muscles use glucose (carbohydrate) as fuel when the animals are awake and active and switch to fat (lipid) when they are asleep. The team discovered that disrupting this natural cycle may lead to diabetes but, surprisingly, also can enhance exercise endurance.

<https://knowridge.com/2018/02/study-indicates-burning-more-fat-and-less-glucose-could-lead-to-diabetes/>

Type 1 Diabetes

The gut and type 1 diabetes linked: study

Researchers at the University of Queensland have now discovered genetics plays a role in the development of this 'unhealthy gut' among type 1 diabetes patients. "We showed that genetic susceptibility and change in immune system function led to alterations in the microbiota," lead investigator Emma Hamilton-Williams said. "This means that changes in the microbiota in type 1 diabetes occur before symptoms develop, and are not just a side-effect of the disease," she explained. The study, published in journal Microbiome, involved mouse models and a large human study of twins in the UK.

<http://www.sbs.com.au/news/the-gut-and-type-1-diabetes-linked-study>

Additional sources: (Daily Mail)

New Study Demonstrates that DexCom CGM Significantly Reduces Hypoglycaemia in People with Type 1 Diabetes on MDI

Usage of DexCom CGM reduced the incidence of hypoglycaemic events by 72% for high risk individuals with type 1 diabetes on multiple daily injections (MDI) of insulin. DexCom, Inc today released the findings of the HypoDE study, a multi-centre, randomised controlled trial (RCT) which was discussed on Friday 15th February at ATTD. The study found that the use of Dexcom continuous glucose monitoring (CGM) reduces the frequency and severity of hypoglycaemic events among high-

risk individuals with type 1 diabetes treated with multiple daily injections (MDI) of insulin.

<https://finance.yahoo.com/news/study-demonstrates-dexcom-cgm-significantly-083000885.html>

Rare Tumor Could Help Produce Insulin For Type-1 Diabetics, Study Shows

The key to getting them to replicate destroyed beta-cells, says Dr. Stewart, may lie in the DNA of rare benign tumors called beta-cell insulinomas. "Those small insulinoma tumors in the pancreas have the genomic recipe, if you will," Dr. Stewart said. "They now have the genomic wiring diagram or roadmap for knowing how to make beta-cells replicate." By sequencing every gene in these tumors, Dr. Stewart found the ones that put the brakes on beta-cell regeneration. As it turns out, certain drugs can take the brakes off the genes in normal beta-cells so they can start to divide. "We found lots of candidates and we're in the process now of screening drugs that take off these other brakes and we're making progress there," Dr. Stewart said.

<http://newyork.cbslocal.com/2018/02/20/insulin-tumor-for-diabetes/>

Diabetes early in life found to increase risk of fatal heart disease by 60%

Developing type 2 diabetes early in life increases your risk of death linked to heart disease by 60%. The risk of an early death from any cause surges 30% for those diagnosed with type 2 diabetes at 49 but the risk of death linked to cardiovascular disease is 60%. Research on 744,000 sufferers over 15 years to 2011 found the average diagnosis age was 59 and there were 115,363 deaths during the period. The risk of an early death from any cause surged 30% for those diagnosed 10 years earlier and there was a 60% higher risk of death linked to cardiovascular disease.

<http://www.mirror.co.uk/lifestyle/health/diabetes-early-life-found-increase-12078382>

Belfast schoolgirl almost dies of diabetic condition

The family of a 15-year-old Co Antrim girl who could have died after being stricken by a dangerous diabetic condition are calling for more awareness over the threat posed by the disease. On February 16 the Belfast Royal Academy student was rushed to the Royal Victoria Hospital with diabetic ketoacidosis (DKA), a complication faced by diabetics that occurs when the body starts running out of insulin. The disorder causes harmful substances - ketones - to build up in the body, which can be life-threatening if not spotted and treated quickly. The condition can cause swelling on the brain, leading to brain damage.

