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## South Korea

Young celebrities could soon be banned from featuring in alcohol advertising in South Korea. A bill restricting people under the age of 25 from appearing in advertisements for alcoholic beverages has passed a key committee vote, and will become law if approved in the National Assembly. Recent figures show the country's highest ever rates of alcohol consumption.

## Uruguay

Initiatives are underway in both Argentina and Uruguay to enact "zero tolerance" bans on driving while under the influence of alcohol.

On April 29, incoming Uruguayan President Tabaré Vázquez announced he would seek to significantly reduce the blood-alcohol level for drivers. Under a presidential decree effective from 15 May, drivers with a blood alcohol concentration above 0.1 grams per litre of blood will have their licenses suspended and receive a US\$460 fine. The current legislation caps the blood alcohol level at 0.3 g/L.

Since his inauguration, the president convened a bipartisan group to lead a three-pronged campaign against alcohol abuse: an awareness drive to highlight the dangers of alcohol, the inclusion of preventive programmes in the education curriculum, and a ban on drunk driving.

Argentina's Interior and Transport Minister Florencio Randazzo also said during a radio interview on April 28 that he intends to send a "Zero Alcohol" bill to Congress.

## Indonesia

Indonesia has introduced a ban on small retailers selling most alcoholic drinks, the latest move to curb drinking in the Muslim-majority country despite opposition from tourist areas.

The ban restricts the sale of beer and pre-mixed drinks – such as spirits with soft drinks – to large supermarkets only. Hotels, restaurants and bars are unaffected.

Alcohol is currently widely available in bigger cities and tourist areas, and industry data shows beer sales have been growing by roughly 5% annually. Recently Islamic parties proposed a total ban on drinking, although Indonesians are among the lowest consumers of alcohol per capita in south-east Asia.

## Global

Sales growth in the global alcoholic drinks industry remained sluggish for the second year in a row in 2014, according to data released by Euromonitor International.

Total volume of sales across the world grew by just 0.8% to 252 billion litres in 2014. Sales have been held back by falling demand from emerging markets, specifically China and Russia. In China, sales grew 1.2%—among the lowest growth recorded since the 1990s.

## What is the association between alcohol consumption and cancer?

This critique relates to the following three recent publications relating alcohol to cancer:

1. Klatsky AL, Li Y, Tran HN, Baer D, Udaltsova N, Armstrong MA, Friedman GD. Alcohol Intake, Beverage Choice, and Cancer: A Cohort Study in a Large Kaiser Permanente Population. *Perm J* 2015;19: March 1, 2015. <http://dx.doi.org/10.7812/TPP/14-189>

### Authors' Abstract

**Context:** Heavy intake of alcoholic beverages is associated with an increased risk of developing several types of cancers at specific body sites. However, evidence is conflicting regarding alcohol-associated cancers in other sites of the body as well as the role played by choice of wine, liquor, or beer.

**Objective:** To study incident cancer risk from 1978 to 1985 and through follow-up in 2012 relative to light-to-moderate and heavy drinking and to the choice of alcoholic beverage in a cohort of 124,193 persons.

**Design:** Cohort.

**Main Outcome Measures:** 1) Cox proportional hazards models controlled for 7 covariates to analyze alcohol-associated risk of any cancer and multiple specific types. 2) Similar analyses in strata of drinkers with or without a preponderant choice of wine, liquor, or beer and with or without inferred likelihood of underreporting.

**Results:** With lifelong abstainers as referent, heavy drinking ( $\geq 3$  drinks per day) was associated with increased risk of 5 cancer types: upper airway/digestive tract, lung, female breast, colorectal, and melanoma, with light-to-moderate drinking related to all but lung cancer. No significantly increased risk was seen for 12 other cancer sites: stomach, pancreas, liver, brain, thyroid, kidney, bladder, prostate, ovary, uterine body, cervix, and hematologic system. For all cancers combined there was a progressive relationship with all levels of alcohol drinking. These associations were largely independent of smoking, but among light-to-moderate drinkers there was evidence of confounding by inferred underreporting. Beverage choice played no major independent role.

**Conclusion:** Heavy alcohol drinking is related to increased risk of some cancer types but not others. Because of probable confounding, the role of light-to-moderate drinking remains unclear.

2. Bagnardi V, Rota M, Botteri E, et al. Alcohol consumption and site-specific cancer risk: a comprehensive dose-response meta-analysis. *British Journal of Cancer* 2015;112:580–593. doi: 10.1038/bjc.2014.579

### Authors' Abstract

**Background:** Alcohol is a risk factor for cancer of the oral cavity, pharynx, oesophagus, colorectum, liver, larynx and female breast, whereas its impact on other cancers remains controversial.

**Methods:** We investigated the effect of alcohol on 23 cancer types through a meta-analytic approach. We used dose-response meta-regression models and investigated potential sources of heterogeneity.

**Results:** A total of 572 studies, including 486 538 cancer cases, were identified. Relative risks (RRs) for heavy drinkers compared with nondrinkers and occasional drinkers were 5.13 for oral and pharyngeal cancer, 4.95 for oesophageal squamous cell carcinoma, 1.44 for colorectal, 2.65 for laryngeal and 1.61 for breast cancer; for those neoplasms there was a clear dose-risk relationship. Heavy drinkers also had a significantly higher risk of cancer of the stomach (RR 1.21), liver (2.07), gallbladder (2.64), pancreas (1.19) and lung (1.15). There was indication of a positive association between alcohol consumption and risk of melanoma and prostate cancer. Alcohol consumption and risk of Hodgkin's and Non-Hodgkin's lymphomas were inversely associated.

**Conclusions:** Alcohol increases risk of cancer of oral cavity and pharynx, oesophagus, colorectum, liver, larynx and female breast. There is accumulating evidence that alcohol drinking is associated with some other cancers such as pancreas and prostate cancer and melanoma.

3. Wienecke A, Barnes B, Neuhauser H, Kraywinkel K. Incident cancers attributable to alcohol consumption in Germany, 2010. *Cancer Causes Control* 2015; [Epub ahead of print].

### Authors' Abstract

**Purpose:** Germany lacks an up-to-date assessment of the cancer burden attributable to alcohol. Therefore, cancer incidence attributable to this exposure was estimated for colorectal, liver, breast, and upper aerodigestive tract (UADT) cancer. Additionally, the impact of alcohol on UADT cancer was analyzed by smoking status, to account for synergistic interactions between these two risk factors.

**Methods:** Alcohol consumption and smoking prevalence from a nationwide survey in Germany 2008-2011 were combined with relative risks of incident cancer from meta-analyses to obtain population attributable risks (PARs), indicating the proportion of cancers that could be avoided by eliminating a risk factor. Each PAR was multiplied with the respective cancer incidence for 2010 to calculate the absolute number of attributable cases.

**Results:** In Germany, for the year 2010, approximately 13,000 incident cancer cases could be attributed to alcohol consumption (3 % of total cases). PAR was highest for esophageal cancer (men: 47.6 % and women: 35.8 %) and lowest for colorectal cancer in men (9.7 %) and breast cancer in women (6.6 %). Among women, moderate consumption levels account for the greatest PAR overall, whereas heavy drinking contributes considerably to overall PAR among men. Additionally, moderate-to-heavy drinking among smokers substantially contributes to the overall PAR of UADT cancers compared to drinking among non-smokers.

**Conclusion:** In Germany, a substantial proportion of cases of common cancers can be attributed to alcohol consumption, even when consumed at moderate levels. Alcohol consumption with concurrent tobacco smoking is especially important for cancers of the UADT. These findings strengthen the rationale for prevention measures that address exposure at all levels.

### Forum Comments

There is no question that heavy alcohol consumption is associated with most upper aero-digestive cancers, including those of the mouth, pharynx, esophagus, etc. In fact, as these are so often seen in heavy drinkers, they are often referred to as "alcohol-related cancers." For these cancers, coexisting heavy cigarette smoking has been shown to markedly increase the risk of cancer.

One feature of the "alcohol-related cancers" is that alcohol comes in direct contact with these tissues. Other cancers appear to be related to alcohol consumption more indirectly, perhaps related to blood alcohol levels. The level of association with alcohol for these cancers is usually less than for the alcohol-related cancers, but an association is often discovered through observational epidemiologic studies or animal experiments.

Comments on paper by Klatsky et al: The paper by Klatsky et al, based on the very large Kaiser-Permanente Study, had 17.8 years of follow up among white, black, Asian, and Latino subjects. The investigators used persistent abstainers as the referent group, with categories of an average of < 1 drink/day as light drinkers, 1 to 2 drinks per day as moderate drinkers, and 3 or more drinks/day as heavy drinkers. The investigators had data allowing them to adjust for age, race, education, BMI, marital status, and smoking, and had the ability to estimate which of the moderate drinkers were under-reporting their intake. No significant differences were noted between abstainers and drinkers for liver cancer, although there

was a tendency toward increased risk for moderate and heavy drinkers. The strongest alcohol-cancer associations were found for melanoma and breast cancer in women, with small but significant increases in risk of the latter even among light drinkers. No significant differences according to type of alcoholic beverage were found. This finding could not be understood by Lanzmann-Petithory, who noted that many studies show a decrease in cancer risk to be associated with increased fruit intake, and "Wine is the combination of alcohol and polyphenol enriched fruit extract. We could guess that at moderate intake (still to be specified), fruit effect wins over alcohol effect."

