Weight Loss Studies in Obese Patients
Aspects of very-low-energy diet treatment and effects of obesity surgery on disability pension

Akademisk avhandling

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Weight Loss Studies in Obese Patients
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Abstract:
Obesity is associated with increased risk of serious medical conditions, impaired quality of life, reduced working capacity, and shortened life expectancy. Obesity surgery is the most effective weight loss treatment with large health benefits, including reduced mortality. However, the long-term effects on productivity loss are not known. Surgical treatment is not an option for all obese patients and effective dietary treatments are much needed. Very-low-energy diets (VLED) induce rapid and substantial weight loss. After the VLED period, patients switch back to ordinary food. The refeeding period may be crucial in adjusting eating habits to maintain weight loss. The effect of different refeeding strategies on weight development has so far not been examined. VLED does not work for all patients and it is therefore important to understand who will benefit the most from VLED treatment and identify those who need extra support. The aim of this thesis was to test if a prolonged refeeding duration after VLED-induced weight loss improves weight development, to explore factors predicting VLED weight loss and drop out, and to study the effect of obesity surgery on disability pension.

Obese patients were recruited to a 1-year, randomised weight management intervention with 12 weeks of initial VLED. Those who lost at least 10 percent of their weight on the VLED were randomised to either 1 or 6 weeks of refeeding to an ordinary, energy-reduced diet. Patients with longer refeeding regained significantly less weight up to 1 year and maintained higher levels of dietary restraint, reflecting an improved ability to restrict food intake and follow dietary prescriptions.

VLED treatment resulted in similar outcomes in women and men. However, the predictors differed by gender. Variables related to perceived physical health, social interaction, socioeconomic factors and obesity-related psychosocial problems predicted VLED outcome. Furthermore, the results suggest that social support and walking capacity are important determinants of successful weight loss in men whereas psychosocial function may influence VLED outcome in women.

The Swedish Obese Subjects (SOS) study involves 2010 surgically treated patients and 2037 obese, contemporaneously, matched control patients followed for up to 20 years. The surgically treated patients achieved sustained weight loss whereas the conventionally treated controls were on average weight stable. Information on granted disability pension was obtained for all participants from the Swedish Social Insurance Agency. The risk of disability pension was lower in the surgically treated men than in the control men when adjusting for confounders (HR=0.79; 95% CI: 0.62–1.00, P=0.05). Number of disability pension days was also lower in men (609 versus 734 days, P=0.01) in a subgroup followed over 10 years (903 men/1994 women). In women, the risk of disability pension or adjusted number of days over 10 years (889 versus 888 days) did not differ between the treatment groups (P=0.97).

The main findings of this work suggest that weight loss after VLED treatment can be improved by prolonged refeeding, that different factors influence VLED outcome in women and men, and that bariatric surgery is associated with reduced disability pension in men.

Keywords: obesity, weight loss, outcome, predictive factors, controlled trial, randomised trial, obesity surgery, very-low-energy diet, disability pension, eating behaviour, quality of life.