AIM Alcohol in Moderation DIGEST ONLINE

INTERNATIONAL DIGEST PROMOTING THE RESPONSIBLE PROMOTION OF ALCOHOL

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US

New legislation introduced in Wisconsin would allow children as young as 14 to serve alcohol to restaurant patrons, the latest in a string of state legislatures' proposals to roll back regulations around work activities for minors.

New Zealand

New Zealand Supreme Court has turned down the appeal of supermarket companies on Auckland Council's proposed Local Alcohol Policy. The supermarket companies, including Foodstuffs and Woolworths New Zealand, had appealed against the council's policy and sought for extension of alcohol sales hours in Auckland.

The policy, intended towards reducing alcohol-associated harms, looked to promote 9pm as the closing time for alcohol sale for several shops. The retailers argued that the shop closing time should be extended until 11pm for alcohol sale. The legal battle between the council and the supermarket has been a lengthy process spanning nearly eight years.

UK

More than 150 pubs have permanently closed in England and Wales during the first three months of 2023, with energy bills being cited as the main cause. An analysis of official government data by the Altus Group showed that 51 pubs were lost each month between January to 31 March - a total of 153 pubs - in comparison to a loss of around 32 pubs a month - 386 in total - during the whole of 2022.

Norway

In the Nordic region, the draft advice on alcohol use, that forms part of the new Nordic dietary advice, has been considerably tightened. The Norwegian newspaper, Nationen, reports that at the previous draft round, the researchers who worked on the new dietary advice wanted to set a recommended maximum intake of 20 grams of alcohol per day. This draft also stated that alcohol intake could have both positive and negative aspects. However, the committee that works with the health councils is now leaning in the direction of recommending abstinence and a more recent draft says that there is no safe level and recommends avoiding or limiting alcohol intake.

Armenia

According to Deputy Minister of Economy, Ani Ispiryan, the Armenian government plans to cancel licensing for the sale and import of certain types of alcohol. The planned changes relate to the production of alcoholic beverages based on beer, wine, apple and other fruit and berry wines and honey, as well as of liquor and other alcoholic beverages containing up to 9% alcohol.

These and other types of respective activities will be exempt from the notification requirement (a simplified type of license). Cancelling this requirement will remove red tape and enable companies or entrepreneurs to enter the market more easily.

A Tribute to Arthur Klatsky, MD (1929 – 2023)

from Members of the International Scientific Forum on Alcohol Research

We are all saddened by the death of Arthur Klatsky on April 30, 2023. Arthur was our colleague for years and a good friend of many of us who study alcohol consumption, health, and disease. As a physician and epidemiologist, Arthur made many important contributions to our current knowledge about the relation between drinking alcohol and health outcomes. He spent most of his career as a senior investigator of the Oakland Kaiser Permanente Medical Center, in California, using their huge database from decades of observations to discover genetic and environmental factors associated with health and longevity.

Born in New York City in 1929, at the onset of the Great Depression in the United States, Arthur became a magna cum laude graduate of Yale University and graduated from Harvard Medical School with Honors. In 1974, he published the first major scientific report on the relation between alcohol consumption and the risk of coronary heart disease, finding decreased risk for moderate drinkers in comparison with non-drinkers. These results represent the seminal epidemiologic findings leading to our understanding of a potential role of moderate alcohol consumption as part of a healthy diet and lifestyle. Subsequently, Arthur published many papers describing the net health outcomes associated with alcohol consumption.

Arthur's research made it clear that the amount and the pattern of alcohol consumption helped determine if there were beneficial or harmful effects of drinking. He was one of the first scientists to describe the "J-shaped curve," where regular light-to-moderate drinking without binges was more often associated with a beneficial effect on health, whereas binge or heavy drinking, especially without food, was more likely to be associated with increased risk of many diseases.

Arthur was the first investigator to demonstrate how "under-reporting" of alcohol consumption was an important factor in estimating health risks. Based on the huge database of the Kaiser-Permanente Cohort (from repeated evaluations over decades), among those patients reporting one to two drinks per day he classified those who had evidence of alcohol misuse (alcoholism, alcoholic liver disease, etc.) somewhere in their medical records as "likely under-reporters." Those reporting one or two drinks/day without such data suggesting abuse were categorized as "unlikely under-reporters." The association of disease outcomes was markedly different between the two categories, with higher risk of hypertension, breast cancer, and premature death being seen only among those at this reported level of drinking who had been categorized as "likely under-reporters." These results clearly supported the absence of such harmful effects of alcohol among truly moderate drinkers.

Through the years, Arthur and Eileen, his wife of 69 years, joined us at national and international scientific meetings where he not only reported his own recent research but, equally important, presented what he thought was a balanced message to the public about drinking. His early recommendations, which have subsequently been strongly supported by later research, was that for most mature adults, a small amount of alcohol (especially wine) consumed with meals and without binge drinking tended to have protective effects for most of the diseases of ageing, including coronary heart disease, ischemic stroke, diabetes, and total mortality. Heavier drinking tended to be associated with harmful effects.

We in our Forum will miss Arthur not only for his intellectual input but for his gentle manner and soft-spoken wisdom. He and Eileen were wonderful participants in our meetings with our receptions and dinners. However, few of us could keep up with them when they undertook their long and strenuous hikes. Presumably, his regular exercise, good genes, and moderate food (and alcohol) intake, all contributed to his long and highly productive career.

The scientific community has lost an important leader who has helped us define what makes up a "healthy lifestyle," and to clarify how moderate alcohol consumption with food can be an important component for most people. We will miss Arthur Klatsky as an intellectual force and as a friend and colleague.

For more information on Arthur Klatsky's work, please visit alcoholresearchforum.org/a-tribute-to-arthur-klatsky-md-1929-2023/

Association between daily alcohol intake and risk of all-cause mortality. A systematic review and meta-analyses

Authors

Zhao J, Stockwell T, Naimi T, Churchill S, Clay J, Sherk A. JAMA Network Open. 2023;6(3): e236185. doi:10.1001/jamanetworkopen.2023.6185

Author's abstract

Importance A previous meta-analysis of the association between alcohol use and all-cause mortality found no statistically significant reductions in mortality risk at low levels of consumption compared with lifetime non-drinkers. However, the risk estimates may have been affected by the number and quality of studies then available, especially those for women and younger cohorts.

Objective To investigate the association between alcohol use and all-cause mortality, and how sources of bias may change results.

Data Sources A systematic search of PubMed and Web of Science was performed to identify studies published between January 1980 and July 2021.

Study selection Cohort studies were identified by systematic review to facilitate comparisons of studies with and without some degree of controls for biases affecting distinctions between abstainers and drinkers. The review identified 107 studies of alcohol use and all-cause mortality published from 1980 to July 2021.

Data extraction and synthesis Mixed linear regression models were used to model relative risks, first pooled for all studies and then stratified by cohort median age (<56 vs56 years) and sex (male vs female). Data were analysed from September 2021 to August 2022.

Main outcomes and measures Relative risk estimates for the association between mean daily alcohol intake and all-cause mortality.

Results There were 724 risk estimates of all-cause mortality due to alcohol intake from the 107 cohort studies (4 838 825 participants and 425 564 deaths available) for the analysis. In models adjusting for potential confounding effects of sampling variation, former drinker bias, and other prespecified study-level quality criteria, the meta-analysis of all 107 included studies found no significantly reduced risk of all-cause mortality among occasional (>0 to <1.3 g of ethanol per day; relative risk [RR], 0.96; 95%CI, 0.86-1.06; P = .41) or low-volume drinkers (1.3-24.0 g per day; RR, 0.93; P = .07) compared with lifetime non-drinkers. In the fully adjusted model, there was a non-significantly increased risk of all-cause mortality among drinkers who drank 25 to 44 g per day (RR, 1.05; P = .28) and significantly increased risk for drinkers who drank 45 to 64 and 65 or more grams per day (RR, 1.19 and 1.35; P < .001). There were significantly larger risks of mortality among female drinkers compared with female lifetime non-drinkers (RR, 1.22; P = .03).

Conclusions and relevance In this updated systematic review and meta-analysis, daily low or moderate alcohol intake was not significantly associated with all-cause mortality risk, while increased risk was evident at higher consumption levels, starting at lower levels for women than men.

Forum comments

Background including previous results

The notion that low-dose alcohol use (moderate alcohol consumption) protects against all-cause mortality in general populations continues to be made controversial. Observational studies show that moderate drinkers have longer life expectancy mainly because moderate drinkers are less likely to die from cardiovascular diseases than abstainers (Di Castelnuovo et al., 2022; Song et al., 2018). Approximately 35 years of systematic reviews and meta-analyses of this literature generally confirm J-shaped risk curves, that is, protective associations at low doses with increasing risk at higher doses (Di Castelnuovo et al., 2002, 2006, 2021). Consumption of up to 20 g alcohol/day for both men and women was associated with lower all-cause mortality than zero consumption, was associated with a reduced risk of all-causes, with approximately 5 g/day associated with the lowest mortality risk.

These meta-analyses have also adjusted for all known confounders. One of the earliest confounders recognized by epidemiologists was that some of the "non-drinkers" no-alcohol reference group in their studies contained former heavy drinkers and had stopped drinking due to adverse health effects.

Forum Member Stockley states that "Scientists then began to collect precise data on previous drinking, to better control for drinking pattern (previous intake, regular versus binge drinking), smoking, physical activity, obesity, and other risk factors for disease and mortality. In almost every well-conceived and controlled study done, it was found that when ex-drinkers were not included in the referent group (and the group consisted only of lifetime abstainers) and other known confounders were also adjusted for, there was still a strong "J-shaped curve" for CVD and mortality for moderate drinkers. This pattern has been found consistently in studies from North and South America, Europe, and Asia, in cultures where alcohol consumption varies from the occasional subject to the large majority of people (Ronksley et al., 2011). All these studies have consistently shown that there is a cardioprotective effect for regular light to moderate alcohol consumption contributing significantly to a reduced all-cause

mortality for light to moderate drinkers (Kono et al., 1986, Cullen et al., 1993, Tsubono et al., 1993, Thun et al., 1997, Rehm et al., 2001, Makela et al. 2005, Di Castelnuovo et al., 2002, 2006, 2021, Perreault et al., 2006, 2017, Friesema et al., 2007, Sadakane et al. 2009., Sun et al., 2009, Huang et al., 2014, Bergman et al., 2013, Ferrari et al. 2014, Jayasekara et al., 2015, Xi et al., 2017, Kunzmann et al., 2018, Colpani et al., 2018, Kapiro et al., 2019, Daya et al., 2020, Härkännen et al., 2020, Li et al., 2020, Van den Brandt and Brandts, 2020, Zhang et al., 2021, Barbería-Latasa et al., 2022)".

J-shaped curves are more often observed in epidemiology than linear relationships because of multiple determinants or risk factors for diseases. Therefore, there will always be an optimum between risk factors and disease outcomes. Accordingly, the consistently observed J-shape between alcohol consumption and all-cause mortality is probably not the result of a methodological flaw. Examples include the J-shaped association between body mass index (BMI) and stroke (Liu et al., 2018), an association which is extended to all-cause mortality after adjusting for potential confounders such as alcohol consumption and smoking (Berrington de Gonzales et al., 2010). Even in patients with non-communicable diseases the association between BMI and mortality is J-shaped. The association between blood pressure (BP) and mortality is also J-shaped both in treated and untreated patients (Boutitie et al., 2002, Sims et al. 2014).

The current paper by Zhao J., Stockwell T., Naimi T., Churchill S., Clay J., Sherk A., (2023) is a follow-up paper to two published previously by this group trying to undermine the well-established J-shaped association between moderate alcohol consumption, cardiovascular disease and all-cause mortality. The first paper written by Filmore et al. (Fillmore et al., 2007) re-iterated the old and already falsified hypothesis that the J-curve would be generated by "sick quitters" or badly categorized moderate drinkers. The "sick quitters" hypothesis was duly discredited by reanalysis of the studies (Klatsky and Udaltsova, 2007). Also repeat studies adjusting for the claimed bias still showed a cardioprotective effect for regular light to moderate alcohol consumption (Di Castelnuovo et al., 2006, Ronksley et al., 2011).

The second paper written by Stockwell et al. (2016) was previously critically reviewed by ISFAR. Forum members noted that the authors were very selective in choosing papers to include in their new analyses: they identified 2,575 studies on the subject, analysed 87, but then found some reason to exclude almost all of these studies to reach a conclusion that " . . . there was no significant protection of all-cause mortality for low-volume drinkers (RR = 1.04, 95% CI [0.95, 1.15]) " based on what is apparently only six (6!) remaining studies. Their new analysis markedly distorted the accumulated scientific evidence on alcohol and CVD and mortality. As stated by one Forum member, "The biased selection of studies that are included undermines the value of the paper, but more importantly promulgates misinformation in the name of appropriate scientific method. Failure to acknowledge the robust body of knowledge that supports the opposite conclusion, and disqualification of extensive studies that offer plausible biologic explanation of observed benefits, is unconscionable."

Furthermore, Forum Member Hendriks remarks that this series of three papers ignores the immense amount of experimental data, not only animal experiments but trials in humans, that have described the mechanisms by which moderate alcohol consumption have been shown to decrease essentially all of the risk factors for cardiovascular disease, including low HDL-cholesterol, elevated LDL-cholesterol, endothelial dysfunction, coagulopathies, inflammation, abnormal glucose metabolism, and many others (Brien et al., 2011, Ronksley et al., 2011, Hendriks, 2020). The consistent finding of lower cardiovascular disease risk among moderate drinkers in all well-done cohort studies is strongly supported by experimental evidence of the mechanisms.

Comments on current methodology

Zhao et al. (2023) have [again] biased their meta-analysis by 'cherry picking' a small number of studies for their meta-analysis.

Zhao et al. (2023) is published in the prestigious journal JAMA Open Network, basically with the same topic including 87 studies from their 2016 publication and adding 20 relatively recent studies to the meta-analysis which met the same inclusion criteria of the second paper. Unfortunately, a number of older epidemiologic studies utilising a potentially biased no-alcohol reference group continued to be included in the 2023 analysis also. The criticisms of the methodology of the 2016 analysis also hold for this 2023 meta-analysis which overlaps on the same body of evidence, and investigates the same hypothesis using the same methodology.

Zhao et al. (2023) have misrepresented the study as an original investigation.

This third paper is presented as an original investigation, the stated purpose of which is to show how sources of bias may change results. How is this different from the stated purpose of the second paper which was to determine whether misclassifying former and occasional drinkers as abstainers and other confounders underlie observed positive health outcomes for low volume drinkers in prospective studies of mortality?

A selected group of studies were analysed that related reported consumption to mortality. Of these 20 newly included papers, approximately half clearly supported a J-shaped association between alcohol and all-cause mortality (Perreault et al. 2017, Syden et al., 2017, Kunzmann et al., 2018, Saito et al., 2018, Keyes et al., 2019, Daya et al., 2020, van der Luiygaarden et al., 2020, di Castelnouvo et al., 2021, Zhang et al., 2021). Why these specific J-shape supportive studies were chosen and others were not, has not been motivated by the authors. For example, Kunzmann et al., (2018) in a population-based cohort study using data from 99,654 adults (68.7% female), aged 55-74 years, participating in the U.S. Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial, strongly supported a J-shaped association between alcohol and mortality, which remains even after adjustment for cancer risk. The results indicate that alcohol consumption below 1 drink/day was associated with the lowest risk of death.

