Does reducing alcohol consumption have a short-term effect on well-being or life satisfaction in adults?

Research indicates that reducing alcohol consumption leads to short-term improvements in adult well-being, particularly in mental health and self-efficacy aspects.

Abstract

Reducing alcohol consumption appears to yield short-term improvements in adult well-being, especially in mental health and self-efficacy. In several Dry January challenges, participants who achieved abstinence reported significant gains on measures such as the Warwick-Edinburgh Mental Well-being Scale and self-rated health; benefits were maintained through six months among completers. Likewise, studies using mailed screening/feedback and workplace brief interventions noted modest increases in quality-adjusted life years and reductions in at-risk drinking, with one report indicating a 33% decrease in weekly drinks via a digital moderation platform.

Other investigations of naturalistic drinking pattern changes found that reduced consumption was linked to enhanced mental well-being—for example, female quitters reported notable improvements—although, in some large cohorts, declines in self-rated physical health and overall satisfaction were observed. In sum, the studies reviewed support that, in the short term, alcohol reduction tends to improve aspects of mental well-being and life satisfaction when participants engage with structured or self-directed interventions.

Paper search

Using your research question "Does reducing alcohol consumption have a short-term effect on well-being or life satisfaction in adults?", we searched across over 126 million academic papers from the Semantic Scholar corpus. We retrieved the 500 papers most relevant to the query.

Screening

We screened in papers that met these criteria:

- **Population Age**: Were all study participants aged 18 or older?
- **Alcohol Reduction**: Did the study examine voluntary (self-chosen) reduction in alcohol consumption with measurements at both baseline and follow-up?
- **Outcome Measurement**: Did the study measure well-being or life satisfaction using validated instruments?
- **Study Design**: Was the study design either a randomized controlled trial, quasi-experimental study, or prospective cohort study?
- **Follow-up Duration**: Was the follow-up period between 24 hours and 6 months?
- **Population Type**: Did the study include participants from the general population (not exclusively those with diagnosed alcohol use disorder)?
- **Intervention Isolation**: Was alcohol reduction studied in isolation OR analyzed separately from other lifestyle interventions?
- **Study Timeline**: Was the study longitudinal (not cross-sectional) with effects measured over more than 24 hours?

We considered all screening questions together and made a holistic judgement about whether to screen in each paper.

Data extraction

We asked a large language model to extract each data column below from each paper. We gave the model the extraction instructions shown below for each column.

- **Study Design**:

  Identify the type of study design used. Look in the methods section for specific design details. Categorize as:

- Cohort study
- Longitudinal study
- Cross-sectional study
- Intervention study

If multiple design elements are present, list all. If unclear, note "design not clearly specified".

Specific attention should be paid to whether the study tracked changes in alcohol consumption over time and its impact on well-being/life satisfaction.

- **Participant Characteristics**:

  Extract the following details from the methods or participant description sections:

- Total sample size
- Age range or mean age
- Gender distribution (% male/female)
- Baseline alcohol consumption status (e.g., moderate drinkers, heavy drinkers, abstainers)

If subgroup analyses were conducted (e.g., by sex), note these specifically.

If multiple populations were studied (like the Hong Kong and US cohorts), extract characteristics for each separately.

- **Alcohol Consumption Change**:

  Identify how alcohol consumption change was defined and measured:

- Categories of consumption change (e.g., quitters, initiators, persistent drinkers)
- Method of measuring consumption change (e.g., self-report, standardized questionnaire)
- Time frame of consumption measurement

Extract specific definitions used by the study for each consumption change category.

- **Well-being/Life Satisfaction Outcome Measures**:

  Extract specific details about how well-being was measured:

- Specific instrument used (e.g., SF-12 Health Survey)
- Subscales measured (e.g., Mental Component Summary, Physical Component Summary)
- Scoring method
- Interpretation of scores (higher/lower scores indicate what)

If multiple well-being measures were used, list all with their specific details.

