



March 2015 Newsletter, Issue 84

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What will May bring?

This is the first Newsletter of 2015 and the last one before the general election. As for so many people, for me this is the first general election where it is impossible to predict the outcome. However, one thing that has been obvious over the last several months is that the NHS is being used as a political football, possibly to such an extent that we don't know whose policies and promises to believe! The NHS and its future should play an important role in the next election but based on rational debate and not rhetoric and sound bites from politicians of all Parties.

Ultimately everyone is a patient of the NHS but for readers of this Newsletter, the NHS and its future is vital to our health and wellbeing. We are frequently reminded that diabetes takes up 10% of the NHS budget, sometimes it seems too frequently because regardless of the blame culture often associated with Type 2 diabetes, no one wants to have diabetes!

Whatever happens in the May election, we have to remember the value of our NHS and its basic principles - everyone still receives treatment free at the point of care and people with diabetes taking medication and/or insulin receive free prescriptions. I was recently reminded of the value of our NHS in a telephone call from an IDDT member in the US. She was relieved that she had private medical insurance for her Type 1 diabetes but felt sorry for the many Americans without insurance, especially people with low incomes and Type 2 diabetes, because many of them do not seek diagnosis as they cannot afford the necessary medication. So while the NHS

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undoubtedly has its faults, it is important to remember and maintain its basic principles.

We have seen many changes in the NHS over the last few years, diabetes care being no exception. For many of us the changes in the NHS and the new organisations within it are difficult to understand. It can also be difficult to understand who is actually providing our care – is it the NHS or is it a private company employed by the NHS? Indeed, does this make any difference? Maybe not, but we must not forget that private companies are making a profit out of the NHS which is funded by tax payers.

What we have seen are changes in NHS systems, a target driven NHS and competition between providers, all apparently to drive improvements in services. In reality what we have seen is a large variation in diabetes services across the country, some areas have excellent services but others are not good. Indeed, Public Health England's own figures in Healthier Lives, show that across the three main treatment targets of blood glucose, blood pressure and cholesterol, levels are only being met by a third of people with diabetes! Nowhere across the country is meeting all three targets well – the average is 36% and the best is 48%.

What we have also seen is restriction on the supply of blood glucose test strips for people with Type 1 and Type 2 diabetes, difficulty obtaining podiatry appointments and standards of care for people with diabetes in hospital not being good enough.

As regular readers know, one of the major changes in diabetes care, to which IDDT objected, was the closing of NHS Diabetes, an organisation set up to specifically to

improve the care of people with diabetes. Despite the massive increase in people with diabetes, diabetes was 'downgraded' to be just part of the NHS organisation responsible for all long-term conditions.

In all these changes to systems and targets to be achieved, consideration of the views and needs of people with diabetes did not appear to be a priority. These needs are not just tick boxes for HbA1cs, blood pressure, cholesterol levels and the rest, all of which are important in the management of diabetes, but the needs are also about day to day living with diabetes, quality of life, the need for support and understanding of some of the difficulties.

People with diabetes are individuals and cannot be treated with a one size fits all approach or system. We are all different, whether we have Type 1 or Type 2 diabetes, we all deal with this situation differently, coping with the necessary lifestyle changes, fears and anxieties about future risks of complications, whether or not we have support of family members and work colleagues, not to mention the 'normal' pressures that affect all our everyday lives. These are all factors that affect how well we are able to manage our diabetes. Let us hope that the changes in May result in a greater awareness that if the health of people with diabetes is to improve, it takes more than changes in the NHS systems and structures.



IDDT responds to State of Report by

On January 14th 2015, Diabetes UK published its annual State of the Nation Report with a press release which led with

The poor state of diabetes healthcare in England is leading to avoidable deaths and record rates of complications

The report highlights statistics from various surveys and audits already published showing that there has been very little overall improvement in diabetes healthcare during the past year. It highlights that 40% of people with diabetes are not receiving the 9 key health checks recommended by NICE. It also states that some aspects of care are worse, for example, the number of people with Type 1 diabetes receiving the 9 key checks has dropped from 43% to 41%.

The Diabetes UK report claims that the care model is not appropriate, is responsible for the lack of improvement and that diabetes care does not need more funds. In contrast, Dr Jonathan Valabhji, National Clinical Director for Obesity and Diabetes, pointed out on Today, BBC Radio 4 (14.01.15), that for individuals with diabetes, the delivery and outcomes have actually improved and the risk of complications in individuals has also gone down.

IDDT was called upon to respond to the Report and we stated:

Surely the situation is straightforward. Over the last few years, the care of people with diabetes has largely been moved from secondary care to primary care and at the same time, there has been a huge rise in the numbers diagnosed, especially with Type 2 diabetes. However, the resources to deal with these changes have not been allocated to GP practices in terms of their staffing levels and diabetes education of the health professionals involved. Equally, there is a shortage of dietitians and podiatrists to advise and treat the increasing numbers of people with diabetes.

the Nation Diabetes UK

More resources are needed and these do cost money. At the same time there is a need for Public Health England to develop and ensure implementation of a prevention programme for Type 2 diabetes. This again costs money, so our view is that more funds and resources, in terms of trained staff, are essential to improve the care and treatment of people with diabetes.

And David Cameron responds...

Following a Parliamentary Question, Prime Minister, David Cameron responded to the report. He said that he would read the report "*Because of all the health conditions diabetes is one of the ones where, if we act fast, we could have a huge knock-on effect on the NHS... An enormous amount of new technology is coming forward on diabetes, and I want to make sure that that technology is rapidly adopted by the NHS.*"

Let us hope that these are not just words. Much of the new technology involves insulin pumps and the artificial pancreas which of course, only applies to the treatment of people with Type 1 diabetes which is only 10% of the whole diabetic population. Without being pessimistic, many people are being restricted or denied the blood glucose test strips they need, so there are going to have to be some major changes in expenditure just to answer these simple needs, let alone paying for the new technology.

Simon Stevens, NHS Chief Executive, in his Five Year Forward Review published in 2014 set out ways that better care for people with diabetes can be delivered. Time will tell...

People with Type 1 diabetes can still produce insulin 40 years later

According to a recent study, about a third of people with Type 1 diabetes produce insulin, as measured by C-peptide, even up to 40 years after diagnosis. (C-peptide is produced at the same time as insulin and so is a good measure of whether or not insulin is being produced.) These findings are in contradiction of the long held view that people with Type 1 diabetes do not produce any insulin.

The study showed that C-peptide is present in a wide age range people with Type 1 diabetes but in greater frequency and higher values in those diagnosed as adults compared to those diagnosed as children. This suggests that there are important differences in the biological process of Type 1 diabetes according to whether people are diagnosed as children or as adults.

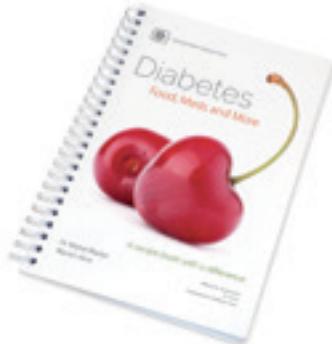
The study involved 919 people with Type 1 diabetes ranging from 3 to 80 years from diagnosis with some having had a duration of diabetes of 3 to 5 years.

- C-peptide was present in 78% of patients diagnosed after age 18, and in 46% of those diagnosed before age 18.
- 16% of adult-onset Type 1 people and 6% of childhood-onset Type 1 diabetes had residual C-peptide more than 40 years from diagnosis.

The research shows that there is a sub-set of people with Type 1 diabetes who continue to produce some insulin and according to researchers, there are several benefits to be gained.

