

Very Low Calorie Diets and Diabetes

What is a Very Low Calorie Diet?

A very low calorie diet (VLCD) is any diet that involves eating 1,000 calories per day or less. The recommended daily energy intake is 2,000 calories a day for women, and 2,500 calories a day for men. As very low calorie diets contain far fewer calories and carbohydrate than the body needs, the body burns stored fat as an alternative source of energy (known as ketosis). This leads to very rapid weight loss.

During a very low calorie diet a person typically stops eating ordinary foods, and replaces them with very low calorie food products such as 'milkshake' style drinks, soups, food bars or porridge. These very low calorie food replacement products are designed to contain all the nutrients that a person needs, while providing 1,000 calories a day or fewer.

Very low calorie diet products are not available on NHS prescription in England, but can be bought privately following recommendation by a healthcare professional, via the internet, or directly from a VLCD company sales representative, 'consultant' or counsellor (e.g. LighterLife, Cambridge Weight Plan, Nestle Health Science, etc.)

Continuous versus intermittent very low calorie diets

People may choose to follow a continuous very low calorie diet, where they replace all of their foods with very low calorie food products (e.g. LighterLife Total, Cambridge Weight Plan, Optifast, etc.), or they may follow a very low calorie diet intermittently for 2-4 days a week, with either healthy eating or their normal way of eating for the rest of the week. There are various popular versions of this type of diet (e.g. the 5:2 Fast diet, Alternate Day Fasting Diet, The 2 Day Diet, etc.). There is some evidence that an intermittent very low calorie diet is easier to follow than a continuous very low calorie diet, that it may improve diabetes control and slow down the progression of type 2 diabetes.

Very low calorie diets and type 2 diabetes

Various studies have been done which show that a very low calorie diet can be very effective in the short term in improving diabetes control if you have type 2 diabetes and to help you to lose weight quickly. However in the longer term, a very low calorie diet is no more effective than a conventional weight loss diet, and people are more likely to regain the weight that they have lost on a very low calorie diet without ongoing support from a health care professional.

The Newcastle Diet

Recent research carried out by researchers at Newcastle University showed that type 2 diabetes may be reversible by following a very low calorie diet. Under the close supervision of a medical team and dietitian, 11 people (9 men and 2 women) with recently diagnosed type 2 diabetes, drastically cut their food intake to just 800 calories a

day for 8 weeks. Known as the 'Newcastle Diet', all that they were allowed to eat each day were 3 very low calorie 'milkshake' drinks and 2 non-starchy portions of vegetables. Within 1 week of starting the very low calorie diet, their fasting blood glucose levels had returned to normal, they had reduced the amount of fat stored in their liver by 30 per cent (one third) and their insulin sensitivity had returned to normal. By the end of the 8 weeks, 7 out of the 11 people had completely reversed their diabetes, they had all lost a significant amount of weight - average weight loss was 15 kg (2 stone 5 lb), and had reduced the amount of fat stored in their livers and pancreases. They were followed up 3 months after finishing the VLCD and were given advice from a dietitian on reintroducing foods back into their diet, portion size control and healthy eating. Of the ten people re-tested, 7 out of the 11 people remained in remission from type 2 diabetes.

To test whether the 'Newcastle' Diet may be a viable NHS treatment for reversing type 2 diabetes, the Newcastle researchers have teamed up with other researchers from Glasgow University to see whether losing weight on a very low calorie diet and keeping it off using a structured, personalised weight loss support programme works. This trial is still ongoing and is known as the DIRECT Trial (Diabetes Remission Clinical Trial). More information about the Newcastle Diet and the DIRECT trial is available on the Newcastle University website:

www.ncl.ac.uk/magres/research/diabetes/reversal.htm

How safe is a very low calorie diet?

NICE (the National Institute of Health and Care Excellence) does not recommend following a very low calorie diet unless you have been assessed and are having treatment and follow up in a specialist weight management clinic (e.g. you are attending a specialist weight management clinic such as TARGET or following a very low calorie diet in preparation for having bariatric surgery). It is important that the very low calorie diet is nutritionally balanced and is followed for a maximum of 12 weeks, as a very low calorie diet can potentially cause health problems. These include the risk of nutritional deficiencies such as anaemia, gallstones, gout, heart problems, dehydration, dizziness, headaches, constipation, 'wind', bad breath, hair loss, dry skin, menstrual changes (if you are a woman), and can leave you with excess, loose, saggy skin.

If you inject insulin or take sulphonylurea tablets (e.g. Gliclazide, Glimpiride, etc.) for your diabetes, then there is an increased risk of hypoglycaemia (e.g. low blood sugar levels) if your insulin doses and/or the amount of tablets that you take are not reduced when you start a very low calorie diet, as very low calorie diet food products are low in carbohydrate (less than 20 grams of carbohydrate per serving).

Very low calorie diets are not recommended for pregnant or breastfeeding women, children or people with certain health conditions such as pre-existing kidney disease, liver disease or unstable heart conditions. A very low calorie diet is also not recommended if you suffer from severe depression, or have a history of an eating disorder such as anorexia nervosa or bulimia nervosa, if you have porphyria, or a milk, soya or egg allergy or milk intolerance, as very low calorie diet food products contain milk, egg or soya protein products.

How do I start a very low calorie diet?

If you think that a very low calorie diet may be suitable for you, the first step is to talk to your doctor or diabetes nurse. He/she will be able to refer you to the diabetes specialist dietitian or your local NHS specialist weight management clinic, who will be able to advise you about whether a very low calorie diet is suitable for you, or not. They will measure your weight and body mass index (BMI), and talk to you about what other steps you've already taken in order to try to lose some weight. If it is agreed that a very low calorie diet is suitable for you to follow, then they advise you about what foods and drinks you can eat and drink as part of a very low calorie diet, and provide you with information about reputable UK companies who sell very low calorie diet food products, as these products are not available on prescription in England.

There are a number of different companies in the UK who sell these products. Some companies will only sell their products to people on the recommendation of a health care professional. Others may provide a telephone sales service or website 'shop', or may employ a local 'consultant' or counsellor, who will talk to you about how their very low calorie diet plan works. You may be asked to complete a health questionnaire and to contact your doctor for his/her permission before starting the very low calorie diet plan. After you have started your very low calorie diet, the company sales representative, 'consultant' or counsellor should contact you, or meet with you regularly to monitor your progress, and refer you back to your doctor if you encounter any health problems during the time you are on your very low calorie diet.

How much does a very low calorie diet plan cost?

The cost of a very low calorie diet plan varies significantly, depending on whether you decide to replace all of your food with very low calorie food products or are following a very low calorie diet intermittently, and what type of counselling or customer support the very low calorie diet company provides you. Alternatively you could ask to be referred to a diabetes specialist dietitian or your local NHS specialist weight management clinic, who will be able to give you dietary advice and support for free.

Very low calorie diet companies

LighterLife: Tel. 0800 2 988 988, website: www.lighterlife.com

Cambridge Weight Plan: 0800 16 14 12, website: www.cambridgeweightplan.com

Nestle Health Science UK (Optifast): Tel. 0845 603 1979, website: www.nestlehealthscience.co.uk 0845 6031979

Further information and advice

For further advice and information please contact:

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