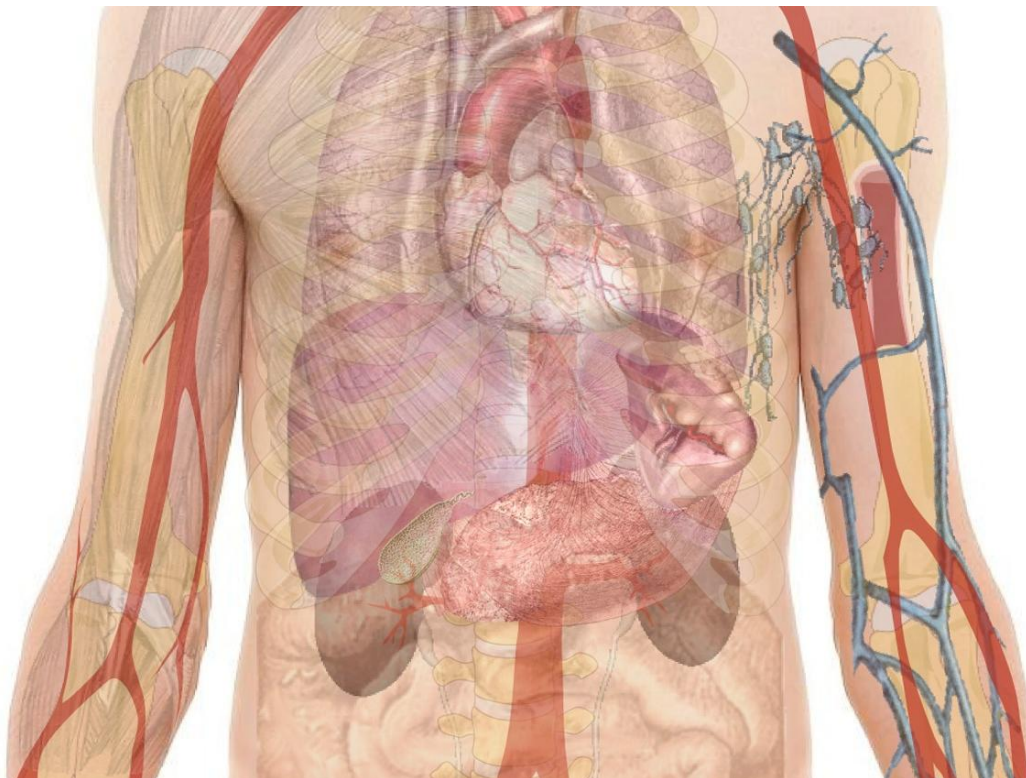


# Study shows new obesity treatment semaglutide causes similar weight loss across different age groups

May 13 2021

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The STEP trials published over the past year have established the efficacy and safety of semaglutide in treating patients with obesity. A new study analysing the effects of this treatment in different age groups

presented at this year's European Congress on Obesity (held online, 10-13 May), shows that it has similar effectiveness across different age groups with regard to weight loss (under 40 years, 40-60 years, and 60 years and over).

However when looking at percentage [body](#) fat and [lean body](#) mass changes, semaglutide was found to have a more pronounced effect in patients aged under 50 years. The study is by Dr. Dror Dicker, Hasharon Hospital-Rabin Medical Center and Tel Aviv University, Tel Aviv, Israel, and colleagues.

Semaglutide, which belongs to the class of drugs called glucagon-like peptide-1 (GLP-1) receptor agonists, was originally developed for and is also used to treat type 2 diabetes. However, its effects on [weight](#) loss led researchers to study its effect on weight loss in people living with obesity but without type 2 diabetes. It is currently not approved for obesity anywhere in the world, however new drug applications are under review by the US Food and Drug Administration (FDA), the European Medicines Agency (EMA), and other health agencies across the world.

Weight loss is often accompanied by loss of lean body mass, which can negatively impact physical functioning and/or resting energy expenditure. Body weight loss and body composition changes (fat mass vs lean mass) may differ by age. Thus in this study of data from the STEP 1 trial (see link to original study below), the authors evaluated the tolerability and effect of subcutaneous semaglutide 2.4 mg on weight loss and body composition according to age.

Adults without type 2 diabetes with body mass index (BMI) of 27 kg/m<sup>2</sup> or over (overweight) with at least one weight-related comorbidity, or a BMI of 30 kg/m<sup>2</sup> or above (with obesity) were enrolled. Subjects were randomised to a once-weekly injection of semaglutide 2.4 mg or placebo, both plus lifestyle intervention, for 68 weeks. Change in body

weight (%) from randomisation to week 68 was analysed according to age: under 40 years (n=655), over 40 to under 60 years (n=981), and 60 years and over (n=325). Safety and tolerability were also re-analysed across these groups.

Total body fat mass and total lean body mass were measured using dual energy X-ray absorptiometry (DEXA) scans in a randomly chosen subgroup of 140 adults (who then gave consent) with BMI of 40 kg/m<sup>2</sup> or under at baseline and week 68. Body composition (percentage body fat mass, percentage lean body mass, lean:fat mass ratio) were analysed according to age less than 50 and 50 years or older.

In STEP 1, most subjects were female (74%); mean age was 46 years, mean body weight was 105 kg, and mean BMI was 38 kg/m<sup>2</sup>. Change in body weight (%) was greater for semaglutide than for placebo and was consistent across age groups: 40 years and under mean weight loss 15.2% semaglutide group versus 2.3% placebo; 40-60 years 14.6kg semaglutide versus 2.5kg placebo; and 60 years and over 14.7kg semaglutide versus 2.4kg placebo. The changes in lean:fat mass ratio were found to be more pronounced in those patients under 50 years—the authors suggest the metabolic effects of ageing could be behind this difference.

The safety of semaglutide was generally consistent across age groups. Gastrointestinal disorders were the most commonly reported adverse events across all age groups.

The authors conclude: "In this new analysis of the STEP 1 trial, weight loss with once-weekly semaglutide 2.4 mg was achieved consistently across different age groups. There was no evidence of differences in treatment effect by [weight loss](#) and body composition across age groups for semaglutide or placebo. Treatment with semaglutide reduced percentage body fat mass and increased percentage lean body mass in all subjects, which was more pronounced in those aged under 50 years.

Semaglutide was generally well tolerated with an adverse event profile consistent with the known class effects of this drug—glucagon-like peptide-1 receptor agonists (GLP-1) - irrespective of age."

Provided by European Association for the Study of Obesity

Citation: Study shows new obesity treatment semaglutide causes similar weight loss across different age groups (2021, May 13) retrieved 3 May 2024 from <https://medicalxpress.com/news/2021-05-obesity-treatment-semaglutide-similar-weight.html>

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