- It has major implications for improving treatments for Type 1 diabetes. For instance, it supports research already underway on treatments that could prolong insulin production which in turn could reduce complications. Those diagnosed at a young age may be more likely to benefit from this type of research.
- This information may prevent misdiagnosing patients as Type 2 diabetes when they actually have Type 1 diabetes.
- Sometimes people are denied an insulin pump because they are still producing C-peptide, and therefore insulin, and this study demonstrates that some people with Type 1 diabetes can continue to produce insulin and so they should not be denied an insulin pump on these grounds. (Diabetes Care, Dec 17 2014)

No wonder 'Diabetes – Everyday Eating' is so popular!



In November 2014, IDDT carried out a small snapshot survey which showed that more than half of those who responded had not been offered sufficient dietary advice when they were diagnosed. Thank you to those people who took part.

- 53% of newly diagnosed people felt they were not given adequate information and guidance about how best to control their condition and minimise the risks of complications. The same proportion of people were not referred to a diabetes education session covering diet.
- One in seven people experienced low blood glucose levels (hypoglycaemia) while in hospital because of inflexible meal times or inappropriate meals.
- 70% found diet the most challenging aspect of their diabetes, 31% blood glucose monitoring, 9% said prejudice and 6% said taking their medication was the most challenging aspect of their condition.

It is hardly surprising that many thousands of IDDT's free booklet '**Diabetes – Everyday Eating**' have been requested or that our book '**Diabetes – Food, Meds and More**' has sold so well! It is available to members at the reduced price of £7.99 plus £1.50 P&P.

IDDT NHS Survey

In January we sent out a survey to all our members living with diabetes. We would like to thank you all for the huge number of responses we received which are now being analysed. Among other things, the findings of the survey will help us to know what is important to you in the care of your diabetes. Many of the decisions about the care people with diabetes receive are made by people who do not actually live with diabetes. This doesn't mean they don't care, but it could mean that decisions are being made without the full knowledge of what is important to people who live with diabetes. We will be able to use this information and let you know the results.

The IDDT Lottery

A new venture for IDDT and we hope you will join in with a chance to win!



As the leaflet with this Newsletter says, the IDDT Lottery will help to fund the provision of FREE IDDT booklets and leaflets, which enables information about the various aspects of diabetes to be available to everyone, regardless of income.

Playing is easy. Just fill in the standing order mandate on the leaflet, return the form to us and we'll enter you into our monthly draw. It only costs £2.00 a month to enter the monthly draw. 60% of the total subscriptions (the prize fund) will be paid out as FOUR cash prizes of 40%, 30%, 20% and 10% of the total prize fund.

You are welcome to enter as many times as you like through multiple sign ups if you want to increase your chance of winning! The more people who join in, the bigger the prize! If you have friends or family who would also join in, don't hesitate to give us a call for more leaflets!

The IDDT Lottery starts in June 2015 and winners will be drawn during the first week of July. If you want to start paying your standing order during April and May, your entries will be included in the June Draw.

The winners each month will be informed and details published on our website at the end of the first week of the month. The winners for the previous three months will also be published in our Newsletters, although there is the option to remain anonymous.

Enter the IDDT Lottery now!

Help us to help people with diabetes

The IDDT Lottery Terms and Conditions are available on our website or can be sent to you if you contact IDDT on 01604 622837.

Dietary supplements healthy or harmful?

Many people take antioxidant dietary supplements in the hope that they will improve their health and prevent illness. There are also claims that they help people to live longer by protecting them from cardiovascular diseases and cancer.

Where do these claims come from?

Very complicated processes take place in our cells which can influence the development of illnesses. One of these processes is called oxidation in which molecules in our bodies react with the oxygen we breathe in and free radicals are produced. These free radicals can damage our cells and are thought to be responsible for the aging process and for making us more vulnerable to diseases. The theory about the use of dietary supplements benefitting health is based on reducing the free radicals in our cells.

Dietary supplements, such as vitamin A, vitamin E, beta-carotene and selenium, have antioxidant properties and are found naturally in fruit and vegetables. Many people think that by taking these dietary supplements or by eating vitamin enriched foods they can boost their health, but is this the case?

Cochrane Collaboration researchers investigate – do they work or could they even be harmful?

Researchers from the Cochrane Collaboration reviewed 78 studies on antioxidant dietary supplements involving nearly 300,000 adults. The studies lasted an average of 3 years with some lasting up to 12 years. Most of the participants were healthy at the time of the study but 25% of them had pre-existing conditions.

The majority of participants consumed a considerably higher amount of antioxidants than would normally be contained in a balanced daily diet:

The results

- Overall, antioxidant dietary supplements do not help people to live longer but the opposite was the case, suggesting that some substances increase the risk of dying. The studies did not state the causes of death so the researchers assumed that the main causes were most likely to be cancer or cardiovascular disease.
- The results were the same for participants who were healthy and those who had pre-existing medical conditions.
- The results did not apply to all the antioxidants – selenium and Vitamin C did not increase mortality but equally, there was no proof that they prevent earlier death.
- All dietary supplements containing vitamins A, E and beta-carotene lead to an increase in the number of deaths.

Antioxidants can cause side effects. For instance, vitamin E, beta-carotene and selenium may cause constipation, diarrhoea and flatulence and very large amounts of vitamin A and C can cause itching.

Conclusions

The Cochrane Review did not find any proof that antioxidant dietary supplements prevent cancer or other life-threatening conditions but excessive doses can even increase the risks. This does not mean that these substances should be avoided because our bodies need vitamins and minerals but we usually get enough from a balanced diet which includes enough fruit and vegetables. However, taking excessive amounts of dietary supplements could be harmful.

There are currently no recommendations in Europe for the safe upper levels of the substances in dietary supplements, although there are plans to define upper levels of vitamins and important minerals.



Venom in sea snails could be used to produce insulin



Venom produced by cone snails found in the sea could be used to design human insulin analogues or for painkilling drugs, according to research at Utah University. Cone snails are by nature venomous but apparently insulin produced by some species is mixed within the venom and this sends fish into hypoglycaemic shock. The researchers say that it is unlikely that this insulin will be used to treat diabetes but it could become a useful tool for better design of human insulin analogues because it may act faster.

Pharmaceutical News

First biosimilar insulin approved in Europe

Regulators in Europe have approved the first biosimilar insulin for use in adults, adolescents and children aged at least 2 years. The new insulin is called Abasria and is essentially equivalent to insulin glargine (Lantus) but made by Eli Lilly and Boehringer Ingelheim. It is likely to lower prices in the UK.

Combination of long-acting insulin and Victoza approved in Europe

Europe has approved a combination of long-acting insulin degludec and liraglutide (Victoza) for the treatment of adults with Type 2 diabetes. It should be prescribed with oral glucose lowering medication or with basal insulin. The combination is known as IDegLira but is being marketed under the name of Xultophy and is expected to be on the market in the first half of 2015. Manufacturers, Novo Nordisk, say that by adding Xultophy, HbA1cs can be lowered by 1.9% and weight lowered by an average of 2.7kg compared with degludec on its own.

Novo Nordisk's liraglutide receives US approval for the treatment of obesity

The US Food and Drug Administration (FDA) has approved a New Drug Application for Novo Nordisk's Saxenda. It is for the treatment of obesity with reduced calorie diet and increased physical activity in people with a weight related problem, such as Type 2 diabetes or cardiovascular disease. It is expected to be on the market in the US in the first half of 2015.

Saxenda is the brand name for liraglutide given in a 3mg dose. Liraglutide is on the market as the injectable drug called Victoza for Type 2 diabetes which is given in a 1.2mg per day dose, according to NICE guidance. If this is unclear, Saxenda and Victoza are the same drug given in different doses for different purposes.

Painkiller tramadol linked to low blood sugars

Canadian researchers have discovered that the painkiller drug, tramadol is associated with increased risk of dangerously low blood sugars. Tramadol is used for mild to moderate pain and its popularity has increased because it is said to be less addictive than some other painkillers.