The study found that under-reporting of alcohol consumption strongly affected the risk of cancer. Among subjects reporting 1 to 2 drinks/day, those whose data within the Kaiser-Permanente system suggested that they were under-reporting their alcohol intake (findings indicating greater intake on other occasions, evidence of alcohol misuse, alcohol-related liver disease, etc.), the HR versus abstainers for any cancer was 1.4 (95% CI 1.3-1.7). In contrast, for those reporting the same amount but having no evidence within their medical records suggesting greater intake or misuse (thus, subjects deemed unlikely to be under-reporters), the HR for any cancer was 1.1 (95% CI 0.9 – 1.2). The study concludes that consuming an average of 3 or more drinks/day increases the risk of cancers of the upper airway/digestive tract, lung, female breast, colorectal, and melanoma; this study did not find an increase for cancers of the stomach, pancreas, liver, or prostate.

Overall, the authors state: "At present, a possible increased cancer risk at moderate intake should enter into individual estimation of the overall risk-benefit equation for alcohol drinking, especially for young persons. For most persons older than age 50 years, the overall benefits of lighter drinking, especially the reduced risk of atherothrombotic disease, outweigh possible cancer risk."

Comments on paper by Bagnardi et al: The paper by Bagnardi et al was a meta-analysis based primarily on cancer incidence from a total of 572 studies, of which 163 were cohort studies and 409 were case-control studies (in general, the latter tend to have higher estimates of alcohol effect than prospective cohort studies, such as that of Klatsky et al). As with any meta-analysis, the authors used confounder-

adjusted estimates when provided by the authors of individual studies, but were otherwise forced to use “unadjusted RRs from the raw data presented in the paper.”

The investigators of this meta-analysis defined  $\leq 12.5$  g/day of alcohol (about one typical drink) as light,  $> 12.5$  to  $\leq 50$  g/day (1 to 4 or 5 typical drinks) as moderate, and  $> 50$  g/day as heavy. They report increased risks for cancers of the upper airway/digestive tract, lung, female breast, colorectal, and melanoma for heavy drinkers. In addition, significant increases were reported for heavy drinking for cancers of the stomach, liver, gallbladder, pancreas, and lung, although the risk ratios for most of these were lower.

Reviewer Ellison noted that the results among subjects assigned to the “light” drinking category ( $< 12.5$  g/day) in this study can be related to those in the Klatsky lightest drinking category, and the results were similar. “However, the inclusion of drinkers averaging up to 50 grams of alcohol per day (up to 4 or 5 typical drinks) in the “moderate” category makes it impossible to compare the results of this meta-analysis with those of Klatsky et al and much other previous research. Current US Dietary Guidelines (2010) define moderate as no more than 1 drink/day for women and no more than 2 drinks/day for men.”

Reviewer de Gaetano was also worried about the wide range of alcohol intake defined as “moderate.” He stated: “In our meta-analysis (Di Castelnuovo et al) we saw already at 40 g daily that the significant beneficial effect of alcohol against total mortality had completely disappeared . . . and between 40 and 50 g/day there was a clear increase in mortality, in respect to abstainers. Thus, in Bagnardi’s meta-analysis, moderate was not moderate indeed!”

As for potential problems associated with combining data from cohort and case-control studies, the authors remark that “heterogeneity across studies was high for some types of cancer.” They state that therefore, “some of the estimates should be interpreted with caution.” Further, they state that because of lack of data, they could not judge the effects of different drinking patterns, different types of beverage, or potential under-reporting of alcohol intake among subjects.

Comments on paper by Wienecke et al: The paper by Wienecke et al based an estimate of alcohol

consumption from a nation-wide survey in Germany in 2008-2011. Alcohol data from a food-frequency questionnaire in the survey recorded consumption during the 4-week period before the survey. Results were stratified into categories of “moderate” ( $< 3$  drinks/day) and “heavy” (at least 3 drinks/day), with 3 drinks considered to be approximately 30 g of alcohol. Cancer incidence in Germany was obtained from estimates by the German Center for Cancer Registry Data at the Robert Koch Institute.

The authors used relative risks for cancer derived from previous meta-analyses to test for association between alcohol and cancer. The meta-analyses used to estimate risk ratios were published between 1999 and 2014 by Hashibe et al, Castellsagué et al, Fedirko et al, Turati et al, and Ridolfo et al. Only two of the meta-analyses also considered the effects of tobacco use. Of the 149 separate studies included in the present analysis, 104 are based on case-control studies and 45 on cohort studies. Their focus was on the population-attributable cancer burden in Germany from alcohol compared with zero alcohol intake. They evaluated the effects of “moderate” intake, defined as  $< 3$  drinks/day, and “heavy” drinking (at least 3 drinks/day). They found that there was an apparent increase in the population attributable risk of cancer for men for upper aero-digestive tract (UADT) and of the colon-rectum, but decreases from alcohol for liver cancer. For women, there was a decrease in colon-rectal cancer and liver cancer from alcohol, but increases for breast and UADT cancers.

The authors comment on the importance of considering coexisting tobacco use when judging the effects of alcohol on UADT cancers. They conclude that “Our analysis indicates that approximately 3% of all incident cancer cases among German adults ages  $\geq 35$  years could be attributable to alcohol consumption in 2010.” The highest proportion of alcohol-attributable cases was estimated for esophageal cancer, but the absolute numbers of attributable cases were for breast cancer and colorectal cancer, as these are much more common diseases in the population. In their discussion, the authors point out: “The high burden of alcohol-associated diseases other than cancer should be considered as well, since cancer prevention is not the only benefit to be expected when eliminating or reducing alcohol consumption.” They they go on to mention fetal alcohol syndrome and liver cirrhosis but, interestingly, do not mention the demonstrated

much more important effects of moderate drinking on reducing cardiovascular disease.

Determining thresholds for effects of alcohol on risk of cancer; the net health effects of alcohol consumption: All three studies describe increased risk for many cancers among heavy drinkers, especially UADT cancers. However, light-to-moderate alcohol intake is by far the most common pattern of drinking in the population, and has been related in most studies to a lower risk of cardiovascular diseases and other diseases of ageing and a decrease in the risk of total mortality. Hence, Forum members think that the most important questions we need to answer are the net effects on health for various drinking levels. We do not need further data to know that heavy drinking leads to certain cancers, and many other adverse health and societal problems. However, given that the majority of people in industrialized nations consume alcohol, what we need are reliable threshold levels of drinking that increase the risk of cancer and other diseases; even with the three large studies reviewed here, there are still limitations in our ability to determine this for some cancers. Reviewer Ellison considered it especially important to evaluate and comment upon *“the net effects of alcohol consumption at different levels of consumption. Only when these are considered can reasonable drinking guidelines be presented for individual patients and the public.”*

The study by Klatsky et al includes confounder-adjusted data from a well-monitored cohort, and suggests that even consumption of up to 1 drink/day may be associated with small but significant increases in the risk of some cancers (UADT, colorectal, breast, and especially melanoma). Under-reporting of alcohol intake is said to affect the risk, but separate results for subjects not considered to be under-reporting their intake are not given for specific cancers in this paper. However, it is stated that for subjects reporting an average of 1 to 2 drinks/day, the HR for any cancer decreases from 1.4 (CI 1.3 – 1.7) for likely under-reporters to 1.1 (CI 0.9 – 1.2) for those deemed unlikely to be under-reporting their intake.

Individual study results versus results from meta-analysis: There are strengths and weaknesses in reaching conclusions from meta-analyses. The number of cases is generally much larger than the numbers from individual studies so that risk ratios of

lesser magnitude can often be found to be statistically significant; this allows cancers with more modest increases from alcohol to be detected. However, the categories in the multiple studies included in a meta-analysis often differ, so compromises must be made in the analysis. The degree of control of potential confounding factors also varies among studies included in a meta-analysis.

Large, well-done prospective studies, especially those with repeated assessments of alcohol intake, offer more precise estimates of alcohol intake, and can account for changes in alcohol intake over time. However, the number of cases may be inadequate to judge more subtle increases in risk. For studies (such as the Kaiser-Permanente Study) with considerable health data over many decades, better adjustment for potential confounders is possible. Also, as has been demonstrated from the Kaiser-Permanente Study, determining which subjects may be under-reporting their typical alcohol consumption can be estimated, which can be important when seeking to judge the effects of light-to-moderate drinking, especially when seeking thresholds for adverse effects of alcohol.

Reviewer Finkel added: *“There are differences between cohort papers and meta-analyses. These differences, while usually small and perhaps the expected biological variation, may be expressions of meaningful information. Shouldn’t we treasure and analyze them? Otherwise, we risk seeing and talking about the same issues over and over again: statistical and epidemiological nuances, confounding factors, choice of beverage, accuracy of self-reporting, adequacy of folate intake, nutrition, endocrine balance, etc. I suppose that’s our job, but sometimes it feels repetitive.”* Finkel also stated: *“I strongly endorse other members’ emphasis on the net effects of alcohol consumption, too often neglected by investigators with tunnel vision.”*

Forum member Thelle had some interesting observations: *“The issues of interest among all of these papers are the etiological role of alcohol in carcinogenesis (about which these observational studies only can provide associations for further research) and the public health message regarding thresholds. The paper by Klatsky et al has an interesting remark concerning the public health issue and the potential net benefit for those aged 50 and over. This is a conclusion that may be reached by a large longitudinal study based upon one single*

population, but less so by meta-analysis." Thelle added: "Unfortunately, the meta-analysis assessed both case-control and longitudinal studies. Further, I am slightly surprised that little has been said about interaction of smoking and alcohol in these papers."

**General comments on the topic of alcohol and cancer:** Forum member Thelle provided an overview of the topic. "First a few general comments on cancer epidemiology. Cancer of the stomach has been declining the last fifty years, probably because of improved hygiene and fewer infected by helicobacter pylori plus a reduced intake of salt. Cancer of the colon has increased during the same period of time. Breast cancer is difficult to assess due to screening procedures likely to affect incidence figures (and those women who are first screened — the better off— also consume more alcohol). The strongest association between alcohol and cancer is seen for esophagus cancer and upper airway cancers. Liver cancer, or rather hepatocellular carcinoma, is also among the more strongly associated cancers in some studies. Both cancers can be considered rare in the Nordic countries, and it is interesting to note that the incidence of these cancers has not changed much during a period when alcohol consumption has increased considerably.