Zhao et al. (2023) have reported erroneous and misleading conclusions.

They concluded that "in this updated systematic review and meta-analysis, daily low or moderate alcohol intake was not significantly associated with all-cause mortality risk…". The supplemental online content, however, clearly shows in eFigure 4 (included below) that adjusted and unadjusted relative risks both show a J-shaped curve for alcohol consumption and all-cause mortality.

The data have been adjusted for many different variables. The unadjusted relative risks showed the classical J-shape. Surprisingly, even the fully adjusted relative risk showed a J-shaped curve as well: a significantly reduced relative risk for all-cause mortality for those drinking a 'low volume', namely 1.30 -24 g/day. The authors, however, state that in their fully adjusted model "daily low or moderate alcohol intake was not significantly associated with all-cause mortality risk" and provide a risk estimate of 0.93 (CI: 0.85-1.01). This discrepancy between figure and text is not addressed by the authors. It is amazing that this discrepancy has not been noted by the reviewers and editors of JAMA Network Open. One wonders if reviewers and editors have read this paper in detail, a first task of reviewers would be to check whether the data support the conclusions. The editors have missed the fact that data and procedures, which were essential to derive at their conclusions have been transferred to the supplemental materials. This makes it impossible to grasp the authors approach from what was written in the original JAMA paper.

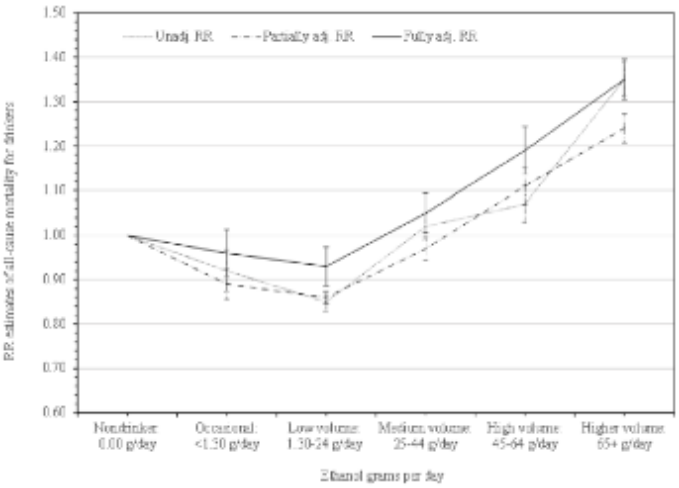


Figure 1 Unadjusted, partially adjusted and fully adjusted Relative risk (RR) of all-cause mortality for drinkers vs non-drinkers, 1980 to 2022

Even the Global Burden of Disease study (Bryazka et al., 2022) showed that low to moderate (5-17 g alcohol per day) drinking does not increase risk of 22 selected health outcomes, overall, there is even some benefit at low level drinking. This study indicates that the theoretical minimum risk exposure level lies at 5 g alcohol per day and may lie between 2 and 20 g alcohol per day, whereas the non-drinker's equivalent lies at 17 g alcohol per day and may lie between 10 and 35 g alcohol per day. Although this study previously (Griswold et al., 2018) found that the global theoretical minimum risk exposure level was zero standard drinks per day, the same group found in this recent updated study that the global theoretical minimum risk exposure level was above 0.

Zhao's fully adjusted model includes adjustments for between-study variation, abstainer biases, sex, country in which a study was conducted, study publication year, follow-up years, drinking pattern, and whether studies controlled for heart problem, social status, race, diet, exercise, body mass index,

and smoking status. Some of these factors are well-known confounding factors such as smoking, diet, exercise, body mass index, but some of the factors adjusted seem irrelevant and are not motivated by the author. These adjustments include between-study variation, abstainer biases, country in which the study was conducted and study publication year. It is also unclear how these adjustments have been made. Apart from the fact that this study does not contain any new aspect, the study outcomes are a direct result of the author's modelling assumptions and the methods used to recode data from the original study resources.

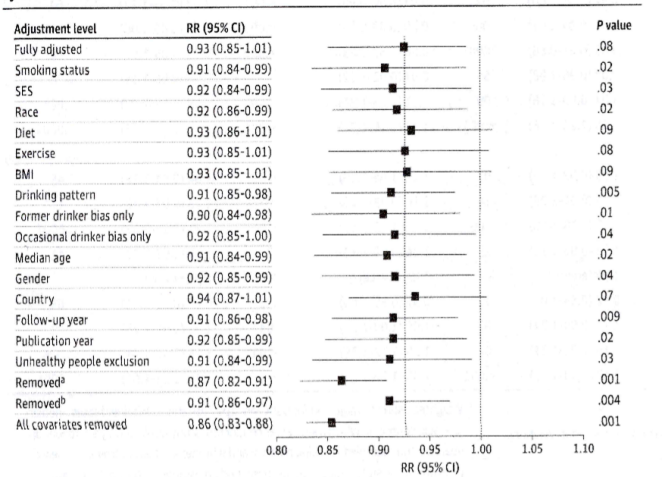
Inaccurate recoding by Zhao et al. (2023).

Recoding appears to be inaccurate as there are inconsistencies when the original study's adjustments are compared with the data provided in eTable 1. For example, Bobak et al., (2016) adjusted their model for age, education, marital status, economic activity, asset score, subjective hardship score, smoking, physical activity, BMI, prevalent cardiovascular disease and cancer, and depressive symptoms. Bobak et al., (2016) also presented separate risks for men and women. The authors of the JAMA paper claim that they control only for age, sex, race, smoking, and an illness exclusion. Zhao et al. (2023) did not specify these adjustments in their table and may, therefore, have over adjusted for physical activity/exercise, BMI and social status.

Table 1 in the JAMA paper (not shown here) provides the characteristics of the highly selective group of studies used for their analysis. It seems that the majority of the studies selected did not adjust for the covariates race, diet and exercise, which may be indicative of the quality of the selected studies. Other covariates were corrected for in most cases. It is unclear why the authors chose to adjust for all of these covariates instead of meta-analysing good quality studies that did adjust for all covariates considered relevant.

The authors motivate their extensive adjustments by stating that removing any of these covariates will reduce the relative risk for alcohol intake. This was illustrated in the only figure featured in the paper. The authors illustrate the effect adjustments made (included below).

Figure. Relative Risk (RR) of All-Cause Mortality Due to Low-Volume Alcohol Consumption (1.3-24.0 g Ethanol per Day) With and Without Adjustment for Potential Confounding by Each Covariate or Set of Covariates



BMI indicates body mass index; SES, socieconomic status

a) Variables smoking status, SES,drinking pattern, former drinker bias only, occasional drinker bias, median age, and gender were removed.

b) Variables race, diet, exercise, BMI, country, follow-up year, publication year, and unhealthy people exclusion were removed.

Therefore, leaving out adjustment for all covariates yielded a relative risk of 0.86 with a highly significant confidence interval of 0.83-0.88. Leaving out the covariates diet, exercise, BMI and country did, however, not significantly affect the fully-adjusted relative risk whereas other adjustments did. This information, which in itself is remarkable, did not change their analysis strategy. It has been known for a long time that adjustment for diet, for example, will affect the relative risk for wine drinkers (Tjønneland et al., 1999, Jani et al., 2021).

Also, without adjusting for country, relative risks do not change significantly as compared to the fully adjusted model. Country seems relevant, however, since drinking patterns vary with culture and country. Literature shows that health outcomes like total mortality and coronary heart disease are negatively affected when alcohol is taken as a binge as compared to regular moderate consumption.

Also, interesting to see in this figure that in the fully-adjusted model there is a change in relative risk. The numbers indicate a relative risk of 0.93 with a confidence interval of 0.85-1.01, whereas the figure shows a relative risk of 0.93 with a confidence interval not crossing the vertical line at 1, probably something like 0.86 – 0.99. This means that the fully-adjusted model produces a relative risk of 0.93, which is not significantly different from the unadjusted or partly adjusted models but still significantly lower than 1.

One wonders what the outcome would have been when the best adjusted papers were used for meta-analytical purposes rather than to adjust and use extensive modelling to derive at some theoretical relative risk that may or may not be true?

Concluding Forum comments

In the present study, the authors have resurrected the arguments that they and others raised decades ago. They express concern about, for example, the inclusion of sick quitters in the non-drinking population in an effort to demonstrate that epidemiologists have not properly adjusted for confounders in determining the presence of the J-shaped curve for cardiovascular diseases such as IHD and mortality. In fact, the issues raised by Fillmore et al. (2006) had been recognized by others in the field as early as 1995 and suitable corrections have been taken since then. The authors of this paper repeat themselves by quoting their previous and discredited paper by Fillmore et al. (2006) and 10-years later by Stockwell et al. (2016).

The 2014 meta-analysis by Roerecke and Rehm concluded that "For drinkers having one to two drinks per drinking day without episodic heavy drinking, there is substantial and consistent evidence from epidemiological and short-term experimental studies for a beneficial association with ischaemic heart disease (IHD) risk when compared to lifetime abstainers. The alcohol-IHD relationship fulfils all criteria for a causal association proposed by Hill."

Even when Wood et al., (2018) in his extensive combined analysis in the Lancet eliminated non-drinkers from their analysis, their data still supported that individuals consuming more often than twice per week or engage in binge drinking, consumption of up to 200 g alcohol/week does not seem to increase mortality compared to non-drinkers.

The Forum, therefore, concludes that the overwhelming body of observational scientific data, as well as an immense number of experimental studies, support the contention that, for most middle-aged and older men and women who choose to do so, the regular consumption of small amounts of an alcoholic beverage can be considered as one of four or five additive components of a "healthy lifestyle." Such a habit has been repeatedly shown to be associated with a lower risk of CVD and of total mortality (Spencer et al., 2005, Holahan et al., 2010, McCaul et al., 2010, Ford et al., 2011, Simons et al., 2011, Larsson et al., 2017, Barbarsko et al., 2018, Li et al., 2018, Ding et al., 2022). Ding et al. (2022) examining modifiable risk factors and longevity in 85 346 participants from the Nurses' Health Study and the Health Professionals Follow-up Study, concludes that there is "important evidence" that maintaining healthy behaviours should be recommended to individuals through mid-life to late adulthood as well as at young ages.

Furthermore, the relationship between alcohol consumption and risk of death from all causes is complex where the reduced risk in death from cardiovascular disease is attenuated by the increased risk in death from cancers. A J-shaped relationship, however, is still observed between average lifetime alcohol consumption and death from all causes in the majority of studies.

Using average lifetime alcohol consumption would avoid the bias that occurs when separating former drinkers from current drinkers according to Stockwell et al., (2016). Accordingly, Kunzmann et al., (2018) used average lifetime alcohol consumption and observed J-shaped associations between average lifetime alcohol consumption and overall mortality, cardiovascular-related mortality, and combined risk of death or cancer. In comparison to lifetime light alcohol drinkers (1-3 drinks per week), lifetime never or infrequent drinkers (<1 drink/week), as well as heavy (2-<3 drinks/day) and very heavy drinkers (3+ drinks/day) were observed to have increased overall mortality and combined risk of cancer or death in other words again showing a J-shaped curve.

Furthermore, the US Health and Retirement Study has previously reported that moderate alcohol consumption independently confers reduced frailty risk for both older men and women (Shah et al. 2018), predicts fewer depressive symptoms among older adults (Paulson et al. 2018) where social interaction is essential to the seemingly beneficial effect of moderate alcohol consumption on depressive symptomatology and functional ability (Scott et al., 2018). Quality of life is relatively little considered factor in epidemiological studies of successful ageing and alcohol consumption, yet we know from the US Rancho Bernardo Study of Healthy Ageing and indeed from the Australian Dubbo Study of the Elderly, that a higher quality of life is associated with higher cognitive, mental and

physical health and generally, longevity (Simons et al., 2006, Simons et al., 2014, Richards et al., 2017).

Specific comments from Forum members

Forum Member Stockley also comments that on page six of 17, Zhao et al. (2023) "claim that individuals aged 50 years or younger who were occasional moderate consumers of alcohol had an increased risk of mortality which increased linearly with amount compared with older individuals." This is in contrast to data, however, that suggests the consumption of alcohol at a younger age does reduce the risk of CVD at a later age (Hvidfeldt et al., 2010) by modulating certain biomarkers for CVD (Power et al., 1998, Green et al., 2009, Wakabayashi and Araki, 2010, Okwuosa et al., 2013).

To date, no single risk factor has been identified to be responsible for causing CVD; rather, multiple interrelated factors seem responsible for its long-term development. Numerous traditional risk factors for CVD are related to diet and lifestyle. Such modifiable risk factors are present at, and develop from, adolescence and develop over many years until symptoms occur, generally in middle or older age (Hajar, 2017).

The US Coronary Artery Risk Development in Young Adults (CARDIA) and other subsequent studies have shown that early adolescent and young adult levels of modifiable risk factors for CVD, albeit low, were equally or more informative about coronary artery disease outcome in middle age than subsequent levels (Loria et al., 2007, Hartiala et al., 2012, Hartiala et al., 2016, Wilkins et al., 2016). This indicates that adolescent and young adult risk factor levels and activities that attenuate them, beneficially affect the pathogenesis of CHD and is associated with reduced CHD outcomes at middle and older age. Although the absolute risk is small in younger adults compared with middle-aged and older adults, light to moderate alcohol consumption but not heavy or excessive amounts and patterns in earlier ages will beneficially affect CVD and all-cause disease outcomes at older age.

Forum Member Ellison considers that "this paper is especially of interest since its reported results do not support the J-shaped curve seen in essentially all well-done cohort studies in western populations. Unfortunately, it represents a biased attempt to condemn all alcohol consumption through manipulation of collected data. In my opinion, there are two key problems with these analyses. The first is the use of only reported alcohol consumption without adjustments for pattern of drinking (regularly versus only on weekends, with/without food, with/without binge drinking, etc.). Simply using the total reported alcohol intake of a subject without knowing the pattern of drinking is insufficient for estimating its health consequences. In comparison with lifetime abstinence, regular moderate drinking with food has been shown consistently to decrease the risk of most health outcomes, including total mortality. The multiple and often unusual adjustment factors used in the present extensive analyses only confuse the picture. An even bigger problem is the combination of subjects from many different cultures for estimating an effect. The best estimates of the health effects related to alcohol consumption are available from large, well-done cohort studies within a defined population (as in nurses, health professionals, etc.) where striking cultural and socioeconomic differences are minimal. In every very large cohort study with adequate adjustments for drinking pattern and such factors, moderate drinkers are found consistently to live longer than lifetime abstainers. Combining data from many different cultures does not produce results that can be applied to any single group or individual, and is not useful for setting drinking guidelines for any population.

Forum members de Gaetano with Augusto Di Castelnuovo highlighted that "One of the new included 20 studies was that of Di Castelnuovo et al. (2021). Zhao et al. 2023 wrongly cited data from this paper (quoted). Zhao et al. (2023) largely based their conclusions by computing adjusted effects based on Meta-Regression Models. The overall relative risks (RRs) for each consumption category are derived from a weighted and adjusted model for a range of potential covariates. However, the Authors do not explain how the adjusted RR value is derived. For which values of the covariates is the overall risk (for each consumption category) calculated? Is it based on the reference value of each covariate? On the unbiased or ideal value? The mean value of the covariate?