This unexpected finding in people with and without diabetes, showed that taking the drug can lead to a threefold increase of hospitalisation for low blood sugars, some of which proved fatal. This association does not prove a cause and effect relationship and more research is necessary. The overall risk is still quite low but the researchers warn that doctors and patients need to be aware that tramadol may be associated with an increased risk of hypoglycaemia. (JAMA Internal Medicine, online December 8 2014)

Actos and Avandia do not raise bladder cancer risk, despite past research that suggested they might

Previous studies suggested that the following drugs for Type 2 diabetes, Actos (pioglitazone) and Avandia (rosiglitazone), led to an increased risk of bladder cancer but a new study found that they did not and nor did their long-term use lead to an increased risk of bladder cancer. The researchers examined the effects of Actos and Avandia in over 1 million people with Type 2 diabetes in different countries for about 4 to 7 years.

They said that the previous studies were weaker because they did not involve large enough numbers of people from different countries. The European Foundation for the Study of Diabetes funded the study. Some of the authors disclosed financial ties to pharmaceutical companies such as Pfizer and Novartis. (Diabetologia, December 2014)

It's hard to believe!



The London Eye re-opened after its winter break with a new sponsor - Coca Cola and is now to be known as the "Coca Cola London Eye"! It lights up in red, inside each pod is the drinks branding and the staff wear red Coca Cola uniforms. The London Eye is owned by American Corporation, Merlin Entertainments.

Soft drinks are the largest source of sugar in children and teenagers' diet and are associated with weight gain, obesity, diabetes, heart disease and poor dental health. It is almost unbelievable that at a time of national policy of cutting back on sugar, one of the country's icons is being sponsored by a drinks company that loads its products with sugar!

It is not just IDDT that finds this amazing, Keith Vaz MP has put down an Early Day Motion in the House of Commons calling on the Government to intervene and review the implications of this decision.

Welsh News

A point about children with diabetes at school in Wales

From a member of IDDT

In your December 2014 Newsletter you mention that the Children and Families Act came into effect in September 2014. Diabetes charities and many others campaigned for the inclusion of the statutory provisions making the detailed care and facilities to meet the needs of children with any long-term condition, a legal requirement.

Please could you make it clear that the Act applies in England only and that, although in 2010 the Welsh Assembly Government published a guidance booklet entitled 'Access to Education and Support for Children and Young People with Medical Needs', there is no statutory responsibility placed on schools in Wales. Schools, local authorities and health authorities have to meet other statutory requirements and the guidance for the care of young people with long-term conditions should be on the same basis. The heads of all the support organisations welcomed this in England and it is a pity that the same does not, as yet, apply in Wales.

Better news for Wales

Wales is to receive new funding of £561,000 to replace all its digital retinal cameras with the latest, third generation high-tech cameras to help to identify retinopathy (eye damage) in people with diabetes. The new cameras will provide the best screening facilities for patients. The latest figures show that of the 115,528 people who were screened in 2013-14, 29.2 % were found to have diabetic retinopathy.

On January 28th 2015, it was announced that there will be a £70m investment for 2015-16 in the Welsh NHS by the UK Government. This is to be spent on developing local services, integrating health and social care and making improvements in the delivery of services for various conditions, including diabetes. This is in addition to the extra £295m being invested by the Welsh Government in Health and Social Care.

In January the first all-Wales annual report about NHS diabetes care set out the progress made against the Welsh Government's Together for Health – a Diabetes Delivery Plan over the last 12 months. For those interested, the report is available at <http://wales.gov.uk/topics/health/nhwales/plans/diabetes/?lang=en>

The Menopause and diabetes

The menopause is a difficult time for women but can be an especially difficult or women with diabetes. Despite the relationship between diabetes and the menopause being complex and known to cause difficulties, there has been limited research in this area and therefore knowledge is limited.

A study published in Practical Diabetes (Vol 31No 4) highlighted many of the issues that IDDT hears from women with Type 1 diabetes going through the menopause.

- There is a lack of information about menopause and diabetes.
- Variability of blood sugars.
- The usual symptoms of menopause.
- Health professionals do not seem to understand or be very interested in their difficulties.

Not all women have distressing menopausal symptoms or want support, so each woman should be treated as an individual.

Facts about the menopause

- The menopause is a natural event and is when spontaneous ovulation, and therefore the reproductive function, ends. In the western world the average of menopause is 51 years in women without diabetes.
- **Perimenopause** [before menopause] is the variable length of time when there are ovarian changes and the first year following menopause. This is when many women start to have the classic symptoms – hot flushes, night sweats, tiredness, weight gain, vaginal dryness, sexual problems, anxiety and mood changes. For women with Type 1 diabetes, some of these symptoms can also be those of hypoglycaemia and menopausal symptoms may be confused with those of hypoglycaemia. This may mask the important warning signs of hypos.
- **Postmenopause** is when there is oestrogen deficiency and this adds to the menopausal symptoms.

Type 1 diabetes and menopause

The following information is based on small studies because larger studies have not been conducted, so it is the best information available.

- Menopause in women with Type 1 diabetes appears to occur at an average age of 41 years compared to 49 years in their non-diabetic sisters and 48 years in other non-diabetic women.
- Women with Type 1 diabetes who had menstrual irregularities before the age of 30 appear to have double the risk of early menopause.

The reasons for this early menopause are not known but there are suggestions that it could be due to periods of high sugars [hyperglycaemia] over the years or the immune system response. It is not known whether glycaemic control has any effect on the onset of menopause.



Type 2 diabetes and menopause

There is a little more known about this.

- Women with Type 2 diabetes appear to have earlier menopause than non-diabetic women – 45 years compared to 48 years respectively.
- In a larger study which excluded women with poor glycaemic control and previous menstrual irregularities, women with Type 2 diabetes had their menopause at a similar age to non-diabetic women.

The use of HRT in women with diabetes

HRT involves replacing oestrogens and progesterones, two hormones that decline in production during menopause. When oestrogens and progesterones are diminished, a woman will experience hot flushes, mood changes, urinary difficulties, vaginal dryness, and irregular menstrual cycles until menstruation ceases permanently. HRT allows women to replenish diminished hormone levels to reduce symptoms of menopause, but there are risks involved for diabetic women as well as non-diabetic women using HRT.

The association between the use of HRT and diabetes has caused some confusion. Some studies have shown a reduced risk of diabetes in women taking HRT, yet HRT information sheets advise caution when using HRT in diabetic women. Currently HRT may be used when indicated in women with diabetes, and it is thought that either low dose oral oestrogen or transdermal (patch or gel) preparations are best. If progestogen is required, either dydrogesterone or micronised progesterone seem least likely to interfere with diabetic control. Further studies are required on the ideal type of HRT.

Menopause and the risk of developing diabetes

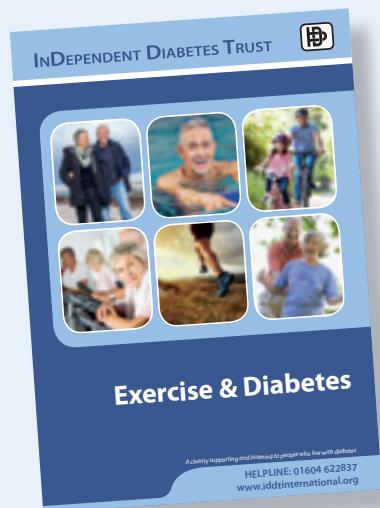
With the dramatic rise in the development of Type 2 diabetes, the number of women over the age of 45 with diabetes has increased tenfold over the last 10 years. Menopause is associated with changes in the body composition which includes weight gain and abdominal obesity, risk factors for Type 2 diabetes. Research suggests that postmenopausal women with abdominal obesity but not overall weight gain, are more likely to have higher fasting insulin and triglyceride levels, higher glucose intolerance and higher systolic blood pressure [the top number], all risks for Type 2 diabetes.

