

**Royal College of General Practitioners and Warwick Medical School
Annual Education, Research and Innovation Symposium 18th May 2017**

Abstract Submission Form

PRESENTER'S DETAILS	
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Category Research	
PRESENTATION DETAILS	
Authors Emma Scott, Kelly Johnstone, Deborah Lycett, Corina Chivu, Mark Ramsden & Jeremy Dale	Title of Study The effect of a very low calorie diet on glycaemic control in people with type 2 diabetes mellitus – a systematic review
What's the problem you are tackling? There are 3.6M people in the UK living with Type 2 Diabetes Mellitus (T2DM), a number expected to reach 5M by 2025. Most are managed in general practice. Good glycaemic control (HbA1c<58mmol/mol) is essential to minimise risk of complications but only achieved by two-thirds of patients. 80% people with T2DM are overweight or obese; the main risk factor for disease progression. With diabetes and its consequences accounting for 10% of the entire NHS budget, there is an urgent need for cost-effective ways to reduce its impact on patients, the NHS and wider society. Very Low Calorie Diets (VLCDs) are nutritionally complete, energy restricted, total meal replacement diets of <800kcal/day. VLCDs can result in rapid weight loss and normalisation glycaemic levels within 7days.	
How did/will you do it? Systematic review was undertaken to address the question: What is the effect of a VLCD on glycaemic control in people with T2DM? Key databases (e.g. Embase, Medline/OVID, CINAHL) were searched from inception to December 2016 using the terms: <i>Very Low Calorie Diet</i> OR <i>Very Low Energy Diet</i> OR <i>VLCD</i> OR <i>VLED</i> OR <i>Total Diet Replacement</i> OR <i>Total Meal Replacement</i> OR <i>Meal Replacement</i> AND <i>Type 2 Diabetes Mellitus</i> OR <i>T2DM</i> . Reference lists were hand-searched. Inclusion criteria: patients aged over 18 with T2DM, using a VLCD intervention, reporting HbA1c or fasting blood glucose as an outcome, any study design. A narrative synthesis of the evidence was undertaken.	

What did you find?

3259 papers were identified from the database searches with 29 eligible for inclusion in the review. Six were RCTs, but most were observational studies. 23 studies were community or primary care based.

The duration of the VLCD interventions ranged from 2-33 weeks. Four interventions also included an exercise component and nine included behaviour change counselling or support.

All studies reported significant improvements in glycaemic control and reductions in body weight. Blood pressure and cholesterol were also significantly lowered in those studies which reported them.

Participant adherence and retention was good, but reporting of adverse effects of the intervention was limited. There was limited information about long term efficacy.

Why does this matter?

These findings confirm that VLCDs can lead to significant weight loss and improved glycaemic control in people with T2DM. VLCDs appear to be as acceptable as other treatments in obese people with type 2 diabetes suggesting that they may provide an alternative non-invasive method of managing T2DM in the primary care setting.

Evidence on the long-term efficacy and cost effectiveness, however, is lacking. Further research in the form of primary care based randomised controlled trials with long-term follow-up is needed to address these questions.