While it would make sense to calculate the overall RR for certain "optimal" levels of some covariates (such as choosing the unbiased level for the "Abstainer biases" covariate or the "adjusted yes" level for covariates like "Control for smoking or race etc."), it is unclear for which level the overall risk should be calculated for covariates such as "Countries" or "Publication year" or "Follow-up

years". The estimation of the overall relative risk depends on the value that has been fixed for each covariate. The absence of this information makes the "adjusted" results reported in the paper difficult to use and interpret."

Forum member Skovenborg states that "a well-designed meta-analysis can provide valuable information for researchers, policymakers, and clinicians. However, there are many critical caveats in performing and interpreting them, and thus many ways in which meta-analyses can yield misleading information. Meta-analysis is powerful but also controversial— controversial because several conditions are critical to a sound meta-analysis, and small violations of those conditions can lead to misleading results (Walker et al., 2008). In the following we have listed a number of bias and limitations in the meta-analysis of Zhao et al., (2023).

Skovenborg states that confirmation bias, also called confirmatory bias or myside bias, is a tendency for people to favor information that confirms their preconceptions or hypotheses regardless of whether the information is true. Biased interpretation has been invoked to explain attitude polarization - when a disagreement becomes more extreme even though the different parties are exposed to the same evidence, and belief perseverance - when beliefs persist after the evidence for them is shown to be false (Plous, 1993). The list of references includes the 107 cohort studies selected for the meta-analysis, and of the remaining 32 references, seven (21.8%) are studies published by one or more of the authors.

The most obvious example of confirmation bias is the analytical bias regarding the draconian strict definition of lifetime abstainer. "The study defined that lifetime nondrinkers or lifetime abstainers were those who never drank one drink in their lifetime" - e.g., studies with any level of occasional lifetime drinking like "less than 12 drinks" or "rarely" or "hardly ever drinking". Types of misclassification error of abstainer/drinker categories: classification of studies on basis of whether the abstainer category includes former or occasional drinkers: a) abstainers contaminated by both occasional drinkers and former drinkers, b) abstainers contaminated by occasional drinkers only, c) abstainers contaminated by former drinkers only and d) abstainers not contaminated by either occasional drinkers or former drinkers." The Forum agrees that only including those studies that claim to have used lifetime nondrinkers or lifetime abstainers is still no guarantee that hardly ever drinkers or rarely drinkers were excluded. Also, excluding the majority of available studies on the basis of a term used by authors, but not checking similarities and differences between definitions for these terms, may not only turn out to be erroneous, but may generate more confusion and unnecessarily limits the use of the good quality data available.

"When the "abstainers" were considered as the reference group in the original studies and considered contaminated by former drinkers or active drinkers, which were usually occasional or light drinkers, the RR estimates for drinkers were considered the biased estimates and thus an adjustment was needed." Actually, Zhao et al., (2023) "reran their analysis using occasional drinkers (<1 drink per week) as the reference, for whom physiological health benefits are unlikely." Only 21 of the 107 studies were deemed "free from abstainer bias", however, the arbitrary adjustment of studies with any level of "occasional drinking", whether it is <1 drink per week or a couple of drinks per year, is influenced by the authors' personal opinions and neither sensible nor evidence-based. "Our rationale for this strict criterion is that self–reported infrequent drinkers have been shown to greatly under report their personal consumption [31,32]", the authors write in the Supplemental Online Content. The conclusions of ref. 32 was that spirits consumption was underestimated by 65.94% compared with sales data, wine by 38.35% and beer by 49.02%. "After adjusting for Q (quantity) and F (frequency) values accordingly, regression analyses found alcohol consumption to be underestimated significantly more by younger drinkers (e.g., 82.9±1.19% for underage drinkers vs 70.38±1.54% for those 65+, $p<0.001$) and by low risk more than high risk drinkers (76.25±0.34% vs 49.22 ±3.01%, $p<0.001$)." The conclusion of ref. 32 was the importance of recall bias: "Survey estimates assessing annual alcohol volume, particularly estimates derived from usual-frequency and quantity measures, have consistently been found to account for only a fraction of per capita consumption from sales data. Our results suggest that the bias is more likely among persons with a less consistent drinking pattern, who may thus have more difficulty recalling their drinking over time, particularly over an assessment period as

long as 12 months". Some readers would argue that the evidence from ref. 31 and 32 was inadequate and of questionable relevance to substantiate the strict criterion for lifetime abstention."

He goes to explain that "full adjustments according to the strict criteria had the effect of eliminating the mortality risk difference between occasional, low-volume and medium-volume drinkers. In the fully adjusted model, mortality RR estimates increased for all drinking categories, becoming nonsignificant for low-volume drinkers (RR, 0.93; 95%CI, 0.85-1.01; P = .07), occasional drinkers (>0 to <1.3 g of ethanol per day; RR, 0.96; 95%CI, 0.86-1.06; P = .41), and drinkers who drank 25 to 44 g per day (RR, 1.05; 95%CI, 0.96-1.14; P = .28). Considering that three of the authors are members of the Low-Risk Alcohol Drinking Guidelines Scientific Expert Panel (limiting low-risk alcohol intake to 1 to 2 standard drinks per week) the result that a daily intake of 25 to 44 g of alcohol per day is not significantly associated with mortality is noteworthy to say the least.

The authors deserve praise for the figure on page six that illustrates the relative risk of all-cause mortality due to low-volume alcohol consumption (1.3 – 24.0 g ethanol per day) with and without adjustment for potential confounding. Pooled unadjusted estimates (724 observations) showed significantly lower risk for low-volume drinkers (RR, 0.85; 95%CI, 0.81-0.88; P = .001) compared with abstainers as defined in the included studies. P-value massage with potential confounding factors like "occasional drinker bias" or "Publication year" was able to make the mortality risk reduction associated with low-volume alcohol intake non-significant as was the full adjustment: RR 0.93 (95% CI 0.85-1.01).

Statistical tests should never, however, constitute the sole input to inferences or decisions about associations or effects. Among the many reasons are that, in most scientific settings, the arbitrary classification of results into "significant" and "non-significant" is unnecessary for and often damaging to valid interpretation of data; and that estimation of the size of effects and the uncertainty surrounding our estimates will be far more important for scientific inference and sound judgment than any such classification (Greenland et al., 2016). The practice that judges study results according to whether a P-value exceeds or does not exceed a standard, yet arbitrary, cutoff value should be discouraged. One must look at the confidence interval to determine which effect sizes of scientific or clinical importance are relatively compatible with the data, given the model. Apart from the results of P-values massage, on page 18 of the Supplemental Online Content you will find eFigure 4 with a fully significant (and fully adjusted) J-shaped curve association of alcohol intake and all-cause mortality.

Forum Member Finkel considers that, as has been previously pointed out, omissions in previously published work likewise give only an incomplete picture, but that was then, this is now.

Forum Member Teissedre adds that "it is very dangerous to draw conclusions with biased results: Are the data adequate to support the authors' interpretations/conclusions? Manifestly not for this study. Are the results generalizable? Manifestly not for this study This study is to put in the low-quality studies. Because of studies like this the public is forced to take into account the fact that a white coat does not guarantee success, or even sometimes the honesty of the wearer. A biased view of science is dangerous."

Forum member Mattivi considers that "most people experience and learn from their mistakes. Sometimes, those who make mistakes even return to the site of their misdeeds to try to make things right, to try to erase the past. It is unusual and surprisingly disappointing to return to repeat the same mistakes. A critical comment such as this one we are making serves to teach those with the ability to work with rigour the correct way. Fortunately, the most intelligent learn from the mistakes of others. This criticism is for them."

Forum Member Estruch muses that "a biased selection of studies is included in the meta-analysis that undermines the value of the paper. In addition, errors in the interpretation of statistical significance in the Figure 1 indicates bad faith. More important, the conclusion goes against the results of hundreds of studies that found that moderate alcohol consumption decrease overall mortality and protects against cardiovascular disease. In addition, the results of animal experiments and human trials have demonstrated the mechanisms underlying the protective effects of moderate alcohol consumption on all cardiovascular risk factors, adding plausability to the conclusions obtained in epidemiological studies."

Forum Member Djousse suggests that "scientific inference suffers greatly when objective reporting of data is ignored by some authors".

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Forum summary

Zhao et al. (2023) again claims as did Stockwell et al. (2016) that "the importance of controlling for former drinker bias/misclassification is highlighted once more in our results which are consistent with prior studies showing that former drinkers have significantly elevated mortality risks compared with lifetime abstainers". This statement clearly contradicts their e-Figure 4 which shows a J-shaped relationship between alcohol consumption and all-cause mortality, such that, as succinctly summarised by Forum Member Djousse, "scientific inference suffers greatly when objective reporting of data is ignored by some authors". Zhao's claim was made based on just 20 additional papers included in their analysis which carefully excluded hundreds of validated studies showing reduced disease and all-cause mortality among moderate drinkers, as well as choosing occasional drinkers as the reference group.

The key features that clearly demonstrate bias in the present paper are:

1. This is the third attempt by the same group of researchers to disprove the beneficial relationship between light to moderate alcohol consumption and cardiovascular health. The first attempt (Fillmore et al, in 2006) was discredited by reanalysis of the studies. Reanalysis showed that after adjusting for the claimed bias the cardioprotective effect for regular light to moderate alcohol consumption was still apparent.
2. Numerous meta-analyses have been undertaken over the past 15 years that have adjusted for this proposed bias and they have consistently shown that there is a cardioprotective effect for regular light to moderate alcohol consumption.
3. In this new paper, Zhao et al., (2023) have again biased their meta-analysis by 'cherry picking' a small number of studies for their meta-analysis – they discarded 3230 studies and analysed only 107. The 107 studies selected did relate consumption to disease and all-cause mortality, but the authors carefully avoided hundreds of validated studies that showed reduced disease risk among light to moderate drinkers.
4. Countless animal and human studies over the past four decades have provided extensive evidence for the biological mechanisms supporting the findings that light to moderate alcohol consumption is cardioprotective. Zhao et al., (2023) seem to have deliberately pretended that they do not exist.

Forum Member Skovenborg succinctly summarises this flawed further meta-analysis by the Canadian Institute for Substance Use Research group to discredit the positive association between regular low to moderate alcohol consumption and all-cause mortality as follows: "a well-designed meta-analysis can provide valuable information for researchers, policymakers, and clinicians. However, there are many critical caveats in performing and interpreting them, and thus many ways in which meta-analyses can yield misleading information. Meta-analysis is powerful but also controversial—controversial because several conditions are critical to a sound meta-analysis, and small violations of those conditions can lead to misleading results (Walker et al. 2008)."

Comments on this critique by the International Scientific Forum on Alcohol Research were provided by the following members:

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Association between alcohol consumption and kidney stones in US adults

A study investigated the association between alcohol consumption and kidney stones in American adults.

National Health and Nutrition Examination Survey (NHANES) datasets from 2007 to 2016 were utilized. Participants with a history of kidney stones and alcohol consumption aged 20 or older were included. The association between alcohol consumption and kidney stones were assessed, adjusting for age, gender, race, marital status, education, recreational activities, smoking, and several comorbidities.

Alcohol consumption was not significantly associated with the incidence of kidney stones, even among heavy drinkers. The authors state that this finding requires a more adequate sample size and a more detailed review of the history of kidney stones to be further verified.

Source: Zhou Z, Huang Z, Ai G, Guo X, Zeng G, Zhu W. Association between alcohol consumption and kidney stones in American adults: 2007-2016 NHANES. Front Public Health. 2023 Apr 14;11:1156097. doi.org/10.3389/fpubh.2023.1156097.

An evaluation of the longitudinal association between alcohol consumption and a measure of inflammation

Moderate alcohol consumption appears to be associated with reduced inflammation. Determining whether this association is robust to common variations in research parameters has wide-reaching implications for our understanding of disease aetiology and public health policy. The researchers evaluated the associations between alcohol consumption and a measure of inflammation.

A secondary analysis of the 1970 British Birth Cohort Study was performed, using data from 1970 through 2016. Measurements of alcohol consumption were taken in early/mid-adulthood (ages 34 and 42), and level of inflammation marker high-sensitivity C-reactive protein (hsCRP) at age 46. Multiverse analyses were applied to comparisons of low-to-moderate consumption and consumption above various international drinking guidelines with an 'abstinent' reference. Research parameters of interest related to definitions of drinking and reference groups; alcohol consumption measurement year; outcome variable transformation; and breadth of covariate adjustment.

A total of 3,101 individuals were included in the final analyses, with primary analyses limited to those where occasional consumers served as reference. All combinations of research specifications resulted in lower levels of inflammation amongst low-to-moderate consumers compared to occasional consumers (1st percentile effect: -0.21; 99th percentile effect: -0.04). Estimates comparing above-guidelines drinking with occasional consumers were less definitive (1st percentile effect: -0.26; 99th percentile effect: 0.43).

The study authors conclude that the association between low-to-moderate drinking and lower hsCRP levels is largely robust to common variations in researcher-defined parameters, warranting further research to establish whether this relationship is causal. The association between above-guidelines drinking and hsCRP levels is less definitive.

Source: Visontay R, Mewton L, Sunderland M, Bell S, Britton A, Osman B, North H, Mathew N, Slade T. A comprehensive evaluation of the longitudinal association between alcohol consumption and a measure of inflammation: Multiverse and vibration of effects analyses. Drug Alcohol Depend. 2023 Apr 20; 247:109886. doi.org/10.1016/j.drugalcdep.2023.109886.

Managing stress with food and alcohol consumption connected with faster lifelong weight gain

Stress is associated with obesity through several mechanisms, including coping methods used in stressful situations. However, long-term prospective studies investigating stress-induced eating and drinking in parallel and their relationships with weight are scarce.

Researchers at the Finnish Institute for Health and Welfare examined the prevalence of stress-induced eating and drinking and their associations with body mass index (BMI) among women and men during a 30-year follow-up, as well as BMI trajectories from early adulthood to middle age. The findings are published in the journal Psychology & Health.

Eating and alcohol use in stress management have not previously been studied in parallel. The study is part of the Stress, development and mental health (TAM) project, a follow-up study in which people in one age cohort in Tampere have been monitored through questionnaires since 1983 at the ages of 16, 22, 32, 42, and 52. Participants coping methods were evaluated by asking how common it was for them to act in certain ways when they encountered stressful situations. The associations between coping methods and BMI trajectories were examined.

The prevalence of stress-induced eating was higher among women than men throughout the follow-up, whereas men aged 22–32 used alcohol more frequently than women as means of stress management, but after this, stress-related use of alcohol was equally common among men and women.

Stress-induced drinking was more common among men at 22 and 32 years of age. Stress-induced eating was associated with higher BMI at all ages among women, and from the age of 32 among men. Eating as a persistent coping method over the life course was associated with a higher and faster growth rate of BMI trajectories. Stress-induced drinking was associated with higher BMI in middle age, and with a faster growth of BMI among men.

The study concludes that effective, appropriate stress management may be one essential factor in preventing weight gain in the adult population.

Source: Elena Rosenqvist, Olli Kiviruusu, Noora Berg & Hanna Konttinen (2023) Stress-induced eating and drinking and their associations with weight among women and men during 30-year follow-up, Psychology & Health. doi.org/10.1080/08870446.2023.2192240

Alcohol consumption and socioeconomic status associated with the risk of kidney cancer

Studies have shown an inverse association between alcohol consumption and kidney cancer risk. Research published in the Annals of Epidemiology postulates that this inverse association may be further influenced by other risk factors.

