

Clinical Doctorate Programme Research Proposal:

Glucose Variability in Type 1 Diabetes & Glycaemic Responses to Food Composition

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Problem:

- Glucose variability
- Postprandial hyperglycaemia (Tansey et al. 2016; Edge et al. 2017)
- The breakfast spike (DCCT, 1993; DirecNet, 2005, Gandrud *et al.* 2007)

Research proposal -two phases:

Phase one - Investigation

Phase two - Intervention

Phase one:

- Glucose variability - CGM data
- Postprandial hyperglycaemia at breakfast - CGM data & photo food diaries.

Phase one - Test meals Investigation

- Glycaemic response to breakfast meals – test meals & CGM data

Phase two – Test meals Intervention

- Test of ability - test meals & CGM data

Eligible criteria:

- <18 years. Diagnosis T1D > 1 year
- MDI & CHO counting/CSII
- Dexcom CGM
- Access to email

Exclusion criteria:

- On Metformin.
- Other medical conditions, including complications of diabetes. Coeliac disease

Recruitment:

- Ethics
- Recruit Dietitians - R&D
- Id numbers & Participant Information Sheet & consent form
- Aim: 300 participants

Recruitment (cont.):

Phase one

- Identify potential recruits
- Gain consent
- Provide researcher with baseline data
- Researcher emails family invite to Dexcom clinic

Recruitment (*cont.*):

- At 3/12 - check eligibility. Provide protocol for 7d photo food diaries & completion of information. Provide data similar to before. Email researcher as before
- Phase one & two test meals. Check eligibility. Provide protocol for test meals & data as before. Email researcher as before

Anticipated outcomes

- Improve understanding of PPH
- Improve the dietetic care
- Empowerment/self management
- Improve mood, concentration, glycaemic control

Questions...