What is the impact of obesity medications on nutrition? Should we be concerned?

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No disclosures

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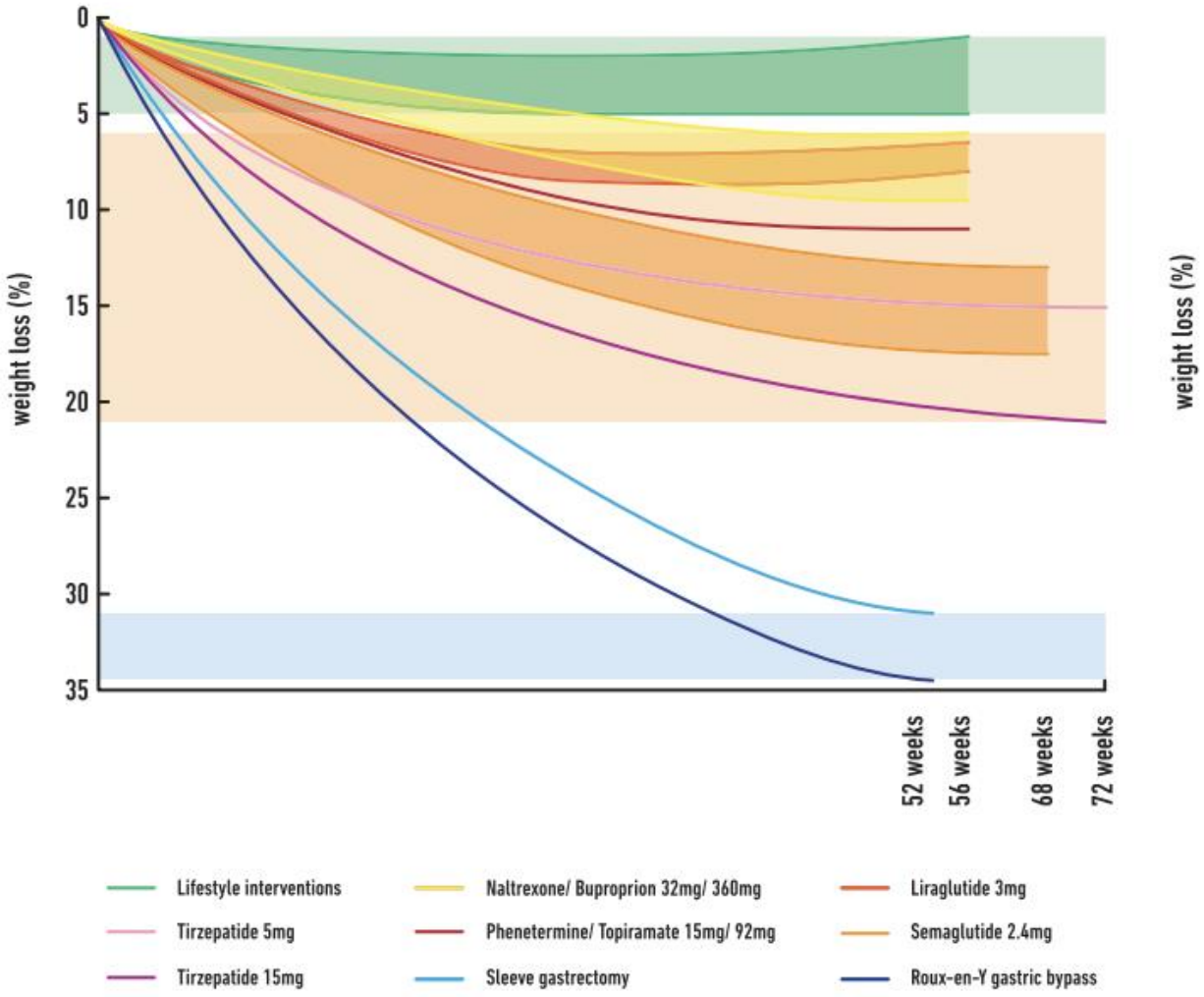

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Improvements in Obesity-Associated Complications and Comorbidities with Weight Reduction