The increased risk of osteoporosis and fracture

- Postmenopausal women with diabetes are at an increased risk of lower bone density [osteoporosis] and fracture compared to non-diabetic women.
- The risk of hip fracture is higher for women with Type 1 diabetes than Type 2 diabetes.

Exercise & Diabetes

IDDT's new free booklet



The treatment of both Type 1 and Type 2 diabetes is insulin or medication, diet and exercise. There are 3 important factors in the treatment of both types of diabetes. They are all equally important because they all affect blood sugar levels and all affect each other.



IDDT has booklets with information about both types of diabetes and diet, Diabetes – Everyday Eating which covers diet and now we have published a new booklet, Exercise and Diabetes.

The new booklet not only looks at different types of exercise, why it is important, its effects on blood glucose levels, the heart and blood pressure.

If you would like a free copy of 'Exercise and Diabetes', contact IDDT on 01604 622837. email enquiries@iddtinternational.org or write to IDDT, PO Box 294, Northampton NN1 4XS.

Concerns about memory testing for dementia

One of our members expressed her concerns when her practice nurse informed her that at her next diabetes annual review she would be given memory tests. At the age of 73 this made her feel angry, vulnerable and at risk of being classed as having dementia. She is refusing to have the tests but would like to know if other people have had similar experiences with their GP practice.

In the latter part of 2014, on the advice of NHS England, David Cameron announced that GPs would receive a payment of £55.00 for every person they diagnose with the signs of dementia.

Researchers in the US report that early symptoms of dementia include such things as forgetting to turn off lights, losing things around the house and coming home from the shops without something you intended to buy. They recommend that people having any of these symptoms should report them to their GP. Maybe the worries for us 'oldies' is what will happen next and will treatment be prescribed?

As someone over 70 and editor of this Newsletter, I freely admit that on occasions I do all of these things but would I tell my doctor? I think probably not, I see them as part of growing older.

Late News: In January this year, the UK National Screening Committee advised against screening all over 65s for dementia because early treatments to slow or prevent it do not exist which suggests little benefit from screening. In addition, on average 18% of people test positive for mild cognitive impairment but only 6% of these will go on to develop dementia, so screening can give false positives and cause unnecessary worry.

The reality

The reality is that with the aging population the number of people with dementia is rising. It is a much feared condition and can have a huge impact on the person with it and their family. In the UK there are 800,000 people with dementia and over 3 million with diabetes, so in the older population, there is a significant risk of developing both conditions. A systematic review showed that dementia was twice as common in people with diabetes. (Lancet Neurol 2006;5) However, the

mechanisms for underlying links between diabetes, cognitive decline and dementia are not fully understood and further research is needed.

It is well known that Type 2 diabetes is linked to an increased risk of dementia but the link to cognitive decline is not so well known. Cognitive decline tends to develop before dementia and includes forgetfulness, absent-mindedness and impulsiveness. At this stage, it is common for people to forget to take their medication or worse still, to take more tablets than prescribed.

In people with Type 1 diabetes, life expectancy has increased and so they too are at greater risk of cognitive decline and dementia. Over many years of having Type 1 diabetes, they have developed a great deal of experience in managing their diabetes, such as carb counting and insulin dose adjustment, and the development of cognitive impairment may result in carers being necessary. This may be difficult to accept but it is also important to recognise that even the best of carers will not have the same expertise as someone who has managed their diabetes over many years. The result may be poorer blood sugars which in turn, may be upsetting for the person with diabetes.

Hypoglycaemia

For many years there have been discussions and concerns about the relationship between dementia and hypoglycaemia. Studies in older people have shown that the risk of dementia was doubled in those with a history of hypoglycaemia compared to those with no history of hypos. At the same time, people with dementia have also been shown to have a threefold increased risk of hypoglycaemia compared to people without dementia. As people get older, warnings signs of hypos may be different and can show as confusion or cognitive impairment which may be assumed to be due to dementia and the hypo going untreated.

20 year lead time, so there is time do something

A new US study looked at the brain health in 13,351 adults with an average age of 57 years when they entered the study, 13% of whom had Type 2 diabetes. The findings were as follows.

- People with diabetes, or at risk of developing diabetes, had greater cognitive decline during the 20 years of the study compared to people without diabetes.
- People with uncontrolled diabetes at the first visit had an even steeper decline over 20 years than those who had their diabetes under control. Also people without diabetes but with high blood sugars at the first visit had greater cognitive decline compared to those with lower blood sugars.

- Cognitive decline was steeper among people who had lived with diabetes longer compared to those who were more recently diagnosed.

Although in contrast to previous studies which found that better blood sugar control among elderly people doesn't affect brain power, this study suggests that better blood sugar control can slow down cognitive decline. One researcher commented that this study suggests that there is a 20 year lead time for cognitive decline and therefore there is time to do something to prevent it, at the latest when people are in their 50s. (Annals of Internal Medicine, December 2014)

So what can be done? Evidence suggests we can lower our risk of dementia by keeping healthy - eating a balanced diet, exercising regularly, not smoking, and keeping blood pressure and weight in check.

Note: if you have a view or experience of being checked for cognitive impairment or dementia, contact Jenny, email jenny@iddtinternational.org or write to IDDT, PO Box 294, Northampton NN1 4XS



STRIDE OUT for IDDT in June



IDDT members are invited to take part in our new 'Striding Out for Diabetes' challenge this summer.

We are encouraging people to walk, run or cycle during the weekend of June 6th and 7th to raise funds for the charity. The distance and location is up to each participant, with the campaign based on the principle that it's "up to you what you do and where you do it" in an attempt to get a series of activities all taking place on the same weekend.

The challenge is a progression from the run and cycle from Market Harborough, in Leicestershire, to Northampton, which took place in June last year and saw a small team of mainly IDDT representatives raise £500 for the charity. This 'flagship' event will take place again this year on June 6th and people are also invited to walk, run or cycle with the team.

Martin Hirst, IDDT Chief Executive, said: "We, like every charity, are reliant on donations so we would be extremely grateful to anybody who registers to take part in this challenge. We are not putting any pressure on anyone to take part but if people do want to get involved then it will be up to you what you do. Whether, it's a one-mile walk or a marathon, every little helps."

We have created a fundraising pack to help members generate awareness and sponsorship, including a sponsorship form. To receive a fundraising pack or to register your interest for the flagship event, email events@iddtinternational.org or visit the IDDT website at www.iddt.org.

GP Training posts left vacant

Over 150 GP training posts have not been filled for 2014, despite a recruitment drive by Health Education England. Across England only 2,688 of 3,067 posts have been filled but the vacancies vary by area. In London, West Midlands and Thames Valley the posts are almost filled but in other areas, such as East Midlands, Yorkshire and Humberside up to 3 out of 10 posts are vacant.

This lack of GPs entering this aspect of the medical profession will add to the already predicted shortage of GPs which will ultimately affect the services we, as patients, receive unless there is some action plan to increase the numbers of GPs.

Senior Nurses leaving the NHS

Figures released in early December 2014 show that the NHS in England has lost more than 1,000 matrons and 3,400 other senior nurses during the past four years. Additional official information from August 2014 shows that the number of community matrons co-ordinating care across different primary services has decreased by 216 in the past four years.

Nurse staffing guidelines released

NICE has issued guidance which maintains that there is an increased risk of harm if a nurse is caring for more than eight patients in hospitals. Evidence shows that providing a higher proportion of registered nurses in the skill mix helps to achieve better outcomes for patients. It recommends that the lead nurse should consider 'red flag events' as indicating that the ward is becoming in danger of being under staffed and should organise the number of nursing staff needed and hospital boards and senior management should take greater responsibility.

