New analysis of trial of semaglutide in adolescents shows it can reduce liver enzymes indicative of liver damage

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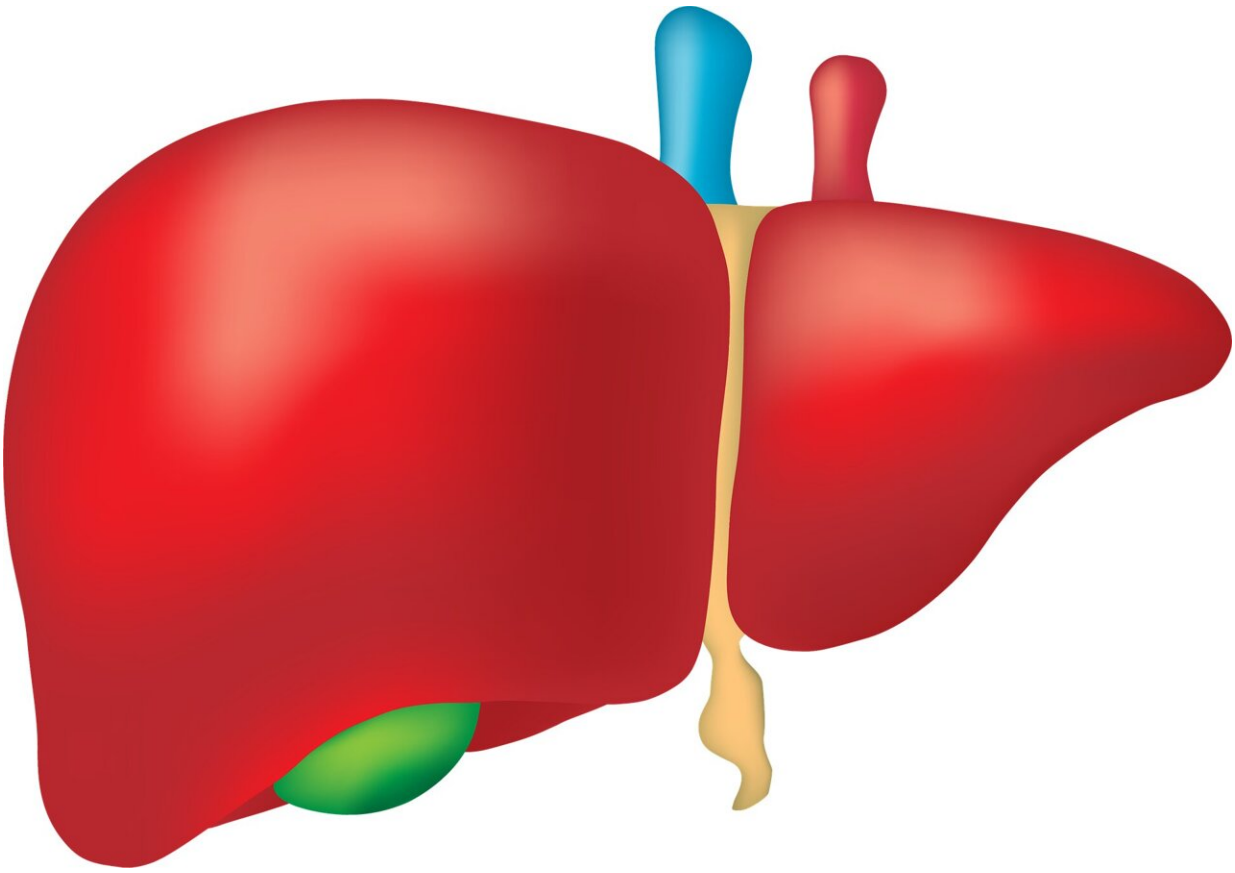

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A new sub-study of the STEP TEENS trial, presented at this year's

European Congress on Obesity (ECO) 2023 in Dublin May 17-20, shows that adolescents using semaglutide experienced significant reductions in levels of liver enzymes that are an indicator of liver damage. The study is by Dr. Daniel Weghuber, Department of Pediatrics, Paracelsus Medical University, Salzburg, Austria, and Dr. Rasmus Sørrig, Novo Nordisk A/S (the manufacturer of semaglutide), Søborg, Denmark, and colleagues.

Increased body weight and body mass index (BMI) are associated with a greater incidence of non-alcoholic fatty liver disease (NAFLD) and its advanced forms such as steatohepatitis, that can cause liver failure. Weight loss can improve liver parameters such as alanine aminotransferase enzyme (ALT) levels in patients with NAFLD/steatohepatitis. ALT measurements are considered the first step in NAFLD screening in children at risk. Consistently high levels of ALT prompt further clinical tests for NAFLD or other diseases affecting the liver, whereas improvement in ALT levels indicates improvement in the underlying cause of liver damage.

The phase 3, double-blind, placebo-controlled STEP TEENS trial demonstrated the efficacy and safety of semaglutide 2.4 mg once weekly for weight management among adolescents with obesity. This post-hoc analysis of the STEP TEENS trial examined the change in ALT levels and presumed NAFLD in adolescents treated with semaglutide 2.4 mg vs. placebo.

Adolescents (aged 12 to 22.1 U/L in females); 34% were presumed to have NAFLD (37% of the semaglutide group and 27% in the placebo group) (defined as BMI in >85th percentile, fatty liver index [FLI, a surrogate index of fatty liver based on BMI, waist circumference, triglycerides and the liver enzyme gamma-glutamyl transferase] of 60 or above and elevated ALT).

The geometric mean ALT level at baseline was 23 U/L vs. 20 U/L in the

semaglutide and placebo groups, respectively. The change from baseline in ALT with semaglutide was significantly greater vs. placebo (–18.1% vs. –1.1%). At week 68, mean ALT levels decreased from baseline levels in participants treated with semaglutide who achieved a weight loss of ≥10%, but not in those with