

GLP-1 Receptor Agonists: Safe and Effective for People With HIV?

Thomas Barnett, DHSc, MS, Keiser University

Chair: Dr. Anne Nelson; Committee: Drs. Judy Jean and Stefane Dias

Background

- People with HIV (PWH) are at greater risk for weight gain and associated comorbidities
- Antiretroviral therapy (ART) may exacerbate these risks, especially for certain regimens
- Glucagon-like peptide 1 (GLP-1) agonists are increasingly used for weight loss but are understudied in PWH
- GLP-1 agonist underutilization may be caused by a lack of evidence in this population

Research Questions

- Do GLP-1 agonists yield significant metabolic outcomes in PWH?
- Do interactions between ART and GLP-1 agonists influence safety/efficacy?
- What are the adverse effects of GLP-1 agonists in PWH?

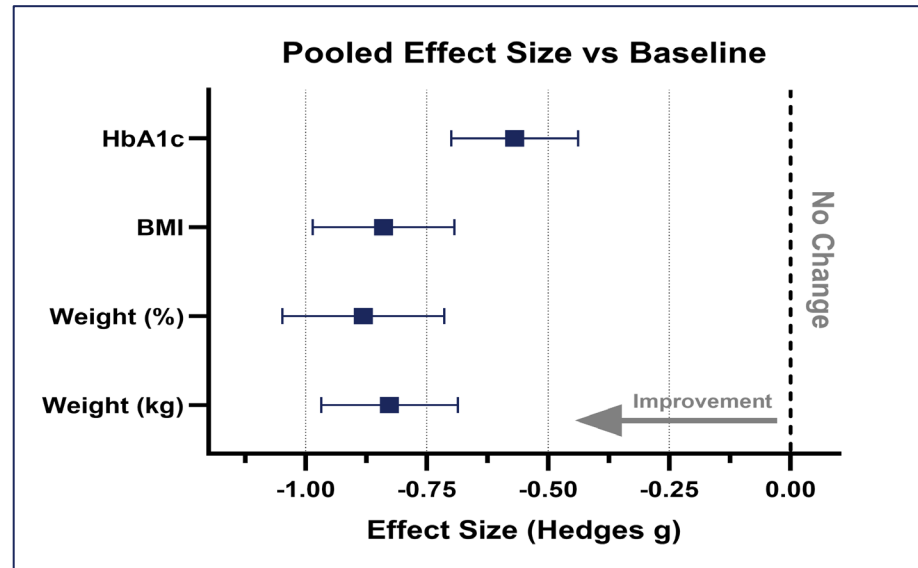
Methods

- Systematic review & meta-analysis (PRISMA)
- Included 12 studies (5 in quantitative analysis)
- Random-effects meta-analysis of means; subgroup, sensitivity, & correlation analyses

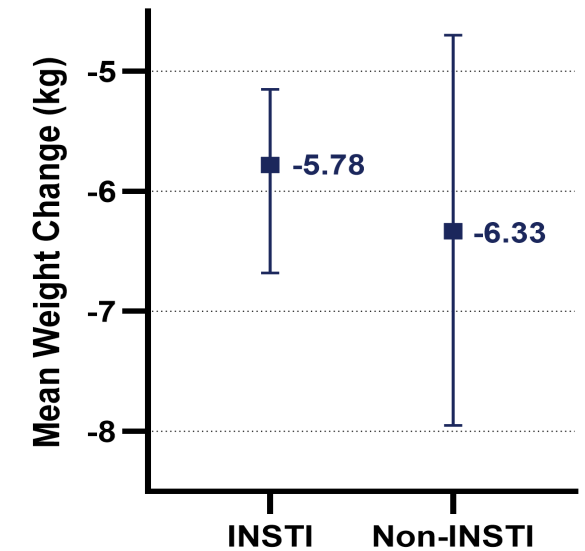
Results

- Significant decrease ($P < .001$) in all four primary outcomes
- **Mean weight loss of 5.58 kg** (95% CI -8.14 to -3.03 kg)
- Integrase strand transfer inhibitor (INSTI) vs non-INSTI-based ART regimens: no significant difference
- Semaglutide showed greater weight loss than alternative GLP-1 agonists (-4.39 kg; 95% CI -8.425 to -0.352 kg)
- Outcomes strongly correlated with baseline weight/BMI
- Inconclusive data on adverse effects and overall safety

GLP-1 AGONISTS WERE ASSOCIATED WITH SIGNIFICANT METABOLIC IMPROVEMENTS IN ALL FOUR PRIMARY OUTCOMES



Weight Loss by ART



NO SIGNIFICANT DIFFERENCE IN WEIGHT LOSS WITH INSTI VS NON-INSTI-BASED ART

Discussion

- GLP-1 agonists appear to offer metabolic benefits for PWH regardless of ART regimen
- No consistent or severe drug interactions or adverse effects were reported
- Heterogeneity & lack of long-term clinical studies remain a major limitation