
XXVIII IFSO World Congress
9-12 September 2025 | Santiago, Chile
COMBINED THERAPIES, THE DAWN OF A NEW ERA
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Optimized approach to the dietary management of weight recurrence: pre and postoperatively
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Disclosure Slide

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✖	No, nothing to disclose
	Yes, please specify:

My only disclosure is that I am not a dietitian

Objectives

- Define weight recurrence after metabolic and bariatric surgery and summarize potential contributing factors
- Identify essential elements of a comprehensive pre-revision dietary assessment
- Describes strategies to optimize diet and eating behavior prior to revision surgery
- Establish best practice parameters for post-revision dietary management to reduce risk of future recurrence
- Review emerging evidence and highlight current research gaps to guide future clinical practice

Weight Recurrence: Definition and Prevalence

- Wide variability in definition across studies
- King et al (2018) found that defining recurrence as a percentage of maximum weight lost had best fit with clinical outcomes
- IFSO Position Statement (Haddad et al, 2024) adopted that definition
- True prevalence difficult to establish due to varying definitions
- Meta-analysis by Reis et al (2024) found prevalence of recurrence, defined as "recovery of >10% of the maximum weight loss or points of BMI (>4 or 5kg/m^2)" was 42%

Table 1
Summary of the published weight recurrence and associated definitions

Definitions published	Term being defined with references
>10 kg from nadir weight	WR [13,14]
>25% EWL from nadir weight	WR [14]
>5 BMI points from nadir weight	WR [23]
WR to a BMI of 35 kg/m^2	WR [14]
Any WR after remission of type 2 diabetes	WR [14]
Any WR	WR [14]
WR 5 yr postoperatively from the nadir weight, expressed as change in BMI or %TWL or change in excess BMI lost or % EWL	WR [14]
Two yr s/p RYGB, patients who regained >10% of their lowest postoperative weight	WR [16]
Two yr s/p SG, WR of 5 kg from nadir weight	WR [13]
EWL <50% after reaching EWL >50%	WR [11]
Lack of maintenance of TWL >20%	WR [26]
Percentage of weight regained over nadir weight in 30 days from nadir (mild = .5%; moderate = .5–1%; severe ≥1%)	WR [22]
Progressive weight regain that occurs after achievement of an initial successful weight loss defined as EWL >50%	WR [11]
BMI >35 kg/m^2	WR [14,23]
BMI >30 + EWL <50%	WR [29]
BMI >35 + EWL <50%	WR [30]
Increase of >15% total weight from nadir	WR [31]
36-mo WR: (36-mo weight − nadir weight)/nadir weight × 100%	WR [20]
48-mo WR: (48-mo weight − nadir weight)/nadir weight × 100%	
Current weight − lowest weight in postoperative time as a percent − age relative to the lowest weight	WR [32]
Significant WR = %WR ≥15%	
WR was evaluated relative to the amount of weight loss relative to nadir	WR [17]
WR/weight loss and WR/nadir at each subsequent weight measurement relative to the elapsed time since nadir	WR [17]
Primary nonresponse (1NR): inability to achieve adequate weight loss after surgery	Primary nonresponder [33] Secondary nonresponder [33]
Secondary nonresponse (2NR): excessive WR after initial adequate weight loss after surgery	
Progressive weight regain that occurs after achievement of an initial successful weight loss defined as EWL >50%	WR [11]
WR calculated from the minimum recorded weight	WR [11,14,35]
Percent WR = (5-yr recorded weight − minimum recorded weight × 100)/(preoperative weight − minimum recorded weight)	
>10% of the lowest postoperative weight	WR [16]
>15% of maximal EWL	WR [34]
>20% of weight loss after achieving goal weight loss	WR [7]
Goal weight loss defined as 15% TWL after SG, 25% TWL after RYGB	
Adequate weight loss (AWL) = achieved goal weight loss without the WR	
Nonresponders never achieve goal weight loss	
2 yr s/p RYGB with successful weight loss defined as ≥50% EWL in 1–2 yr postoperatively	WR [15]
WR defined >15% of the 1-yr postoperative weight	
S/p RYGB, all patients must have achieved nadir weight in the following time periods: 1–2 yr, 2–3 yr, 3–4 yr, 4–5 yr, 5–6 yr, and >6 yr postoperatively. WR is evaluated relative to weight loss	WR [17]
>10 kg weight gain from lowest postoperative weight	WR [13]

SG = sleeve gastrectomy; RYGB = Roux-en-Y gastric bypass; EWL = excess weight loss; TWL = total weight loss; IWL = insufficient weight loss; WR = weight regain/recurrence; s/p = status post; NR = nonresponders; AWL = adequate weight loss.

