

Food intake and intolerance after high gastric reduction surgery

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Success of surgery for weight reduction, as measured by both weight loss and minimisation of eating-related complications, appears to be largely dependent on adherence to post-operative dietary advice. This five month study was designed to provide detailed dietary intake and food intolerance data, in parallel with serial anthropometric data.

Twenty-six obese subjects (25 females, one male, aged 23-59 years, BMI 32.5 - 52.7 kgm⁻²) underwent anthropometric, haematological and dietary assessment prior to high gastric reduction (HGR). At this time, subjects were provided with both verbal and written dietary instruction (contained in a patient information booklet) which was specific for post-HGR and was also referred to at follow-up. Follow-up assessments were conducted at three weeks and two months post-HGR. Nineteen subjects were followed up at five months post-HGR.

Weight decreased significantly throughout the follow-up period at both two months ($P < 0.01$) and five months ($P < 0.01$). Mean (SD) weight loss at two months ($n = 26$) and five months ($n = 19$) was 14.3 kg (4.1) and 24.0 kg (7.9) respectively. Mean energy intake remained significantly decreased ($P < 0.01$) throughout the study, at both two months (3.41 MJ) and five months (4.23 MJ). Although dietary iron intake remained below the Recommended Dietary Intake (RDI) at both two months (40% of RDI) and five months (51% of RDI), haematological indices of iron status were not significantly decreased and remained within reference ranges throughout the study. This finding may be partly explained by the high level of compliance (75% of subjects) to one of the recommended multivitamin/mineral supplements (1.5 - 5.0 mg elemental Fe) and the high dietary vitamin C intake, which, unlike most other nutrients, was 170-185% of RDI throughout the follow-up period.

Detailed information on meal and snack patterns was obtained and correlated with weight loss. Complications of eating were measured by a vomiting (V) and eating (E) score, ranging from V1E1 (significant complications) to V5E5 (no complications). By two months, 80% of subjects had a V score of 4 or 5 (either never regurgitating or regurgitating less than once per week), however at five months, the number of subjects with a V4-5 score had decreased to 60%. This finding was interpreted by the investigators to be due to relaxed compliance to the recommended post-HGR eating guidelines. In contrast, the E score improved consistently throughout the study. The majority of subjects (80%) were able to tolerate unminced red meat, chicken, fish and raw fruits/vegetables at five months. Fresh bread was slightly less well tolerated with only 60% of subjects being able to tolerate fresh bread at five months.

Our findings show that HGR is an effective operation which results in considerable weight loss at a rapid and steady rate and that, with appropriate dietary guidance and post-operative follow-up and support, eating-related complications and risk of haematological sequelae can be minimised.