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## Semaglutide - More Weight Loss in Women Than Men With Heart Failure



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Semaglutide has demonstrated significant symptom improvement in both men and women suffering from a common type of heart failure with limited treatment options. Research presented at the American Diabetes Association's 2024 Scientific Sessions and published in the Journal of the American College of Cardiology reveals that women achieved greater weight loss while experiencing similar symptom relief compared to men.

A secondary analysis of the STEP-HFpEF (Semaglutide Treatment Effect in People with Obesity and HFpEF) programme indicates that semaglutide offers benefits to both men and women that do not track directly with weight loss, suggesting potential cardiovascular effects independent of weight management. This study, encompassing two trials and involving 1,145 participants over 52 weeks, compared semaglutide against placebo, revealing notable differences between sexes.

The study examined the effects of administering semaglutide 2.4 mg once weekly versus placebo on the STEP-HFpEF programme's dual primary and confirmatory secondary, and exploratory outcomes by sex.

The analysis assessed potential variations in phenotypic characteristics and treatment outcomes of semaglutide based on sex in obesity-related heart failure (HF) with preserved ejection fraction (HFpEF). It examined how sex influences baseline disease characteristics. It compared the effects of semaglutide versus placebo on critical trial endpoints within the STEP-HFpEF programme, which includes both the STEP-HFpEF and STEP-HFpEF DM trials.

Study researchers emphasise the significance of understanding sex differences in obesity-related HFpEF. Obesity and visceral adiposity play crucial roles in the development and progression of HFpEF, with potentially greater impact on women, who constitute the majority affected by the disease and experience more pronounced symptoms and physical limitations. This study highlights these distinctions and underscores the consistent benefits of semaglutide for both women and men.

Women with obesity and heart failure with preserved ejection fraction were observed to have higher BMIs compared to men and exhibited more significant baseline symptoms. Women also showed higher levels of systemic inflammation, and compared to previous studies on HFpEF, those with obesity-related HFpEF were also younger.

Semaglutide improved heart failure-related symptoms, physical limitations, and exercise function and reduced inflammation and natriuretic peptides similarly to placebo, irrespective of sex. It also reduced systolic blood pressure and waist circumference.

However, there were notable sex differences in the treatment effects regarding weight loss with semaglutide. Females achieved greater weight loss than males, with a mean difference of -9.6% versus -7.2%. This disparity highlights a statistically significant interaction despite reductions in body weight observed in both sexes.

At baseline, females exhibited higher left ventricular ejection fraction, worse symptoms, and greater physical limitations, along with elevated inflammation levels, despite similar rates of hypertension and diuretic use and lower incidence of atrial fibrillation compared to males, despite their higher BMI. Researchers suggest that this pattern might indicate a prevalence of a typical obesity-related phenotype of HFpEF among female participants, contrasting with males who may have HFpEF complicated by left atrial myopathy alongside increased BMI.

Source: [American College of Cardiology](#)

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