"But even for these cancer types the risk ratios are relatively low, and the possibility of residual confounding must be taken seriously. I think we must consider some general problems when relating alcohol to risk of cancer:

1. The heterogeneity of cancer. It is not one particular disease; the causes are different and they should not be lumped together.
2. Exposure time. The decline in risk estimates after 20 years; what does this mean? Are other factors taking over?
3. Are there cohort effects in meta- analyses which will affect the average effects?
4. Does the effect of alcohol at meals differ from alcohol independent of food intake?
5. The relative risk estimates are rather low, but still sufficient to say that they satisfy the Hill criteria for strong associations when discussing etiology (or is Hill old-fashioned today with causal algebra?).
6. Acetaldehyde is a possible culprit, but the half-time is short. Is this a plausible mechanism?

"And I have some particular issues with regard to the three papers under review:

1. Klatsky et al. Why are the ex-drinkers having increased risk for UADT and liver cancer, but less so for melanoma and colon-rectal cancer?
2. The Klatsky paper showed higher risk for smokers who consumed alcohol. An interaction effect is suggested, but not commented upon.
3. The association with melanoma; to what extent is UV radiation a confounder here? Sunny holidays and drinking?
4. Wienecke et al used risk estimates from meta-analyses and applied them to German survey data to calculate how many cases could be attributed to alcohol. They end up with the same fraction of total cancer attributed to alcohol, about 3%, but I am not sure whether that is a circular argument.

"My conclusion is that the area is in shades of grey. A high alcohol consumption is likely to contribute to some cancers, but at lower levels, the case remains unsolved."

**Reviewer Ursini commented:** "I fully agree with the comments by Thelle. As a basic scientist, I feel uncomfortable with the present expansion of computational evaluation of a risk, which for non-specialists becomes a 'cause.' Are the Hill criteria completely abandoned, and what about the biological rationale that must be in agreement with the epidemiological results? We teach to students that basic science drives and inspires clinical studies and epidemiology, and that meta-analyses can only provide the final confirmatory evidence. Apparently, the need for getting results and publishing quickly is not dimmed by the indispensable requirement of scientific thoroughness. Finally, I must also admit my surprise in reading the name of the journal where the paper by Wienecke has been published: Cancer Causes Control. Isn't this promising too much at the present level of knowledge? Also considering that a recent paper in Science identifies the real cause of cancer is "bad luck."

**Forum member Finkel stated:** "Based on my years practicing and teaching, I still view some upper aerodigestive (especially in concert with tobacco) and hepatocellular cancers as clearly tied to alcohol, to state it generally, with, no doubt, nuances to be unravelled. I remain confused about breast cancer and, perhaps, colorectal cancer in this regard. I would

return a guilty verdict versus heavy drinking, but am uneasy when it takes intricate statistics to implicate light or moderate drinking as either promoters of or protectors from various cancers. The definitions of light-moderate-heavy sometimes vary awkwardly. I also feel the need for clarification of beverage types and drinking pattern — and so many confounders.”

Reviewer Mattivi commented: “There is a clear consensus that a high alcohol consumption is likely to contribute to several cancers, and these three papers further support the IARC classification of ethanol in alcoholic beverages as carcinogenic to humans. On the other hand, there is a strong need to improve our understanding of the biological rationale and to further clarify the dose-effect, especially at a lower level of consumption, and also to distinguish among different alcoholic beverages.”

Dr. Samir Zakhari, former director of the Division of Metabolism and Health Effects at the National Institute on Alcohol Abuse and Alcoholism (NIAAA), has noted when evaluating the relation of alcohol to breast cancer, “Numerous risk factors are involved in breast carcinogenesis; some are genetic and beyond the control of a woman; others are influenced by lifestyle factors. The current state-of-knowledge about alcohol and breast cancer association is ambiguous and confusing to both a woman and her physician” (Zakhair & Hoek).

Forum member Skovenborg provided his impressions of the overall data relating alcohol to cancer, reaching the following conclusions: “The association between heavy drinking and certain cancer types is strong and convincing and a trustworthy biological pathway has been described for most of these cancer types.

“However, there is a deplorable lack of a uniform definition of light, moderate, and heavy drinking. A recent example, that has had a large coverage by the media, is from a World Cancer Research Fund (WCRF) report regarding the associations between food, nutrition and physical activity and the risk of liver cancer, which stated that ‘Three drinks a day can cause liver cancer’ (wcrf.org). A closer look at their published data indicate that the slope of the non-linear dose-response figure for ethanol intake and liver cancer is fairly flat below 45 grams of alcohol a day. According to the WCRF, that is up to ‘three drinks a day’ – however 45 grams of alcohol amounts

to 5.25 British drinks, 4.5 French drinks and 3.75 Danish drinks, which is heavy drinking by almost any definition and not moderate drinking as the WCRF headline implies.

“Further, a serious flaw in most reports on alcohol and cancer is the lack of information on confounding, drinking patterns, beverage choice, as well as the effects of underreporting of alcohol intake. Also, a damaging flaw in the present reports is the omission of a discussion of total mortality vs cancer mortality. Such omissions support sometimes misguided information being widely circulated to the public.”

### References from Forum review

DiCastelnuovo A, Costanzo S, Bagnardi V, Donati MB, Iacoviello L, de Gaetano G. Alcohol dosing and total mortality in men and women: an updated meta-analysis of 34 prospective studies. *Arch Intern Med.* 2006;166:2437-2445.

Hashibe M, Brennan P, Chuang S et al. Interaction between tobacco and alcohol use and the risk of head and neck cancer: pooled analysis in the international head and neck cancer epidemiology consortium. *Cancer Epidemiol Biomark Prev* 2009;18:541–550.

Castellsague´ X, Munoz N, De Stefani E, et al. Independent and joint effects of tobacco smoking and alcohol drinking on the risk of esophageal cancer in men and women. *Int J Cancer* 1999;82:657–664.

Fedirko V, Tramacere I, Bagnardi V, et al. Alcohol drinking and colorectal cancer risk: an overall and dose–response meta-analysis of published studies. *Ann Oncol* 2011;22:1958–1972.

Turati F, Galeone C, Rota M, et al. Alcohol and liver cancer: a systematic review and meta-analysis of prospective studies. *Ann Oncol* 2014;25:1526–1535.

Ridolfo B, Stevenson C. The quantification of drug-caused mortality and morbidity in Australia, 1998. In: Australian Institute of Health and Welfare (ed); *Drug statistics series*. Australian Institute of Health and Welfare, 2001. Canberra.

Dietary Guidelines for Americans 2010, U.S. Department of Agriculture, U.S. Department of Health and Human Services, [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov).

WCRF report. Available at [wcrf.org/sites/default/files/Liver-Cancer-2015-Report.pdf](http://wcrf.org/sites/default/files/Liver-Cancer-2015-Report.pdf).

Zakahari S, Hoek JB. Alcohol and Breast Cancer: Reconciling Epidemiological and Molecular Data. In: V. Vasiliou et al. (eds.), *Biological Basis of Alcohol-Induced Cancer*, *Advances in Experimental Medicine and Biology* 815. Springer International Publishing, Switzerland; DOI 10.1007/978-3-319-09614-8\_2.



## Forum Summary

Three major papers on the association of alcohol consumption and cancer have recently been published. Forum members considered that all were well done, and presented valuable new information on the topic. While the key findings in each study are similar, each brings specific information on how alcohol relates to the risk of developing cancer. In this critique, we present the authors' abstracts of each paper, our comments on the paper, and then an overall discussion of the topic.

Problems can occur when combining case-control studies with prospective cohort studies, as was done in one of the papers reviewed; risk estimates are usually higher in the former type of study and control for potential confounding may be less complete. Further, it is especially important to consider the interaction between alcohol consumption and smoking for upper aero-digestive tract cancers, as was not always done. When able to be estimated, under-reporting of alcohol intake among those claiming to be moderate drinkers can help define the relation between alcohol and disease. And none of the studies covered in this critique emphasized the net effects of alcohol consumption: because of protective effects against cardiovascular disease, moderate drinking is almost always associated with a lower risk of total mortality than that which occurs among abstainers.

In summary, the Forum considers that the three papers reviewed provide important data on one of the few lifestyle factors that have been shown to relate to the risk of cancer. And cumulative research data clearly show that heavy alcohol intake increases the risk of upper aero-digestive tract cancers and some other cancers. Further, in these and many previous reports, even light alcohol consumption was associated with an increase in risk of breast cancer in women. Unfortunately, for most cancers, the threshold level of drinking associated with an increase in risk is not clearly defined.

Forum members agree with the conclusions presented by Klatsky et al in his paper for providing advice regarding alcohol consumption: **"At present, a possible increased cancer risk at moderate intake**

**should enter into individual estimation of the overall risk-benefit equation for alcohol drinking, especially for young persons. For most persons older than age 50 years, the overall benefits of lighter drinking, especially the reduced risk of atherothrombotic disease, outweigh possible cancer risk."**

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

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Note on potential conflict of interest: An author of one of these papers, Arthur Klatsky, is a member of the International Scientific Forum on Alcohol Research. Dr. Klatsky had no input into the preparation of this critique.

## The association of alcohol consumption with the risk of developing heart failure

This critique comments on two recent papers on alcohol and heart failure. The authors' abstracts of the two papers are given below:

(1) Larsson SC, Orsini N, Wolk A. Alcohol consumption and risk of heart failure: a dose-response meta-analysis of prospective studies. *European Journal of Heart Failure* 2015;17:367–373. doi:10.1002/ejhf.228

### Authors' Abstract

**Aims** The aim of this study was to conduct a meta-analysis of prospective studies assessing the relationship between alcohol consumption and risk of heart failure (HF).