- **Key Findings Related to Alcohol Consumption and Well-being**:

  Extract the primary findings connecting alcohol consumption changes to well-being:

- Specific statistical results (beta coefficients, confidence intervals)
- Statistically significant changes
- Differences between groups (e.g., female quitters vs. lifetime abstainers)
- Direction of effect (positive/negative changes in well-being)

Prioritize results directly addressing changes in well-being or life satisfaction due to reduced alcohol consumption.

Results

Characteristics of Included Studies

Study	Study Design	Population Demographics	Intervention Type	Duration of Follow-up	Full text retrieved
de Visser and Piper, 2020	Prospective cohort, longitudinal	3171 Dry January registrants + 2977 general population; younger, more women in Dry January group; heavier drinkers	Naturalistic (Dry January participation)	Baseline, 1 month, 6 months	Yes
Robinson and Visser, 2017	Longitudinal, intervention	4232 British adults; moderate drinkers	Dry January challenge	Baseline, 1 month	No
Visser et al., 2015	Longitudinal	857 British adults (249 men, 608 women); moderate drinkers	Dry January challenge	Baseline, 6 months	No
de Visser and Nicholls, 2020	Longitudinal	4232 adults (mean age 45.3, 74.9% female); Dry January registrants	Dry January challenge	Baseline, 1 month	Yes

Study	Study Design	Population Demographics	Intervention Type	Duration of Follow-up	Full text retrieved
Barnes et al., 2016	Randomized controlled trial (RCT), intervention, longitudinal	1049 adults 60 years, 65.7% male; at-risk drinkers	Project SHARE (education, counseling)	Baseline, 6, 12 months	Yes
Garnett et al., 2020	Randomized controlled trial (RCT), intervention, protocol	5562 UK adults, 18+; hazardous/harmful drinkers	Digital app vs. National Health Service (NHS) advice	Baseline, 1, 3, 6 months (planned)	Yes
Yao et al., 2019	Longitudinal, cohort	FAMILY: 10,386 (mean age 49.3, 44.2% male); NESARC: 31,079 (mean age 46.3, 40.6% male)	Naturalistic (drinking pattern change)	4 years (2 waves)	Yes
Imtiaz et al., 2018	Longitudinal	NESARC, sample size not specified; moderate/heavy drinkers, abstainers	Naturalistic (pattern change)	2 waves (duration not specified)	No
Kraemer et al., 2002a	Longitudinal, cohort, intervention	213 outpatients (mean age 44.6–49.3, ~70% male); at-risk and alcohol use disorder	Early Lifestyle Modification (ELM)	Baseline, 6, 12 months	Yes
Kraemer et al., 2002b	Longitudinal, cohort	213 outpatients; drinkers	None (observational)	Baseline, 6, 12 months	No
Eigenbrodt et al., 2006	Longitudinal, cohort	12,332, mean age 54, 44% male; 40% 1 drink/week	Naturalistic (pattern change)	8 years (3 triennial visits)	Yes
Vadhan et al., 2024	Longitudinal, intervention	46,411 adults, 21+; 64.3% drank 7 days/week	Digital moderation platform (Sunnyside)	12 weeks	No

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Study	Study Design	Population Demographics	Intervention Type	Duration of Follow-up	Full text retrieved
Kuerbis et al., 2015	Randomized controlled trial (RCT), intervention, longitudinal	86, mean age ~65, 66% male; at-risk drinkers	Mailed screening/feedback	Baseline, 3 months	Yes
Massin and Kopp, 2010	Longitudinal	RLMS-HSE, Russia; sample size not specified	Naturalistic (pattern change)	Not specified in abstract	No
Watson et al., 2015	Randomized controlled trial (RCT), intervention, longitudinal	57 employees; inclusion by Alcohol Use Disorders Identification Test (AUDIT)	Workplace brief intervention	Baseline, 6 months	Yes
Schell et al., 2023	Secondary analysis of 3 randomized controlled trials (RCTs)	Not specified; males/females analyzed separately	Online interventions (alcohol, gambling, mental health)	Not specified in abstract	No

Study design:

- Randomized controlled trials (RCTs):4 studies
- Longitudinal studies (including cohort and intervention designs):11 studies
- Secondary analysis of RCTs:1 study

Intervention type:

- Dry January or naturalistic abstinence challenge:4 studies
- Digital or online interventions:3 studies
- Education, counseling, or brief interventions:4 studies
- Naturalistic studies of drinking pattern change:4 studies
- Observational with no intervention:1 study

We did not find mention of intervention type information missing for any study.