Researchers used an Australian cohort, the 45 and Up Study recruited between 2005-2009 to investigate the association between alcohol consumption, and other potential risk factors and kidney cancer incidence. The median follow up was 5.4 years.

Of the 267,357 participants aged > 45 years living in New South Wales, 497 were diagnosed with kidney cancer. There was a significant inverse association between alcohol consumption and risk of kidney cancer, and a significant inverse dose-response relationship. There was significant interaction between alcohol consumption and socioeconomic status. Participants residing in higher socioeconomic areas (the two most advantaged quintiles) who consumed 8-10 drinks or >10 drinks per week, respectively, had a lower risk of kidney cancer compared to the group who consumed 1-4 drinks per week (HR 0.34, 95% CI 0.15-0.76, HR 0.51, 95% CI 0.31-0.83) with a dose-response trend of HR 0.62 (95% CI 0.42-0.93) per 7 drink increase in weekly alcohol consumption.

The researchers conclude that there could be an inverse association between alcohol consumption and risk in those residents in higher socioeconomic areas.

Source: Kim LH, Bang A, Sarich P, Nair-Shalliker V, Patel MI, Smith DP. Alcohol consumption and socioeconomic status associated with the risk of kidney cancer in a large Australian cohort study. Ann Epidemiol. 2023 May 2:S1047-2797(23)00079-0. doi.org/10.1016/j.annepidem.2023.04.014.

Alcohol consumption and risk of total hip replacement due to hip osteoarthritis in women

A study examined the relation of alcohol consumption to hip osteoarthritis in women. The study authors state that alcohol has been associated with both adverse and beneficial health effects generally, however, the relation of alcohol consumption to hip osteoarthritis has been minimally studied.

Among women in the Nurses' Health Study cohort in the United States, alcohol consumption was assessed every four years, starting in 1980. Intake was computed as cumulative averages and simple updates with latency periods of 0-4 through 20-24 years. 83,383 women, without diagnosed osteoarthritis in 1988 were followed to June 2012. 1,796 cases of total hip replacement due to hip osteoarthritis were identified.

Alcohol consumption was positively associated with hip osteoarthritis risk. Compared with nondrinkers, multivariable hazard ratios and 95% confidence intervals were 1.04 (0.90, 1.19) for drinkers of >0 to <5 grams/day, 1.12 (0.94, 1.33) for 5 to <10 grams/day, 1.31 (1.10, 1.56) for 10 to <20 grams/day, and 1.34 (1.09, 1.64) for ≥20 grams/day. This association held in latency analyses of up to 16-20 years, and for alcohol consumption between 35-40 years of age. Independent of other alcoholic beverages, the multivariable hazard ratios (per 10 gram of alcohol) were similar for individual types of alcohol intake (wine, liquor, and beer).

Higher alcohol consumption was associated with greater incidence of total hip replacement due to hip osteoarthritis in a dose-dependent manner in women.

Source: Marchand NE, Hu Y, Song M, Rosner BA, Karlson EW, Ratzlaff C, Lu B, Liang MH, Willett WC. Alcohol consumption and risk of total hip replacement due to hip osteoarthritis in women. Arthritis Rheumatol. 2023 Apr 25. doi.org/10.1002/art.42543.

Narrative review of the effects of red wine consumption

The authors of a review published in the journal, Nutrients, state that a strong controversy persists regarding the effect of red wine consumption and health. Guidelines for the prevention of cardiovascular diseases (CVD) and cancers discourage alcohol consumption in any form, but several studies have demonstrated that low red wine intake may have positive effects on CVD risk.

The review evaluates randomised controlled trials, examining the recent literature on the correlations between acute and chronic RW consumption and health.

All random control trials published in English on PubMed from 1 January 2000 to 28 February 2023 were evaluated. Ninety-one were included, seven of which had a duration of more than six months.

The review assessed the effect of red wine on: (1) antioxidant status, (2) cardiovascular function, (3) coagulation pathway and platelet function, (4) endothelial function and arterial stiffness, (5) hypertension, (6) immune function and inflammation status, (7) lipid profile and homocysteine levels, (8) body composition, type 2 diabetes and glucose metabolism, and (9) gut microbiota and the gastrointestinal tract.

Red wine consumption mostly results in improvements in antioxidant status, thrombosis and inflammation markers, lipid profile, and gut microbiota, with conflicting results on hypertension and cardiac function. Notably, beneficial effects were observed on oxidative stress, inflammation, and nephropathy markers, with a modest decrease in CVD risk in five out of seven studies that evaluated the effect of red wine consumption in patients with type 2 diabetes mellitus, and had a duration between six months and two years. Importantly, a longer duration of treatment with red wine has been shown to protect renal and cardiac function parameters in T2DM patients, suggesting that a moderate intake of red wine may serve as a dietary supplement in diabetic patients.

The review authors suggest that additional long-term randomised controlled trials are needed to confirm these benefits, and assess the potential risks associated with RW consumption.

Source: Lombardo M, Feraco A, Camajani E, Caprio M, Armani A. Health Effects of Red Wine Consumption: A Narrative Review of an Issue That Still Deserves Debate. Nutrients. 2023 Apr 16;15(8):1921. doi.org/10.3390/nu15081921.

Association of alcohol consumption and fatigue in systemic lupus erythematosus

Fatigue is one of the most common complaints and is a potentially modifiable issue in systemic lupus erythematosus (SLE). Studies suggest that alcohol consumption has a protective effect against the development of SLE; however, an association between alcohol consumption and fatigue in patients with SLE has not been studied. A research project assessed whether alcohol consumption was associated with fatigue using lupus patient-reported outcomes (LupusPRO).

The cross-sectional study, conducted between 2018 and 2019, included 534 patients (median age, 45 years; 87.3% female) from 10 institutions in Japan. The main exposure was alcohol consumption, which was defined as the frequency of drinking [<1 day/month (none group), ≤1 day/week (moderate group), and ≥2 days/week (frequent group)]. The outcome measure was the Pain Vitality domain score in LupusPRO. Multiple regression analysis was performed as the primary analysis after adjusting for confounding factors, such as age, sex, and damage. Subsequently, the same analysis was performed as a sensitivity analysis after multiple imputations (MIs) for missing data (n = 580).

In total, 326 patients were categorized into the none group, 121 into the moderate group, and 87 into the frequent group. The frequent group was independently associated with less fatigue compared with none group [β = 5.98 (95% CI 0.19-11.76)] and the results did not substantially deviate after MI.

Frequent drinking was associated with less fatigue, which highlights the need for further longitudinal studies focusing on drinking habits in patients with SLE, the authors say.

Source: Katayama Y, Miyawaki Y, Shidahara K, Nawachi S, Asano Y, et al., Association of alcohol consumption and fatigue in SLE: A cross-sectional study from Lupus Registry of Nationwide Institution (LUNA) cohort. Lupus. 2023 Apr;32(4):531-537. doi.org/10.1177/09612033231159471.

Differences in the food consumption between kidney stone formers and non-formers in the Swiss Kidney Stone Cohort

Diet has a major influence on the formation and management of kidney stones. However, kidney stone formers' diet is difficult to capture in a large population. Researchers described the dietary intake of kidney stone formers in Switzerland and to compare it to non-stone formers.

Data came from the Swiss Kidney Stone Cohort, a multicentric cohort of recurrent or incident kidney stone formers with additional risk factors, and a control group of CT-scan proven non-stone formers. Dieticians conducted two consecutive 24-h dietary recalls, using structured interviews and validated software (GloboDiet). The mean consumption per participant of the two 24-h dietary recalls was taken to describe the dietary intake and used two-part models to compare the two groups.

The dietary intake was overall similar between stone and non-stone formers. However, kidney stone formers had a higher probability of consuming cakes and biscuits (odds ratio, OR[95% CI] =1.56[1.03; 2.37]) and soft drinks (OR=1.66[1.08; 2.55]). Kidney stone formers had a lower probability of consuming nuts and seeds (OR =0.53[0.35; 0.82]), fresh cheese (OR=0.54[0.30; 0.96]), teas (OR=0.50[0.3; 0.84]), and alcoholic beverages (OR=0.35[0.23; 0.54]), especially wine (OR=0.42[0.27; 0.65]). Furthermore, among consumers, stone formers reported smaller quantities of vegetables, coffee, teas and alcoholic beverages.

Stone formers reported lower intakes of vegetables, tea, coffee, and alcoholic beverages, more specifically wine, but reported drinking more frequently soft drinks than non-stone formers. For the other food groups, stone formers and non-formers reported similar dietary intakes. Further research is needed to better understand the links between diet and kidney stone formation and develop dietary recommendations adapted to the local settings and cultural habits.

Source: Legay C, Haeusermann T, Pasquier J, Chatelan A, Fuster DG, Dhayat N, Seeger H, Ritter A, Mohebbi N, Ernandez T, Stoermann C, Buchkremer F, Segerer S, Wuerzner G, Ammor N, Roth B, Wagner CA, Bonny O, Bochud M. Differences in the food consumption between kidney stone formers and non-formers in the Swiss Kidney Stone Cohort. J Ren Nutr. 2023 Apr 27:S1051-2276(23)00067-5. doi.org/10.1053/j.jrn.2023.04.007.

Association of alcohol consumption with all-cause mortality, new-onset stroke, and coronary heart disease in patients with abnormal glucose metabolism

Healthy lifestyles can lower the risk of cardiovascular disease (CVD) and long-term complications. However, the relationship between alcohol consumption and CVD mortality is still controversial, and there is a lack of evidence from large-scale longitudinal studies in the Chinese population. Based on the REACTION study (Risk Evaluation of Cancers in Chinese Diabetic Individuals: A Longitudinal Study), a paper explored the association between alcohol consumption and all-cause mortality, stroke, and coronary heart disease (CHD) in patients with abnormal glucose metabolism during a 10-year follow-up period to provide evidence for lifestyle counselling for these patients.

First, baseline data were collected from the REACTION study cohort in Changchun, Jilin Province, China, in 2011-2012. A questionnaire survey was performed among patients with abnormal glucose metabolism aged over 40 years. The frequency of their alcohol intake, the type of alcohol, and the amount of alcohol consumed daily were surveyed. Physical and biochemical examinations were also performed. Then, through the Primary Public Health Service System of Jilin Province, the researchers collected outcomes during the 10-year follow-up up to October 1, 2021, including all-cause mortality, stroke, and CHD. The relationship between baseline alcohol consumption and 10-year outcomes was analysed and risk ratio (RR) and 95% CI were calculated by adjusting for different clinical indicators.

A total of 4,855 patients with T2DM and prediabetes (35.2% men and 64.8% women) were included in the baseline analysis. Outcomes of 3,521 patients during the 10-year follow-up were obtained, including 227 deaths, 296 new-onset strokes and 445 new-onset CHD. Occasional drinking (less than once a week) was associated with a reduced 10-year all-cause mortality, with an RR of 0.511 (95% CI [0.266, 0.982]) after adjustment for age, gender, medical history, and lifestyles and an RR of 0.50 (95% CI [0.252, 0.993]) in a fully adjusted model including additional biochemical indicators. In addition, heavy alcohol consumption (≥30 g/day for men and ≥15 g/day for women) was significantly associated with an increased incidence of stroke, with an RR of 2.503 (95% CI [1.138, 5.506]) after the adjustment for age, gender, medical history, lifestyles, and biochemical indicators. No significant association was found between alcohol consumption and new-onset CHD.

For patients with abnormal glucose metabolism, occasional drinking (less than once a week) reduces the risk of all-cause mortality, while heavy alcohol consumption (≥30 g/day for men and ≥15 g/day for women) significantly increases the risk of new-onset stroke. The authors say that such patients should avoid heavy alcohol intake, but light alcohol consumption or occasional drinking is acceptable. Additionally, it is crucial to control blood glucose and blood pressure and keep performing physical activities.

Source: Cui M, Li F, Gang X, Gao Y, Xiao X, Wang G, Liu Y, Wang G. Association of alcohol consumption with all-cause mortality, new-onset stroke, and coronary heart disease in patients with abnormal glucose metabolism-Findings from a 10-year follow-up of the REACTION study. J Diabetes. 2023 Apr;15(4):289-298. doi.org/10.1111/1753-0407.13371.

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Increases in 'deaths of despair' during the COVID-19 pandemic in the United States and the United Kingdom

The COVID-19 pandemic significantly impacted mental health, health-related behaviours such as drinking and illicit drug use and the accessibility of health and social care services. How these pandemic shocks affected 'despair'-related mortality in different countries is less clear. A study used public data to compare deaths from alcohol, drugs and suicide in the United States and the United Kingdom to identify similarities or differences in the impact of the pandemic on important non-COVID causes of death across countries and to consider the public health implications of these trends.

Data were taken from publicly available mortality figures for England and Wales, Northern Ireland, Scotland, and the United States of America, 2001–2021, and analysed descriptively through age-standardised and age-specific mortality rates from suicide, alcohol and drug use.

Alcohol-specific deaths increased in all countries between 2019 and 2021, most notably in the United States and, to a lesser extent, England, and Wales. Suicide rates did not increase markedly during the pandemic in any of the included nations. Drug-related mortality rates rose dramatically over the same period in the United States but not in other nations.

Mortality from 'deaths of despair' during the pandemic has displayed divergent trends between causes and countries. Concerns about increases in deaths by suicide appear to have been unfounded, whereas deaths due to alcohol have risen across the United Kingdom and in the United States and across almost all age groups. Scotland and the United States had similarly high levels of drug-related deaths pre-pandemic, but the differing trends during the pandemic highlight the different underlying causes of these drug death epidemics and the importance of tailoring policy responses to these specific contexts.

Source: C. Angus, C. Buckley, A.M. Tilstra, J.B. Dowd, Increases in 'deaths of despair' during the COVID-19 pandemic in the United States and the United Kingdom, Public Health, Volume 218, 2023, Pages 92-96. doi.org/10.1016/j.puhe.2023.02.019.

Alcohol use, dementia risk, and sex

High-risk alcohol use is an established modifiable risk factor for dementia. However, prior reviews have not addressed sex differences in alcohol-related dementia risk. In a systematic review, researchers take a sex-specific perspective towards the alcohol-dementia link, taking into account the age of dementia onset.

Researchers searched electronic databases for original cohort or case-control studies investigating the association between alcohol use and dementia. Two restrictions were considered: First, studies had to report results stratified by sex. Second, given the fact that the age at dementia onset seems to affect the alcohol-dementia link, studies were required to distinguish between early-onset and late-onset dementia (cut-off: 65 years). Additionally, the contribution of alcohol to dementia incidence was quantified for a set of 33 European countries for the year 2019.

3,157 reports were reviewed, of which 7 publications were finally included and summarised narratively. A lower dementia risk when drinking alcohol infrequently or at moderate levels was found in men (three studies) and women (four studies). High-risk use and alcohol use disorders increased the risk of mild cognitive impairment and dementia, particularly early-onset dementia. Estimating the alcohol-attributable share of incident dementia cases revealed that 3.2% and 7.8% of incident dementia cases were estimated to be attributable to high-risk alcohol use (at least 24 g of pure alcohol per day) in 45-to-64-year-old women and men, respectively.

Research to date has paid little attention to the sex-specific link of alcohol and dementia. In the absence of sex-specific research, the established recommendations on high-risk alcohol use should be employed to communicate the alcohol-attributable dementia risk.