**Methods and results** We searched the PubMed database from inception to September 2014 and reviewed the reference list of relevant articles to identify prospective studies assessing the association between alcohol consumption and risk of HF. Study-specific relative risk (RR) estimates were combined using a random-effects meta-analysis. The meta-analysis included eight prospective studies, with a total of 202 378 participants and 6211 cases of HF. The pooled adjusted RRs of HF were 0.85 [95% confidence interval (CI) 0.78–0.93] for light to moderate alcohol consumption (<14 drinks/week) and 0.90 (95% CI 0.72–1.13) for high alcohol consumption ( $\geq$ 14 drinks/week) compared with non-drinkers. In a dose-response meta-analysis, we observed a non-linear relationship between alcohol consumption and risk of HF ( $P$  for non-linearity=0.001). Compared with non-drinkers, the RRs (95% CI) across levels of alcohol consumption were 0.90 (0.84–0.96) for 3 drinks/week, 0.83 (0.73–0.95) for 7 drinks/week, 0.84 (0.72–0.98) for 10 drinks/week, 0.90 (0.73–1.10) for 14 drinks/week, and 1.07 (0.77–1.48) for 21 drinks/week.

**Conclusion** Alcohol consumption in moderation is associated with a reduced risk of HF.

(2). Dorans KS, Mostofsky E, Levitan EB, Håkansson N, Wolk A, Mittleman MA. Alcohol and Incident Heart Failure Among Middle-Aged and Elderly Men: The Cohort of Swedish Men. *Circulation Heart Failure* 2015; pre-publication. DOI:10.1161/CIRCHEARTFAILURE.114.001787.

### Authors' Abstract

**Background** Compared with no alcohol consumption, heavy alcohol intake is associated with a higher rate of heart failure (HF) whereas light-to-moderate intake may be associated with a lower rate. However, several prior studies did not exclude former drinkers, who may have changed alcohol consumption in response to diagnosis. This study aimed to investigate the association between alcohol intake and incident HF.

**Methods and Results** We conducted a prospective cohort study of 33,760 men 45–79 years old with no HF, diabetes mellitus or myocardial infarction at baseline participating

in the Cohort of Swedish Men Study. We excluded former drinkers. At baseline, participants completed a food-frequency questionnaire and reported other characteristics. HF was defined as hospitalization for or death from HF, ascertained by Swedish inpatient and cause-of-death records from January 1, 1998 through December 31, 2011. We constructed Cox proportional hazards models to estimate multivariable-adjusted rate ratios (IRRs). During follow-up, 2916 men were hospitalized for ( $n=2139$ ) or died ( $n=777$ ) of incident HF. There was a U-shaped relationship between total alcohol intake and incident HF ( $p=0.0004$ ). There was a nadir at light-to-moderate alcohol intake: consuming 7 to less than 14 standard drinks per week was associated with a 19% lower multivariable-adjusted rate of HF compared with never drinking (IRR: 0.81, 95% CI: 0.69, 0.96).

**Conclusions** In this cohort of Swedish men, there was a U-shaped relationship between alcohol consumption and HF incidence, with a nadir at light-to-moderate intake. Heavy intake did not appear protective.

### Forum Comments

The association between alcohol intake and the risk of developing heart failure (HF) is unclear, but most cohort studies have shown a lower risk of HF among moderate drinkers but a possible higher risk among heavy drinkers. The recent meta-analysis included in this critique (Larsson et al) was based on eight prospective studies, with more than 200,000 subjects and 6,211 cases of HF. Those authors report that "In a dose-response meta-analysis, we observed a non-linear relationship between alcohol consumption and risk of HF ( $P$  for non-linearity=0.001). Compared with non-drinkers, the RRs (95% CI) across levels of alcohol consumption were 0.90 (0.84–0.96) for 3 drinks/week, 0.83 (0.73–0.95) for 7 drinks/week, 0.84 (0.72–0.98) for 10 drinks/week, 0.90 (0.73–1.10) for 14 drinks/week, and 1.07 (0.77–1.48) for 21 drinks/week."

Meta-analyses provide important information because they are usually based on very large numbers of subjects and cases, and can detect smaller increases in risk than seen in individual studies. However, single large prospective cohort studies tend to provide more detailed information on, and allow better adjustment for, potential confounders. The present paper from Sweden also reviewed in this critique (Dorans et al) is based on 33,760 men who were followed for 14 years, with almost 3,000 cases of fatal or non-fatal HF.

There are a number of strengths of both papers, the meta-analysis because of its large size and breadth

of coverage, and the cohort report which had consistent data on a number of risk factors that may have confounded the results. However, the overall results are very similar in showing a reduction in HF from moderate alcohol consumption.

Specific comments on Larsson et al: The first paper, the meta-analysis, used appropriate techniques to summarize data from eight prospective studies that included more than 200,000 subjects with 6,211 incident cases of HF. The degree of control for potential confounding varied among the studies included in the meta-analysis, but the authors chose the most fully adjusted risk ratios provided by the original authors.

This paper included a two-stage random-effects dose-response analysis, using a restricted cubic spline analysis to judge for non-linear effects. The investigators also pooled the study-specific RRs from all of the studies. Their key findings were reduced risks of HF for consumers of 3 and 10 drinks/week (a 10% and 17% decreased risk, respectively) and a RR of 1.07 (95% CI 0.77 – 1.48) for consumption of 21 drinks/week. The authors note that their analyses cannot judge the effect on the risk of HF among alcoholics or other heavy drinkers.

Specific comments on Dorans et al: The second study is based on a population-based cohort from central Sweden with excellent follow up for the development of HF; for example, more than 99% of inpatients in Sweden are included in the dataset used for the ascertainment of HF. The investigators excluded ex-drinkers from the study, so that they would not potentially influence the association by including subjects who may have stopped drinking because of certain diseases or advice from their physicians.

This cohort study had an adequate number of never drinkers (n=1,396) to use as a comparison group. The analyses were well-done, with appropriate sensitivity analyses. Further, these investigators had data permitting adjustments for potential confounders, including age, BMI, physical activity, education, smoking, marital status, family history of premature myocardial infarction, history of hypertension and hypercholesterolemia, and diet quality, with the latter assessed as degree of compliance with a DASH diet (Levitan et al). The authors carried out chart reviews of reported cases, with confirmation of 95%

of suspected cases. They also had data on specific types of alcohol consumed by subjects.

A weakness, as acknowledged by the authors, was the lack of information on the pattern of drinking (regular versus binge). In beverage-specific analyses, there were similar reductions for consumers of beer, wine, and spirits, although there was a tendency for a slightly greater reduction in risk for consumers of beer, the most common beverage in this cohort. However, for beverage-specific analyses, the authors included non-drinkers in their comparisons with consumers of each type of beverage, so that subjects not consuming a specific beverage included drinkers of other beverages plus non-drinkers, making it somewhat difficult to judge the results.

The results show that drinkers, in comparison with never-drinkers, tended to have a higher family history of heart disease, more hypertension and high cholesterol, much higher rates of smoking, less physical activity, and a poorer diet (all of which should have increased their risk of HF). However, the risk of HF for most categories of drinkers tended to be lower than that of non-drinkers, with the lowest risk among consumers of 7 – 14 drinks/week (HR=0.81, 95% CI 0.69 – 0.96). [This estimate is very similar to that shown in the meta-analysis by Larsson et al: 0.83 (0.73–0.95) for 7 drinks/week and 0.84 (0.72–0.98) for 10 drinks/week. In both the present study and the meta-analysis, drinkers in the highest category of drinking had an estimated HR greater than 1.00, but the differences from non-drinkers was not statistically significant.

Forum member Finkel commented: “This study seems to me well done and of adequate power. It confirms the previously determined protection against heart failure by light-moderate alcohol consumption in a U-shaped relationship, and counters the age-old objection that reported benefits of moderate consumption were based on ‘sick quitters.’”

Overall comments on alcohol and HF: Forum member Thelle raised some important points on the subject: “My main concern with these papers is that heart failure covers a plethora of mechanisms and underlying diseases, among which coronary heart disease is the most important. Other causes are high blood pressure, valve disorders, cardiomyopathy, myocarditis and arrhythmias. The U-shaped curve could be due to the association with coronary heart

disease, that the authors comment upon. But as the cohort paper excluded patients with previous known myocardial infarction, this would seem less likely. What then caused heart failure in these subjects: a non-coronary factor affecting the myocardium, and likely to be prevented by alcohol? Or, are the HF cases un-diagnosed or newly diagnosed coronary patients where HF is a manifestation?"

Arthur Klatsky, a member of this Forum, published an editorial accompanying the paper by Larsson et al. He pointed out that key issues on studies of alcohol and HF include the following: (1) a realization that alcohol-health relationships are non linear; (2) results of studies may be affected by whether or not ex-drinkers are included in the reference group; (3) there have been no randomized trials of alcohol and major health outcomes, such as HF; (4) it is difficult to judge results from different types of beverage because of confounding by other lifestyle factors among consumers of a particular beverage; (5) in many studies of HF, only patients who are hospitalized or patients with HF who die are included, so milder cases are not evaluated; (6) it is difficult to separate effects of alcohol on the development of coronary heart disease (the underlying factor for much HF) and effects directly on the myocardium; (7) data support increased risk of many diseases from heavy drinking, but moderate drinking may decrease risk for middle-aged and older adults; thus, advice should be individualized. Klatsky also commented that *"Since there is some presumed misclassification of intake by under-reporting, the inverse alcohol-HF association may be stronger than the data show."*

Cardiologist and Forum member Goldfinger agreed with the comments of Klatsky. *"As always, I appreciate Arthur's editorializing and stated positions on the role of moderate alcohol consumption. His comment 'HF is pluricausal, with multiple risk factors and not a unitary cause' is most important when reviewing these papers. HF is a syndrome and not a disease. It may result from coronary artery disease and multi-infarct/ischemic cardiomyopathy, viral or toxic cardiomyopathy, congenital heart disease, valvular heart disease, pericardial disease, volume overload syndromes, diastolic dysfunction of aging, etc.*

*"Certainly moderate alcohol consumption has a robust role in prevention of atherosclerotic cardiovascular disease (ASHD) and thus its consequences, such as HF.*

And, ASHD is the number 1 cause of heart failure, thus a beneficial effect, as has been shown in both papers, is of little surprise and to be expected. Moderate alcohol drinking, particularly wine drinking, has been associated with an overall healthier lifestyle, and thus may be associated with a reduced risk of infection, exposure, and healthier aging. This has impact on the likelihood of developing acquired conditions that may lead ultimately to the syndrome of HF.

