

# Synopsis of the original article ***Once-Weekly Semaglutide in Adolescents with Obesity***

Weghuber D, et al. N Engl J Med 2022. DOI:  
10.1056/NEJMoa2208601

Synopsis created and reviewed by Novo Nordisk

# Introduction



Once-weekly s.c. semaglutide 2.4 mg, a GLP-1RA, is used to treat obesity in adults, but has not been assessed in adolescents

# Trial design



## Study design

Randomized, double-blind, parallel-group, placebo-controlled trial of once-weekly s.c. semaglutide 2.4 mg vs. placebo, plus lifestyle intervention

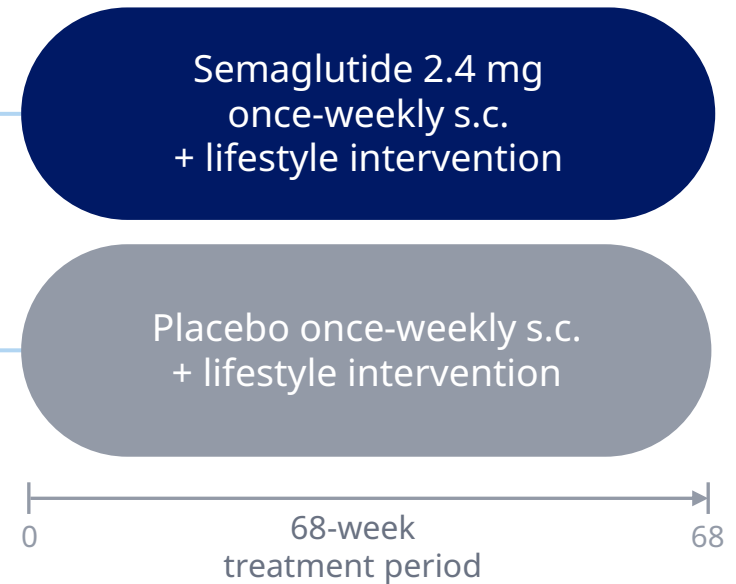


**Adolescents**  
(12–<18 years)  
**with obesity\*** or  
**with overweight†**  
and  
**≥1 weight-related  
coexisting condition**

N = 201



2:1



## Primary endpoint

Percentage change in BMI from baseline to week 68



## Secondary confirmatory endpoint

Weight loss of at least 5% at week 68

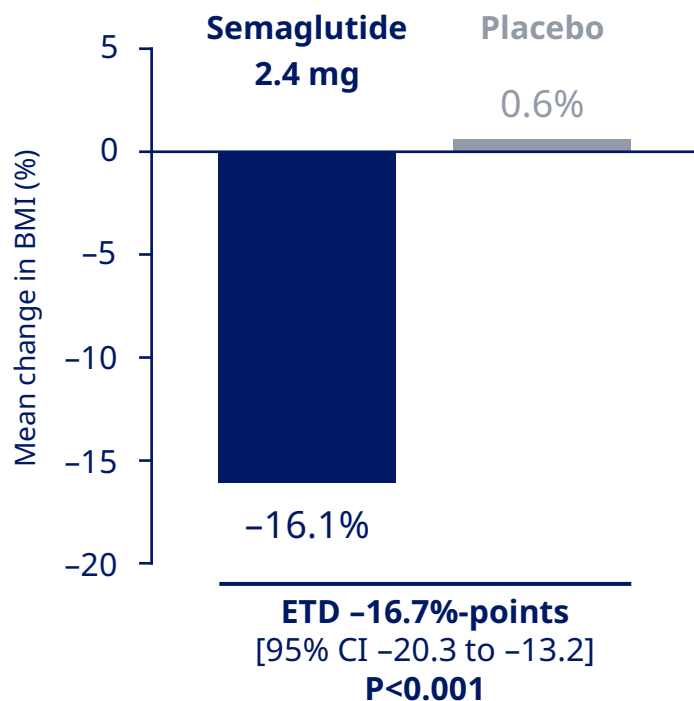
\*BMI in the 95<sup>th</sup> percentile or higher. †BMI in the 85<sup>th</sup> percentile or higher. BMI, body mass index; R, randomized; s.c., subcutaneous.



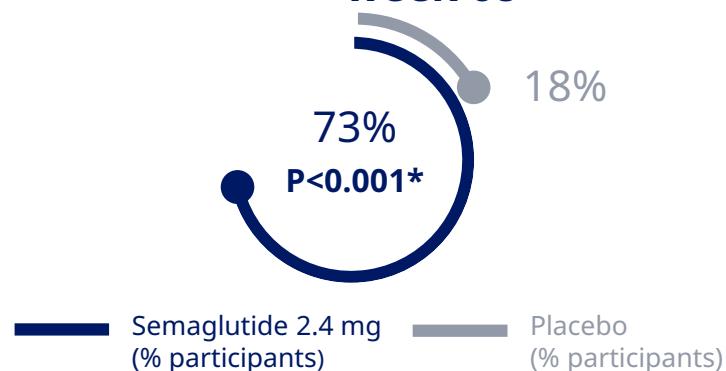
# Once-weekly s.c semaglutide 2.4 mg led to a substantial reduction in BMI over 68 weeks



## Mean change in BMI (%) from baseline to week 68



## Proportions with weight loss of 5% or more at week 68



## Improvements were greater with semaglutide vs. placebo in:

- Body weight
- Waist circumference
- HbA<sub>1c</sub>
- Lipids<sup>†</sup>
- ALT



## Safety

### Gastrointestinal AEs

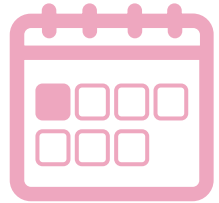
Greater incidence with semaglutide vs. placebo:  
**62% vs. 42%**  
(including cholelithiasis<sup>‡</sup>)

### Serious AEs

**11%** with semaglutide  
vs. **9%** with placebo

\*P value for the estimated odds ratio. <sup>†</sup>Except high-density lipoprotein cholesterol. <sup>‡</sup>Five (4%) participants with semaglutide vs. none with placebo.  
AE, adverse event; ALT, alanine aminotransferase; BMI, body mass index; CI, confidence interval; ETD, estimated treatment difference; HbA<sub>1c</sub>, glycated hemoglobin.

# Conclusions



Among adolescents with obesity, **semaglutide 2.4 mg plus lifestyle intervention** resulted in a **greater reduction in BMI** than lifestyle alone