Source: Kilian C, Klinger S, Rehm J, Manthey J. Alcohol use, dementia risk, and sex: a systematic review and assessment of alcohol-attributable dementia cases in Europe. BMC Geriatr. 2023 Apr 25;23(1):246. doi.org/10.1186/s12877-023-03972-5.

Metabolic signature of healthy lifestyle and risk of rheumatoid arthritis

While substantial evidence suggests that healthy lifestyle behaviours are associated with a lower risk of rheumatoid arthritis (RA), the underlying metabolic mechanisms remain unclear.

A study aimed to identify the metabolic signature reflecting a healthy lifestyle and investigate its observational and genetic linkage with rheumatoid arthritis risk.

The study included 87,258 UK Biobank participants (557 cases of incident RA) aged 37 to 73 years with complete lifestyle, genotyping and nuclear magnetic resonance (NMR) metabolomics data. A healthy lifestyle was assessed based on five factors: healthy diet, regular exercise, not smoking, moderate alcohol consumption, and normal body mass index. The metabolic signature was developed by summing selected metabolites' concentrations weighted by the coefficients using elastic net regression. The associations between metabolic signatures and rheumatoid arthritis risk were assessed and the mediating role of the metabolic signature in the impact of a healthy lifestyle on rheumatoid arthritis was examined. Genome-wide association analysis (GWAS) was performed to obtain genetic variants associated with the metabolic signature, then Mendelian randomization (MR) analyses were conducted to detect causality.

The metabolic signature comprised of 81 metabolites, robustly correlated with healthy lifestyle. The metabolic signature was inversely associated with RA risk (HR per standard deviation increment: 0.76, 95% CI: 0.70-0.83), and largely explained the protective effects of healthy lifestyle on RA with 64% (95%CI: 50.4-83.3) mediation proportion. One and two-sample MR analyses also consistently showed the associations of genetically inferred per SD increment in metabolic signature with a reduction in RA risk (HR: 0.84, 95% CI: 0.75-0.94, and OR: 0.84, 95% CI: 0.73-0.97 respectively).

The findings implicate the metabolic signature reflecting healthy lifestyle as a potential causal mediator in the development of RA, highlighting the importance of early lifestyle intervention and metabolic tracking for precise prevention of RA.

Source: Zhang J, Fang XY, Leng R, Chen HF, Qian TT, Cai YY, Zhang XH, Wang YY, Mu M, Tao XR, Leng RX, Ye DQ. Metabolic signature of healthy lifestyle and risk of rheumatoid arthritis: observational and Mendelian randomization study. Am J Clin Nutr. 2023 Apr 29:S0002-9165(23)48892-2. doi.org/10.1016/j.ajcnut.2023.04.034.

Light alcohol consumption promotes early neurogenesis following ischemic stroke in adult mice

Neurogenesis plays a crucial role in postischemic functional recovery. Alcohol dose-dependently affects the prognosis of ischemic stroke. Researchers investigated the impact of light alcohol consumption (LAC) on neurogenesis under physiological conditions and following ischemic stroke.

Three months old C57BL/6J mice were fed with 0.7 g/kg/day ethanol (designed as LAC) or volume-matched water (designed as control) daily for eight weeks. To evaluate neurogenesis, the numbers of particular neurons were assessed in the subventricular zone, dentate gyrus (DG), ischemic cortex, and ischemic striatum. The neurons assessed were 5-bromo-2-deoxyuridine (BrdU)+/doublecortin (DCX)+ and BrdU+/NeuN+.

Light alcohol consumption significantly increased BrdU+/DCX+ and BrdU+/NeuN+ cells in the subventricular zone under physiological conditions. Ischemic stroke dramatically increased BrdU+/DCX+ and BrdU+/NeuN+ cells in the dentate gyrus, subventricular zone, ischemic cortex, and ischemic striatum. The increase in BrdU+/DCX+ cells was significantly greater in light alcohol consumption mice compared to the control mice. In addition, light alcohol consumption significantly increased BrdU+/NeuN+ cells by about three folds in the dentate gyrus, subventricular zone, and ischemic cortex. Furthermore, light alcohol consumption reduced ischemic brain damage and improved locomotor activity.

Therefore, light alcohol consumption may protect the brain against ischemic stroke by promoting neurogenesis.

Source: Li J, Li C, Subedi P, Tian X, Lu X, Miriyala S, Panchatcharam M, Sun H. Light Alcohol Consumption Promotes Early Neurogenesis Following Ischemic Stroke in Adult C57BL/6J Mice. Biomedicines. 2023 Apr 2;11(4):1074. doi.org/10.3390/biomedicines11041074.

How associations between profiles of beverage consumption and type 2 diabetes risk are mediated by biomarker networks

Many studies have independently investigated the associations of the consumption of individual beverage types and specific plasma biomarkers with the risk of type 2 diabetes (T2D). However, as individuals do not consume single beverage types exclusively and plasma biomarkers do not act in isolation, it remains unclear how patterns of beverage consumption and plasma biomarker networks associate both with each other and T2D risk.

Research published in the American Journal of Clinical Nutrition explored potential dietary determinants of the T2D risk by defining a model that describes habitual beverage consumption profiles in relation to identified networks of circulating plasma biomarkers.

The study included 1461 cases and 1568 control participants from case-control studies of T2D nested within the Nurses' Health Study. Participants completed validated semiquantitative food frequency questionnaires that assessed habitual beverage consumption, and they provided blood samples from which 27 plasma biomarkers of the cardiometabolic risk were identified. Common exploratory factor analysis (EFA) identified factors that separately described beverage consumption profiles and biomarker networks. The relationships between beverage and biomarker factors and the T2D risk was explored.

EFA revealed 5 factors describing unique beverage consumption profiles and 7 factors describing biomarker networks. The factor describing alcoholic beverage consumption was associated with a reduced risk of T2D (odds ratio [OR]: 0.50 [0.40, 0.64]) mediated, in part, by the factor describing increased concentrations of adiponectin biomarkers (19.9% [12.0, 31.1]). The factor describing low-calorie sweetened beverage (LCSBs) consumption was associated with an increased risk of T2D (OR: 1.33 [1.03, 1.72], lower concentrations of insulin-like growth factor binding proteins 1 and 2, and soluble leptin receptor, and increased leptin concentrations.

Moderate alcohol consumption was associated with reduced T2D risk, mediated in part by increased circulating adiponectin. LCSB consumption was associated with both increased T2D risk and perturbed insulin-like growth factor and leptin signalling.

Source: Rose BD, Rimm EB, Zhang X, Sun Q, Huang T, Young RL, Ivey KL. You are what you drink? How associations between profiles of beverage consumption and type 2 diabetes risk are mediated by biomarker networks. Am J Clin Nutr. 2023 Apr 14:S0002-9165(23)46844-X. doi.org/10.1016/j.ajcnut.2023.04.015.

A dose-dependent association between alcohol consumption and incidence of proteinuria and low glomerular filtration rate

Previous cohort studies have reported conflicting associations between alcohol consumption and chronic kidney disease, characterized by proteinuria and low glomerular filtration rate (GFR). A systematic review, which included 14,634,940 participants from 11 cohort studies, assessed a dose-dependent association of alcohol consumption and incidence of proteinuria and low estimated GFR (eGFR) of <60 mL/min/1.73 m2.

Compared with non-drinkers, the incidence of proteinuria was lower in drinkers with alcohol consumption of ≤12.0 g/day (relative risk 0.87 [95% confidence interval 0.83, 0.92]), but higher in drinkers with alcohol consumption of 36.1–60.0 g/day (1.09 [1.03, 1.15]), suggesting a J-shaped association between alcohol consumption and the incidence of proteinuria. Incidence of low eGFR was lower in drinkers with alcohol consumption of ≤12.0 and 12.1–36.0 than in non-drinkers (≤12.0, 12.1–36.0, and 36.1–60.0 g/day: 0.93 [0.90, 0.95], 0.82 [0.78, 0.86], and 0.89 [0.77, 1.03], respectively), suggesting that drinkers were at lower risk of low eGFR.

In conclusion, compared with non-drinkers, mild drinkers were at lower risk of proteinuria and low eGFR, whereas heavy drinkers had a higher risk of proteinuria but a lower risk of low eGFR. The clinical impact of high alcohol consumption should be assessed in well-designed studies.

Source: Yamamoto R, Li Q, Otsuki N, Shinzawa M, Yamaguchi M, Wakasugi M, Nagasawa Y, Isaka Y. A Dose-Dependent Association between Alcohol Consumption and Incidence of Proteinuria and Low Glomerular Filtration Rate: A Systematic Review and Meta-Analysis of Cohort Studies. Nutrients. 2023 Mar 25;15(7):1592. doi.org/10.3390/nu15071592.

Association between alcohol consumption and incidence of type 2 diabetes mellitus in Japanese men

The effect of alcohol intake on the incidence of type 2 diabetes remains controversial due to inconsistent results across studies. A study aimed to better define the association between alcohol consumption and incidence of type 2 diabetes.

Researchers performed a secondary analysis using open-access data from a retrospective Japanese cohort of 15,464 participants who underwent regular medical examinations at Murakami Memorial Hospital. All participants underwent an initial exam including a questionnaire survey, physical examination, and blood biochemical testing to establish a at baseline. The primary outcome was new-onset T2DM during the follow-up exam. Statistical analysis was conducted to assess the risk of alcohol consumption on type 2 diabetes.

During a median follow-up time of 5.39 years, 373 new-onset type 2 diabetes events were observed. The cumulative risk of type 2 diabetes incidence was higher in the heavy alcohol consumption group vs. the other three groups: none/minimal, light, and moderate consumption. Further analysis indicated incidental type 2 diabetes was independently associated with alcohol consumption. The adjusted hazard ratio relative to the none/minimal consumption group was 1.02 (95% confidence interval: 0.71, 1.48) for light consumption, 1.06 (0.71, 1.57) for moderate consumption, and 2.06 (1.30, 3.24) for heavy consumption. Subsequent subgroup analysis confirmed the association between alcohol consumption and type 2 diabetes incidence in men, but not in women.

Heavy alcohol consumption was independently associated with an increased risk of new-onset T2DM in Japanese men.

Source: Song J, Lin WQ. Association between alcohol consumption and incidence of type 2 diabetes mellitus in Japanese men: a secondary analysis of a Retrospective Cohort Study. BMC Endocr Disord. 2023 Apr 25;23(1):91. doi.org/10.1186/s12902-023-01350-1.

Medical research by publishing date

08 February 2023 - Deep brain stimulation for alcohol use disorder recovery

21 February 2023 - Association of alcohol consumption and fatigue in systemic lupus erythematosus published online

28 March 2023 - Increases in 'deaths of despair' during the COVID-19 pandemic in the United States and the United Kingdom

22 March 2023 - Managing stress with food and alcohol consumption connected with faster lifelong weight gain

25 March 2023 - A dose-dependent association between alcohol consumption and incidence of proteinuria and low glomerular filtration rate

31 March 2023 - Association between daily alcohol intake and risk of all-cause mortality. A systematic review and meta-analyses

02 April 2023 - Light alcohol consumption promotes early neurogenesis following ischemic stroke in adult mice

11 April 2023 - Association of alcohol consumption with all-cause mortality, new-onset stroke, and coronary heart disease in patients with abnormal glucose metabolism

14 April 2023 - Association between alcohol consumption and kidney stones in US adults

14 April 2023 - How associations between profiles of beverage consumption and type 2 diabetes risk are mediated by biomarker networks (Available online)

16 April 2023 - Narrative review of the effects of red wine consumption

25 April 2023 - Association between alcohol consumption and incidence of type 2 diabetes mellitus in Japanese men

25 April 2023 - Alcohol use, dementia risk, and sex

25 April 2023 - Alcohol consumption and risk of total hip replacement due to hip osteoarthritis in women

April 27, 2023 - Differences in the food consumption between kidney stone formers and non-formers in the Swiss Kidney Stone Cohort

29 April 2023 - Metabolic signature of healthy lifestyle and risk of rheumatoid arthritis

2 May 2023 - Alcohol consumption and socioeconomic status associated with the risk of kidney cancer in a large Australian cohort study online

1 June 2023 - An evaluation of the longitudinal association between alcohol consumption and a measure of inflammation

Deep brain stimulation for alcohol use disorder recovery

Brain stimulation, a neuro–surgical procedure intended to directly influence brain activity, shows promise as a new treatment for alcohol use disorder. A pilot study investigated whether electrical stimulation to brain areas implicated in addiction can help with substance use disorder recovery.

The study included 6 adults with severe alcohol use disorder. Each participant underwent a surgery to place electrodes to provide repeated electrical stimulation to the nucleus accumbens, a central structure in the brain's reward pathway.

The study found that self-reported alcohol consumption decreased across the 12-month study period with moderate to large effect sizes, as did other clinical outcome measures associated with thoughts about alcohol use and alcohol use disorder symptoms. Additional clinical outcome measures including depression and anxiety symptoms, also showed improvements, albeit to a smaller extent than alcohol related outcomes. In addition, functional brain changes consistent with recovery were observed over time.

Source: Davidson, B., Giacobbe, P., George, T. P., Nestor, S. M., Rabin, J. S., Goubran, M., … & Lipsman, N. (2022). Deep brain stimulation of the nucleus accumbens in the treatment of severe alcohol use disorder: a phase I pilot trial. Molecular Psychiatry, 27(10), 3992-4000. doi.org/10.1038/s41380-022-01677-6.

Health4Life eHealth intervention to modify multiple lifestyle risk behaviours among adolescents

Lifestyle risk behaviours are prevalent among adolescents and commonly co-occur, but current intervention approaches tend to focus on single risk behaviours. A study published in the May edition of The Lancet Digital Health evaluated the efficacy of the eHealth intervention Health4Life in modifying six key lifestyle risk behaviours (alcohol use, tobacco smoking, recreational screen time, physical inactivity, poor diet, and poor sleep, known as the Big 6) among adolescents.

A cluster-randomised controlled trial was conducted in secondary schools that had a minimum of 30 year 7 students, in three Australian states. Schools were allocated schools to Health4Life (a six-module, web-based programme and accompanying smartphone app) or an active control group (usual health education). All students aged 11–13 years who were fluent in English and attended participating schools were eligible. Teachers, students, and researchers were not masked to allocation. Primary outcomes were alcohol use, tobacco use, recreational screen time, moderate to vigorous physical activity (MVPA), sugar-sweetened beverage intake, and sleep duration at 24 months, measured by self-report surveys, and analysed in all students who were eligible at baseline.

Between April 1, 2019, and Sept 27, 2019, 85 schools (9,280 students) were recruited, of which 71 schools with 6,640 eligible students (36 schools [3,610 students] assigned to the intervention and 35 [3,030 students] to the control) completed the baseline survey. 14 schools were excluded from the final analysis or withdrew, mostly due to a lack of time.

The research found no between-group differences for alcohol use (odds ratio 1·24, 95% CI 0·58–2·64), smoking (1·68, 0·76–3·72), screen time (0·79, 0·59–1·06), MVPA (0·82, 0·62–1·09), sugar-sweetened beverage intake (1·02, 0·82–1·26), or sleep (0·91, 0·72–1·14) at 24 months. No adverse events were reported during this trial.

In the trial, Health4Life was not effective in modifying risk behaviours, the study concludes. The results provide new knowledge about eHealth multiple health behaviour change interventions. However, further research is needed to improve efficacy.

