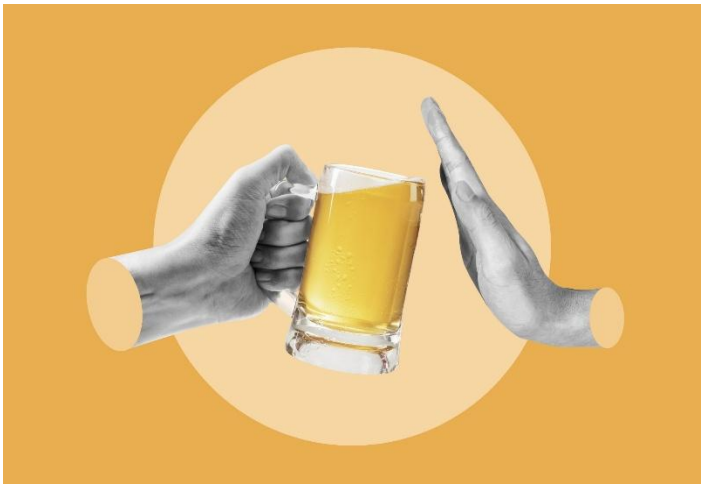
To Fewer Alcohol Drinking Days Study Links GLP-1 Treatment

Researchers examined whether recorded prescriptions for glucagon-like peptide-1 receptor agonists (GLP-1RAs) are associated with self-reported alcohol consumption among participants in the National Institutes of Health's (NIH's) All of Us Research Program.



Study

Researchers conducted an observational cohort study combining a one-time, cross-sectional measure of alcohol consumption with longitudinal electronic health record data from the NIH's All of Us Research Program Curated Data Repository version 8.

They analyzed survey responses, electronic health records, and physical measurements collected from 1981 to October 2023, although most participants' electronic health record histories began between 2014 and 2019.

Eligible participants were adults who completed the Lifestyle Survey, had a documented or calculable body mass index, had at least one inpatient, outpatient, or emergency department visit in the past two years, and had no recorded history of medullary thyroid carcinoma, multiple endocrine neoplasia syndrome type 2, or end-stage renal disease.

Participants were excluded if they had a recorded pregnancy in the preceding year, a history of bariatric surgery, a prescription record for naltrexone, acamprosate, or disulfiram, or no lifetime history of alcohol consumption.

Participants with at least two GLP-1RA records on separate days, including at least one record during the 365 days before survey completion, were categorized into current or previous prescription groups according to the timing of these records relative to Lifestyle Survey completion.

The future prescription group included individuals who had their first recorded GLP-1RA exposure on or after completing the Lifestyle Survey, which was considered the comparison group.

The term "prescriptions" included clinician prescriptions, dispensations, claims, administrations, medication-list entries, self-reports, and records with an unspecified source, so it did not necessarily confirm medication use or adherence.

The Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) questionnaire was used to measure frequency of alcohol consumption, the number of drinks consumed on a typical drinking day, and the frequency of consuming six or more drinks on one occasion.

To calculate incidence rate ratios (IRRs), the researchers performed multivariable weighted negative binomial regression analyses. They used propensity score weighting, adjusting for demographic, clinical, and health care utilization variables.

Additional analyses included each of the three AUDIT-C questions separately, comparing results across matched samples and unweighted models. The Benjamini-Hochberg procedure was used to adjust for multiple comparisons.

Findings

Among the 393,596 participants in the NIH's All of Us Research Program with available electronic health records, 20,768 participants had at least one recorded GLP-1RA exposure, while 15,447 participants had two or more records on separate days.

After applying the inclusion criteria, participants were divided into three groups: 3,650 in the current prescription group, 544 in the previous prescription group, and 5,642 in the future prescription group, which served as the main comparison group. An additional 270,324 eligible participants were available for propensity-score matching, enabling closely matched comparison groups.

After weighting, absolute standardized mean differences were below 0.1 for all measured characteristics. After matching, they were below 0.1 for all characteristics except former tobacco use.

The main analysis evaluated the association between GLP-1RA prescriptions and AUDIT-C scores. The analysis showed that individuals with current GLP-1RA prescriptions had lower AUDIT-C scores than participants in the future prescription group. For the current prescription group, the average AUDIT-C score was approximately 5% lower than in the future-prescription group, a statistically significant difference.

Participants with prior GLP-1RA prescriptions had average AUDIT-C scores approximately 8% lower than those in the future-prescription group, although the difference was not statistically significant. Moreover, sex-stratified analysis presented similar patterns among both men and women in the current prescription group, although statistical significance was observed only among women before adjustment for multiple comparisons and did not remain significant after that adjustment.

The researchers could not conduct sex-stratified analyses of the previous prescription group because of its smaller sample size.

The outcomes from secondary analyses were generally consistent with those from the primary analysis. In the propensity-score-matched analysis, participants with current or previous GLP-1RA records were compared with matched participants who had no GLP-1RA record at the time of survey completion.

The matched analysis also found significantly lower average AUDIT-C scores among participants with current prescriptions, whereas no statistically significant difference was observed among participants who previously had a recorded prescription.

Separate analyses of each AUDIT-C question showed that both the current- and previous-prescription groups had lower reported drinking frequency than the future-prescription group. Reported drinking frequency was approximately 4% lower in the current-prescription group and 10% lower in the previous-prescription group.

No statistically significant differences were observed in the reported quantity of alcohol consumed on a typical drinking day or in the frequency of consuming six or more drinks on one occasion.

Conclusion

The findings indicated that current GLP-1RA prescriptions were associated with modestly lower self-reported AUDIT-C scores, with the difference appearing to reflect lower reported drinking frequency rather than fewer drinks per occasion or less binge drinking. Participants were generally prescribed GLP-1RAs for non-alcohol-related indications and were not specifically recruited for AUD treatment.

Findings were generally similar across the weighted and propensity-score-matched analyses. The observed associations were modest, and the study could not establish causality. Alcohol consumption was assessed only once, prescription records did not confirm medication adherence, residual confounding remained possible, and the All of Us cohort is not nationally representative.

The AUDIT-C survey also used a threshold of six or more drinks for all participants, which may underestimate clinically meaningful alcohol use among women and adults aged 65 years or older. However, the results support further investigation of GLP-1RAs as potential treatments for AUD, and larger randomized controlled trials are needed to clarify their mechanisms and evaluate their potential efficacy in people with AUD.

Source:

https://www.news-medical.net/news/20260713/Study-links-GLP-1-treatment-to-fewer-alcohol-drinking-days.aspx