*"Another critical consideration is how the HF patients in these papers were identified: almost exclusively by hospitalizations. The precipitating cause of decompensation needs to be considered, e.g., infection (particularly respiratory and urinary tract infections in the elderly), dietary indiscretion, excessive salt intake, non-compliance with chronic medication, etc. This certainly complicates the analysis, as a great many patients with chronic heart failure are not hospitalized. Several studies have linked modest alcohol with a decreased risk of infections (e.g., Kamholz), so, an important effect may be on the triggers of decompensation in a more expansive stable population, rather than an effect on the instigation of the disease that caused it in the first place. In general, the results/consensus are consistent with the fund of knowledge we currently have, that is, safe and moderate alcohol consumption is associated with a healthier life and one that is more likely free of disease and disability."*

#### References from Forum review

Dorans KS, Mostofsky E, Levitan EB, Håkansson N, Wolk A, Mittleman MA. Alcohol and Incident Heart Failure Among Middle-Aged and Elderly Men: The Cohort of Swedish Men. *Circulation Heart Failure* 2015; pre-publication. DOI:10.1161/Circheartfailure.114.001787

Klatsky AL. Editorial: Alcohol drinking and heart failure: where do we stand? *European Journal of Heart Failure* 2015;17:348-350.

Kamholz SL. Wine, spirits and the lung: Good, bad or indifferent? *Trans Am Clinical and Climatological Assoc* 2006;117:129-145.

Larsson SC, Orsini N, Wolk A. Alcohol consumption and risk of heart failure: a dose-response meta-analysis of prospective studies. *European Journal of Heart Failure* 2015;17:367-373. doi:10.1002/ejhf.228.

Levitan EB, Wolk A, Mittleman MA. Relation of consistency with the dietary approaches to stop hypertension diet and incidence of heart failure in men aged 45 to 79 years. *Am J Cardiol* 2009;104:1416-1420.

## Forum Summary

Two new papers have provided data on the association of alcohol consumption with the risk of developing heart failure (HF). The first is a meta-analysis by Larsson et al that is based on eight prospective studies, with more than 200,000 subjects and 6,211 cases of HF. Meta-analyses provide important information because they are usually based on very large numbers of subjects and cases, and can detect smaller increases in risk than seen in individual studies. However, single large prospective cohort studies tend to provide more detailed information on, and allow better adjustment for, potential confounders. The second paper discussed in this critique by Dorans et al, is based on 33,760 men who were followed for 14 years, with almost 3,000 cases of fatal or non-fatal HF.

There was a high degree of consistency between these two studies: both concluded that moderate alcohol consumption, in comparison with non-drinking, is associated with a lower risk of developing HF. The meta-analysis (Larsson et al) concluded that there was a dose-response association between alcohol and HF; for example, a reduced risks of HF for consumers of 3 and 10 drinks/week (a 10% and 17% decreased risk, respectively), but not for those reporting the consumption of 21 drinks/week (a RR of 1.07; 95% CI 0.77 – 1.48). In the report from the single large Swedish prospective study (Dorans et al), the risk of HF for most categories of drinkers tended to be lower than that of never drinkers, with the lowest risk among consumers of 7 – 14 drinks/week (HR=0.81, 95% CI 0.69 – 0.96).

Forum members considered both of these studies to have been very well done, and the similar results not unexpected. HF has many causes, but in developed countries the most common is coronary artery disease (CAD), and moderate drinking has long been known to be associated with a lower risk of developing CAD. In their critique, Forum members discuss other conditions that relate to the development of HF, including conditions (such as respiratory infection, excessive salt intake, non-compliance with prescribed medication, etc.) that may trigger an attack of symptomatic HF.

To summarize, based on previous research and these two excellent papers, current data suggest that the moderate intake of an alcoholic beverage lowers

the risk of the development of symptomatic HF. This undoubtedly relates, as least to some extent, to the demonstrated protection of alcoholic beverages against CAD. As for giving advice regarding the consumption of alcohol, Forum members agree with the conclusions stated by Klatsky in his editorial accompanying one of the papers: **“All persons should avoid heavy drinking and many persons should avoid all alcohol. However, it is the author’s opinion that many middle-aged and older persons at risk of CAD or HF should be told that he or she is better off as a light to moderate drinker. Dispassionate objectivity plus common sense should dictate advice about drinking.”**

Comments on these publications were provided by the following members of the International Scientific Forum on Alcohol Research:

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## Regular wine consumption in chronic heart failure

Moderate, regular alcohol consumption is generally associated with a lower risk of cardiovascular events but data in patients with chronic heart failure (HF) are scarce. A study was conducted to evaluate the relations between wine consumption, health status, circulating biomarkers and clinical outcomes in a large Italian population of patients with chronic HF enrolled in a multicenter clinical trial.

A brief questionnaire on dietary habits was administered at baseline to 6,973 patients enrolled in the GISSI-HF trial. The relationship between wine consumption, fatal and non-fatal clinical endpoints, quality of life, symptoms of depression and circulating biomarkers of cardiac function and inflammation (in subsets of patients) were evaluated with simple and multivariable adjusted statistical models.

Almost 56% of the patients reported drinking at least one glass of wine per day. After adjustment,

clinical outcomes were not significantly different in the four groups of patients. However, patients with more frequent wine consumption had a significantly better perception of health status score, less frequent symptoms of depression, and lower plasma levels of biomarkers of vascular inflammation after adjusting for possible confounders.

The study demonstrates in a large cohort of patients with chronic HF that moderate wine consumption is associated with a better perceived and objective health status, lower prevalence of depression, and less vascular inflammation, but does not translate into a more favourable clinical 4-year outcomes.

Source: Regular wine consumption in chronic heart failure: impact on outcomes, quality of life, and circulating biomarkers Cosmi F, Di Giulio P, Masson S, Finzi A, Marfisi RM, Cosmi D; Scarano M; et al *Circulation: Heart Failure* Published early online 29 April 2015.

## Blacks may not receive same health benefits from moderate alcohol drinking as whites

According to a nationally representative study of the US population by researchers at Harvard T.H. Chan School of Public Health, although moderate alcohol consumption appears to lower mortality, the protective effect may vary according to race and gender.

Previous research has found an association between moderate drinking and lowered risk of type 2 diabetes, heart disease, and premature mortality, but those studies were conducted among mostly white populations, and some studies have suggested that blacks may not experience similar risk reduction.

An epidemiological analysis was performed on data from 126,369 white people and 25,811 black. The CDC survey data were collected from 1997 to 2002, and follow-up continued to monitor death rates through 2006.

The survey respondents reported frequency and level of alcohol consumption and gave information on education, employment and income. The researchers assessed "social integration" into society, such as living in poverty or being unemployed. Other health-related behaviours, including whether they smoked, and information on any medical conditions were also recorded. Moderate alcohol consumption was broadly defined as 1-2 drinks a day for men and 1 a day for women.

The results showed that 13% of white men and 24% of black men had never consumed alcohol. Among women, 23% of white women and 42% of black women reported never drinking.

For men, the lowest risk of mortality was among white men who consumed 1-2 drinks, 3-7 days per week and among black men who didn't drink at all. For women, the lowest risk of mortality was among white women consuming 1 drink, 3-7 days per week, and among black women who consumed 1 drink on 2 or fewer days per week.

Given the findings, the authors suggested further research into other factors that might be involved in the connection between alcohol and mortality risk, such as lifestyle related to diet, physical activity, sleep, youthful experimentation vs. coping with hardships; socioeconomic status and other markers of social integration; differences in physical, chemical, and social exposures in both occupational and residential environments; genetic differences; and gender differences.

Source: "Black-White Differences in the Relationship Between Alcohol Drinking Patterns and Mortality Among US Men and Women," Chandra L. Jackson, Frank B. Hu, Ichiro Kawachi, David R. Williams, Kenneth J. Mukamal, and Eric B. Rimm, *American Journal of Public Health*, online April 23, 2015.

## Tobacco and alcohol in relation to male breast cancer

The etiology of male breast cancer is poorly understood, partly due to its relative rarity. Although tobacco and alcohol exposures are known carcinogens, their association with male breast cancer risk remains ill-defined.

The Male Breast Cancer Pooling Project consortium provided 2,378 cases and 51,959 controls for analysis from 10 case-control and 10 cohort studies. Individual participant data were harmonized and pooled. Unconditional logistic regression was used to estimate study design-specific (case-control/cohort) ORs and 95% confidence intervals (CI), which were then combined using fixed-effects meta-analysis.

Cigarette smoking status, smoking pack-years, duration, intensity, and age at initiation were not associated with male breast cancer risk. Relations with cigar and pipe smoking, tobacco chewing, and snuff use were also null. Recent alcohol consumption and average grams of alcohol consumed per day were also not associated with risk; only one sub analysis of

very high recent alcohol consumption (>60 g/day) was tentatively associated with male breast cancer (OR unexposed referent = 1.29; 95% CI, 0.97–1.71; OR>0–<7 g/day referent = 1.36; 95% CI, 1.04–1.77). Specific alcoholic beverage types were not associated with male breast cancer. Relations were not altered when stratified by age or body mass index.