2–5%	Blood glucose Triglycerides
5–10%	Systolic and diastolic blood pressure HDL cholesterol Hepatic steatosis Knee pain and function in osteoarthritis Urinary stress incontinence Polycystic ovary syndrome (improved menstrual cyclicity, reduced serum androgens) Male hypogonadism Quality of life
10–15%	Gastroesophageal reflux disease (improved symptom severity and frequency) Obstructive sleep apnea (decreased Apnea-Hypopnea Index) Steatohepatitis (improvement in MASH activity score) Female infertility
>15%	Remission of T2D

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Objective

Discuss the impact of OMM on nutrition

- Nutritional deficiencies (protein, micronutrients)
- Eating behaviour
- Body composition (muscle mass loss)

Nutritional Assessment

Nutritional Assessment

- Assess nutrient deficiency risk factors
- Evaluate nutrient intake
- Nutrition-focused history
- Physical assessment of body composition

Almadoz, 2024

Nutritional Assessment

Monitor Treatment response

- Assess response monthly (every 3m) (OMM escalation)
- Address GI symptoms
- Monitor for emergent or worsening of mood disorders

Almadoz, 2024

Nutritional deficiencies

Main concerns

- Macronutrients (i.e. protein)
- Micronutrients
  <1200kcal/d should consider taking complete MVI
- Assessing nutritional status

Nutrition Bulletin, 2024

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Nutritional deficiencies

Potential risk of **nutritional deficiencies (ND)**

High prevalence ND pre-operative and post operative moment

OMM → Significant **reduction in food intake, similar to** MBS(<1200kcal/d)

1) Consider **vitamin & mineral supplementation w/OMM**

2) Checking **nutritional blood and correcting deficiencies before** OMM as there is a high incidence of nutritional deficiencies, especially ferritin, folate, vitamin B12, and vitamin D

Parrot et al 2016 , O'Kane et al 2020
Brown et al, 2020 3 Antje D-M et al 2012

Nutritional deficiencies

The diet quality may remain poor after MBS
The same is likely true for OMM.

Bariatric Surgery Does Not Affect Food Preferences, but Individual Changes in Food Preferences May Predict Weight Loss

Mette Søndergaard Nielsen [1,2], Simone Rasmussen[1], Bodil Just Christensen[3], Christian Ritz[1], Carel W. le Roux [4,5], Julie Berg Schmidt[1] and Anders Sjödin[1]

REVIEW
Clinical Trials and Investigations

Obesity
A Research Journal
THE OBESI SOCI

2024

Nutritional considerations with antiobesity medication

Eating Behaviours

OMM

Increase well-being:
- Reducing the rewarding value of high-energy dense foods.
- Reducing negative effects, weight and stigma
- Providing individuals with moments of reflection to exam their food intake
- Focus on healthy living

Almadoz, 2024

Eating Behaviours

Screening for eating disorders (ED)

- Decreased caloric intake with no effect on eating habits (mask ED)

-Impact of GLP-1 RAs lead to unwanted **consequences** on eating behaviours:

* **inappropriate food choices** to provide adequate nutrient intake.

* gastrointestial side effects: ↓ **protein and micronutrient-rich food.**

Eating Behaviours

Simple & easy orientation to improve eating habits

Focused on adequate protein intake and regular ingestion of fruits and vegetables.

Body composition

The main concern is excessive muscle mass loss.

Lack of information about body composition in the pre-operative moment.

Sarcopenic Obesity

- A vicious cycle of weight gain and muscle loss
- Reduced mobility
- Increased dependency and disability.
- Risk of weight recurrence
- Risk of osteoporosis
- Frailty, comorbidities, and mortality, especially in the older population

Batsis & Villareal, 2024; Domini et al 2022

Preventing excessive MM loss

- Body composition evaluation
- Adequate protein intake (>60g/day, > 0.8g/Kg BW)
- Strengthening exercises.

