

Comparing the Efficacy of Minimally Supervised Home-Based and Closely Supervised Gym Based Exercise Programs on Weight Reduction and Insulin Resistance after Bariatric Surgery

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Abstract : Background and Objectives: Effectiveness of various exercise protocols in weight reduction after bariatric surgery has not been sufficiently explored in the literature. We compared the effect of minimally supervised home-based and closely supervised Gym based exercise programs on weight reduction and insulin resistance after bariatric surgery. Methods: Women undergoing gastric bypass surgery were invited to participate in an exercise program and were randomly allocated into two groups. They were either offered a minimally supervised home-based (MSHB) or closely supervised Gym-based (CSGB) exercise program. The CSGB protocol constitute two sessions per week of training under ACSM guidelines. In the MSHB protocol participants received a notebook containing a list of recommended aerobic and resistance exercises, a log to record their activity and a schedule of follow up phone calls and clinic visits. Both groups received a pedometer. We measured their weight, BMI, lipid profile, FBS, and insulin level at the baseline and after 20 weeks of exercise and were compared at the end of the study. Results: A total of 80 patients completed our study (MSHB=38 and CSGB=42). The baseline comparison showed that the two groups are similar. Using the ANCOVA method of analysis the mean change in BMI (covariate: BMI at the beginning of the study) was slightly better in CSGB compared with the MSHB (between-group mean difference: 3.33 (95%CI 4.718 to 1.943, F: 22.844 p < 0.001)). Conclusion: Our results showed that both MSHB and CSGB exercise methods are somewhat equally effective in improvement of studied factors in the two groups. With considerably lower costs of Minimally Supervised Home Based exercise programs, these methods should be considered when adequate funding are not available.

Keywords : postoperative exercise, insulin resistance, bariatric surgery, morbid obesity

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