In this analysis of the Male Breast Cancer Pooling Project, we found little evidence that tobacco and alcohol exposures were associated with risk of male breast cancer.

Tobacco and alcohol do not appear to be carcinogenic for male breast cancer. Future studies should aim to assess these exposures in relation to subtypes of male breast cancer.

Source: Tobacco and alcohol in relation to male breast cancer: an analysis of the male breast cancer pooling project consortium. *Cancer Epidemiol Biomarkers Prev* 2015 Mar 16;24(3):520-31. Epub 2014 Dec 16. Michael B Cook et al.

## Alcohol consumption and the risk of renal cancers in the European prospective investigation into cancer and nutrition (EPIC)

Epidemiologic studies have reported that moderate alcohol consumption is inversely associated with the risk of renal cancer. However, there is no information available on the associations in renal cancer subsites.

From 1992 through to 2010, 477,325 men and women in the European Prospective Investigation into Cancer and Nutrition (EPIC) cohort were followed for incident renal cancers (n = 931). Baseline and lifetime alcohol consumption was assessed by country-specific, validated dietary questionnaires. Information on past alcohol consumption was collected by lifestyle questionnaires. Hazard ratios (HRs) and 95% confidence intervals (CIs) were estimated from Cox proportional hazard models.

In multivariate analysis, total alcohol consumption at baseline was inversely associated (protective)

with renal cancer; the HR and 95% CI for the increasing categories of total alcohol consumption at recruitment versus the light drinkers category were 0.78 (0.62-0.99), 0.82 (0.64-1.04), 0.70 (0.55-0.90), 0.91 (0.63-1.30), respectively (ptrend=0.001). A similar relationship was observed for average lifetime alcohol consumption, and for all renal cancer subsites combined or for renal parenchyma subsite. The trend was not observed in hypertensive individuals and not significant in smokers.

In conclusion, moderate alcohol consumption was associated with a decreased risk of renal cancer.

Source: Alcohol consumption and the risk of renal cancers in the European prospective investigation into cancer and nutrition (EPIC). Wozniak MB; Brennan P; Brenner DR; Overvad K; Olsen A; Tjonneland A; Boutron Ruault MC; et al. *International Journal of Cancer*, accepted article early online 9 April 2015.

## New insights into the role of nutrition in CVD prevention

Authors of a recent study state that nutrition plays an increasingly significant role in lifestyle strategies for cardiovascular prevention.

Foods and dietary patterns that encompass specific foods and beverages and their combinations, with synergies among their components, are the subject of much epidemiologic and clinical research in relation to health issues, including cardiovascular disease.

Foods with the highest evidence for beneficial effects on cardiovascular outcomes (mainly fatal and nonfatal coronary artery disease and stroke) and intermediate risk markers (principally cholesterol and blood pressure) are fruits and vegetables, legumes, nuts, whole grains, dairy products, fish, and alcohol consumed in moderation.

In their paper, epidemiologic and clinical trial evidence on cardiovascular health issues is reviewed for these foods and for the dietary pattern with the highest probability of a causal link with cardiovascular protection, namely the Mediterranean diet. When pertinent, mechanisms of protection derived from specific nutrients in foods are also examined.

The explosion of knowledge in cardio protective foods and diets needs to be translated to the public, as dietary quality is still far from optimal in large segments of the population, the authors argue.

Source: *New insights in to the role of nutrition in CVD prevention.* Aleix Sala-Vila, Ramon Estruch, Emilio Ros. *Current Cardiol. Rep.* (2015) 17:26.

## Genetics of alcoholic cirrhosis - GenomALC multinational study

The risk of alcohol-related liver cirrhosis increases with increasing alcohol consumption, but many people with very high intake escape from liver disease. Authors of a paper published in *Alcoholism: Clinical and Experimental Research* postulate that susceptibility to alcoholic cirrhosis has a complex genetic component and propose that this can be dissected through a large and sufficiently powered genomewide association study (GWAS).

The GenomALC Consortium comprises researchers from Australia, France, Germany, Switzerland, United Kingdom, and United States, with a joint aim of exploring the genetic and genomic basis of alcoholic cirrhosis. For this study, researchers recruited high-risk drinkers who are either cases (with alcoholic cirrhosis) or controls (drinking comparable amounts over similar time, but free of significant liver disease). Extensive phenotypic data are obtained using semistructured interviews and patient records, and blood samples are collected.

859 participants were recruited including 538 matched case-control samples as of September 2014, using study-specific inclusion-exclusion criteria and data collection protocols. Of these, 580 are cases (442 men and 138 women) and 279 are controls

(205 men and 74 women). Duration of excessive drinking was slightly greater in cases than controls and was significantly less in women than men. Cases had significantly lower lifetime alcohol intake than controls. Both cases and controls had a high prevalence of reported parental alcohol problems, but cases were significantly more likely to report that a father with alcohol problems had died from liver disease (odds ratio 2.53, 95% confidence interval 1.31 to 4.87,  $p = 0.0055$ ).

The study has demonstrated that recruitment of participants for a GWAS of alcoholic cirrhosis has proved feasible across countries with multiple sites. Affected patients often consume less alcohol than unaffected ones, emphasizing the existence of individual vulnerability factors. Cases are more likely to report liver disease in a father with alcohol problems than controls, consistent with a potential genetic component to the risk of alcoholic cirrhosis.

Source: *Genetics of alcoholic cirrhosis - GenomALC multinational study* Whitfield JB; Rahman K; Haber PS; Day CP; Masson S; Daly AK; Cordell HJ; et al *Alcoholism: Clinical and Experimental Research* Vol 39, No 5, 2015, pp836-842.



## The mechanism by which moderate alcohol consumption influences coronary heart disease

An open access paper in the journal Nutrition provides an integrated view of the CHD pathogenesis pathway in order to elucidate how moderate alcohol consumption could reduce CHD risk.

A literature review was conducted focusing on the pathogenesis of CHD. Biomarker data were further systematically analysed from 294 cohort studies, comprising 1,161,560 subjects. From the above a suitably integrated CHD pathogenetic system for the purpose of this study was developed.

The resulting integrated system provides insight into the integrated higher-order interactions underlying CHD and moderate alcohol consumption. A 'connection graph' is used to illustrate the relationship between moderate alcohol consumption and the relative risks (RR) attributed to various measurable CHD serological biomarkers. Thus, the possible reasons for the reduced RR for CHD with moderate alcohol consumption become clear at a glance.

The authors conclude that moderate alcohol consumption is associated with a lower risk of CHD. This lower risk has been observed independent of the

beverage type consumed. A high-level conceptual model has been developed which links moderate alcohol consumption, and the pathogenesis and hallmarks of CHD.

This shows the positive effect of moderate alcohol consumption on certain important aspects of the pathogenesis of CHD and may explain why moderate alcohol consumption is associated with lower CHD risk. It is now clear at a glance that moderate alcohol consumption increases HDL-cholesterol, insulin sensitivity and adiponectin levels while decreasing inflammation, all of which have positive effects on the risk for CHD.

The integrated high level CHD model provides a summary of evidence for a causal relationship between CHD risk and moderate alcohol consumption.

Source: The mechanism by which moderate alcohol consumption influences coronary heart disease. Marc J Mathews, Leon Liebenberg and Edward H Mathews. Nutrition Journal 2015,14:33.

[www.nutritionj.com/content/14/33](http://www.nutritionj.com/content/14/33)

## Modest alcohol consumption reduces the incidence of fatty liver in men

The authors state there has been no large-scale longitudinal study addressing an impact of alcohol consumption on a development of fatty liver diagnosed by ultrasonography. The researchers therefore investigated the impact of alcohol consumption on a natural history of fatty liver, analysing 5,437 apparently healthy Japanese who received the health checkup programmes repeatedly over 10 years.

Standardised questionnaires were used to address the medical history and lifestyle and a standardised ultrasonographic diagnosis was used to identify fatty liver. The total amount of alcohol consumed per week was calculated and classified into four grades; none or minimal, light, moderate, or heavy alcohol consumption (<40, 40–140, 140–280 or >280g/week, respectively). The hazard risks of alcohol consumption for the development of fatty liver were calculated by Cox hazard model after adjusting age, BMI, and parameters for lifestyle.

During 10 years of follow-up, fatty liver was continuously diagnosed in 10% of men and 20% of women with fatty liver at the baseline. In men, the adjusted hazard risks of light and moderate alcohol consumption for the development of fatty liver were 0.72 (95% confidence interval 0.60–0.86,  $P < 0.001$ ) and 0.69 (0.57–0.84,  $P < 0.001$ ), respectively. However, they were not significant in women.

The authors conclude that new onset of fatty liver was significantly repressed in apparently healthy men who consume light to moderate alcohol.

Source: The modest alcohol consumption reduces the incidence of fatty liver in men: a population-based large-scale cohort study Yoshitaka Hashimoto, Masahide Hamaguchi, Takao Kojima, Yasuhiro Ohshima, Akihiro Ohbora, Takahiro Kato, Naoto Nakamura and Michiaki Fukui. Journal of Gastroenterology and Hepatology. Volume 30, Issue 3, pages 546–552, March 2015.

## The effect of alcohol consumption on insulin sensitivity and glycemic status

Moderate alcohol consumption is associated with a reduced risk of type 2 diabetes. This reduced risk might be explained by improved insulin sensitivity or improved glycemic status, but results of intervention studies on this relation are inconsistent.

The purpose of this study was to conduct a systematic review and meta-analysis of intervention studies investigating the effect of alcohol consumption on insulin sensitivity and glycemic status.