News from

UK diabetes care compared with other European countries

It is difficult to compare healthcare systems in different countries but a recently published study classified diabetes care across 30 different countries, called the Euro Diabetes Index. Information from 6 areas of diabetes care was combined to give a single index of the quality of care in each country.

Diabetes care in the UK was 4th after Sweden, the Netherlands and Denmark and performed well on:

- case finding
- the range and reach of services
- access to treatment and procedures
- outcomes.

This could be partly due to having a free universal healthcare system, which does not apply to some countries. England also has established national guidelines, pay performance systems and a national eye screening programme to try to ensure that people with diabetes annually receive the 9 key recommended checks, although only 59.9% of people received them in 2012/13 (National Diabetes Audit).

However, there is plenty of scope for improvement as the UK did not do well in:

- the prevention of Type 2 diabetes
- adult obesity
- the consumption of soft drinks
- the regular use of bicycles
- the proportion of people eating the recommended amounts of fruit and vegetables.

Transparency in the European Medicines Agency

From January 1st 2015, the European Medicines Agency (EMA) will publish the clinical trial data that are used in its decision-making on medicines. This will apply to clinical reports contained in all applications for marketing authorisations for new drugs. It is a shame that it has taken so long to make this information available to the public.

Guideline Daily Amounts and Reference Intakes

Dr Mabel Blades, consultant registered dietitian gives us the latest nutritional update

In line with EU law, the labelling of pre-packaged foods and drinks is changing and by December 2014 the majority had done so. Food labels help people to choose which foods to include in their diet.

The Guideline Daily Amounts (GDA) which are often seen on packs are being updated and renamed as Reference Intakes (RI),

Europe

although the amounts are not changing. Where the front of pack information has shown percentages of GDA, this will now be percentages of the Reference Intake (RI).

On the back of the pack the ingredients in a product must be shown and this is in descending order of weight. Information on the nutrient content of foods per 100g must be given which will be as energy in kilojoules and kilocalories, total fat, saturates, carbohydrates, sugars, protein and salt. Information on sodium will no longer be used.

The Reference Intakes for energy and selected nutrients for adults are:

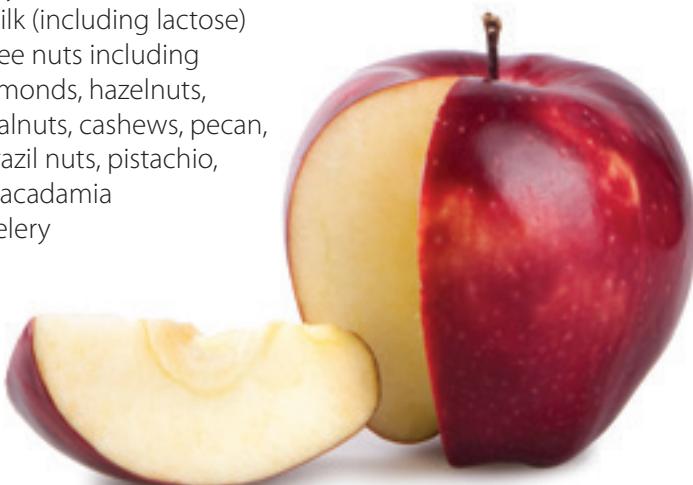
Energy 8400kJ / 2000kcal	Sugars 90g
Total fat 70g	Protein 50g
Saturates 20g	Salt 6g
Carbohydrates 260g	

Allergies and Intolerances

Also in line with EU law, by December 2014 pre-packaged foods and drinks should have all of the 14 possible allergens highlighted in the ingredient list. Pre-packaged foods and drinks should not simply carry the words 'may contain' unless the manufacturer has done a risk analysis. When eating out people will be able to ask for information on allergens in foods from those providing the food.

The 14 allergens are:

- Cereals containing gluten, that is wheat, oats, rye, barley, spelt khorasan wheat / kamut
- Crustaceans eg prawns, crabs, lobster
- Eggs
- Fish
- Peanuts or ground-nuts
- Soya
- Milk (including lactose)
- Tree nuts including almonds, hazelnuts, walnuts, cashews, pecan, brazil nuts, pistachio, macadamia
- Celery
- Mustard
- Sesame seeds
- Sulphur dioxide (where added at greater than 10mg/kg or 10ml/L in the finished product)
- Lupin
- Molluscs eg clams, squid, oysters, scallops.



What the papers say

Financial Times

'Steps are afoot to supply affordable treatments to the developing world' (November 14, 2014)

To mark World Diabetes Day, an article by David Crouch pointed out that in poor countries, such as India, 1 million people died from diabetes in 2012 and 10s of millions go without the insulin they need. Dr Laurence Gerlis, IDDT's Medical Adviser, was quoted as saying that when a child gets Type 1 diabetes in developing countries, it is more or less left to die.

Insulin manufacturer, Novo Nordisk, have announced that it will strive to make diabetes drugs available to 40 million people by 2020 by selling the older variety of non-patented 'human' insulin at cost price. The company has agreements with governments of 48 developing countries to sell 'human' insulin at a price that does not exceed 20% of the average price in Europe, the US, Canada and Japan. However, this does not guarantee that the savings will be passed on to those with diabetes. While Dr Gerlis is quoted as saying he has deeply held misgivings about the priorities of pharmaceutical companies developing new insulins, he conceded that low cost 'human' insulin will save lives.

Daily Telegraph

'Novo Nordisk welcomes the chance to go out of business' (November 24th, 2014)

This article highlighted that both Type 1 and Type 2 diabetes are on the increase and that the global market for insulin is expected to reach £20.6 billion by 2019. It also said that as a treatment insulin can hardly be improved on because it is replacement for a substance the body does not make but Novo Nordisk is still finding ways to improve insulin. Their medical adviser says that for the 60 years after insulin was discovered, research was about making better insulins from animal insulin – making them last longer so people did not have to take as many injections a day. (Interesting that nowadays, it is all about increasing the numbers of daily injections!) He goes on to say that now they have the ability to create insulins with different release times to try to copy the action of the normal pancreas.

However, his most interesting statement in the article is: "Still, Novo Nordisk's stated mission goes beyond supplying treatments to eradicating diabetes altogether. We feel a responsibility for trying to prevent or eradicate diabetes and if that meant the dissolution of Novo Nordisk, that'd be fine."

Sounds impressive although strange for big business! Of course, the article fails to point out that for some years now, Novo Nordisk has been making drugs for the treatment of Type 2 diabetes which makes up 95% of the global diabetic population and is not going to be eradicated any time soon!!



The importance of injection technique

Research has shown that the number of people in the UK using insulin trebled between 1991 and 2010, largely due to a considerable increase in the number of people with Type 2 diabetes using insulin. (Diabetes, Obesity & Metabolism, June 2014) It is a good idea to check our injection techniques however long we have had diabetes. We also have readers with Type 2 diabetes put on injectable drugs, such as Byetta or Victoza, so here are a few reminders about injection techniques which apply to both.

Correct injection technique can:

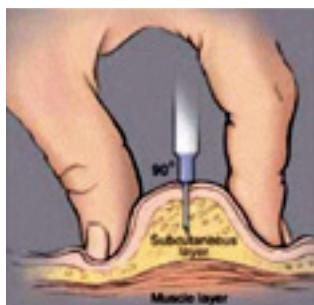
- reduce the numbers of hypos,
- improve stability of blood glucose levels.

Incorrect injection technique can result in insulin not being absorbed correctly which can cause:

- hypoglycaemia if insulin is injected into muscle when it will be absorbed more quickly,
- hyperglycaemia if it is injected into damaged tissue when it will be poorly absorbed,
- possible diabetes ketoacidosis (DKA) in people with Type 1 diabetes.