<http://www.belfasttelegraph.co.uk/news/northern-ireland/belfast-schoolgirl-almost-dies-of-diabetic-condition-36641676.html>

"The hardest thing is waking up and part of your body has gone"

I was duty manager at a professional football club and something got in my shoe and caused an ulcer on my toe. I was advised to give up work, which I wouldn't do - bit of male pride, I suppose. The ulcer got worse and worse and worse, and in the end I had to have an amputation of one of the toes and the metatarsal hub. I have also got a muscle wasting disease in my legs [not related to the diabetes], which they diagnosed when I was in hospital, [and] they tried to pin and straighten my legs. Six months after the procedure I had a huge infection in the pins in my leg and I had to have intravenous antibiotics for a year. If my legs start getting ulcers again, because of all the other complications it could be a case of taking them off.

<http://www.theguardian.com/society/2018/feb/27/the-hardest-thing-is-waking-up-and-part-of-your-body-has-gone-diabetes>

Type 2 Diabetes

Diabetes type 2 - FIVE signs that you may have high blood sugar and should see a GP

Diabetes type 2 is caused by the pancreas not producing enough of the hormone insulin. Without enough insulin, sugar stays in the blood and isn't converted into fuel for the body. Having high blood sugar levels can lead to hyperglycaemia, a condition that triggers the main symptoms of diabetes.

These are the five main diabetes symptoms that you should be aware of. “If you experience any of these symptoms on a regular basis, talk to your doctor,” said medical website Healthline. “They may recommend that you be tested for diabetes, which is performed with a basic blood draw.”

<http://www.express.co.uk/life-style/health/924186/diabetes-type-2-symptoms-uk-high-blood-sugar-signs>

Can You Inherit Type 2 Diabetes? Supercomputers Identify Rare Gene That May Increase Your Risk by 200 Percent

The study authors used supercomputers at the Barcelona Supercomputing Center to look for clues in hundreds of databases of medical and genetic data on people with type 2 diabetes. Researchers compared genetic data of people who were diagnosed with type 2 diabetes — and, in some cases, found similarities in rare genes. One of the previously unknown genetic links to type 2 diabetes was a rare variation in the X chromosome, which caused a 200 percent increase in the risk of developing type 2 diabetes in men, they found. (They didn’t see the same association in women because men only have one X chromosome, while women have two, so issues with that X chromosome are more likely to cause effects in men.) Mercader says this is significant because there are only a few genes that increase the risk of type 2 diabetes so significantly on their own.

<http://www.everydayhealth.com/type-2-diabetes/symptoms/there-diabetes-gene-new-study-suggests-there-may/>

Some choice words for diabetes

The Bigger Picture campaign uses spoken-word poems and music videos to highlight the impact of type 2 diabetes on communities. Health experts and arts educators have teamed up to try a novel approach to preventing the condition in young people. The campaign, called The Bigger Picture, aims to get teenagers and young adults to view the diabetes crises in their communities not just as a medical problem related to poor diet and a lack of exercise but as a social justice problem tied to stress, poverty, violence and limited access to healthy and affordable foods.

<http://www.independent.co.uk/news/science/some-choice-words-for-diabetes-a8220881.html>

Novo Nordisk study highlight benefits of new type 2 diabetes therapy

Novo Nordisk has announced headline results from a new clinical study showing the effectiveness of semaglutide in the treatment of adults with type 2 diabetes. The PIONEER 1 study represents the first phase IIIa trial investigating the efficacy and safety of the GLP-1 analogue compared with placebo in 703 people with type 2 diabetes, with a total of ten trials taking place as part of this study programme. The primary objective of the study was achieved, with significant and superior improvements in long-term blood sugar levels observed for all three doses of oral semaglutide. Moreover, the 14 mg dose of oral semaglutide also demonstrated superior weight loss benefits.

