

## Meta-Pharmacologic Support and Scaffolding for Obesity Therapy

Sanjay Kalra<sup>1,2</sup>, Nitin Kapoor<sup>3,4</sup>, Saurabh Arora<sup>5</sup>

### Abstract

Obesity is a multifactorial endocrine disease. Novel hormone receptor modulators are now available for its treatment. This does not mean, however, that obesity can be managed or cured by pharmacotherapy alone. Multidimensional support and scaffolding are required to attain and sustain optimal outcomes with drug therapy. In this communication, we provide a systematic coverage of the various aspects of support that are needed. We term them metapharmacologic, as they extend beyond the realm of conventional pharmacology. These include biomedical (medical, endocrine, pharmacotherapeutic), lifestyle (nutrition, physical activity), and psychosocial (psychological, social, systemic) optimization.

**Keyword:** Holistic care, Lifestyle medicine, non-pharmacological care, overweight, obesity, person-centred care

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### Introduction

The last few years have seen a major shift in the way we treat diabetes and obesity. Glucagon-like peptide 1 receptor agonists (GLP1RA) such as semaglutide, and dual GLP1 and glucose-dependent insulinotropic polypeptide (GIP) RA like tizapatide have created nothing short of a revolution in metabolic care.<sup>1</sup>

Data from randomized controlled trials reveal a good efficacy, safety, and tolerability profile of these drugs. The responder rate is upwards of 90% in all trials, suggesting near-universal utility of semaglutide and tirzepatide.<sup>2,3</sup> Similar results are noticed in the real world, though continuation rates are lower than those reported by RCTs.<sup>4</sup>

These data, and the media coverage that accompanies them, suggest that modern anti-obesity medications (AOMs) are panaceas for weight loss and metabolic health. This simplistic statement, however, ignores the

<sup>1</sup>Department of Endocrinology, Bharti Hospital, Karnal, India; <sup>2</sup>University Center for Research & Development, Chandigarh University, India;

<sup>3</sup>Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, India; <sup>4</sup>Non communicable disease unit, Baker Heart and Diabetes Institute, Melbourne, Victoria, Australia; <sup>5</sup>Department of Endocrinology, Fortis Hospital, Ludhiana, India.

**Correspondence:** Sanjay Kalra. e-mail: [brideknl@gmail.com](mailto:brideknl@gmail.com)  
ORCID ID: 0000-0003-1308-121X

**Table:** Supportive aspects of obesity care.

#### Biomedical Facets

- Medical optimization
- Pharmacological optimization
- Endocrine optimization

#### Lifestyle Facets

- Nutritional optimization
- Psychotherapeutic optimization

#### Psychosocial Facets

- Psychological optimization
- Social & systemic optimization

multifaceted causation and clinical correlates of obesity. While obesity is basically a hormonal disorder, it needs a multidisciplinary, endocrinology-led approach to mitigation and management. It is the support offered by the health care team that makes the difference between safe, smart, sufficient, and sustained weight loss on one hand, and misplanned, maladaptive, managerial misadventures in metabolic management medicine.

We share a simple framework that helps obesity care professionals take cognizance of these aspects. (Table) This concept allows them to structure their therapy in a systematic manner, so as to achieve not only patient comfort, but professional satisfaction and public acceptance as well.

### Medical Optimization

Medical support for obesity care includes screening, diagnosis, and medical and interventional management of the various conditions, complications, and comorbidities that coexist with obesity. The rubric of clinical obesity provides a robust framework for planning and provision of comprehensive weight management.<sup>5</sup>

Obesity is a multidimensional endocrine disorder and requires astute clinical skills to suspect, screen, substantiate, and settle endocrine dysfunction in a satisfactory manner. Such disorders may cause, contribute to, confound, or occur as a corollary or consequence of obesity. Regardless of the sequence of presentation, endocrine optimization remains the cornerstone of obesity treatment. The term barocrinology shares and strengthens the scientific scaffold of obesity medicine.

Medical and endocrine optimization also includes pharmacological assessment and appraisal. Weight gain, in some cases, may be iatrogenic (e.g, due to pioglitazone) or

due to insufficient treatment of conditions such as hypogonadism, hypothyroidism, heart failure, and kidney disease. Rational pharmacotherapeutic stewardship thus becomes an essential part of follow-up in obesity care.

### Lifestyle Optimization

Nutritional support is perhaps the most important aspect of weight management. Malnutrition due to wrong attitudes, behaviours, and choices predisposes to obesity. Obesity itself is associated with forms of malnutrition, such as protein deficiency (sarcopenia) and hidden hunger (micronutrient inadequacy). While weight loss therapy requires a calorie deficit, an unregulated and ill-monitored diet may lead to nutritional deficiency and a resultant adverse impact on health. Ensuring a balanced and complete diet requires continuous nutritional support. This is especially challenging in persons on GLP1RA or dual agonists, who may experience a change in appetite and taste.

Similar health care support is required to ensure adequate exercise, resistance exercise, and diversity of physical activity. Professional psychotherapeutic or exercise medicine advice can help prevent and manage loss of lean body mass. It also helps prevent fatigue and injury due to exercise in persons on weight loss programmes.

### Psychosocial Optimization

Medical, endocrine, and pharmacological optimization, as well as nutritional and physical activity/exercise interventions, are the bedrock of obesity management. However, these will be accepted and adhered to, only if the person is motivated. Psychological support, including psychological first aid, counselling, and education with explanation, therefore, becomes the foundation of all such therapy.<sup>6</sup> We use the acronym SPACES (Sustained psychological aid, counselling, explanatory education, and support) to highlight this. SPACES needs to be customized and personalized, keeping in mind the significant inter-individual and intra-individual variability that occurs in obesity care.

The person living with obesity does not exist in isolation: he or she is part of their family and society. Multiple social and environmental factors contribute to weight gain. Social and familial support must therefore be ensured in order to achieve optimal outcomes.

This may include positive reinforcement by the family, availability of healthy options for eating and exercise, and monetary assistance. Systemic optimization, too, becomes an important part of weight management: the health care system should be equipped to offer obesity-friendly services, while policymakers should integrate metabolically smart solutions into all future planning.

### Summary

This brief communication reinforces the need for comprehensive, metapharmacologic (beyond pharmacotherapeutic), person-centred care. Such therapy may be administered by a single person or by a team of obesity care professionals. The delivery of such care will depend upon the resources and restraints of the health care system, as well as the needs and necessities of the person being treated. As the obesity epidemic takes root and as obesity care becomes more easily available, accessible, and affordable, we must be mindful of the meta pharmacologic aspects of metabolic management, and modulate them to maximize outcomes.

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