Majid et al, 2022)

Factors Associated with Weight Recurrence*

- Anatomic:
  - GJ stoma diameter
- Genetic/Physiologic:
  - Hormone levels
    - Post-prandial GLP-1
  - Gut microbiome
- Physical Activity:
  - Reduced intensity and overall time
- Weight promoting medications:
- Psychosocial
  - Low social support
  - Post-operative follow-up
- Behavioral:
  - Binge eating
  - Loss of control eating
  - Emotional eating
  - Alcohol use
- Dietary:
  - Overall energy intake
  - Portion size
  - Diet quality
    - Ultra processed foods
    - Sweet consumption
    - Increased carbohydrate and reduced protein intake
  - Grazing

(Ames, 2022; Athanasiadis, 2021; Cheung, 2023; Cohen, 2023; Ergenc, 2-25;Isom, 2021; Lobao, 2024; Moslehi, 2023; Noria, 2023; Nymo, 2022)

Comprehensive Pre-revision Assessment

- Disease progression- normalize some degree of weight recurrence
- Get the patient perspective
- Expectations- need for realignment?
- Individualized approach utilizing interdisciplinary team
  - Dietary/nutritional assessment by dietitian with specialized knowledge regarding metabolic and bariatric surgery
  - Behavioral health assessment
    - maladaptive or disordered eating behaviors
    - mental health challenges
    - health behaviors
  - Physical activity assessment, including Frequency, Intensity, Time, and Type
  - Medical assessment, including anatomic issues, comorbidities, and weight promoting medications

(Cohen, 2023; Haddad, 2024; Tolvanen, 2023)

Comprehensive Pre-revision Assessment

- Nutrition focused physical exam
- Comprehensive diet history
  - Meal patterns:
    - Frequency
    - Duration
    - Quantity
    - Timing
    - Eating mechanics
  - Diet composition, including:
    - Food choices
    - Snacks
    - Liquids
    - Eating out
- Nutrition knowledge
- Diet restrictions or intolerances
- Alcohol intake
- Hunger and fullness cues
- Eating triggers
- Tracking or other self monitoring
- Vitamin and mineral supplementation
- Laboratory screening
- Financial considerations
- Cultural considerations
- Support

(Cohen, 2023; Haddad, 2024; Tolvanen, 2023)

Pre-revision Diet Optimization

- Individualized diet recommendations and education
- Shift focused from scale to health and relationship with food
- Correct existing vitamin and mineral deficiencies
- Focus on diet quality
  - Minimize ultra-processed foods
  - Minimize liquid calories
  - Minimize simple carbohydrates
  - Focus on lean proteins, fruits, vegetables, and complex carbohydrates
- Establish regular meal pattern
- Mindful eating, with focus on hunger and fullness cues
- Small plates/ portion control
- Self-monitoring

(Frias-Toral, 2025; Isom, 2021)

Pre-revision Diet Optimization

Calories	1200-1800 kcal/day	
Proteins	35% of intake (80-100g)	
Carbohydrates	35-50% of intake (130 g)	Focus on complex carbs, low-glycemic load
Fats	20-35% of intake	Minimize trans and saturated fats
Fiber	15 g/day	Soluble
Dairy	3 servings per day	
Fluids	64 oz/day	
Micronutrient supplementation	MVI, Calcium, Vitamin D, Fe, Folic acid, B12, B1	Per guidelines, adjust based on labs

(Faria, 2008; Frias-Toral, 2025; Isom, 2021)

Nutritional Considerations for GLP-1s

Calories	1200-1500 kcal/day women, 1500-1800 kcal/day men		healthy diet focused on vegetables, fruits, whole grains, lean proteins, low fat dairy, healthy fats
Protein	>60 g/day, up to 1.5 g/kg/day	10-35 % of energy intake	focus on lean proteins
Carbohydrates	130 g/d +	45-65% of energy intake	whole grains, fruits, vegetables, nuts and seeds, dairy. Limit added sugars
Fats		20-35% of energy intake	nuts and seeds, avocado, fatty fish, vegetable oils (limit palm and coconut oil). Limit saturated fats
Fiber	21-25 g/day women, 30-38 g/day men		whole grains, vegetables, beans/lentils, fruits, nuts and seeds. Gradually increase foods with soluble and insoluble fiber
Fluids	>2-3 L/day		No/low calorie or nutrient-dense beverages
May need smaller, more frequent meals. Due to decreased hunger, may need strategies, such as alarms, to ensure adequate intake			

Almandoz, 2023; Mozaffarian, 2025)

Post-Revision Management

- Individualize recommendations
- Will likely start with liquids again and advance diet accordingly
- Balanced diet with focus on high quality foods
  - Minimally processed foods, fruits, vegetables, lean protein, healthy fats
- Low-glycemic/high-fiber
- Importance of protein to help preserve lean body mass, increase satiety
- Separate food and fluids to enhance satiety
- Portion control
- Self-monitoring
- Vitamin and mineral supplementation- may differ from pre-revision
- Follow-up!

