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Shadid et al 2013

**ABSTRACT** Introduction: Disappointing long-term results from medical treatment have led to the increasing application of bariatric surgery in class 3 obesity (CL3OB). We report continuing results from our behavior modification program, which aims to provide an alternative for surgery.

Methods: 95 adults with CL3OB or CL2OB with major obesity-related complications (Body Mass Index (BMI)  $44.2 \pm 0.6$  kg/m<sup>2</sup>), age  $48.8 \pm 1.3$  yr) followed 10 group lessons alternated with individual consultations with highly trained professionals. Individualized exercise and diet instructions (1200-2000 kCal/day) were given. 124 controls (BMI  $42.9 \pm 0.5$  kg/m<sup>2</sup>, age  $50.9 \pm 1.1$  yr) received standard care.

Results: 2-year weight loss of completers (n=62) averaged  $18.2 \pm 1.2$  kg\* ( $14 \pm 1\%$  of IBW,  $25 \pm 2\%$  of excess body weight (EBW)). 41 patients lost  $\geq 10\%$  of IBW, 14 of whom  $\geq 20\%$ , and 3  $\geq 30\%$ . Several reached these amounts later. Controls gained  $1.0 \pm 0.7$  kg ( $0.8 \pm 0.6\%$  of IBW,  $1 \pm 1\%$  of EBW), 2 people losing  $\geq 10\%$  IBW. Last observation carried forward analysis (LOCF) showed mean weight loss of  $15.1 \pm 1.4$  kg\* ( $11 \pm 1\%$  of IBW,  $21 \pm 2\%$  of EBW). Preliminary results show weight maintenance of successful subjects up to 3.5 years: 23 (out of the potential 61) patients completing 3 years lost  $19 \pm 1\%$  of IBW ( $12 \pm 1\%$  in the LOCF). 20-35% of our results would have been considered at least satisfactory by various surgical standards. Metabolic and cardiovascular parameters largely improved despite lowering of medication.

Conclusion: Non-surgical mid/long term weight loss is achievable in severely obese patients in outpatient settings; the efficacy/safety trade-off in obesity treatment is an important consideration in interpreting these results. \*p<0.001