Source: Champion KE, Newton NC, Gardner LA, Chapman C, Thornton L, et al., Health4Life Team. Health4Life eHealth intervention to modify multiple lifestyle risk behaviours among adolescent students in Australia: a cluster-randomised controlled trial. Lancet Digit Health. 2023 May;5(5):e276-e287. doi.org/10.1016/S2589-7500(23)00028-6.

Do non-drinking youth drink less alcohol in young adulthood or do they catch up? Findings from a Swedish birth cohort

Alcohol consumption among adolescents has declined considerably during the last two decades. However, it is unknown if these adolescents' alcohol consumption will remain low as they grow older. A study by researchers in Sweden used longitudinal data to examine if non-drinking adolescents have a lower alcohol consumption in young adulthood or if they catch up.

A self-report survey was distributed to a birth cohort (n = 794) born in 1997 in a Swedish region when cohort members attended ninth grade (age 14-15 years) in 2012. Responders were divided into non-drinkers and alcohol users and assessed again in their late teens (17-18 years) and young adulthood (20-21 years).

In their late teens (17-18 years), non-drinkers at baseline consumed less alcohol and had a lower probability of harmful use compared with their alcohol-using peers. In young adulthood (20-21 years), these effects disappeared when adjustment was made for covariates. However, a stratified analysis showed that non-drinking adolescents low in conduct problems consumed less alcohol and had a lower probability of harmful use in young adulthood than alcohol-using peers.

The study suggests that the decline in alcohol use among adolescents in the past decades may be associated with a lower alcohol consumption in the late teens and young adulthood among those low in conduct problems. This may have promising implications for alcohol-related morbidity and mortality.

Source: Larm P, Hellström C, Raninen J, Åslund C, Nilsson KW, Giannotta F. Do non-drinking youth drink less alcohol in young adulthood or do they catch up? Findings from a Swedish birth cohort. Eur J Public Health. 2023. doi.org/10.1093/eurpub/ckad057.

UK alcohol consumption during the COVID-19 pandemic: The role of drinking motives, employment and subjective mental health

Previous investigations suggest that the COVID-19 pandemic effects on alcohol consumption were heterogenous and may vary as a function of structural and psychological factors. Research examining mediating or moderating factors implicated in pandemic-occasioned changes in drinking have also tended to use single-study cross-sectional designs and convenience samples.

A study explored structural (changed employment or unemployment) and psychological (subjective mental health and drinking motives) correlates of consumption reported during the COVID-19 pandemic using a UK nationally representative dataset. They then determined whether population-level differences in drinking during the COVID-19 pandemic (versus pre-pandemic levels) could be attributable to drinking motives.

Data collected from samples of UK adults before and during the pandemic were obtained and analysed. The researchers assessed whether drinking motives (enhancement, social, conformity, coping), employment and the perceived impact of the pandemic on subjective mental health may explain between-person differences in self-reported alcohol consumption. The study also tested the theory that population-level differences in alcohol consumption are attributable to variances in drinking motives.

Analyses of the 2020 dataset detected both direct and indirect effects of subjective mental health, drinking motives, and employment matters (e.g., having been furloughed) on alcohol use. Findings from a multigroup structure equation modelling were consistent with the theory that drinking motives explain not only individual differences in alcohol use at both time points, but also population-level increases in use during the pandemic.

This work highlights socioeconomic and employment considerations when seeking to understand COVID-19-related drinking. It also indicates that drinking motives may be particularly important in explaining the apparent trend of heightened drinking during the pandemic.

Source: Monk RL, Qureshi AW, Richardson GB, Heim D. UK alcohol consumption during the COVID-19 pandemic: The role of drinking motives, employment and subjective mental health. PLoS One. 2023 Apr 12;18(4):e0283233. doi.org/10.1371/journal.pone.0283233.

Alcohol use frequency and binge drinking frequency among US adolescents

Current research suggests that average alcohol use increases during late adolescence, peaks at age 21, and then decreases into adulthood. But research from Boston University's School of Public Health shows that drinking patterns from youth into adulthood are actually much more varied among certain subgroups of youth. The study is published online ahead of print in the journal Addiction.

Analysing long-term trajectories of alcohol use has the potential to strengthen policy and intervention priorities and timing. Researchers identified and described trajectories of alcohol use and binge drinking frequency from mid-adolescence to early adulthood and measured the association of the role of early drinking initiation with trajectory membership.

The study focused on participants in the National Longitudinal Survey of Youth 1997, an ongoing federally run study of US adolescents born between 1980 and 1984. The nationally representative study surveyed more than 8,000 people from age 15 to 30 about alcohol use within the last 30 days, from 1997 to 2015. Participants self-reported the number of days in the past 30 days they: (1) drank alcohol and (2) binge drank [>5 drinks on one occasion]. The researchers identified 5 distinct trajectories from age 15-30 of past 30-day drinking and past 30-day binge drinking and evaluated the associations between early drinking initiation (≤14 years) and key demographics with trajectory membership.

5 past 30-day drinking groups were identified: late-escalating (16.0%), moderate-frequency (19.0%), high-frequency (11.1%), low-frequency (35.4%) and no/infrequent (18.4%). Early drinking initiation (versus later) was associated with higher odds of membership in the moderate (adjusted multinomial odds ratio [aMOR] = 4.32; 95% confidence interval [CI]: 3.65, 5.12) and high-frequency groups (aMOR = 4.17; 95%CI: 3.50, 4.97) than in the no/infrequent comparator trajectory. 5 groups with distinct binge drinking frequency patterns were identified: later escalating (9.9%), high-frequency (3.9%), low frequency (28.7%), earlier onset (9.5%), and no/infrequent (48.0%). Early initiation was associated with increased odds of membership in earlier onset and high-frequency groups compared with the no/infrequent group. For both outcomes additional differences in probability of group membership were identified by gender, racial identity, parental factors (religiosity, high school completion), and household characteristics (household size, income, and region of residence).

The researchers conclude that youth in the United States appear to follow heterogeneous drinking and binge drinking trajectories from adolescence into adulthood. These may include higher-use trajectories as well as trajectories with different escalation timing (e.g., earlier vs. later). Early initiation of drinking may increase risk of membership in higher- and earlier-use trajectory groups.

Source: Ranker, LR, Ross, CS, Rudolph, AE, Weuve, J, Xuan, Z. Identifying and describing trajectories of alcohol use frequency and binge drinking frequency among those age 15-30 in a national cohort of U.S. adolescents: a group-based trajectory modelling approach. Addiction. 2023; 000–0. doi.org/10.1111/add.16216

Marital quality and alcohol use among couples in mid- and later-life

Spouses influence one another's drinking behaviour, but little research has explored how relationship quality may impact older couples' alcohol use.

Using data from the 2014-2018 waves of the Health and Retirement Study (HRS) and actor-partner interdependence models, researchers examined how marital quality is related to total alcohol consumption and risk of heavy drinking for married couples over age 50.

Neither husbands' nor wives' perceptions of negative marital quality were related to changes in heavy drinking or number of drinks consumed over the observation period. However, wives' positive marital quality was associated with increased risk of heavy alcohol use for both wives and husbands, and with an increase in the number of drinks wives consume over time. Couples over age 50 do not appear to use alcohol as a way of coping with negative marital relationships, but rather may increase their drinking in the context of positive relationships, the study concludes.

Source: Bulanda JR, Curl AL, Roberts AR. Marital Quality and Alcohol Use among Couples in Mid- and Later-Life. J Appl Gerontol. 2023 May;42(5):1068-1077. doi.org/10.1177/07334648221143305.

Risky alcohol consumption among women in Australia attending breast screening services

A study sought to measure risky drinking among women attending breast screening services in Australia according to new national alcohol guidelines and to compare daily, weekly and recent (past 12 months) consumption to Australian gender and age population norms.

The study was a retrospective analysis of cross-sectional data from the Lifepool Project (collected October 2011-January 2016) in Victoria, Australia, comprising a convenience sample of women attending breast screening services aged 40+ years. The researchers gathered information on typical and heavy alcohol consumption patterns over the previous 12 months (frequency, quantity), socio-demographic (e.g., age, education) and health-related (e.g., menopause status, breast cancer history) characteristics. Primary outcomes were the proportion of women drinking at a level exceeding new guidelines for weekly and daily alcohol consumption.

Of 49,240 women, the mean age was 59.94 years. Most women had consumed alcohol during the past 12 months [85.48%]. 18.34% were drinking at a level exceeding new national guidelines for weekly consumption (i.e., greater than 10 standard drinks per week), and 15.60% were exceeding new guidelines for consumption on a single day (i.e., greater than four standard drinks on any 1 day, more than once per month). The proportion of women in this sample drinking daily, weekly and in the past 12 months was significantly greater among nearly all age groups (by decade), compared with Australian gender and age norms.

There appears to be a high prevalence of risky alcohol consumption among a large convenience sample of breast screening service clients in Australia using new national alcohol guidelines introduced in December 2020.

Source: Grigg J, Manning V, Cheetham A, Greenwood CJ, Youssef G, Lockie D, Bell R, Stragalinos P, Bernard C, Lubman DI. Risky alcohol consumption among women in Australia attending breast screening services: an exploratory cross-sectional study. Addiction. 2023 Apr 14. doi.org/10.1111/add.16191.

Peer-led interventions to reduce alcohol consumption in college students

Risky alcohol consumption among college students is a significant public health issue. In the college setting, students can collaborate in the implementation of peer-led interventions. To date, evidence of peer-led programmes in reducing harmful alcohol consumption in this population is inconclusive. A scoping review provides a broad overview by systematically examining and mapping the literature on peer-led interventions for preventing risky alcohol consumption by college students. The specific aims were to (1) identify the underlying focus of the interventions and assess their (2) effectiveness and (3) feasibility.

A comprehensive search was conducted for peer-led interventions that exclusively addressed alcohol consumption, college students as the target population and interventional studies. The methodological quality of the articles was evaluated. From 6,654 potential studies, 13 were included. Nine interventions were described within these studies: Voice of Reason programme, Brief Advice sessions, Peer Theatre, Alcohol Education programme, Perceptions of Alcohol Norms intervention, Motivational Intervention, Alcohol Skills Training programme, Lifestyle Management Class and the Brief Alcohol Screening and Intervention for College Students.

Only the last showed significant reductions in three of the four outcome measures: quantity and frequency of drinking, estimated peak blood alcohol concentration and alcohol-related consequences. It did not significantly decrease the number of heavy-drinking episodes.

The review authors conclude that peer interventions may be effective in preventing alcohol use among college students, although the evidence is weak and scarce. Further research is needed to strengthen the findings about peer-led interventions.

Source: Lavilla-Gracia M, Pueyo-Garrigues M, Pueyo-Garrigues S, Pardavila-Belio MI, Canga-Armayor A, Esandi N, Alfaro-Díaz C, Canga-Armayor N. Peer-led interventions to reduce alcohol consumption in college students: A scoping review. Health Soc Care Community. 2022 Nov;30(6):e3562-e3578. doi.org/10.1111/hsc.13990.

Impact on alcohol selection and online purchasing of changing the proportion of available non-alcoholic versus alcoholic drinks

Increasing the proportion of non-alcoholic drinks on sale in online supermarkets could reduce the amount of alcohol people purchase, according to researchers at the University of Cambridge.

Their study published in PLOS Medicine evaluated the impact of increasing the proportion of non-alcoholic (relative to alcoholic) drinks, on selection and actual purchasing of alcohol.

In a randomised controlled trial, 737 participants were randomly assigned to one of 3 groups with varying proportions of alcoholic versus non-alcoholic drinks ("25% non-alcoholic/75% alcoholic"; "50% non-alcoholic/50% alcoholic"; and "75% non-alcoholic/25% alcoholic").

Participants selected drinks from 64 options in a simulated online supermarket that was designed to look and function similarly to an online supermarket. Participants were then required to immediately purchase the same drinks in an actual online supermarket.

The researchers found that increasing the proportion of non-alcoholic drinks—from 25% to 50% or 75%—reduced the amount of alcohol selected and bought, in this online supermarket setting.

This study provides evidence that increasing the proportion of non-alcoholic drinks could reduce alcohol selection and purchasing, highlighting the potential for availability interventions to reduce alcohol sales at the population level.

Further studies are warranted to assess whether these effects are realised in a range of real-world settings, the authors say.

Source: Clarke N, Blackwell AKM, Ferrar J, De-Loyde K, Pilling MA, Munafò MR, et al. (2023) Impact on alcohol selection and online purchasing of changing the proportion of available non-alcoholic versus alcoholic drinks: A randomised controlled trial. PLoS Med 20(3): e1004193. doi.org/10.1371/journal.pmed.1004193.

Minimum legal drinking age and alcohol-attributable morbidity and mortality by age 63 years

Minimum legal drinking age (MLDA) is an effective policy tool in preventing youth drinking and short-term alcohol-attributable harm, but studies concerning long-term associations are scarce.

In a register-based, national cohort study, researchers assessed alcohol-attributable morbidity and mortality of cohorts born in 1944-54 in Finland. Data were from the 1970 census, the Care Register for Healthcare (maintained by the Finnish Institute of Health and Welfare), and the Cause-of-Death Register (maintained by Statistics Finland). As MLDA was lowered from 21 years to 18 years in 1969, these cohorts were effectively allowed to buy alcohol from different ages (18-21 years). The researchers used survival analysis to compare their alcohol-attributable mortality and hospitalisations with a 36-year follow-up.

Compared with the first cohort (1951) allowed to buy alcohol from age 18, the hazard ratios (HRs) for alcohol-attributable morbidity and mortality were lower in cohorts who could not buy alcohol until age 20 or 21 years. For alcohol-attributable morbidity in those aged 21 years when the reform took place, HR was 0·89 (95% CI 0·86-0·93) for men and 0·87 (0·81-0·94) for women versus those aged 17 years. For alcohol-attributable mortality, HR was 0·86 (0·79-0·93) for men and 0·78 (0·66-0·92) for women aged 21 years when the reform took place. The outcomes of the later-born 1952-54 cohorts did not differ from the 1951 cohort.

The researchers say that earlier cohorts had consistently lower alcohol-attributable mortality and morbidity; however, other simultaneous increases in alcohol availability probably contributed to increased alcohol-related harm among the younger cohorts. Overall, differences between cohorts born only a few years apart highlight late adolescence as a crucial period for the establishment of lifelong patterns of alcohol use and suggest that higher MLDA could be protective for health beyond young adulthood.

Source: Luukkonen J, Tarkiainen L, Martikainen P, Remes H. Minimum legal drinking age and alcohol-attributable morbidity and mortality by age 63 years: a register-based cohort study based on alcohol reform. Lancet Public Health. 2023 May;8(5):e339-e346. doi.org/10.1016/S2468-2667(23)00049-X.

The influence of social media on alcohol consumption of mothers of children and adolescents

The authors of a study examining the influence of social media on alcohol consumption say that alcohol is often portrayed as a fun and interactive coping strategy for mothers to manage the demands of motherhood. Social media platforms have established themselves as a popular forum for mothers to share information and create an environment in which mothers may be exposed to and influenced by alcohol-related content. Given the increased social acceptance and normalization of drinking among mothers, especially during the recent pandemic, a critical analysis of social media influences on alcohol behaviours and consumption is warranted.