(Faria, 2008; Frias-Toral, 2025, Sarwer, 2011; Stoklossa, 2013)

Post-revision Diet Optimization

Calories	1200-1800 kcal/day	
Proteins	35% of intake (80-100g)	
Carbohydrates	35-50% of intake (130 g)	Focus on complex carbs, low-glycemic load
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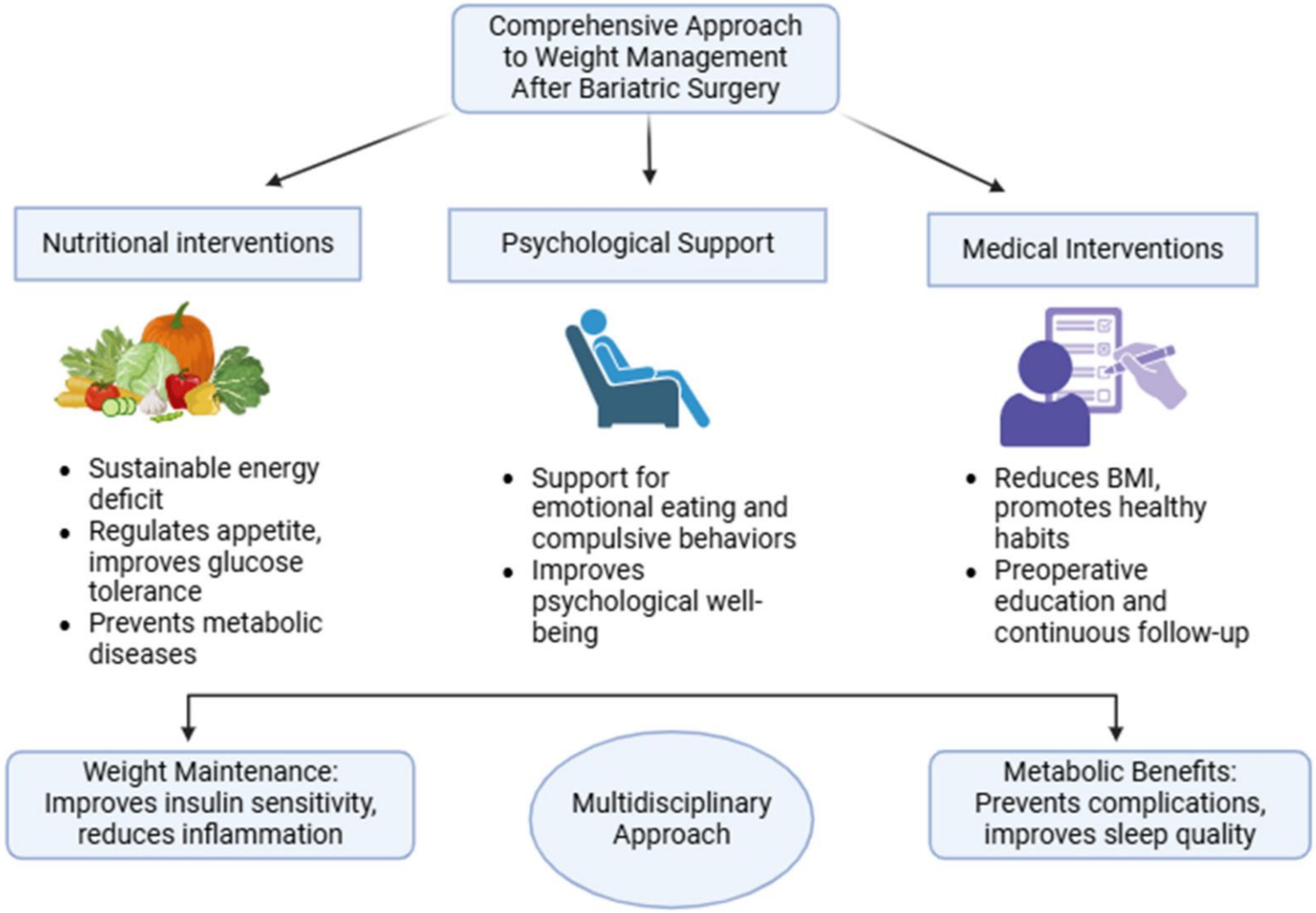
(Faria, 2008; Frias-Toral, 2025; Isom, 2021)

Post-Revision Management



(Frias-Toral, 2025- https://www.mdpi.com/nutrients/nutrients-17-00688/article_deploy/html/images/nutrients-17-00688-g003.png; Tolvanen, 2023)

Emerging Evidence and Research Gaps

- Emerging Evidence:
  - Nutrigenomics and epigenetics
  - Gut microbiome
  - Predicting response to surgery
    - Genotyping
    - Machine learning
- Gaps and Research Opportunities:
  - Needs studies using standardized definitions of recurrence
    - effect of diet composition on outcomes
    - impact of eating behaviors on outcomes
    - influence of interdisciplinary team follow-up on outcomes

(Faria, 2020; Frias-Toral, 2025; Larkin, 2025, Saux, 2023)

Take to practice points

Optimized approach to postoperative weight recurrence should involve the interdisciplinary team and be tailored to individual patient needs

Emphasis on regular follow-up and self-monitoring to aid in early identification and intervention for weight recurrence

Focus on protein, eating behaviors, and diet quality

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Thank you!

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