Duration of follow-up:

- 3 months or less:4 studies
- 6 months:4 studies
- 12 months or longer:5 studies
- We did not find mention of duration of follow-up for 3 studies.

Effects of Alcohol Reduction

Immediate Effects (0–1 month)

Study	Intervention Type	Well-being Measures	Life Satisfaction Measures	Key Findings
de Visser and Piper, 2020	Dry January (naturalistic)	Warwick-Edinburgh Mental Well-being Scale (WEMWBS), self-rated health	WEMWBS	The study reported significant improvements in well-being and health for completers; these were not seen in the general population
Robinson and Visser, 2017	Dry January (challenge)	No mention found	No mention found	The study reported well-being improved for all, especially completers
de Visser and Nicholls, 2020	Dry January (challenge)	Warwick-Edinburgh Mental Well-being Scale (WEMWBS), General Self-Efficacy Scale (GSE)	WEMWBS	The study reported significant increases in well-being and self-efficacy, especially for completers
Garnett et al., 2020	Digital app (protocol)	EuroQol 5-Dimension 5-Level (EQ-5D-5L) (planned)	Quality-adjusted life years (QALYs) (planned)	No results reported; protocol only
Kuerbis et al., 2015	Mailed screening/feedback	Self-rated health (not specific)	No mention found	The study reported reduced at-risk drinking and risk scores in the intervention group
Watson et al., 2015	Workplace brief intervention	EuroQol 5-Dimension (EQ-5D)	Quality-adjusted life years (QALYs)	The study reported a small QALY gain, cost savings, and reduced Alcohol Use Disorders Identification Test (AUDIT) scores

Study	Intervention Type	Well-being Measures	Life Satisfaction Measures	Key Findings
Schell et al., 2023	Online interventions	Quality of life (QOL; instrument not specified)	QOL	The study reported female quality of life improved more with extensive alcohol intervention

Intervention types:

- Dry January (1 naturalistic, 2 challenge):3 studies
- Digital app (protocol only):1 study
- Mailed screening/feedback:1 study
- Workplace brief intervention:1 study
- Online interventions:1 study

Well-being and life satisfaction measures:

- Warwick-Edinburgh Mental Well-being Scale (WEMWBS):3 studies
- EuroQol 5-Dimension (EQ-5D or EQ-5D-5L):2 studies (used or planned)
- Quality-adjusted life years (QALYs):2 studies (used or planned)
- Quality of life (QOL):1 study
- General Self-Efficacy Scale (GSE):1 study
- Self-rated health:2 studies
- We did not find mention of a specified well-being or life satisfaction measure in 2 studies.

Key findings:

- Significant improvements in well-being/self-efficacy for completers of Dry January:2 studies
- Well-being improved for all participants, especially completers:1 study
- Reduced at-risk drinking and risk scores in the intervention group:1 study
- Small QALY gain, cost savings, and reduced AUDIT scores:1 study
- Female quality of life improved more with extensive alcohol intervention:1 study
- No results reported (protocol only):1 study

We found results for 6 studies; for 1 study (the digital app protocol), we did not find results. Most studies used a validated well-being or life satisfaction measure, but we did not find mention of a specified measure in 2 studies.

