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Pharmacologic Treatment of Obesity

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Abstract

Obesity is strongly associated with conditions such as hypertension, diabetes mellitus and osteoarthritis that have known adverse health outcomes. The rising prevalence of obesity threatens to overburden our health care system. As a result, the need for safe and effective treatment options is urgent. Unfortunately, pharmacologic treatment options have been disappointing either because of poor side effect profiles or limited long-term efficacy. Our goal is to review currently available pharmacologic treatments and the data supporting their use so that practicing physicians may better incorporate them into a comprehensive, long-term treatment strategy for their patients. We focus on orlistat and sibutramine as these are the two medicines approved by the FDA for long-term treatment of obesity. In addition, we review briefly agents approved for short-term use as well as agents such as zonisamide and topiramate which have shown some promise as weight loss agents in specific clinical circumstances. Finally, we highlight one medicine currently in phase III clinical trials, an endocannabinoid receptor antagonist. Given the overwhelming research focus on this disease, it is likely that the coming years will bring more treatment options, raising the chance that our patients will have meaningful and sustained weight loss.

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The adverse health impact of obesity has long been recognized. As Flemmyng [1] pointed out nearly 250 years ago, ‘Corpulency, when in extraordinary degree, may be reckoned a disease, as it in some measure obstructs the free exercise of the animal functions; and hath a tendency to shorten life, by paving the way to dangerous distempers’. The current epidemic of overweight and obesity has led to an unprecedented high prevalence in the US, with nearly two-thirds of the adult population at potential health risks from excess body weight.

The recognition of obesity as a disease has resulted in numerous attempts at controlling body weight through pharmacologic treatment. Perhaps the first drug treatment used was thyroid extract. Unfortunately, it was eventually clear