

Defining “Weight Stability” for Post-Bariatric Body Contouring Procedures

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It is common sense that body contouring procedures for post-bariatric population should only take place when the patients finally achieve a desired deflation pattern (BMI) in a complete and stable basis, presenting proper nutritional, psychological and clinical conditions. While still losing weight, those patients face a delicate process of metabolic adaptation with nutritional depletion and negative nitrogen balance, which impairs healing conditions and the overall response to surgical stress [1]. Aly has called attention to possible false plateaus in the post-bariatric weight loss curve and undesirable weight fluctuations following body contouring procedures are closely associated with high complication rates and low quality results [2]. Timing for post-bariatric plastic surgery is still ruled by fairly subjective criteria, because there are no definitive and consensual landmarks to describe “weight loss stability,” in other words, when it happens, what exactly defines it, and how long time of such “stability” is necessary to safely allow the beginning of body contouring restoration.

The literature has anecdotally proposed 12–24 months until post-bariatric patients reach weight stability [3]. Patients’ profiles, technical skills, surgical procedures (restrictive/absorptive/both), dietary education, physical activity and psychological behavior are some of the different aspects involved in the bariatric treatment outcome. Because those different variables may influence each weight loss curve, we find it reasonable that medical services should research and identify their own mean time for stabilization, according to their practice records. In our institution, we have retrospectively found 21.5 months as the mean time to achieve weight stability after gastric bypass (RYGB) [4].

Rubin defined weight stability as no more than 2.5 kg change in weight per month over the previous 3 months [1]. We believe that this limitation should consider different body dimensions using weight percentage instead of generic standard values. We define “stability” when a patient keeps a variation range under 3% of the initial weight, over a 3-month period. We take four weight measurements, at the beginning (W_i), 30 (W_{30}), 60 (W_{60}) and 90 days (W_{90}). The highest score minus the lowest one (ΔW) multiplied by 100 and divided by the initial weight (W_i) brings up what we call weight variation index (WVI), which may not exceed 3 in order to configure weight stability (Fig. 1). Because we have identified our mean weight stabilization time around 21 months, we start taking those measurements at the 18th month post-bariatric (W_i), and if the WVI is still higher than 3, we discharge that initial value and take another one 30 days later, reestablishing a new 3-month evaluation period. This policy should be repeated until the WVI drops lower than 3, when weight stability will be confirmed and the patient allowed to undergo body contouring procedures [3].

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$$WVI = \frac{\Delta W \times 100}{W_i}$$

$WVI < 3 = \text{Weight Stability}$

WVI = Weight Variation Index
 ΔW = Higher minus lower score (W_i , W_{30} , W_{60} , W_{90})
 W_i = Initial weight in a 3-month period
 W_{30} = weight 30 days
 W_{60} = weight 60 days
 W_{90} = weight 90 days

Fig. 1 Weight variation index formula

We suggest a clear definition of weight loss stability for post-bariatric patients, established by a mathematical formula. Although adjustments may possibly take place, the implementation of such objective and reproducible landmarks will help to provide comparable data, by many different institutions, toward the establishment of evidence-

based protocols proposing the ideal opportunity to start body contouring procedures in that population.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

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