<https://www.zenopa.com/news/801845006/novo-nordisk-study-highlight-benefits-of-new-type-2-diabetes-therapy>

Exercise during pregnancy could protect against type 2 diabetes and hypertension

A supervised exercise program during pregnancy reduces insulin levels and blood pressure, according to new findings. Three women in the control group were diagnosed with type 2 diabetes compared to none in the exercise group. In the exercise group 46.4% reported continuing to exercise more often compared to only 25% in the control group. The researchers believe exercise interventions such as these could help to lower the risk of type 2 diabetes and hypertension during the postpartum period, but added that further research is required to validate their findings.

<http://www.diabetes.co.uk/news/2018/feb/exercise-during-pregnancy-could-protect-against-type-2-diabetes-and-hypertension-95108144.html>

Type 2 diabetes symptoms: Three ways to lower your blood sugar through diet

TYPE 2 diabetes is a condition where the body can’t control the amount of sugar in the blood. Symptoms range from urinating more often than usual to blurred vision. The best form of treatment is regular exercise and eating the right things - here are three changes recommended you should make to your diet.

<https://www.express.co.uk/life-style/health/923040/type-2-diabetes-uk-symptoms-diet-treatment>

Younger type 2 diagnosis linked to cardiovascular disease

Developing type 2 diabetes earlier in life increases the risk of heart disease by 60 per cent, according to an Australian study. However, those with an early diagnosis of the condition were less likely to die from cancer down to “more frequent contact with the health system” helping early diagnosis, the study by the Baker Heart and Diabetes Institute also suggested. The data of 743,709 Australians with type 2 diabetes registered on the National Diabetes Services Scheme between 1997 and 2011 were examined during the research published in Diabetologia.

<http://diabetestimes.co.uk/younger-type-2-diagnosis-linked-cardiovascular-disease/>

Young adults diagnosed with type 2 diabetes at increased risk of later heart attack: study

A study of nearly 750,000 Australians diagnosed with type 2 diabetes between 1997 and 2011 found the earlier the diagnosis, the higher their risk of dying from cardiovascular disease (CVD) or stroke. During this 15-year period, those diagnosed with type 2 diabetes 10 years earlier than someone of the same age had a 30 to 60 per cent increased risk of death from any cause and from CVD respectively. With the number of adolescents being diagnosed with diabetes increasing across the globe, the concerning findings have prompted calls for more “aggressive” intervention and prevention.

<https://thenewdaily.com.au/life/wellbeing/2018/02/23/adults-diagnosed-type-2-diabetes-risk-dying-prematurely/>

Type 2 diabetes symptoms: Why you should never ignore feeling thirsty

Type 2 diabetes symptoms include passing more urine than usual and feeling tired all the time. If the condition is left untreated, a number of other health problems can follow, so it's important to recognise all the signs - including feeling very thirsty.

<http://www.express.co.uk/life-style/health/922907/type-2-diabetes-symptoms-uk-test-nhs>

Other News

Liz McInnes: With diabetes on the increase, we must do more to understand the condition

People want better access to healthcare professionals who understand diabetes. Many respondents said that they felt that they were being treated as a condition and a set of symptoms rather than as a human being. They want better access to technology and treatments. Diabetes treatment is ever-evolving and advancing but 28% of those who took part in the survey reported problems in getting the medication or equipment they needed to manage their diabetes. They want education and information to be widely available. No-one should be given a diagnosis of diabetes without being also informed of where to go for information and support. They want more support and understanding at work and school

<https://www.politicshome.com/news/uk/health-and-care/house/house-magazine/93103/liz-mcinnis-diabetes-increase-we-must-do-more>

Diabetic man "accused of being drunk by airline staff" after three-hour plane delay causes blood sugar level to spike

A diabetic man who says he suffered a 'hyper' after a three-hour flight delay with no food was accused of being drunk by airline staff, he claims. Kevin Beards says he was forced to remove his top and inject himself with medication in front of hundreds of people because his blood sugar levels became dangerously high - known as hyperglycaemia or a 'hyper' - after passengers were taken off the plane.

<http://www.mirror.co.uk/news/uk-news/diabetic-man-accused-being-drunk-12081348>