Dietitians: Nutrition champions in the era of weight-loss medications

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Obesity is a complex, multifactorial condition shaped by over 100 different genetic, biological, physiological, psychological, environmental, and social influences.[1,2] Although typically associated with excess energy intake rather than undernourishment, many people living with obesity may also be at risk of malnutrition.[3] Deficiencies in essential nutrients, arising from a combination of biopsychosocial factors associated with the condition, may be further exacerbated by weight-loss treatment pathways.[4]

Introduction

The weight management clinical landscape is changing.[5] The soaring popularity of glucagon-like peptide-1 receptor agonists (GLP-1 RAs)[5] and other weight-loss medications are bridging the gap between traditional lifestyle-based and surgical weight loss interventions.[6] Less invasive than bariatric surgery and delivering greater results than behaviour change alone, GLP-1 RAs and newer dual incretin therapies (targeting both GLP-1 and glucose-dependent insulinotropic polypeptide [GIP] receptors) are offering people living with obesity an alternative, accessible weight-loss solution.[6] However, not all those undergoing GLP-1 RA therapy have access to the holistic care recommended to support medication adherence, sustainable weight loss, and long-term health.[7]

Registered dietitians (RDs) are an essential part of the weight-management multidisciplinary team (MDT). Experts in preventing, identifying, and treating nutritional deficiencies, RDs provide the targeted nutrition support needed to mitigate malnutrition risk in this vulnerable patient group.[8] However, while access remains inequitable,[9] RDs must leverage their role as nutrition champions to advocate for person-centred obesity care that moves beyond weight-centric thinking and prioritises long-term health.

The double burden of malnutrition

The prevalence of malnutrition, in the form of micronutrient deficiencies, is higher in people living with obesity compared with age and sex matched individuals of a healthy weight.[10] Altered absorption and pharmacokinetics, dietary inadequacies, and elevated requirements predispose people living with obesity to the development of the double burden of malnutrition – that is, the co-existence of under and over-nutrition.[11] For example, excess adiposity disrupts vitamin D distribution and metabolism,[12] while pathological metabolic changes increase dietary requirements for zinc, magnesium, chromium, manganese, and vanadium due to their role in carbohydrate and fat metabolism.[3]

Inter-individual susceptibility to an obesogenic environment is another driver of malnutrition in people living with obesity.[13] Eating behaviour traits (EBTs) is the term used to describe individuals' reactions to food-related cues, determining food intake and impacting obesity risk.[14] Variability in EBTs makes some individuals more likely to emotionally overeat or reach for foods with a lower nutrient-density,[13] while also impacting responsiveness to lifestyle-based weight loss interventions.[14]

Besides physiological and psychological mechanisms, the social determinants of health also influence the development of the double burden of malnutrition at a population level.[11] In high income countries, people living with obesity are more likely to live in food insecure households, where nutrient-dense diets may be inaccessible or unaffordable.[11] Interventions which aim to tackle both over and under-nutrition must therefore address the social inequities that shape food choice.[11]

GLP-1 RAs and obesity: The 'perfect malnutrition storm'

The impact of sustained micronutrient deficiencies in obesity is well established and includes reduced bone density, altered glucose metabolism and pancreatic beta cell function, diminished cognitive ability, and compromised women's health.[15]

Malnutrition risk may be heightened once weight-loss treatment commences.[3] Very low-calorie diets (VLCDs), bariatric surgery, or the use of pharmaceuticals may further restrict dietary intake or impair nutrient absorption and utilisation.[3] Safeguarding nutritional status during periods of significant, rapid weight loss is difficult, even with dedicated dietetic input.[16]

While patients undergoing bariatric surgery receive holistic nutritional support, encompassing micronutrient supplementation, dietary counselling and lifestyle advice, those undergoing GLP-1 RA therapy do not always have equitable access to comprehensive care across the UK.[4,7] Achieving a similarly significant weight loss via an equally restrictive diet, the risk of both macro and micronutrient deficiencies amongst patients receiving GLP-1 RAs is arguably just as high,[4] yet there are currently no consensus guidelines on their nutritional management and nutritional care remains sub-optimal.[17]

GLP-1 RAs are incretin-based medications originally developed for the treatment of type 2 diabetes mellitus (T2DM), now widely used in weight management due to their potent effects on weight reduction.[4] GLP-1 RAs promote weight loss through multiple mechanisms, including appetite suppression via central pathways, glucose-dependent stimulation of insulin secretion, inhibition of glucagon release, and delayed gastric emptying. Together, these actions significantly reduce food intake and overall energy consumption.[4]

However, the benefits of GLP-1 RAs extend far beyond weight loss and glycaemic control.[18] Their ability to improve a range of cardiovascular-related outcomes such as blood pressure, risk of atrial fibrillation and major cardiovascular events irrespective of T2DM status is also well-documented.[18] Patients undergoing GLP-1 RA therapy report an array of benefits associated with a reduction in energy consumption, including perceived improvements in quality of life, mental health and body image.[19] While reductions in food intake may be therapeutically beneficial, GLP-1 RAs can suppress intake to a level that makes it difficult to achieve macro and micronutrient requirements. In the absence of dietetic support, maintaining sufficient intake is challenging, particularly when total daily energy intake falls to approximately 800 kcal per day.[16]