The causes of poor injection technique include:

- not rotating injection sites,
- using needles of incorrect length,
- re-using needles,
- inappropriate use of pinched skin.



The skin

Human skin has three layers: on the outside, the dermis, then the epidermis and underneath this is the hypodermis, also called subcutaneous tissue. This contains fat, connective tissue and the larger blood vessels and nerves. Under the subcutaneous tissue is a layer of muscle. Insulin injections should be into the subcutaneous layer.

Insulin should always be injected subcutaneously

Insulin should always be injected subcutaneously, between the skin and the muscle for best absorption and a longer effect.

- To avoid the risk of injecting into muscle, the skin should be pinched by lifting away the skin from the muscle with two fingers and a thumb, as in the picture.
- The needle should be inserted at 90° and the insulin injected.
- The needle should be left in the skin for at least 10 seconds after the injection so the insulin does not leak out.
- The needle is then withdrawn and the skin fold released.
- If you pinch the skin, then you can inject at either 45° or vertically but the choice of needle length must match the thickness of the skin. Your diabetes nurse will discuss this with you.
- If you do not want to pinch the skin, the needle should not be injected vertically but must be at an angle of

45° and the needle should be short or medium length to avoid injecting into muscle. If you inject at an angle less than 45°, then the insulin will only reach the dermis [first layer of the skin] and bruising may occur.

Needle length

Skin thickness ranges from 1.2 – 2.7 mm regardless of age, gender, ethnicity or BMI but subcutaneous thickness can vary with BMI, gender and also from site to site. For example, in a person with fat around the middle, the depth of the subcutaneous layer may be only 2 – 4 mm on the legs and arms but 20 – 30 mm around the abdomen. Your diabetes specialist nurse will discuss the correct needle length for you.

There is a misconception that people with greater subcutaneous tissue depth require longer needles, especially if they are overweight or obese. In fact, there is no difference between injecting insulin into shallow or deep subcutaneous tissue because both are absorbed at similar rates.

Historically, when only longer needles were available, people with only small subcutaneous depth used to pinch the skin into a fold or inject at an angle to avoid hitting the muscle. With the exception of children or very slim adults, shorter needles of 4, 5 and 6 mm mean that people can inject at 90° without a skin fold if they so wish. For adults, there is no clinical reason for using needles longer than 8 mm.

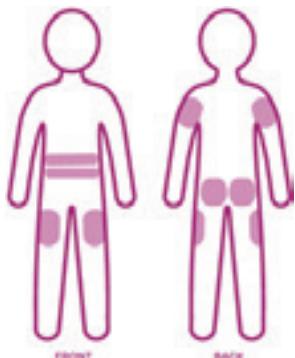
Site rotation

The injection site should be rotated because injecting into the same site can result in hard lumps developing (lipohypertrophy). As well as these being unsightly, the insulin will not be absorbed properly from these areas.

Rapid- or short-acting insulin should be injected into the tummy area (if you or your child is happy about this) because it is absorbed more quickly from here.

Long-acting insulin should be injected into the upper thigh as it is absorbed more slowly from here.

It is best to avoid injecting into the arms or calves because there is a risk of hitting muscle.



Single use of needles

Insulin pen needles are for single use only. Re-using the needle several times can lead to it being distorted and loss of its lubrication which in turn, can lead to more painful injections.

When using a pen to inject, always remove the pen needle after injecting. If the needle is not removed, this leaves an open passage to the insulin which can (i) leak out and (ii) air bubbles can enter the cartridge so with the next injection the full dose may not be given.

Warning - injecting through clothes

Some people, particularly teenagers inject through their clothes. The drawbacks of doing this are that it is difficult to pinch the skin through clothes, the fabric can remove the lubricant on the needle and can damage the needle tip both of which increase discomfort. It is also not possible to inspect the injection site for insulin leakage or damage.

Working with others



IDDT remains committed to not accepting funds from the pharmaceutical industry, to maintain our independence and ensure that the information we provide is as unbiased as possible. It is vital that treatment is based on evidence and not influenced by the expensive marketing campaigns of pharmaceutical companies.

However, IDDT membership is growing and the economic climate is not really improving, so the Trustees have had long discussions about ways of improving our income. It was agreed that there are no circumstances in which we would accept pharmaceutical industry funding but we can accept funding from certain cosmeceuticals and nutraceuticals. No doubt readers will be saying what on earth are they?

Cosmeceuticals are skincare products, which bridge the gap between cosmetics and pharmaceuticals and used by skincare professionals in their practices.

Nutraceuticals are nutritional products that provide health and medical benefits but unlike pharmaceuticals, these are not synthetic substances or chemical compounds formulated for specific purposes. Dietary supplements, dietetic and functional foods fit into this category.

pomegreat

Pomegreat is a pomegranate juice drink with a low glycaemic index (low GI), so a 'nutraceutical'. It is made from pomegranates blended with a natural fruit extract containing pinitol, but never sugar. Pinitol is found mainly in legumes, such as carob and whole soybean and there is evidence that it can counter some of the harmful effects of sugar.

As sugar in drinks is a major risk factor for Type 2 diabetes, IDDT is pleased to partner with a brand that is taking this issue seriously and providing a healthy drink. Millions of people worldwide are at risk of developing Type 2 diabetes because of the intrinsic risks associated with modern convenience diets. We look forward to working with Pomegreat and we hope that other juice and soft drink businesses will follow their important lead.

The company also make Mangogreat and both products are available in leading supermarkets. You can also visit their website at www.pomegreat.com



Foot care for people with diabetes is simply not good enough

In December 2013, figures from the Yorkshire and Humber Public Health Intelligence Diabetes Footcare Activity Profiles showed that people with diabetes in some areas of England were twice as likely to undergo diabetes-related amputations as the national average – as many as 4.9 amputations each year for every 1,000 people with diabetes, compared to the average of 2.6 per 1,000

A year later in December 2014, Diabetes UK conducted an online survey of 6,696 people with diabetes.

- 32% were not informed about their risk levels at their annual foot check.
- 32% also said they were not given adequate advice about foot care.
- 18% did not have their feet checked for corns, calluses and changes in shape.

The dangers of delaying medical help with foot problems

A study of foot care by Leicester University has highlighted the importance of seeking early medical care for people with diabetes with foot problems.

The researchers looked at 20 cases of foot problems where care had been delayed by 18 weeks and in one case the delay was 36 weeks. In 30% of the cases where the delay occurred, amputation was needed to prevent even more serious complications. Foot problems are defined as any change in the foot including grazes, wounds burns, dry skin, bunions and ingrown toenails. We may think that some of these seem fairly trivial but for people with diabetes, they are not - they need early treatment.

It is recommended that people with diabetes visually inspect their feet daily because they may have neuropathy and a loss of sensation, so relying on symptoms is not sufficient to detect any problems.

Having said this, IDDT is aware of the difficulties people are experiencing in actually getting an appointment with a podiatrist, so just making people aware of the need to look after their feet is not enough. – there has to be greater access to podiatrists so that people are not put at risk. This is yet another example of the need for people with diabetes to be assertive and insist on receiving the foot care that they need to prevent the problems getting worse, even if the problems seem trivial.

Reminder: NICE guidelines say that people with diabetes with acute foot problems should receive medical attention within 24 hours.

IDDT has a booklet 'Neuropathy and foot care' and if you would like a copy, call IDDT on 01604 622837, email enquiries@iddtinternational.org or write to IDDT, PO Box 294, Northampton NN1 4XS.

Who is responsible for foot care? Minister makes it clear!

