

Long-term Weight Loss Maintenance with Obesity Pharmacotherapy: a 5-Year Retrospective Study

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Objective: To determine the association of anti-obesity medications (FDA-approved and off-label) with weight loss maintenance over 3-5 years.

Methods: We performed a retrospective observational study of adults 18-75 years treated for overweight/obesity at a tertiary academic weight management center with an initial visit between April 1st, 2014, and April 1st, 2016. We excluded patients who had a period of follow-up less than 2.5 years or a gap in follow-up of greater than 2 years. Patients who had bariatric surgery, pregnancy, or a medical condition predisposing them to weight loss during the study were also excluded. We extracted key demographic data, medical history, and weight at each visit. Anti-obesity medication (AOM) start date and end date was determined through chart review with attention to patient self-reporting of medication adherence to calculate total exposure to each AOM. We used the weight loss maintenance definition of weight regain >3% of the nadir weight.

Results: A total of 428 patients met inclusion criteria for the analysis and were followed for a mean of 4.4 years. The mean age was 50.9 years, 73% were female, and median initial BMI was 34.3 kg/m². Weight categories were as follows: 19% overweight, 35% class 1, 25% class 2, and 20% class 3 obesity. In addition, 16% had diabetes and 36% had prediabetes. The median nadir BMI was 25.6 with a median maximum weight loss of 14.7%. The median time to achieving nadir weight was 1.9 years. Average weight change from the initial to final visit was -10.6% (-10.9 kg), with a final visit median BMI of 27.4. The proportion of patients who achieved >5%, >10%, >15%, and >20% total weight loss was 70.8%, 48.1%, 30.1%, and 16.8%, respectively. During the 4.4 years the patients were followed, weight regain following the nadir weight was 6.3%. At the last observation, 40.2% of all patients had maintained their maximum weight loss. The mean number of AOMs trialed throughout the duration of the study was 4.2. At the final visit, a mean of 2.5 AOMs were being taken. The most common medications observed at the final visit alone or in combination were metformin (76.2% of patients), phentermine (31.1%), topiramate (30.8%), bupropion (29.9%), and semaglutide (24.5%).

Conclusion: Long-term weight loss of 10.6% was observed over 3-5 years in adults with overweight/obesity who were managed with pharmacotherapy. This study demonstrates clinically significant long-term weight loss maintenance can be achieved with pharmacotherapy and lifestyle interventions.

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