Emerging evidence highlights concerns regarding the long-term nutritional consequences of GLP-1 RA therapy.[9] The physiological impact of GLP-1 RAs may reduce tolerance to nutrient-dense, high-volume foods such as fruit and vegetables, making it difficult for individuals to meet fibre and micronutrient requirements.[16] Sustained protein and energy deficits have also been observed and associated with sarcopenia,[16] with an estimated 30-40% of total weight loss attributed to reductions in fat-free mass.[9] People living with obesity embarking on their journey using weight-loss medications may unwittingly be entering into a perfect malnutrition storm: pre-existing nutritional deficiencies combined with a restrictive diet, gastrointestinal disturbances, and a lack of dietetic support can all accelerate a declining nutritional status despite improvements in weight-based and metabolic markers of health.[16] Although the National Institute for Health and Care Excellence (NICE) cites a lack of evidence to support the effectiveness of GLP-1 RAs when used as a single stand-alone treatment,[7] limited access to RDs and broader structural inequities remain, hindering comprehensive and consistent care.[9]

The role of dietitians in holistic obesity care

Consideration of dietary intake beyond calories and health status beyond body mass index (BMI) requires an MDT approach.[7] NICE recommends dietary, lifestyle and psychological support as part of a Tier 3 weight-management service for patients undergoing GLP-1 RA therapy, however, acknowledges that access to these services across England and Wales is inconsistent.[7] RDs are uniquely placed to help patients achieve sustainable weight loss while mitigating nutritional risk, experienced in dietary analysis, person-centred nutrition counselling and behaviour change techniques.[8] Although challenging, RDs possess the skills required to overcome nutritional barriers and create individualised care plans[8] that promote the gold-standard of care recommended by NICE.[7] Acknowledging the structural limitations of current GLP-1 RA treatment pathways,[7] RDs must adopt alternative approaches to help mitigate malnutrition risk and promote long-term health outcomes in this vulnerable patient group.

See **Table 1** for steps to support holistic obesity care for patients undergoing GLP-1 RA therapy and other weight loss medications.[8]

Table 1: Steps to support holistic obesity care for patients undergoing GLP-1 RA therapy and other weight loss medications[8]

STEP	KEY COMPONENTS	EXAMPLES OF TOPICS TO ADDRESS
Assess	• Life stage • Medical history and diagnosis • Physical exam, lab tests • Food security/affordability • Diet history (nutritional adequacy) • Psychosocial factors (e.g. mental stress) • Other potential barriers to change (e.g. food allergies/intolerances)	• Age of onset of problems with excess weight • Periods of rapid weight gain or loss • Previous attempted weight loss interventions
Advise	• Benefits of GLP1-RA assessment • Role of nutrition and lifestyle as foundations for health, with benefits beyond weight loss alone	• Diet and physical activity recommendations • GLP1-RA side effects • Compliance with dosing schedule
Agree	• Shared plan of care to increase likelihood that both weight reduction and general health goals are understood and SMART	• Shared decision making on target body weight and plan for continuity of care, including making follow up appointments • Culturally-tailored meal plan, exercise plan and SMART eating and activity goals
Assist	• Address challenges and barriers such as food access, transport, and need for financial resources	• Eligibility assessment and enrolment support (if eligible) for government food assistance/financial/exercise programmes • Help finding local activity and exercise resources
Arrange	• Refer as needed to other specialities	• Registered dietitian or nutritionist • Behavioural therapist • Social worker

Source: Adapted from Mozaffarian D, *et al.* (2025). The 5A's Framework. Obes Pillars.

Making Every Contact Count: Dietitians as nutrition champions

Making Every Contact Count (MECC) is a behaviour change approach that uses routine health and care contacts to encourage improvements in physical and mental health. Supporting the opportunistic delivery of clear and concise healthcare messaging via short conversations, MECC is designed to fit naturally into existing health and care roles. Widespread adoption of MECC across different settings has the potential to significantly improve population health.[20]

As nutrition champions, RDs can still implement this long-term health ambition by adopting the MECC approach. Through brief, routine interactions with not only patients, but healthcare professionals (HCPs), RDs may help to prioritise the nutritional status of people undergoing GLP-1 RA therapy. While direct contact with patients may be limited, RDs can utilise this time to screen for red flag symptoms of malnutrition, signpost to appropriate psychological services, or initiate early discussion about micronutrient supplementation. Similarly, contact with other HCPs provides an opportunity for dietitians to take the lead in educating their colleagues about holistic weight management (**Figure 1**). Implementing and training colleagues to use nutritional screening tools may help to identify malnutrition early and is recommended as part of an MDT approach.[8] Similarly, enhancing awareness of the need to monitor dietary intake, biochemical markers, and overall wellbeing in individuals receiving GLP-1 RA therapy may help support the delivery of a more comprehensive standard of care.[16] Through MECC, RDs may support the shift from weight-centred to person-centred thinking required to promote long-term health and wellbeing.[8]

Figure 1: Key elements of nutritional priorities to support GLP-1 RA therapy for obesity[8]

Source: Adapted from Mozaffarian D, *et al.* (2025). The 5A's Framework. Obes Pillars.

Conclusion

GLP-1 RAs and other weight-loss medications are effective and accessible adjuncts in obesity management. Offering benefits extending beyond weight loss to improvements in cardiovascular outcomes and mental health,[18,19] their increased utilisation is unsurprising. However, as their popularity soars, so too does the risk of malnutrition, with long-term health consequences for those undergoing treatment.[4] People living with obesity require specialist, comprehensive care to manage the physiological, psychological, and social changes prompted by weight-loss medications.[7] As part of the weight-management MDT, RDs provide person-centred nutritional, lifestyle and behavioural interventions to promote sustainable success.[8] However, inequitable access to Tier 3 weight management services in England and Wales[7] is reflective of the socio-economic inequity that itself is a driver of obesity[1] and a barrier to RD contact.[7] By adopting the MECC approach and leveraging their role as nutrition champions, RDs are uniquely positioned to shape the evolving clinical landscape. Raising awareness of the importance of person-centred care can catalyse the shift in thinking needed to achieve sustainable weight loss while safeguarding long-term health.

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