In May 2014 an MP asked the Secretary of State for Health some very pertinent questions about podiatry / chiropody services for people with diabetes:

- what assessment he has made of the quality of foot care provided in primary care to patients with diabetes;
- who is responsible for auditing compliance with National Institute for Health and Care Excellence guidelines relating to the care of patients with diabetes;
- what guidance his Department has issued to GPs on the assessment and treatment of foot conditions where a patient has diabetes.

Jane Ellison, the Minister responsible for diabetes, answered:

"The National Institute for Health and Care Excellence (NICE) has published clinical guidance and quality standards on the treatment of diabetes and its complications. The NICE Diabetes Quality Standard is clear that people with diabetes who are at risk of foot ulceration should receive regular reviews by a foot protection team in accordance with its clinical guidance. The Health and Social Care Act (2012) places a duty on NHS England to have regard to the NICE Quality Standards. Clinical commissioning groups (CCGs) should also have regard to them in planning and delivering services, as part of a general duty to secure a continuous improvement in quality"

She goes on to point out that GPs are paid for annually assessing nerve damage and poor blood supply to the feet in people with diabetes.

One thing that IDDT is aware of from our members is that in many areas, there simply does not appear to be enough podiatrists employed by the NHS to meet the increasing numbers of people with diabetes who need foot care. So somewhere along the line, these responsibilities are not being fulfilled.

From our own correspondents

Verio IQ and batteries

Dear Jenny

I recently received the offer to try a Verio IQ blood glucose meter, free of charge and I ticked the "interested" box. The Verio IQ machine with a battery and chunky recharging unit arrived, together with a letter explaining my current meter and strips will soon be replaced by the new unit and strips.

I was surprised at the news and the comparative bulk of the new unit, together with the need for a power supply to recharge the battery as necessary. I am currently aged 65, but active, living on a canal narrowboat travelling the country for most of the year but electricity supplies are non-existent in remote places. I wrote to Johnson & Johnson explaining their "improved" meter is, in fact, a backward step for me. Within a day or two I received a phone call from a "customer care" lady who was genuinely surprised that someone with diabetes would even contemplate being in remote places without the benefit of electricity!

However, the next day a Verio IQ, powered by "ordinary batteries" arrived by post. I thought your members may like to know that the Verio IQ is available with batteries but only if requested.

By email



Neglect of younger people with diabetes

Dear Jenny,

Further to your recent observations about the NHS neglect of younger people with diabetes, I feel this has always been the same. I have had diabetes since I was 10 years old and I feel that unless you learn to cope with your own problems, nothing will improve. I feel that doctors should educate younger people to cope with short-acting (or rapid- acting) insulin to deal with high sugars, when ill or for any other reasons. I can use a couple of extra units to lower my blood sugars. I insist on always using animal insulin and nothing else because it works for me.

Mrs V.M.

North West

Celebration lunch after Jenny receives her MBE

Jenny Hirst, co-chair and co-founder of the charity InDependent Diabetes Trust (IDDT) was presented with an MBE by Prince Charles at Buckingham Palace. The award recognises the contribution Jenny has made to charity and public health, having worked tirelessly for people with diabetes since her daughter was diagnosed with Type 1 diabetes almost 40 years ago.

Jenny successfully led a ten-year battle against the pharmaceutical industry when she campaigned for the continuation of animal insulin following moves to switch people to genetically engineered human



insulin, which caused thousands of people adverse reactions. The sustained lobbying led to government intervention and people with diabetes can still use animal insulin today.

Jenny attended an investiture ceremony at Buckingham Palace on November 21st 2014 with her granddaughter Amelia Hirst and IDDT Trustee Veronica Readman.

She said: "I am not one for personal accolades so I accepted the MBE on behalf of the charity and all of those who fought tirelessly in the name of people with diabetes to ensure the continuation of animal insulin."

Parents fear of hypos in children with Type 1 diabetes

An Australian study investigated if parents' fear of hypoglycaemia is associated with worse diabetes control and tried to identify risk factors for increased hypo fears. A survey was completed by 106 parents of children with an average age of 11.1 years and a duration of diabetes of 4.8 years, 52% were male and 48% were using an insulin pump.

The results showed:

- Fear of hypoglycaemia was the highest among parents of 6 to 11 year olds.
- Parents of children with HbA1cs less than 7.5% had less fear of hypoglycaemia, suggesting that parental fear of hypoglycaemia is linked to worsening of control, as measured by HbA1cs.
- Interestingly, previous seizures and increased frequency of phone calls from the diabetes team were not associated with increased fear.

(*Journal of Paediatrics and Child Health*, August 2014, Vol 50, Issue 8)

There have been many similar studies, including some that have shown the opposite - that parents' anxiety or depression can result in worse diabetes control in their children. As a parent of longstanding, it seems not surprising to me that parents fear hypoglycaemia in their children. It is a mixture of fear that something may happen to our children, fear that we may mishandle it in some way, fear of the effects on our children and many more. We have children with a chronic condition! It will not go away and it feels like our job to try to ensure that the long-term complications of diabetes do not happen to our child. All this is a huge responsibility for us as parents.

Forty years on from my daughter's diagnosis, I see that these feelings are still experienced by parents, despite all the modern technology. Or are some of these feelings because of modern technology? There is more testing, pumps and even more testing and this mean that parents are aware of blood sugars in their children all the time and aiming for lower target HbA1cs which sometimes are unachievable. While technology may well improve the



practicalities of living with diabetes, it does not solve the emotional problems for parents or their children. It has always been the case that we need a system that offers greater help, support and understanding in the initial years and in the years that follow as new issues arise in the lives of our children.

Research of interest to Parents

Two new genes discovered as causes of neonatal diabetes

Neonatal diabetes is diagnosed when a child is less than 6 months old and some of these children have added complications, such as muscle weakness and learning disabilities with or without epilepsy. It is a rare condition which affects about 1 in 100,000 births.

Research carried out at the University of Exeter Medical School discovered mutations in two specific genes which are important for the development of the pancreas. This affects insulin production and causes the disease where blood glucose levels rise dangerously high. This increases the number of known genes that can cause neonatal diabetes to 20 and also increases the knowledge of how insulin-producing beta cells are formed, which in turn, has implications for research into manipulating stem cells that could one day lead to a cure.

Parental diabetes influences birth weight and diabetes risk in offspring

Research has shown that paternal diabetes was associated with lower weight at birth but maternal diabetes was associated with higher birth weight. Lower birth weight was linked to Type 2 diabetes, but the risk declined with a 1kg increase in birth weight. The researchers suggest that current treatments to increase birth weight to prevent the onset of Type 2 diabetes may be ineffective. (Int Journal of Epidemiology, December 2013)

Post-exercise hypoglycaemia in young people with Type 1 diabetes

A study collected information on young people with Type 1 diabetes aged 14 to 20 and found that those who spent 30 minutes or more on moderate to vigorous physical activity in the previous afternoon had a 31% increased risk of night time or next-day hypoglycaemia compared with those who had lower exercise levels. The researchers said that these results highlight the importance of educating young people about hypoglycaemia prevention following exercise. (Diabetes Care, May 2014)

Does body weight affect the progression of Type 1 diabetes due to beta cell loss in children and adolescents?