Short-term Effects (1–6 months)

Study	Intervention Type	Well-being Measures	Life Satisfaction Measures	Key Findings
de Visser and Piper, 2020	Dry January	Warwick-Edinburgh Mental Well-being Scale (WEMWBS), self-rated health	WEMWBS	The study reported that benefits were sustained at 6 months for completers
Visser et al., 2015	Dry January	No mention found	No mention found	The study reported reduced consumption, increased self-efficacy at 6 months, especially for completers
Barnes et al., 2016	Project SHARE (education, counseling)	Short Form-12 version 2 (SF-12v2; Mental Component Summary [MCS], Physical Component Summary [PCS]), Short Form-6D (SF-6D), Geriatric Depression Scale (GDS)	SF-6D	The study reported statistically significant but small improvements in mental health and quality of life
Yao et al., 2019	Naturalistic (pattern change)	Short Form-12 (SF-12; MCS, PCS)	SF-12	The study reported female quitters had significant mental well-being gains; validated in 2 cohorts
Imtiaz et al., 2018	Naturalistic (pattern change)	Short Form-12 (SF-12; multiple subscales)	SF-12	The study reported decreased consumption improved mental health-related quality of life for heavy drinkers, but reduced physical health-related quality of life; initiation of drinking reduced mental health-related quality of life

Study	Intervention Type	Well-being Measures	Life Satisfaction Measures	Key Findings
Kraemer et al., 2002a	Early Lifestyle Modification (ELM)	Short Form-36 (SF-36; MCS, PCS), Sickness Impact Profile (SIP)	SF-36	The study reported 30% reduction improved mental and (marginally) physical quality of life, reduced consequences
Kraemer et al., 2002b	Observational	Short Form-36 (SF-36; MCS, PCS)	SF-36	The study reported similar findings as above
Eigenbrodt et al., 2006	Naturalistic (pattern change)	Self-rated health	No mention found	The study reported stopping/starting/abstaining associated with decline in health perception versus continued drinking
Vadhan et al., 2024	Digital moderation platform	No mention found	No mention found	The study reported a 33% reduction in weekly drinks; wellness improvement implied but not measured
Massin and Kopp, 2010	Naturalistic (pattern change)	Subjective well-being	Satisfaction	The study reported a hump-shaped relationship; moderate-high drinking linked to low satisfaction
Watson et al., 2015	Workplace brief intervention	EuroQol 5-Dimension (EQ-5D)	Quality-adjusted life years (QALYs)	See above
Schell et al., 2023	Online interventions	Quality of life (QOL)	QOL	See above

Intervention types:

- Naturalistic (pattern change) designs:4 studies
- Dry January (temporary abstinence) interventions:2 studies
- Lifestyle modification (Early Lifestyle Modification):1 study
- Digital moderation platform:1 study
- Education/counseling (Project SHARE):1 study

- Workplace brief intervention:1 study
- Online interventions:1 study
- Observational design:1 study

Well-being and life satisfaction measures:

- Short Form-12 (SF-12):5 studies
- Short Form-36 (SF-36):4 studies
- Warwick-Edinburgh Mental Well-being Scale (WEMWBS):2 studies
- Short Form-6D (SF-6D):2 studies
- Quality of life (QOL):2 studies
- Geriatric Depression Scale (GDS), Sickness Impact Profile (SIP), EuroQol 5-Dimension (EQ-5D), quality-adjusted life years (QALYs), self-rated health, subjective well-being, and satisfaction:each used in 1 study
- We did not find mention of well-being or life satisfaction measures in 3 studies.

Key findings:

- Sustained or significant improvement in well-being or life satisfaction (both Dry January interventions):2 studies
- Small or marginal improvements:3 studies
- Conditional or mixed effects (e.g., only for certain subgroups or with both positive and negative domains):2 studies
- Negative effects (decline in health perception or lower satisfaction with moderate-high drinking):2 studies
- For 3 studies, we did not find a measured effect or the effect was not specified.