IFSO Consensus 2023

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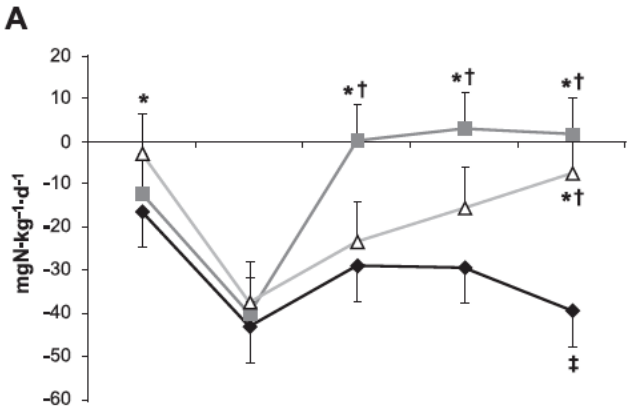
Effects of high-protein diets on fat-free mass and muscle protein synthesis following weight loss: a randomized controlled trial

Stefan M. Pasiakos,*,[1] Jay J. Cao,[†] Lee M. Margolis,* Edward R. Sauter,[‡] Leah D. Whigham,[†] James P. McClung,* Jennifer C. Rood,[§] John W. Carbone,[‖] Gerald F. Combs, Jr.,[†] and Andrew J. Young*



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Review

Effectiveness of Nutritional Supplementation on Muscle Mass in Treatment of Sarcopenia in Old Age: A Systematic Review

Vincenzo Malafarina MD [a,*], Francisco Uriz-Otano MD [a], Raquel Iniesta PhD [c], Lucía Gil-Guerrero MD, PhD [b]

[a] *Department of Geriatrics, Hospital San Juan de Dios, Pamplona, Spain*
[b] *Department of Internal Medicine, Hospital San Juan de Dios, Pamplona, Spain*
[c] *Servicio de soportes estadístico, Fundació per a la recerca Sant Joan de Deu, Barcelona, Spain*

Original article

Exploration of the protein requirement during weight loss in obese older adults

Peter J.M. Weijs [a, b, c, *], Robert R. Wolfe [d]

[a] *Department of Nutrition and Dietetics, School of Sports and Nutrition, Amsterdam University of Applied Sciences, Amsterdam, The Netherlands*
[b] *Department of Nutrition and Dietetics, Internal Medicine, VU University Medical Center Amsterdam, Amsterdam, The Netherlands*
[c] *EMGO+ Institute for Health and Care Research, VU University Medical Center, Amsterdam, The Netherlands*
[d] *Center for Translational Research in Aging and Longevity, Donald W. Reynolds Institute on Aging, University of Arkansas for Medical Sciences, 4301 West Markham Street, Slot 806, Little Rock, AR 72205, USA*

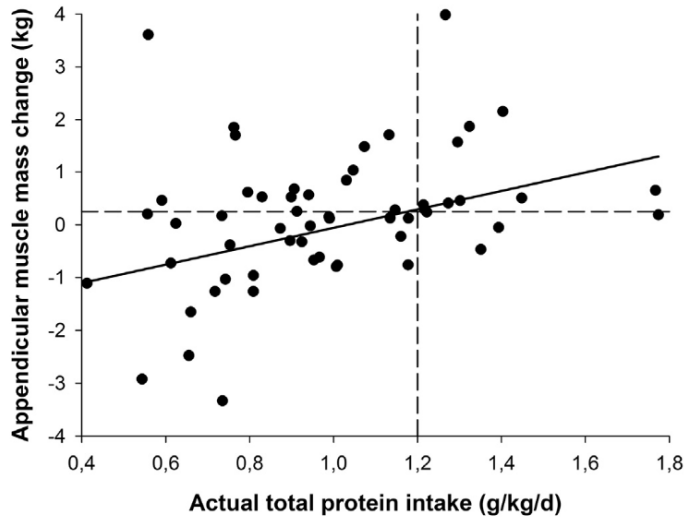

Fig. 1. Change in appendicular muscle mass (kg) over 13 wk challenge period versus actual total protein intake (g/kg/d), as assessed by dietary record at 13 wks. Footnote: *Two extreme values are outside the figure range (x = 0.97 y = −7.50; x = 0.75 y = −5.37). Both subjects are included in the regression line.