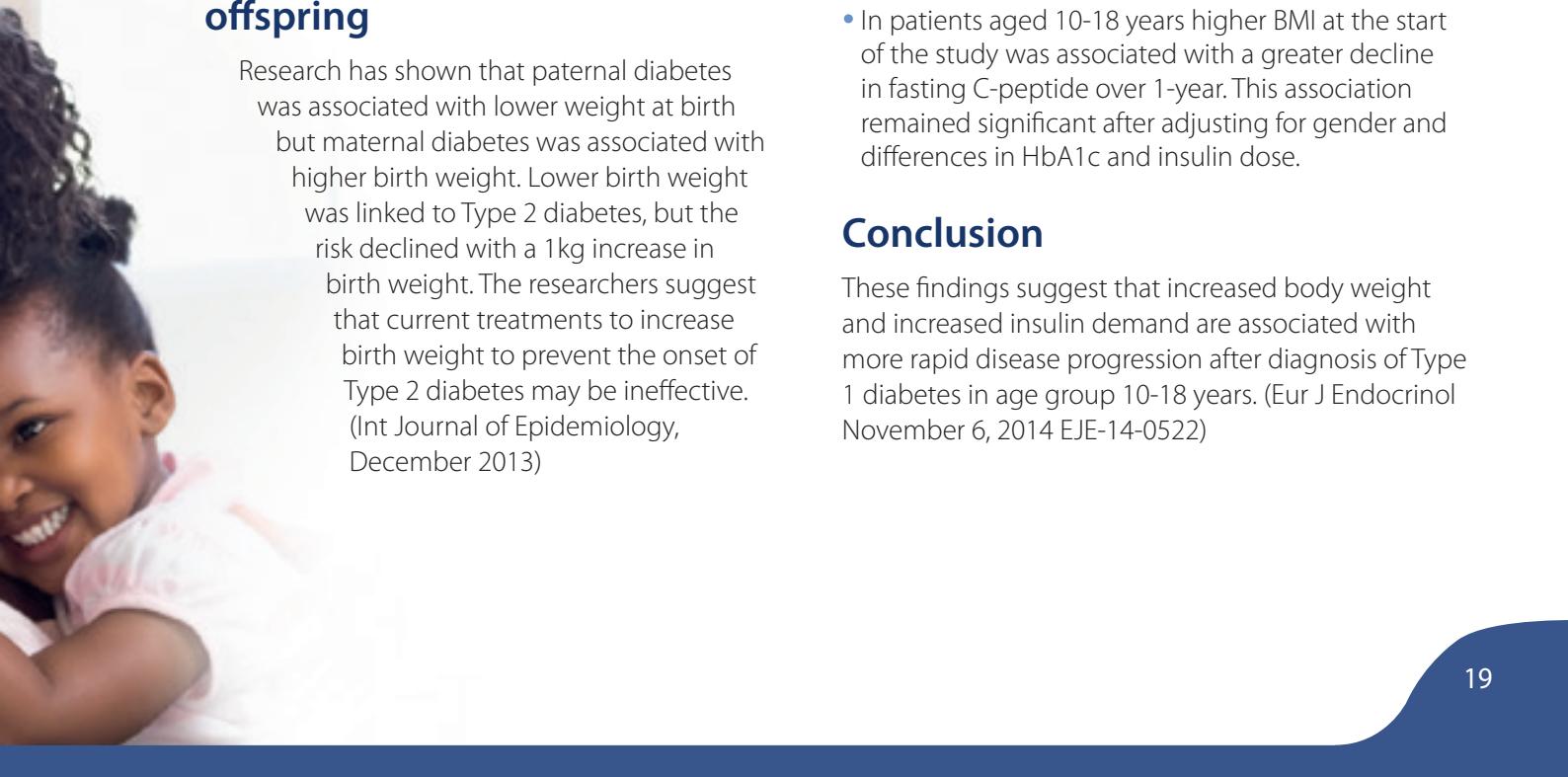
This study investigated whether body weight (BMI) measured at diagnosis affects the progression of Type 1 diabetes in children and adolescents after a year. It was carried out at 7 centres in Europe and the participants were in groups according to age at diagnosis – those under 5 years, 5 to 10 years, 10 to 18 and 18 years and over. C-peptide was collected from all the participants. C-peptide is produced at the same time as the production of insulin, so measuring C-peptide levels shows the amount of insulin that is being produced.

The results showed the following.

- In the participants aged 0-5 years, 5-10 years and those diagnosed over 18 years, there was no association between BMI and C-peptide decline.
- In patients aged 10-18 years higher BMI at the start of the study was associated with a greater decline in fasting C-peptide over 1-year. This association remained significant after adjusting for gender and differences in HbA1c and insulin dose.

Conclusion

These findings suggest that increased body weight and increased insulin demand are associated with more rapid disease progression after diagnosis of Type 1 diabetes in age group 10-18 years. (Eur J Endocrinol November 6, 2014 EJE-14-0522)





SNIPPETS

Short bursts of exercise improve blood sugars

A small study has shown that short bursts of intense exercise before meals could improve blood sugar control in people at risk of Type 2 diabetes. Adults with insulin resistance but not on medication for diabetes benefited more from short bursts of intense exercise before meals than from a longer period of sustained exercise. The researchers from New Zealand said this form of exercise could improve blood glucose control and counteract the effects of a sedentary lifestyle. (Diabetologia, May 2014)

Everybody Active, Every Day

This is the title of an initiative by Public Health England which aims to encourage people, to include physical exercise in their daily lives. Sport England has also announced National Lottery funding for programmes to increase the amount of exercise carried out by people in the UK.

Work stress may raise the odds of diabetes

Male and female employees who reported having job strain were more likely to develop Type 2 diabetes regardless of their lifestyle habits, compared with those without job strain. (Diabetes Care, August 2014)

Mediterranean diet tied to better outcomes in Type 2 diabetes

An analysis has shown that people with Type 2 diabetes who followed a Mediterranean diet took up to eight years before requiring anti-diabetes medications, compared with six years in those who followed a low fat diet. Diabetes remission was also more prevalent in the Mediterranean diet group than those in the low fat diet group. (Diabetes Care, April 2014)

Greater weight loss seen with green veg intake

Research indicates that women who ate at least 5 grams of green leafy vegetables daily, such as spinach, had higher levels of the satiety hormone glucagon-like peptide 1 (feeling of being full). They reached an average weight loss of 11 pounds at three months, compared with 7.7 pounds in the group who did not eat the green vegetables. (Appetite, August 2014)

Chocolate may decrease the risk of Type 2 diabetes

Several previous studies have shown the health benefits of eating chocolate, especially dark chocolate and the American Heart Association has stated that daily chocolate intake may lower blood pressure and improve blood sugar.

A new study looked at information on 18,235 men with an average age at the start of the study of 66 and they

all reported their chocolate intake. After about 9 years, 1,123 of these men developed diabetes. Compared to those who ate no chocolate, men who ate one to three servings per month had a 7% reduced risk for Type 2 diabetes, those who ate one serving per week had a 14% reduced risk and two or more servings per week was linked to a 17% reduced risk. The reasons for this are not known but some studies have shown that cocoa and chocolate may improve insulin resistance. (American Journal of Clinical Nutrition, Feb 2015)

MRI tracks brain response to sugars

A recent study used functional MRI to find out if the brain responds differently to fructose (fruit sugar) and glucose. Fructose appears to increase the action of the reward circuits in the brain which sets off the desire to eat.

Volunteers were shown images of food and this tended to activate an area of the brain that plays a central role in this function and involves dopamine, which promotes desire, and serotonin whose effects include satiety (feeling of fullness). Activation of this area of the brain was greater after the volunteers drank a fructose drink than with a glucose beverage drink. (American College of Neuropsychopharmacology meeting, December 2014)

So it seems strange that fruit juice was originally recommended as one of the government's 5 a day!

Counselling helps with weight loss

Diet and exercise can be effective but American research has shown that in primary care, when obese people had counselling by trained professionals they lost the most weight. The researchers looked at studies published between 1980 and 2014 in which three methods for weight loss were used – reducing calorie intake, increasing exercise and behavioural therapy. People who used all three methods lost the most weight. Behavioural therapy is counselling aimed at changing behaviour by replacing bad habits with good ones. The guidelines suggest 14 face to face, 10 to 15 minute behavioural counselling sessions over 6 months. (JAMA online, November 3rd 2014)

From your editor – Jenny Hirst

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