PubMed and Embase were searched up to August 2014. Intervention studies on the effect of alcohol consumption on biological markers of insulin sensitivity or glycemic status of at least 2 weeks' duration were included. Investigators extracted data on study characteristics, outcome measures, and methodological quality.

Fourteen intervention studies were included in a meta-analysis of six glycemic end points. Alcohol consumption did not influence estimated insulin sensitivity (standardized mean difference [SMD] 0.08

[-0.09 to 0.24]) or fasting glucose (SMD 0.07 [-0.11 to 0.24]) but reduced HbA1c (SMD -0.62 [-1.01 to -0.23]) and fasting insulin concentrations (SMD -0.19 [-0.35 to -0.02]) compared with the control condition. Alcohol consumption among women reduced fasting insulin (SMD -0.23 [-0.41 to -0.04]) and tended to improve insulin sensitivity (SMD 0.16 [-0.04 to 0.37]) but not among men. Results were similar after excluding studies with high alcohol dosages (>40 g/day) and were not influenced by dosage and duration of the intervention.

Although the studies had small sample sizes and were of short duration, the current evidence suggests that moderate alcohol consumption may decrease fasting insulin and HbA1c concentrations among nondiabetic subjects. Alcohol consumption might improve insulin sensitivity among women but did not do so overall.

Source: The effect of alcohol consumption on insulin sensitivity and glycemic status: a systematic review and meta-analysis of intervention studies. Schrieks IC; Heil AL; Hendriks HF; Mukamal KJ; Beulens JW. *Diabetes Care*. Vol 38, No 4, 2015, pp723-732.

## Different amounts of alcohol consumption and cataract: a meta-analysis

A study evaluated the association between different amounts of alcohol consumption and the risk of age-related cataract.

Heavy alcohol consumption was defined as more than two standard drinks per day, which is equal to a daily intake of 20 g of alcohol or 140 g per week. Moderate consumption was defined as less than 20 g of alcohol per day but more than never any.

Researchers searched for studies with data on alcohol consumption and age-related cataract. Five case-control and five cohort studies were identified through comprehensive literature search of PubMed and Embase.

In the meta-analysis of 10 studies, the associations between moderate alcohol consumption and age-related cataract were marginally nonsignificant (pooled relative risk, 0.88; 95% confidence interval, 0.74 to 1.05; I<sup>2</sup> = 82.1%), whereas heavy alcohol consumption was associated with an increased risk

of age-related cataract (pooled relative risk, 1.26; 95% confidence interval, 1.06 to 1.50; I<sup>2</sup> = 58.9%). The association between heavy alcohol consumption and cataract was stronger in case-control than in cohort studies. Adjusting for smoking as a potential confounder attenuated the association between heavy alcohol consumption and cataract.

The authors conclude that heavy alcohol consumption significantly increased the risk of age-related cataract, whereas moderate consumption may be protective for this ocular condition. Clinically, information on a patient's alcohol drinking history might be valuable to general physicians and ophthalmologists when there is a diagnosis of age-related cataract and should be collected on a routine basis in eye clinics.

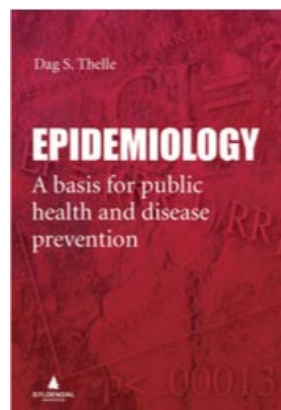
Source: Different amounts of alcohol consumption and cataract: a meta-analysis Gong Y; Feng K; Yan N; Xu Y; Pan CW, *Optometry and Vision Science*. Vol 92, No 4, 2015, pp471-479.

## Epidemiology - A basis for public health and disease prevention by Dag S. Thelle

Epidemiology involves the study of the distribution and determinants of health in a given population, and the subsequent application of this study to improve outcomes.

This book introduces major topics in this field, and where applicable, illustrated by tables and figures from Norwegian and Swedish studies.

The first twelve chapters concern epidemiologic methods, including discussion of study designs and bias, together with an overview of vital statistics and a discussion on causality. The final eight chapters discuss changes in health more generally (or the epidemiologic transition), prevention, an introduction



to genetic epidemiology, infectious disease, reporting observational studies, and assessing new information.

The book is aimed at students in medical school, as well as public health and other health sciences students at the Bachelor and Master's level.

ISBN/EAN: 9788205412200

## Driving under the influence of alcohol: frequency, reasons, perceived risk and punishment

A study investigated aspects of Driving Under the Influence (DUI) in Spanish drivers. The study assessed the frequency of DUI, reasons, perceived risk, drivers' knowledge of the related penalties, perceived likelihood of being punished, drivers' perception of the harshness of punitive measures and drivers' perception of the probability of behavioural change after punishment for DUI.

A sample of 1,100 Spanish drivers, 678 men and 422 women aged from 14 to 65 years old, took part in a telephone survey using a questionnaire to gather socio-demographic and psychosocial information about drivers, as well as information on enforcement, clustered in five related categories: Knowledge and perception of traffic norms; Opinions on sanctions; Opinions on policing; Opinions on laws (in general and on traffic); and Assessment of the effectiveness of various punitive measures.

Results showed around 60% of respondents believe that driving under the influence of alcohol is a very high risk behaviour. 90.2% of the sample said they

never or almost never drove under the influence of alcohol. The main reasons given were to avoid accidents (28.3%) as opposed to avoiding sanctions (10.4%).

9.7% of participants said that they had driven after consuming alcohol. Here, the main reasons for doing so were "not having another way to return home" (24.5%) and alcohol consumption being associated with meals (17.3%).

The perceived risk of having a traffic accident as a result of DUI is influenced by variables such as sex and age. With regard to the type of sanctions, 90% think that DUI is punishable by a fine, 96.4% that it may result in temporary or permanent suspension of driving license, and 70% that it can be punished with imprisonment.

Source: Driving under the influence of alcohol: frequency, reasons, perceived risk and punishment. Alonso F; Pastor JC; Montoro L; Esteban C Substance Abuse Treatment Prevention and Policy Vol 10, Art No 11, 2015, 9pp.

## IQ and level of alcohol consumption

A Swedish study investigated whether there was any association between IQ test results and alcohol consumption, measured as both total alcohol intake and pattern of alcohol use.

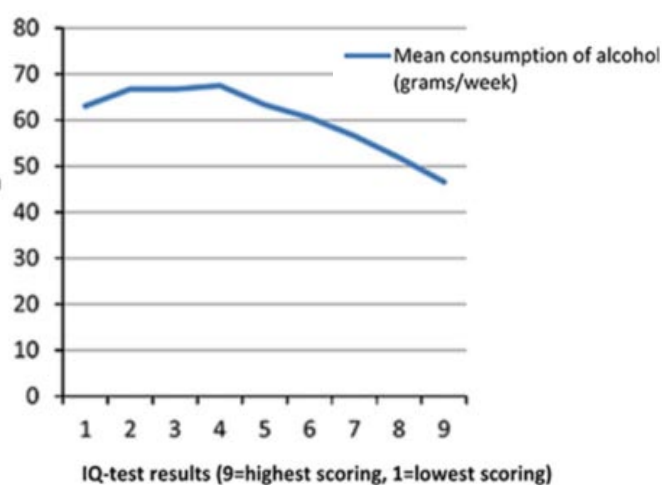
The study population consists of 49,321 Swedish males born 1949 to 1951 who were conscripted for Swedish military service 1969 to 1970. IQ test results were available from tests performed at conscription. Questionnaires performed at conscription provided data on total alcohol intake (consumed grams of alcohol/wk) and pattern of drinking. Multinomial and binomial logistic regressions were performed on the cross-sectional data to estimate odds ratios (ORs) with 95% confidence intervals (CIs). Adjustments were made for socioeconomic position as a child, psychiatric symptoms and emotional stability, and father's alcohol habits.

The results showed an increased OR of 1.20 (1.17 to 1.23) for every step decrease on the stanine scale to be a high consumer versus a light consumer of alcohol. For binge drinking, an increased OR of 1.09 (95% CI = 1.08 to 1.11) was estimated for every step decrease on the stanine scale. Adjustment for confounders attenuated the associations. Also, IQ

in adolescence was found to be inversely associated with moderate/high alcohol consumption measured in middle age.

The authors conclude that lower results on IQ tests are associated with higher consumption of alcohol measured in terms of both total alcohol intake and binge drinking in Swedish adolescent men.

Source: A lower IQ has been linked to greater and riskier drinking among young adult men. Sojlund S, Hemmingsson T, Allebeck P. *Alcoholism: Clinical & Experimental Research* 2015 Mar;39 (3) 548-55.



## Alcohol use in films and adolescent alcohol use

A study investigated whether exposure to alcohol use in films (AUFs) is associated with early alcohol use, binge drinking, and alcohol-related problems in British adolescents.

The Cross-sectional study with 5,163 15-year-olds from the Avon Longitudinal Study of Parents and Children in the United Kingdom measured adolescent exposure to AUFs, age at onset of alcohol use, and binge-drinking behavior. The findings were adjusted for early childhood social, family and behavioral factors, adolescent tobacco use, and peer drinking.

After adjustment, adolescents with the highest exposure to AUFs were 1.2 (95% confidence interval [CI]: 1.1-1.3) times more likely to have tried alcohol

compared with those least exposed and 1.7 (95% CI: 1.5-2.0) times more likely to binge drink. They were 2.4 (95% CI: 1.9-3.1) times more likely to drink weekly and 2.0 (95% CI: 1.7-2.4) times more likely to have alcohol-related problems than those least exposed.

The study found that exposure to AUFs is associated with higher risk of alcohol use and alcohol-related problems in UK adolescents. They argue that this provides evidence to support the argument that a review of film-rating categories and alcohol ratings for all films may help reduce problem-related alcohol consumption in young people.