A scoping review mapped the evidence on social media influences and alcohol consumption among mothers of children and teenagers younger than eighteen years old. Several databases were consulted, and the evidence was collated into two themes and seven subthemes. Factors related to alcohol consumption in motherhood included (1) community and social support, (2) coping and mental health, (3) motherhood expectations and identity, (4) alcohol consumption, (5) marketing strategies, (6) everyday issues, and (7) social media influence.

The authors state that numerous social, economic, and health problems are associated with alcohol misuse. The current literature suggests that social media is a powerful tool to disseminate messages about alcohol and normalise mothers' drinking behaviours.

Source: Reisdorfer E, Nesari M, Krell K, Johnston S, Dunlop RZ, Chute A, de Goes FdSN, Singh I. The Influence of Social Media on Alcohol Consumption of Mothers of Children and Adolescents: A Scoping Review of the Literature. Nursing Reports. 2023; 13(2):682-696. doi.org/10.3390/nursrep13020061

Reducing alcohol use through alcohol control policies

Despite the effectiveness of key alcohol control policies being widely agreed on, meta-analyses on their impact on alcohol use relying on real-world evidence are scarce. An open access paper in eClinicalMedicine, part of the Lancet Discovery Science, reviewed the evidence from a total of 36 studies published since January 2000.

The research estimated the impact of three major alcohol control policies on alcohol consumption levels. In addition, all available evidence on alcohol policy effects conditional on gender, socioeconomic status, and race and ethnicity were summarised narratively.

The greatest reduction in alcohol consumption was seen following the introduction of pricing policies, particularly for the most affordable alcohol. Based on a limited number of available studies (n = 9), the researchers found that following the introduction of pricing policies, alcohol consumption reduced the most among low-income groups, while the evidence was inconclusive for other sociodemographic factors.

The authors state that Taxation increases, the introduction of MUP, and restrictions of temporal availability all contribute to a decline in consumption levels and consequently alcohol-attributable harm. However, more research is needed on their impact on health inequalities between different sociodemographic groups. Alcohol control policies need to be systematically evaluated with respect to their potential contribution to mitigate health inequalities through differential effects on alcohol use.

Source: Reducing alcohol use through alcohol control policies in the general population and population subgroups: a systematic review and meta-analysis, C Kilian, J.M. Lemp, L Llamosas-Falcón, T Carr, Y Ye, W.C. Kerr, N Mulia, K Puka, A.M. Lasserre, S Bright, J Rehm, C Probst, eClinicalMedicine 2023; 101996. Published Online. doi.org/10.1016/j.eclinm.2023.101996

The last 50 years of UK drinking guidelines

The UK's drinking guidelines have changed significantly over the last 50 years with the first set of advice for individual drinking being developed in 1984. An article on The Drinks Business website details how the UK's drinking guidelines have changed over the years. Though seemingly a far cry from today's standards, each modification to the guidelines reflected the research available at the time, as well as the generally more relaxed attitude to drinking in past decades.

thedrinksbusiness.com/2023/04/the-last-50-years-of-uk-drinking-guidelines/

Social research listed by publication date

30 November 2022 - Peer-led interventions to reduce alcohol consumption in college students

December 9, 2022 - Marital quality and alcohol use among couples in mid- and later-life

March 30, 2023 - Impact on alcohol selection and online purchasing of changing the proportion of available non-alcoholic versus alcoholic drinks

7 April 2023 - Health4Life eHealth intervention to modify multiple lifestyle risk behaviours among adolescent students in Australia (Published Online)

12 April 2023 - UK alcohol consumption during the COVID-19 pandemic: The role of drinking motives, employment and subjective mental health

13 April 2023 - The influence of social media on alcohol consumption of mothers of children and adolescents

14 April 2023 - Risky alcohol consumption among women in Australia attending breast screening services

17 April 2023 - Identifying and describing trajectories of alcohol use frequency and binge drinking frequency among US adolescents

20 Apr 2023 - Do non-drinking youth drink less alcohol in young adulthood or do they catch up? Findings from a Swedish birth cohort

May 2023 - Minimum legal drinking age and alcohol-attributable morbidity and mortality by age 63 years

May 10, 2023 - Reducing alcohol use through alcohol control policies

Firms in the UK told to cut down on alcohol at work parties

Businesses are being urged to limit the amount of alcohol served at work social events in order to prevent people from acting inappropriately towards others. The warning from the Chartered Management Institute (CMI) comes as it releases a new poll, suggesting a third of managers have seen harassment or inappropriate behaviour at parties. Women were more likely than men to say they had witnessed this behaviour (33% v 26%). Overall, 42% said work parties should be organised around activities that don't involve alcohol. Younger people, aged between 16 and 34, were most likely to say this.

The chief executive of the CMI, Ann Francke, said that socialising with colleagues is "a great team building opportunity" that many people enjoy. But she added that managers have a responsibility to keep inappropriate behaviour in check, and to ensure there are safeguards in place.

"That might mean adding additional activities alongside alcohol, limiting the number of drinks available per person or ensuring that people who are drinking too much are prevented from acting inappropriately towards others."

David D'Souza, from the human resources body the CIPD, said that work social events may become even more important, with the rise of hybrid working. "While they can, and should, be fun, organisations and leaders must not neglect their legal and ethical responsibilities to keep employees safe - obligations they have every single day in the workplace."

Complaint against Engine Organic Gin upheld for suggestion of therapeutic qualities in the UK

In the UK, a complaint by a member of the public against Engine Organic Gin was upheld by the alcohol industry's Independent Complaints Panel (Panel) for suggesting consumption of the drink could change a consumer's mood and had a therapeutic quality.

The drink produced by Engine S.r.l is distributed in the UK by Disaronno. The Panel stated that the wording on the back label which read 'sage and lemon is a traditional remedy to cure a sour mood' suggested that consumption of the drink could 'cure' a consumer's bad mood. Furthermore, the Panel was concerned the suggestion of a 'cure' could directly appeal to those with poor mental health who may be more susceptible to substance misuse. When considered alongside the wording 'fuel the dream' on the front label, the Panel considered that these combined elements suggested that the drink had a therapeutic quality and upheld the complaint under Code rule 3.2(j).

Commenting on the decision, the Chair of the Independent Complaints Panel, Nicola Williams, said: "Linking alcohol with improving a consumer's mood is a clear infringement of the Code and alcohol producers should not suggest their drink has therapeutic qualities. Producers should carefully consider every aspect of a product's marketing and packaging to ensure such suggestions are avoided."

portmangroup.org.uk/engine-organic-gin/

Alcohol and intimate partner relationships

In the UK, Adfam, a national charity tackling the negative effects of drugs and alcohol on family members and friends, has published a report looking at the experiences and needs of adults who are affected by the drinking of an intimate partner. The report focuses on the tensions, harms and negative effects this drinking can have on a relationship, as well as the support available and the barriers to engaging with, and accessing, these services. It builds on established research into alcohol and intimate partner violence, in order to expand on the issues surrounding relationships and alcohol.

Key recommendations are targeted at:

- Government and policy makers - to improve the lives of those affected by the drinking of an intimate partner by enacting policy change;
- Commissioners, service providers and healthcare professionals - to ensure the services and support delivered is effective; and
- Researchers and academics - to build on the findings from the report and achieve a wider understanding of the experiences of different groups of partners.

adfam.org.uk/wp-content/uploads/2023/03/Alcohol-and-Intimate-Partner-Relationships-Research-Report-2023.pdf

Scotland to reconsider alcohol marketing restrictions

Humza Yousaf, Scotland's new First Minister, has set out his government's priorities for the next three years – including rethinking plans to ban alcohol adverts and delaying the deposit return scheme.

A consultation on proposals which would have severely restricted alcohol marketing at sporting events and in public spaces closed last month. It suggested potential measures such as the ban of alcohol advertisements in newspapers and magazines, on outdoor billboards, a ban on alcohol brands sponsoring events, and the possibility that alcohol would be obscured in a similar manner to tobacco in supermarkets. Athletes could also have been banned from featuring in alcohol advertisements in print and online.

Outlining his Programme for Government in Holyrood, Humza Yousaf announced that while the aim of the consultation was "admirable" he would be sending the proposals back to the drawing board. He said that he supported wholeheartedly the aim of this consultation – to reduce the harm caused by alcohol to children "…but it is clear that some of the proposals have caused real concern to an industry which is already facing challenges on multiple fronts".

The First Minister also announced a delay to the Deposit Return Scheme, which was set to launch in August but has now been pushed back to March 2024.

In response to "New Leadership, A Fresh Start for Scotland" speech by First Minister Humza Yousaf, Matt Lambert, CEO of the Portman said: "We welcome the announcement by First Minister Humza Yousaf and support his comments that 'the business community itself recognises that unrestricted marketing is incompatible with the well-being of our people'.

"We also support other not-for-profit groups which help ensure underage alcohol consumption continues to fall, as seen in the past decade and more. These include measures that restrict sales of alcohol so they cannot be made to those under 18 (Challenge 25); youth education schemes (Alcohol Education Trust), and community groups which work with the police and social workers to divert children from drinking (Community Alcohol Partnerships).

"We welcome the call to engage, and hope to work with the Scottish Government to continue to address harmful and underage drinking and actively support and extend the good work of other not-for-profit groups.

Alcohol Harm Minimisation bill in New Zealand

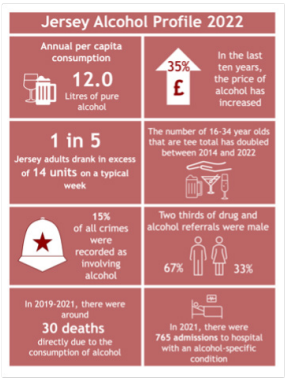
IN New Zealand, Green Party MP Chloe Swarbrick's Alcohol Harm Minimisation bill has failed at its first reading, after only a handful of Labour MPs voted for it. The bill would have banned alcohol sponsorship and advertising in sports. However, the bill failed 85 votes to 29 - with just 17 Labour MPs supporting it. The government has already planned to adopt one part of the bill, which will abolish the Special Appeals process from Local Alcohol Policies, so councils have more power to control alcohol sales, trading hours, and locations.

Alcohol Profile 2022 published for Jersey

Public Health Intelligence has published Jersey's Alcohol Profile for the last two years. The biennial report contains the latest alcohol statistics for Jersey, considers trends over time, and compares Jersey with other jurisdictions.

Key findings include:

- the average alcohol consumption per Jersey adult (aged 15 years or older) in 2022 was 12.0 litres of pure alcohol per year (equivalent to around 8.1 pints of beer or 2.6 bottles of wine per week).
- between 2020 and 2022 the price of alcohol in Jersey increased, but inflation of alcohol price (API) was lower than that of other household expenditure (RPI).
- in 2022 33% of people in Jersey reported binge drinking at a frequency of monthly or more; this proportion was similar over the last 7 years.



- the rate of hazardous or harmful drinking was higher in men (1 in 3) than in women (1 in 6).
- fewer Jersey adults were teetotal in 2022 (13%), compared to England (21%).
- in 2021, there were 725 hospital admissions specifically related to alcohol per 100,000 population, statistically similar to the English rate of 626 per 100,000. Two thirds of alcohol-specific hospital admissions were males.
- over the three-year period 2019-2021, the age standardised rate of alcohol-specific deaths per 100,000 population in Jersey was 10.9, statistically similar to the rate in England in 2017-2019 of 10.9 per 100,000 population.
- alcohol played a role in almost 1 in 6 of all crimes recorded in Jersey in 2022. 32% of assaults and serious assaults, 11% of domestic assaults and 23% of offences in the St Helier night-time economy involved alcohol.

gov.je/SiteCollectionDocuments/Government%20and%20administration/Alcohol%20Profile%202022.pdf

Promoting responsible drinking in Europe

In May, spiritsEUROPE, the European association representing distillers and producers of spirit drinks, published its Annual Report entitled The Spirits Sector in Action – Promoting Responsible Drinking in Europe.

The report contains a summary of the work delivered by the sector in 2022 to promote responsible drinking and help reduce alcohol-related harm, which has been declining across Europe over the past years. Last year, 90 initiatives spanning across six different thematic focus areas were carried out in 23 European countries, reaching an audience of up to 194 million people.

The report presents a number of initiatives from 2022, including promoting responsible drinking among adults (Estonia, Hungary and Malta), Reducing underage drinking (Netherlands and Portugal), peer-to-peer approaches with young adults (Italy and Spain), combatting drink-driving (Europe-wide and Poland) and promoting abstinence during pregnancy & breastfeeding (France and Germany).

"The Report is testimony to our long-standing commitment to responsibility-enhancing actions across Europe. All of the campaigns and initiatives are designed to provide fact-based, meaningful and actionable advice to consumers to help them make informed choices and adopt balanced lifestyles, which may – or may not – include the moderate consumption of alcoholic beverages", said Manu Giró, President of spiritsEUROPE.

Ulrich Adam, Director General of spiritsEUROPE added, "We firmly believe in an approach rooted in responsible communications to promote responsible drinking. Such an approach includes providing consumers with fact-based, understandable, and actionable guidance about low-risk levels and patterns of drinking, as can be seen from the different RDIs described in the Report."

spirits.eu/upload/files/publications/CP.AS-032-2023-responsible%20drinking%20initiatives%20report%202023.pdf

Low awareness of the link between alcohol consumption and breast cancer in Ireland

The Health Research Board in Ireland has published the results of a study that investigated relationships between demographic characteristics, type of drinker and awareness of breast cancer risk. The study was based on data from Wave 2 of the national Healthy Ireland Survey, a representative sample of 7,498 Irish adults aged 15+years.

The researchers found that 21% of respondents correctly identified that alcohol use was associated with increased risk of breast cancer. Women showed greater awareness than men (27% compared to 15%), as did those aged 45-54 years (27%) especially when compared to those aged 15-24 years (13%). Those educated to degree level or higher were almost twice as likely than those with no qualifications to know of the risk (29% compared to 16%).

Drinking patterns, such as how often and how much alcohol respondents drink, did not influence level of knowledge with hazardous drinkers (20%), low-risk drinkers (23%) and non–drinkers (21%) showing an almost equally low level of awareness. Similarly, area of residence did not impact knowledge.

The researchers conclude that, as breast cancer is a prevalent disease among women in Ireland, it is essential that the public, in particular women who drink, are made aware of this association. Public health messages that highlight the health risks associated with alcohol use, and which target individuals with lower educational levels, are warranted.

drugsandalcohol.ie/37780/

EU Industry coalition calls for digital solutions for product information that work for all

On 27 March, an alliance of 17 European trade associations representing food and non-food producers, retailers, large and small companies, including Comité Européen des Entreprises Vins, The European Confederation of Independents Winegrowers and European Federation of Origin Wines wrote to the European Commission calling for digital solutions for product information that works for all.

In their letter they invite the Commission to:

- Ensure a general coordinated approach to digital labelling in order to avoid the fragmentation of the Single Market that may stem from sectoral (and national) legislation.
- Ensure all legislative initiatives that concern labelling provide a consistent, non-conflicting and compatible framework with regard to digital labelling and are future-proof for the use of digital means.
- Explore and address the challenges and opportunities for consumers and economic operators of a legally coherent approach across all sectors to provide certain product information through digital means;
- Maintain the roles and responsibilities of all business operators concerned – from manufacturing to the point of sale;
- Explore innovative solutions that are simple, easy, cost-efficient, and practical to implement for all economic operators.

fooddrinkeurope.eu/wp-content/uploads/2023/03/230327-Joint-letter-digital-solutions-for-product-information.pdf

Responsible Alcohol Delivery Code of Conduct in the Netherlands

In the Netherlands, The Responsible Alcohol Consumption Foundation (STIVA) and fast-food delivery company Flink have signed a new Responsible Alcohol Delivery Code of Conduct.

