Recent advances in the pathophysiology and pharmacological treatment of obesity.


Source
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Abstract

What is known and Objective: The increasing prevalence of obesity and associated morbidity present unmet medical needs for safe and effective new drug therapies. Our aim is to review the diverse targets and compounds that are in clinical development.

Methods: Literature searches were conducted using the PUBMED database for studies published in English from January 1985 to December 2011 using combinations of key words, including obesity, overweight, weight loss and treatment in addition to the clinical trials website. Bibliographies of selected references were also evaluated for relevant articles. Press/news releases were also utilized. The collection of information for this review was limited to the most recently available human and animal data.

Results and Discussion: Weight loss drugs in development include compounds that act centrally (neuropeptide Y, AgRP and MCH1 receptors) to limit food intake or reduce the absorption of fat from the gastrointestinal tract (lipase inhibitors) or increase energy expenditure or reduce adipose tissue formation. Among the existing therapy, new combinations (topiramate plus phentermine, bupropion plus naltrexone) offer greater efficacy with reduced adverse effects. What is new and Conclusion: Despite recent setbacks in the pharmacotherapy of obesity (withdrawal of rimonabant and sibutramine), many compounds are in phase II/III trials. The future holds promise for a new drug that alone or in combination with an existing agent could target the initial pathophysiology and morbidities associated with obesity.

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