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Sarcopenic Obesity

Obesity A Research Journal — THE OBESITY SOCIETY — WILEY

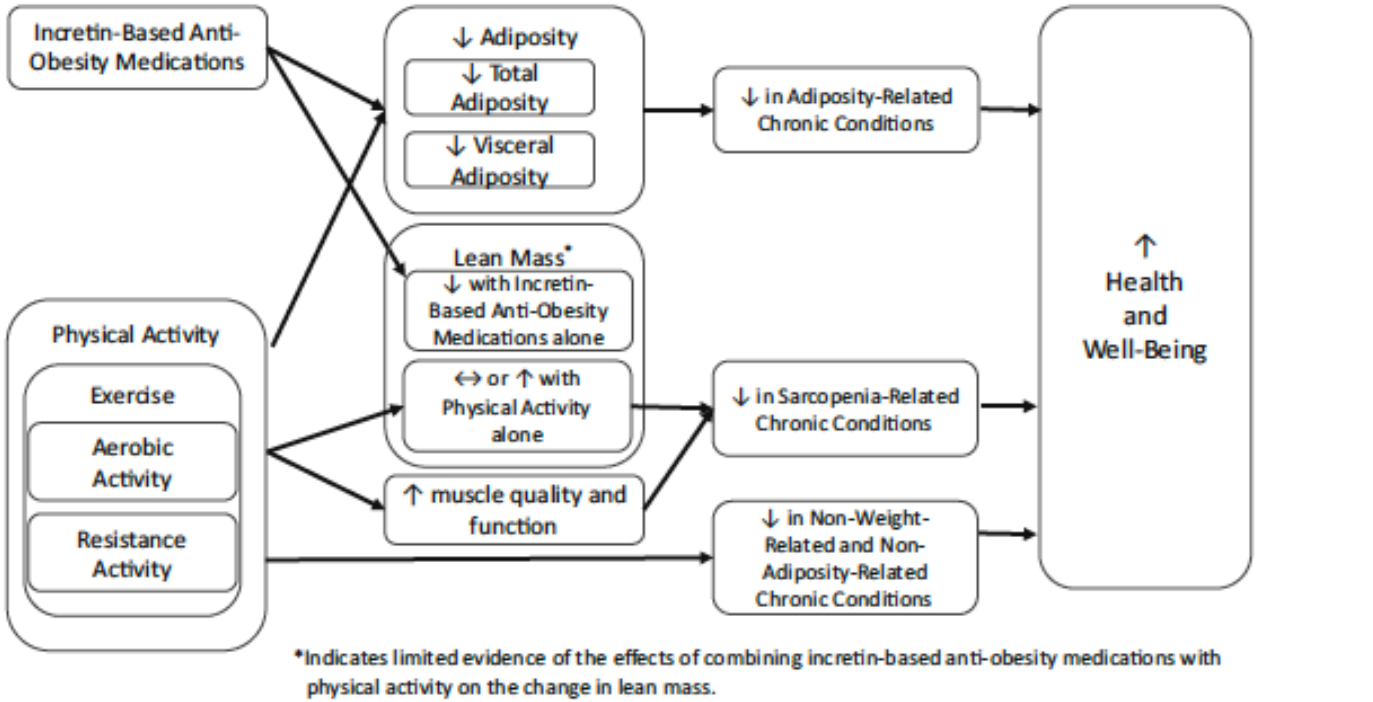

FIGURE 1 Body composition and health benefits of physical activity within the context of glucagon-like peptide-1 (GLP-1) antiobesity medications.

Jakicid J et al, 2023

Advice on recommended intake

- Fluid >2-3L/day
- Adequate protein intake (>60g/day, **up to** 1.5g/Kg BW/day)
- Micronutrients: treat preexisting deficiencies and counsel adequate intake
- Consider supplementation MVI, Vit D and calcium
- Strengthening exercises.

Almadoz, 2024; IFSO Consensus 2023 , IFSO Consensus 2024

Conclusions

- Some degree of muscle mass loss (MM) occurs in most weight loss scenarios;
- Evaluation of eating disorders should be done before the use of OMM;
- Nutritional deficiencies (micronutrients) may occur.

Take home messages

- Multivitamins should be prescribed before the use of OMM
- Screening for ND and body composition evaluation should be done before OMM
- Adequate protein intake and physical activities may help to prevent excessive MM loss

Thank you