Peter de Wolf, director of STIVA said, "It is extremely important that alcoholic products are enjoyed responsibly. The producers and importers of alcoholic beverages are therefore pleased that we have now been able to conclude a code of conduct for responsible delivery. As far as STIVA is concerned, this serves as an example for the sector. We will warmly invite other companies to endorse the code as well."

The code was signed during Flink's NIX18 week (NIX18, the Not for under 18s campaign is an initiative of the Ministry of Health, Welfare and Sport and many partners).

Activities took place throughout the week to draw employees' attention to the importance of responsible alcohol delivery and age verification during delivery. Mystery shoppers structurally check whether this is done properly. If this is not the case, sanctions may follow for the employee in question.

Wine in Moderation launch new Responsible Service Training

Wine in Moderation launched its new Responsible Service training program at the Vinitaly2023 conference, which was attended by sector professionals.

The training tool will be available in different formats, including face-to-face and digital, and will be adapted to the cultural needs and national legislation of every country, ensuring the best possible implementation.

Through its Responsible Service training, Wine in Moderation aims to empower wine professionals, such as sommeliers, tasting room staff, and hospitality industry workers, to promote and encourage responsible wine consumption among their customers. The new education tool is the result of two years' work launched in the frame of Wine in Moderation's strategy for 2020-2025 which aims to empower wine professionals around the world about responsible and moderate consumption patterns.

The education sessions will be coordinated at national level by the WiM National Coordinators, who will communicate about the organisation of the training and the release of the digital training for each market.

Sandro Sartor, President of Wine in Moderation said "We believe that all representatives of the wine sector – in every region and at every step of the value chain – have a role to play in finding the best ways to communicate about the value of moderation and to contribute to the reduction of harm due to abusive and hazardous drinking"

"The education and training of professionals is therefore key to empower them with the necessary knowledge and tools to talk about responsible consumption patterns and encourage moderate consumption habits ".

In addition to the launch of the Responsible Service Training, Wine in Moderation has also signed a 3-year partnership with ProWein. Wine in Moderation, as the international programme for the wine sector, and ProWein, as one of the leading trade fairs for wine and spirits, will work together to raise awareness about the importance of moderation.

New Alcohol Action Plan in Belgium

Fifteen years after Belgian authorities started discussing it, a plan to address alcohol related harm has been finally adopted in Belgium. The government's health ministers have approved an "interfederal alcohol plan". It is the first agreement of this kind involving all federal and regional ministries of the country. The new Alcohol Action Plan contains measures on alcohol availability, alcohol marketing, treatment and care, as well as future plans for minimum unit pricing. Measures to limit alcohol availability include:

1. Spirits and fortified wines will no longer be sold to minors between 16 and 18 years of age, but they will still be able to buy beer and wines.
2. Alcohol sales from vending machines will be banned.
3. The sale of alcohol will be prohibited in shops along motorways between 10pm and 7am and also in hospitals. However, people can still use alcohol in hospital cafeterias or in restaurants next to highways.
4. Offering alcoholic drinks for free as part of promotional campaigns will no longer be allowed.

75 actions are to be implemented over the next two years and there are further measures scheduled for the period 2026 - 2028.

organesdeconcertation.sante.belgique.be/fr/documents/plan-interfederal-2023-2025-pour-lutter-contre-la-consommation-nocive-dalcool

Archaeologists uncover elaborate ancient winery among Roman ruins

Archaeologists have discovered a Roman winery amid the ancient ruins of the Villa of Quintilii near Rome. The discovery was made by chance while archaeologists from the Italian ministry of culture were excavating the area for the starting posts of the chariot racing track, built by emperor Commodus in the second century AD.

Dr Emlyn Dodd, assistant director at the British School at Rome, is an expert on ancient wine production, and has published the archaeological findings in an article for scholarly journal Antiquity. Dodd called the ancient complex "an amazing mini city completed by a luxury winery for the emperor himself to indulge his Bacchic tendencies".

Northern Territory government extends alcohol restrictions in Alice Springs for another three months

The Northern Territory government in Australia has announced that the three-month trial of takeaway liquor restrictions in Alice Springs will be extended for another three months.

The restrictions include a sales limit and a narrowing of bottle shop opening times. Customers will be allowed one sale per person per day, with alcohol-free days continuing on Mondays and Tuesdays for takeaway purchases. Bottle shop opening hours will continue to be capped, with alcohol sales only permitted between 3pm and 7pm, excluding on Saturdays.

The restrictions were first announced in January. Northern Territory's chief minister, Natasha Fyles commented that the measures had proved to be hugely effective in curbing alcohol-related harm.

Reportedly leaked hospital data recently revealed alcohol-related emergency department presentations at Alice Springs Hospital almost halved in the month since the rules were introduced and domestic violence incidents have dropped by a third.

The restrictions have received support across the community, with key stakeholders arguing for some or all of the restrictions to remain in place. Surges in crime in the town were blamed on the Northern Territory government's handling of long-standing alcohol bans last year. Northern Territory federal MP Marion Scrymgour welcomed the extension, saying it was necessary for more work to be done in Alice Springs. The federal government has pledged $250 million to address social issues in Alice Springs.

US alcohol-related deaths continued to rise in 2021

Alcohol-related deaths in the US, which increased during the first year of the pandemic, continued to increase during the second year of the pandemic, according to new analyses of 2021 mortality data by National Institute on Alcohol Abuse and Alcoholism (NIAAA) researchers. In a previous study, the researchers reported that alcohol-related deaths soared 25.5% between 2019 to 2020, the first year of the pandemic. During the two decades prior to the pandemic, alcohol-related deaths increased around 2.2% per year.

The annual total number of deaths increased 25% between 2019 and 2020 (from 78,927 to 99,017). The annual total number increased another 10% between 2020 and 2021 (from 99,017 to 108,791). A death was considered alcohol-related if alcohol was listed in a death certificate as the primary cause (e.g., alcohol-associated liver disease) or a contributing factor (e.g., death from a fall while intoxicated). Between 2020 and 2021. Increases were similar for males (10.1%) and females (9.8%), and occurred for nearly all age groups. Deaths involving alcohol-associated liver disease increased from 29,504 in 2020 to 33,097 in 2021 (12.2% increase), while deaths due to overdoses on alcohol alone or with other drugs increased from 15,201 in 2020 to 17,148 in 2021 (12.8% increase).

Overall, alcohol played a role in 3.1% of deaths in the United States in 2021.

The possible reasons for the increase in alcohol-related deaths during the pandemic is still being explored. In 2020, sales of alcohol increased by 2.9%, the largest annual increase in over 50 years, but it is not yet known whether sales grew in 2021. Research suggests that some people increased their alcohol consumption in an effort to cope with pandemic-related stress and anxiety. This was particularly common for people with pre-existing struggles with anxiety, depression, and alcohol misuse.

The NIAAA researchers say that the increase in alcohol-related deaths appears to reflect a widespread increase in alcohol-related harms during the pandemic. There were increases in both the numbers of transplants for alcohol-associated liver disease and emergency department visits for alcohol withdrawal, as well as the percentage of emergency department visits that involved acute alcohol consumption. Additionally, after decades of a general decline, the National Highway Traffic Safety Administration reported a 14% increase in alcohol-related traffic fatalities in 2020.

niaaa.nih.gov/news-events/research-update/alcohol-related-deaths-which-increased-during-first-year-covid-19-pandemic-continued-rise-2021

April is #AlcoholResponsibilityMonth in the US

Every April in the US, Responsibility.org activates around #AlcoholResponsibilityMonth focussing on underage drinking, eliminating drunk and impaired driving, and empowering adults of legal drinking age who choose to drink to do so responsibly. This year's campaign uses the phrase "Responsibility Starts with Me," and names 'those things for which we are responsible and that keep us balanced as parents, colleagues, friends, and community members'. Key messages include:

- Responsibility starts with empowering kids to say YES to a healthy lifestyle and NO to underage drinking.
- Responsibility starts with keeping drunk and impaired drivers off our nation's roads.
- Responsibility starts with making sure that if we choose to drink, we do so mindfully.

responsibility.org/alcohol-responsibility-month/

Taiwan college students drinking less alcohol, government survey finds

University students in Taiwan are drinking less alcohol than they were two years ago, though one in seven still reported drinking excessively in the last month, according to survey results published by the Health Promotion Administration (HPA).

The results, from the HPA's 2022 survey of university student health, showed that 38.45% of respondents had drunk alcohol in the past 30 days, down from 44.2% in 2020, while 67.76% had consumed a drink in the last year. Meanwhile, the proportion of students who said they had drunk excessively -- defined as six or more drinks in one sitting -- in the last month dropped from 20% in 2020 to 14.39% last year.

More male respondents reported drinking excessively (16.42%) compared to female respondents (12.61%).

72% percent of students said that they drink at get-togethers with friends, while 41% said at family gatherings, 23% said when they were feeling happy, and 21% said they drank to reward themselves.

focustaiwan.tw/sci-tech/202305090020

Éduc'alcool pilot project 'Check ton verre'

Éduc'alcool and the Service de police de la Ville de Montréal (SPVM) launched the "Check ton verre" pilot project in April in the presence of François Bonnardel, Minister of Public Security of Québec. This initiative takes the form of a free distribution of 10,000 glass protectors to, among other things, protect consumers from having illicit substances added to their drinks without their knowledge.

The glass protectors will be distributed to bars in Montréal. In the coming months, the distribution will continue in licensed establishments in the city and at certain events.

"Check ton verre" focuses on preventing alcohol consumption among a younger clientele. It also aims to reduce the risk of overdose and hospitalisation following the voluntary or involuntary ingestion of illicit substances, or excessive alcohol consumption and emphasises the importance of reporting an unintentional intoxication event to the police to help keep everyone safe.

For witnesses, people who intoxicate others without their knowledge, and victims, the pilot project draws attention to individual responsibilities, but also to collective actions regarding alcohol consumption. It does not aim to put the burden on potential victims, but rather to make them aware of the need to adopt safe and responsible behaviours. The project also wishes to demonstrate that everyone is concerned and that every one can really play a determining role and can contribute to ensure the safety of their peers by a simple act of mutual aid.

The glass protector fits many types of glass. It is simple to use and easy to carry, making it practical for bars, festivals, parties and more.

educalcool.qc.ca/en/media/press-releases/check-ton-verre/

Amended alcohol marketing code in Australia

Australia's Alcohol Beverages Advertising Code (ABAC) has been strengthened following an extensive 15-month public consultation process. The consultation process considered a wide range of submissions from government, health organisations and industry and community opinion research to ensure the regulations are in line with expectations on appropriate advertising of alcohol products.

The strengthened code, which is overseen by the independent Alcohol Beverages Advertising Code (ABAC) scheme includes changes that will further protect children from exposure to alcohol advertising and help the Code keep pace with changing marketing methods particularly on social and digital media.

The key changes include: increasing the percentage of adult viewers required before alcohol advertising is permitted around television programmes from 75% to 80%; expanding the definition of 'Strong and Evident Appeal to Minors' to further ensure that alcohol advertisements do not engage young people; expanding restrictions on the direct marketing of alcohol by toughening requirements to offer opt outs from this marketing and ensure these are honoured; tighter restrictions on what is meant by responsible and moderate alcohol consumption including the unacceptability of treating excessive alcohol consumption as amusing and of negatively portraying abstinence or refusal of alcohol; clarifies that suggesting consumption of alcohol offers a therapeutic benefit is prohibited and this has been expanded to clarify that this includes a health or mental health benefit, and it is not permissible to suggest alcohol helps overcome problems or adversity.

ABAC will transition to the new Code from 1 August 2023.

abac.org.au/wp-content/uploads/2023/04/Revised-ABAC-Responsible-Alcohol-Marketing-Code-28-4-2023.pdf

Consumer sensitivity to price changes across total beverage alcohol

Latest findings from IWSR show that although stated alcohol spend is falling in many markets, consumer confidence about finances and the future is trending more positive than in 2022. This is especially true of Europe.

Key findings from wave two of IWSR's consumer barometer price sensitivity tracking (based on consumer surveys conducted in February 2023) across the 17 key markets of Australia, Brazil, Canada, China, France, Germany, India, Italy, Japan, Mexico, Netherlands, Poland, South Africa, Spain, Taiwan, the UK, and the US, show that consumers are cutting back on their alcohol expenditure as their spend on necessities like meat, fish, poultry, and cleaning products increases. This trend is most pronounced in the UK, but is also notable in Germany and Australia. In these countries, as well as in France and Canada, where there are also moderation or financial pressures, deciding not to buy alcohol was found to be the second most popular strategy for saving money.

Consumers have polarising price expectations with many categories show a broadening of acceptable price range (both up and down), although premiumisation persists in some markets and categories.

The barometer reports consistently positive sentiment towards the idea of moderation, especially as a money-saving strategy. This supports the resilience of the premiumisation trend, with many consumers choosing to drink better quality less often, rather than having to down-trade. Relying on promotions is the top money-saving strategy, enabling consumers to still stick with their preferred brand or drink type.

On-premise demand remained fairly constant in Europe and the Americas, while in China, Japan, and Taiwan the relaxation of Covid-19 restrictions has boosted on-premise sales. Across key markets, millennials and Gen Z of legal drinking age are driving on-premise visits. Consumers in India and China are amongst the ones most willing to trade-up while in the on-premise. In other markets, going out without drinking alcohol is a popular money-saving strategy, as is opting for cheaper beverage options.

Staying-in and enjoying the at-home drinking occasion is strong in most markets, with China being the outlier, with the relieving of lockdown restrictions resulting in a significant increase in going-out sentiment.

theiwsr.com/consumers-opt-to-spend-less-on-beverage-alcohol-but-confidence-in-the-future-is-improving/

AIM – Alcohol in Moderation was founded in 1991 as an independent not for profit organisation whose role is to communicate "The Responsible Drinking Message" and to summarise and log relevant research, legislation, policy and campaigns regarding alcohol, health, social and policy issues.

AIM Mission Statement

- To work internationally to disseminate accurate social, scientific and medical research concerning responsible and moderate drinking
- To strive to ensure that alcohol is consumed responsibly and in moderation
- To encourage informed and balanced debate on alcohol, health and social issues
- To communicate and publicise relevant medical and scientific research in a clear and concise format, contributed to by AIM's Council of 20 Professors and Specialists
- To publish information via www.alcoholinmoderation.com on moderate drinking and health, social and policy issues – comprehensively indexed and fully searchable without charge
- To educate consumers on responsible drinking and related health issues via www.drinkingandyou.com and publications, based on national government guidelines enabling consumers to make informed choices regarding drinking
- To inform and educate those working in the beverage alcohol industry regarding the responsible production, marketing, sale and promotion of alcohol
- To distribute AIM Digest Online without charge to policy makers, legislators and researchers involved in alcohol issues
- To direct enquiries towards full, peer reviewed or referenced sources of information and statistics where possible
- To work with organisations, companies and associations to create programmes, materials or policies that communicate responsible alcohol consumption messages or work to reduce alcohol related harm.

AIM Social, Scientific and Medical Council