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REVIEW

Current and emerging pharmacotherapies for obesity in Australia

Samantha Hocking[a,b,1], **Anthony Dear**[c], **Michael A. Cowley**[d,*]

[a] *Northern Clinical School, University of Sydney, Royal North Shore Hospital, St Leonards, NSW, Australia*
[b] *Department of Endocrinology, Royal North Shore Hospital, St Leonards, NSW, Australia*
[c] *Eastern Clinical Research Unit: Translational Research Division, Eastern Health Clinical School, Department of Medicine, Monash University, Level 2, 5 Arnold Street, Box Hill, VIC, Australia*
[d] *Biomedicine Discovery Institute & Department of Physiology, Monash University, Building 13F, Clayton, 3800, VIC, Australia*

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Summary
Background: Obesity is a major issue in Australia and globally. Many individuals struggle to maintain weight loss with lifestyle modification, and adjunctive pharmacotherapy may help. Historically, there have been limited pharmacotherapies for managing obesity. In addition, previous treatments such as phentermine-fenfluramine, rimonabant and sibutramine were withdrawn due to safety issues, resulting in lingering safety concerns.
Methods: This is a narrative review of published data examining four new pharmacotherapy options for weight management in Australia.

Of four new therapeutic options, three may be approved in Australia shortly and one — liraglutide 3.0 mg — was approved in December 2015. Liraglutide is a glucagon-like peptide-1 receptor agonist that appears to act by increasing satiety and reducing food intake. Lorcaserin is a selective agonist of the serotonin$_{2C}$ receptor, which mediates anorectic activity. The naltrexone/bupropion extended release (ER) combination utilises synergistic effects of the two component drugs, mediated via neurons in the hypothalamus, to reduce energy intake. Phentermine/topiramate ER combines the appetite suppressant phentermine with topiramate, an anti-epileptic with appetite-suppressant effects. All can result in

* Corresponding author.
E-mail address: michael.cowley@monash.edu (M.A. Cowley).
[1] Current address: The Boden Institute of Obesity, Nutrition, Exercise & Eating Disorders, The University of Sydney, Sydney, Australia.

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meaningful improvements in obesity-related diseases, including diabetes and cardiovascular disorders) in large phase 3 trials, with efficacy demonstrated over 3 years for liraglutide 3.0 mg and 1—2 years for the rest.

Conclusions: The landscape of obesity treatment is changing rapidly. Of the new therapeutic options presented, all options have associated adverse events requiring long-term safety data, but the availability of new options is a welcome development.

Contents

Introduction

By 2025, an estimated 83% of male and 75% of female adult Australians will be overweight or obese [1]. Among Australians aged 45—79 years, approximately 1:8 hospital admissions, 1:6 hospital days and AU$1 in every $6 spent on hospitalisation are attributable to overweight and obesity [2]. Obesity has been recognised as a disease by groups such as the Australian and New Zealand Obesity Society, the American Medical Association, and the World Health Organization [3—5]. Obesity increases the risk of other health problems, including hypertension, dyslipidaemia and other cardiovascular diseases, obstructive sleep apnoea, musculoskeletal disorders and cancer [6]. Additionally, overweight and obesity are associated with an increased risk of all-cause mortality across all ages and geographical regions [7].

The cornerstones of any weight-loss programme are behavioural interventions to help participants improve their diet, reduce their caloric intake and increase physical activity [8]. However, many individuals find it impossible to maintain clinically significant weight loss with behavioural interventions alone [9]. Thus, there is a growing need for pharmacotherapy that can assist with weight management. Without pharmacotherapy, the main alternative is bariatric surgery. Surgery, however, is generally restricted to those with severe obesity or obesity with comorbidities; it has associated health risks and is not an option for the majority of patients with obesity due to factors such as costs, access, risk and acceptability [10].

Some sections of the healthcare community question the role of pharmacotherapies in weight management, or the clinical relevance of weight loss in the range of 5—10% achieved with adjunctive pharmacotherapy. However, such modest weight loss is known to have a positive impact in terms of risk reduction of obesity-associated diseases such as

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