Insulin Pump Newsletter
Issue 2

NEEDS
NORTH EAST ESSEX DIABETES SERVICE

Happy New Year!

Apologies for not getting this out to you in 2015 as previously anticipated; however it gives us great pleasure to wish you seasons greetings and hope that you and yours have had a safe and enjoyable festive period.

Cold and flu season is here!

There are more than 200 common cold viruses and three types of flu virus, with many different strains, so they're impossible to avoid. Infections and dehydration can make it much harder to control your blood glucose levels so we have some top tips to help you cope and keep you well. So be prepared!!!!!

Make sure you have **in date** ketone urine testing stix or ketone blood testing strips for your meter (optium neo meters or optium exceed meters). Also in date insulin pens and needles. (all should be on repeat prescription via your GP).

Refresh yourself on **YOUR** sick day rule plan. Discuss this with a relative/ close friend so that if you are unwell, they can help you. Most pumps can tell you your average total daily dose (TDD) for the last week – do you know what yours is? If not, find out and write it down.

When you are feeling unwell it is important to check your blood glucose levels every 4 – 6 hours. Also check for ketones every 4-6 hours whilst feeling unwell or if you have elevated blood glucose levels (one reading about 17 mmol/L or several blood glucose levels above 13 mmol/L indicates a need to check for ketones).

Whenever you are unwell make sure you:

- Sip sugar free fluids (100 ml every hour)
- Try to eat small amounts of carbohydrates (40g) every 3-4 hours
- Rest as much as you can

Minor illness: no ketones (or trace) (less than 1.5 mmol/L on optium meter
Use normal correction doses to maintain blood glucose levels

Moderate Ketones present: 1.5 – 3 mmol/L on optium meter or + - ++ ketones on urine Stix
Give 10% of your average TDD every 2 hours as a correction dose. Plus usual insulin to carbohydrate ratio for food and normal basal rate

Severe Ketones present: 3 mmol/L on optium meter or +++ - ++++ on urine stix
Give 20 % of average TDD every 2 hours as a correction dose. Plus usual insulin to carbohydrate ratio for food and normal basal rate. If you continue to vomit, are unable to keep fluids down, or are unable to control your blood glucose or ketone levels you must contact the hospital as an emergency.

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Never stop taking your basal insulin

- If you are requiring large bolus as correction you may need to change your pump site more frequently and consider giving corrections via insulin pen (e.g. NovoRapid/ Humalog/ Apidra) & keep pump running for basal & meal bolus.
- Bolus advice calculated by the pump /handset will not be accurate when you are unwell with moderate/severe ketones- so use the above.

October Insulin Pump Workshop

20 pump users attended to learn more from the insulin pump team about advanced blousing, such as multi/combo and the extended wave, the cannula options and insertion techniques and changes happening within the pump service.

Also Steve Turner spoke about the local patient forums and groups and how they can be useful to help shape local services and that more pump user involvement would be beneficial. If you would like to get involved just let us know and we can pass your details onto Steve.

Feedback was excellent and we will be planning 3 further workshops in 2016. If you were unable to make the workshop you can discuss any of the topics covered at your next clinic appointment with the team. Also if you would like to make any suggestions for topics to cover at future events please email or speak with one of the team.

Research News

April of this year there was a 'World first for the artificial pancreas team' (University of Cambridge), the first **natural** birth, for a woman with diabetes fitted with an artificial pancreas. Previously trials have allowed 3 deliveries to take place by Caesarean section only.

This is extremely exciting as could really be a big benefit to some mums to get better control and ensure a healthy pregnancy. www.cam.ac.uk/research/news/world-first-for-artificial-pancreas-team

De Montford University are also developing an artificial pancreas, not ready for patient use yet, but still very interesting. They are looking for volunteers… http://www.dmu.ac.uk/research/research-faculties-and-institutes/health-and-life-sciences/pharmaceutical-technologies/artificial-pancreas/artificial-pancreas.aspx

Finally…

Back to Cambridge for a new Clinical Trial in Type 1 diabetes for those diagnosed within the last 5 years.Use of a new medication 'Aldesleukin' (interleukin-2). The aim of the study is to see whether this medication can halt damage to the pancreas of people with newly diagnosed type 1 diabetes

Those eligible can take part, contact DILT1D@cimr.cam.ac.uk for further details.

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Pump Annual Review

We will be looking into a new format for the annual review appointments, to take a more holistic look at whether you are meeting you agreed personal goals and if pump therapy continues to be the best way for you to manage your diabetes. Given the current financial climate in the NHS we need to be sure all therapies we are providing are effective and available to those who will benefit the most. If you feel insulin pump therapy has not helped you achieve optimal diabetes control or that you find the pump too much work and time consuming please discuss with the team and there are numerous options to consider.

Team Update

Many of you will know and have seen Karen Turner (DSN) on a regular basis in pump clinic over the years. She has recently retired and we wish her all the best for the future! Ceri Jagger and Heather Chandler will now be the new regular faces for you to see in clinic, they have many years of diabetes experience between them and will do their best to ensure a smooth transition.

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Tel: 0845 2413313 / 01473 344930
Email: info@diabetesneeds.org.uk

Useful Tips

- Aim to give bolus insulin just before you eat a meal- this allows the insulin time to start working just as the digested carbohydrate is entering the blood stream.
- Bolus insulin given after a meal can result in a raised blood glucose for some time (approx. 30 minutes after the bolus is given), if done late at every meal that can easily add up and impact HbA1c
- A few situations this may vary include:
  - Very High GI foods (blousing a bit earlier may help the insulin get into blood stream at the right time). If poor appetite/ not sure how much you will eat > best option is to bolus half at start of meal then remainder of what you eat at end of meal
  - Gastroparesis (diabetes team would advise individually if relevant)
  - Using advanced bolus such as multiwave/ combo wave/ expended- this will vary on the circumstances and naturally not all insulin is given before meal.