Intervention Effectiveness

Digital Interventions

Study	Intervention Method	Success Rate	Well-being Impact	Implementation Considerations
Garnett et al., 2020	Digital app (Drink Less)	No mention found (protocol)	No mention found	Large-scale randomized controlled trial, cost-effectiveness planned
Vadhan et al., 2024	Digital moderation platform (Sunnyside)	33% reduction in weekly drinks	The study implied wellness improvement	Large, self-selected sample; real-world setting
Schell et al., 2023	Online interventions	No mention found	Quality of life (QOL) improved in females with extensive intervention	Secondary analysis; gender differences

Summary of digital interventions:

- Quantitative reduction in alcohol use and implied improvement in well-being:1 study (Vadhan et al., 2024)
- Improved well-being (quality of life) but no specified quantitative success rate:1 study (Schell et al., 2023)
- No mention found of either a quantitative success rate or well-being impact:1 study (Garnett et al., 2020)

Temporary Abstinence Programs

Study	Intervention Method	Success Rate	Well-being Impact	Implementation Considerations
de Visser and Piper, 2020	Dry January	No mention found	Significant, sustained well-being gains for completers	Self-selected, motivated participants
Robinson and Visser, 2017	Dry January	No mention found	Well-being improved, especially for completers	Support use predicted success
Visser et al., 2015	Dry January	No mention found	Reduced consumption, increased self-efficacy	No rebound effect
de Visser and Nicholls, 2020	Dry January	No mention found	Well-being and self-efficacy gains, especially for completers	Email support predicted success

Summary of temporary abstinence programs:

- Significant or sustained well-being gains for completers:1 study
- Well-being improvements (including self-efficacy gains) for completers:2 studies
- Reduced alcohol consumption and increased self-efficacy:1 study
- We did not find mention of studies that reported no well-being impact.

Implementation considerations:

- Support (including email or general support use) predicted success:2 studies
- Self-selection and participant motivation noted as important:1 study
- Lack of rebound effect reported:1 study

Other Reduction Approaches

Study	Intervention Method	Success Rate	Well-being Impact	Implementation Considerations
Barnes et al., 2016	Project SHARE (education, counseling)	No mention found	Small, statistically significant mental health/quality of life gains	Older adults, primary care
Kuerbis et al., 2015	Mailed screening/feedback	73% less likely to be at-risk drinkers (intervention)	Reduced risk scores	Older adults, low-intensity
Watson et al., 2015	Workplace brief intervention	No mention found	Small quality-adjusted life year (QALY) gain, cost savings	Feasibility, low uptake
Kraemer et al., 2002a/b	Early Lifestyle Modification (ELM)	No mention found	30% reduction improved mental/physical quality of life	Outpatients, at-risk and alcohol use disorder
Yao et al., 2019	Naturalistic (pattern change)	No mention found	Female quitters improved mental well-being	Large, population-based
Imtiaz et al., 2018	Naturalistic (pattern change)	No mention found	Improved mental, reduced physical health-related quality of life	Large, population-based
Eigenbrodt et al., 2006	Naturalistic (pattern change)	No mention found	Decline in health perception for abstainers/quitters	Large, population-based
Massin and Kopp, 2010	Naturalistic (pattern change)	No mention found	Moderate-high drinking = low satisfaction	Russian context

Summary of other reduction approaches:

- Naturalistic (pattern change) approaches:4 studies
- Brief or low-intensity interventions (mailed or workplace-based):2 studies
- Structured programs (Project SHARE, Early Lifestyle Modification):2 studies

Success rate:

- Specified quantitative success rate:1 study (Kuerbis et al., 2015) reported that participants were 73% less likely to be at-risk drinkers in the intervention group.
- No mention found of a specified success rate in the other 7 studies.

Well-being impact:

- Improved well-being or quality of life following intervention or pattern change:5 studies

- Mixed or unclear effects on well-being (improved mental but reduced physical health-related quality of life):1 study
- Reduced or negative well-being (decline in health perception or low satisfaction associated with moderate-high drinking):2 studies
- We did not find mention of any studies that failed to report a well-being impact.

Summary

- Short-term positive effects:The included studies generally report a short-term positive effect of alcohol reduction on well-being, particularly mental health, for motivated adults.
- Most pronounced among completers:The effect is most pronounced among those who achieve substantial reduction or abstinence, with some gender differences observed (greater benefit for female quitters).
- Digital and brief interventions:Digital and brief interventions are promising, though effect sizes are often small.
- Mixed findings in large cohorts:Some large cohort studies report null or negative effects, highlighting the importance of considering confounding factors when interpreting results.

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