Slim·Fast® and Diabetes

Meal replacement diets for achieving weight loss in people with Diabetes Mellitus (DM) may be used in people with Type 2 Diabetes who do not require insulin. However, they have not been evaluated in people with Type 1 Diabetes in whom, therefore their use cannot therefore be recommended.

There is no difference in terms of energy, micronutrient and macronutrient content between a meal replacement diet and a carefully devised self-selected reducing diet chosen from foods. However nutritional requirements are more easily achieved with meal replacements and clinical trials show that weight reduction and maintenance as well as improvement of biomarkers occur with meal replacement diets.

Adjustment of the drug regimen is the same for meal replacement programmes as for any other weight reduction programme. Many patients show improved metabolic control during and after weight loss. Sensitivity to insulin can increase soon (48–72 hours) after commencing the diet, so early and frequent reassessment is recommended, with frequent self-monitoring of blood glucose and adjustment of drug dosage.

Metformin If on maximal or near maximum doses reduce by 500mg, initially, taking this from either the first or second dose of the day.

Sulphonylureas If on maximal or near maximum dose reduce by 25 to 33% (e.g. 15mg glibenclamide to 10mg glibenclamide) at the commencement of the diet and readjust as necessary after a few days. On lower doses reduce slightly (e.g. by 2.5mg for glibenclamide, by 40mg (half tablet) for gliclazide, by 2.5mg for glipizide, by 1mg for glimepiride).

Repaglinide and Nateglinide Similar to sulfonylureas, but short-acting; stimulate insulin secretion. Usually taken 15 min before meals (0–30 min); skip dose if meal not eaten (widely available in the USA). Weight loss may be easier if overall dose reduced at the start of the diet.

Thiazolidenediones (TZDs) act by increasing insulin sensitivity. If dietary energy is reduced while TZDs are taken with another oral hypoglycaemic agent, without due consideration of dose adjustment there may be an increased risk of hypoglycaemia.

Alpha-glucosidase If acarbose is the sole medication reduce dose (e.g. by 50mg at each meal) because meal replacements provide relatively more carbohydrate and gastro-intestinal side-effects may be greater than usual if the full dose is continued. Consider stopping this medication during the weight reduction programme. Used in combination with sulphonylureas, both should be reduced to reduce the risk of hypoglycaemic episodes.

Bulking agent Guar gum could be continued at full dosage but in the interests of minimising gastro-intestinal side effects should be stopped on commencement of meal replacements. Meal replacements contain fibre at an adequate level – additional guar gum is not needed.

Other Drugs Used In Diabetes

Lipase inhibitors Ideally the patient has demonstrated successful weight loss before commencement of orlistat.

Orlistat Introduction of a meal-replacement diet is not specifically indicated during weight loss with orlistat, but is not contraindicated. A maintenance programme of one meal replacement per day after weight reduction has been achieved may help to maintain body weight after cessation of use of orlistat.

Sibutramine Appetite suppression using this serotonin-reuptake inhibitor may 'wear-off' in some people after a few weeks. Use of meal-replacements with a sibutramine-like drug has been shown to result in good weight reductions.

Rimonabant No trial of rimonabant with meal replacements has been reported, but there is no known contraindication to continuing the rimonabant with a meal replacement regimen.

Hypotensive Agents

Reducing diets have an early effect on blood pressure probably mediated by altered sodium handling. Consideration must be given to the need for adjustment of blood-pressure-lowering therapy from the commencement of the dietary regimen, possibly working in the reverse order in which the hypotensive agents were introduced following the 'A/CD' approach recommended by NICE, the British Hypertension Society and Joint British Societies Guidelines.

Blood Lipid Lowering Drugs

Statin and other lipid-lowering drugs should be continued throughout a meal replacement diet programme and blood lipids re-measured after 12 weeks. Drug therapy may then be readjusted as necessary based on blood lipid results.

Weight Management In Type 1 Diabetes Mellitus

There is no contraindication to weight-reduction in overweight Type 1 Diabetic patients, but meal replacement diets have not been subjected to clinical trial evaluation in people with Type 1 Diabetes and therefore their use cannot be recommended at this time. Guidance from the doctor or dietitian should be sought.