Source: Alcohol use in films and adolescent alcohol use. Waylen A; Leary S; Ness A; Sargent J *Pediatrics* Published early online 13 April 2015.

## Scotland – minimum pricing

On 6 May, The European Court of Justice heard evidence from the Scottish government on its case for introducing a minimum unit price for alcohol. The hearing in Luxembourg will enable the court to produce its preliminary ruling on the policy.

Legislation to bring in a minimum unit price of 50p was passed by the Scottish Parliament in May 2012. A legal challenge was brought by the Scotch Whisky Association (SWA), which argued it breached European law.

The legal bid by the SWA, backed by other European wine and spirits producers, was initially rejected at the Court of Session in Edinburgh in 2013. However, following an appeal hearing, the case was referred to the European court.

As part of the hearing, Judges heard oral evidence from the Scottish government. EU member states also had the opportunity to make representations to the court, with Ireland, Norway, the UK and Sweden expected to argue in support of the policy.

A preliminary ruling by the court in Luxembourg will be issued later this year and the case will then be referred back to the Court of Session for a final decision.

## Vin & Société highlight prevention campaigns

Vin & Société is using Twitter to reach out to consumers through weekly “prevention meetings”. Every Wednesday since early February, Vin & Société has invited its followers to present and to learn more about prevention campaigns and enter the debate on responsible consumption.

Vin & Société introduced a “Prevention” page alongside the launch of their new website earlier this year, which lists all the prevention campaigns that

have been developed in different countries to address drink & drive, alcohol in pregnancy, under aged drinking, and alcohol in the workplace, etc.

[www.vinetsociete.fr/prevention](http://www.vinetsociete.fr/prevention)



## Trade associations unite to publish high strength scheme retailer advice

Two of the UKs leading trade associations have joined forces to produce new guidance for retailers on schemes run by local authorities that aim to voluntarily remove high strength alcohol from sale.

The Association of Convenience Stores and the Wine and Spirit Trade Association have developed the advice following concerns raised about the approach of the so called “Reducing the Strength” initiatives across the UK.

The guidance sets out the competition risks associated with engaging with an initiative and provides retailers with a framework to assess the quality and effectiveness of an initiative before deciding whether to engage.

[www.wsta.co.uk/images/PAN/2015/ReducingTheStrengthGuidance.pdf](http://www.wsta.co.uk/images/PAN/2015/ReducingTheStrengthGuidance.pdf)

## Ireland Government provides €1m for alcohol awareness

The Irish Government is to provide €1 million in funding to increase public awareness of alcohol-related harm.

Speaking at the Third National Alcohol Forum Conference in Dublin, Minister for Health Dr Leo Varadkar announced that €1 million was to be made available under the Dormant Accounts Action Plan, which will allow grants of €41,600 to be made available to each of the Drug and Alcohol Task Forces in the country. This will help “raise awareness about alcohol-related harm, and to change attitudes”, the Minister said.

Varadkar also announced that The Public Health (Alcohol) Bill will be published this summer with a view to being made law by the end of the year. The bill will include minimum pricing for alcohol, and will regulate alcohol advertising and sponsorship targeted at young people, including a broadcast watershed. However, the Public Health (Alcohol) Bill does not propose an outright ban on sports sponsorship by drinks companies.

The Alcohol Forum Conference took place as part of Action on Alcohol Week, which ran from April 20-24.

[www.alcoholforum.org](http://www.alcoholforum.org)

## SpiritsEUROPE reports on delivery of commitments towards harm reduction



SpiritsEurope have reported on the latest progress against their 2015 Roadmap, presenting initiatives that have been implemented in the twelve months from March 2014 to March 2015.

Now in its fourth year, the implementation of the ROAD MAP 2015 continues in

the 22 EU Member States where spiritsEUROPE has a national member association. Although progress has varied from country to country over the past twelve months, new initiatives have been developed and decisions have been taken to reach the objectives set for 2015.

The report shows that there is still some way to go for the EU spirits sector is to achieve the goals set out in the ROAD MAP before the 2015 deadline, however, a substantial contribution has been made to contribute to reducing alcohol related-harm.

Highlights of this year's implementation include:

- Tackling underage drinking and irresponsible drinking by adults, encouraging better collaboration and sharing good practices and

sharing responsibility for joined-up campaigns and programmes - Some programmes have been used as examples and have been adopted for use by other countries and many are run in partnerships which can vary from town halls to retail chains, from social media influencers to medical professionals.

- Progress in the use of responsible drinking message (RDM) on advertising and on product labels, in the form of a consumer information website.

A spiritsEUROPE ROADMAP commitment is to display a responsible drinking message on labels, preferably in the form of a website. An increasing number of voluntary agreements are being taken and more companies are displaying either the responsible drinking.eu portal or their own consumer information website address where meaningful information is provided to consumers on a variety of topics.

Four new countries have introduced a responsible drinking message on product labels. For instance, Finland added their new consumer information website to labels, and Latvian local producers represented in LANA implement a common RDM message voluntarily. A number of other countries are still in the process of implementing this objective, and discussions are in progress in many countries.

## European Parliament calls for a new Alcohol Strategy

MEPs voted in favour of a Resolution calling on the European Commission (EC) to present a new EU Alcohol Strategy to tackle health harm for 2016-2022. The move comes just a week after European Union (EU) Health Ministers meeting in Riga called on the Commission to take action on the health impacts of alcohol. The resolution tabled was passed at a plenary session in Strasbourg and was adopted less than an hour after being brought.

Both MEPs and Ministers have criticized the Commission for failing to update the previous EU Alcohol Strategy, which expired in 2012. In

adopting the European Parliament Resolution on the Future EU Alcohol Strategy, set to run from 2016 to 2022, MEPs said the strategy should focus on "alcohol consumption by minors and EU-wide labelling to discourage drink-driving and drinking while pregnant". The strategy should also include "collecting reliable data, improving prevention and treatment, reducing accidents caused by drink-driving and analysing various drinking patterns".

The European Commission is expected to consider the resolution next year.

## New EU driving licence code on alcohol interlocks

To improve road safety the European Commission has introduced a harmonised EU code on alcohol interlock devices for driving licences (Commission Directive (EU) 2015/653 of 24 April 2015 amending Directive 2006/126/EC of the European Parliament and of the Council on driving licences). The new Directive will enter into force EU-wide on 15 May 2015.

This new code "69" will replace different national codes in use, for programmes where the driver is restricted to drive vehicles that are only equipped with alcohol interlock devices. Such programmes are planned or in use in several Member States, notably to prevent drink-driving offences from re-occurring.

A harmonised EU code will facilitate EU-wide understanding of the restriction as well as enable Member States to enforce it. However it is still for the Member States to decide both whether or not to introduce such programmes and how to enforce the restriction.

## EU Parliament backs mandatory calorie labeling for alcohol

On 29 April, Members of the European Parliament voted to table a proposal that by the end of 2016 all alcoholic drinks have calorie content labels.

Alcoholic beverages with a 1.2% alcohol by volume or higher were exempt from the 2011 law that European Union passed requiring all food and drinks have nutritional information, including calories, on their labels. Despite the support from the EU for calorie labelling on beer, wine and spirits it could take months or even years for a mandatory law to come into effect. It is the first step however in the Parliamentary process to be considered law.

Some alcoholic-drink manufacturers have begun to introduce nutritional labelling voluntarily. A spokesman for the Portman Group said "A number of drinks companies and retailers are already taking voluntary action when it comes to calorie labels... But we live in a digital age and should be thinking innovatively about how people access information, not just focusing on product labels which are limited in size and space".

## Responsible Retailing Forum researchers present evaluation findings for MillerCoors' Respect 21™ programme

On 30 April, Researchers with Responsible Retailing Forum released the findings of their national study of MillerCoors Respect 21™ program at the RRForum's 13th annual conference. Across several investigations, Respect 21™ was found to increase the frequency that store clerks check ID.

Working in partnership with the RRForum, MillerCoors launched Respect 21™ in 2005. The participating licensees receive a self-assessment tool for examining their current practices and a H.E.L.P. guide that outlines the basics of responsible retailing. Respect 21™ also provides feedback on whether staff are verifying the age of young customers by employing mystery shoppers: young, but legal-age customers who enter a store or serving establishment and attempt to purchase or be served an alcoholic beverage.

RRForum's analysis clearly demonstrated that Respect 21™ led to higher rates of ID-checking, consistent with store policies.

In all, RRForum analysed the mystery shopper results for four different studies. A study

conducted in 2010 and 2011 involved 192 retailers in four communities: Bloomington/Normal, Illinois; Fort Myers, Florida; Joliet, Illinois; and Lubbock, Texas. Before Respect 21™ began, only 82% of the store clerks asked for and checked the mystery shopper's ID. Performance improved across the four months that Respect 21™ operated, culminating with a 95% ID-checking rate by programme's end. Similar results were seen in two of the other investigations. In the other programme, the initial ID-checking rate was nearly 90%, which left little room for improvement.

Moving forward, MillerCoors will continue to expand Respect 21™ in college communities. At present, there are 28 such programmes, with new programs being established in Missoula, Montana and Tulsa, Oklahoma later this year.



**Respect 21:**  
Preventing Underage Access

## Apparent alcohol consumption hits a 50 year low in Australia

Australians appear to be drinking less alcohol overall than any time in the previous 50 years, according to figures released 6 May by the Australian Bureau of Statistics (ABS).

Estimates of 'apparent consumption' are obtained from information related to supply (for example, excise data on alcohol produced for domestic consumption, and data on imports) and do not represent actual consumption.

Across all alcoholic beverages, there were 9.7 litres of pure alcohol available for consumption in 2013-14 for every person in Australia aged 15 years and over. This is the lowest level since the early 1960s.

The pattern of alcohol consumption has changed significantly over this period. Fifty years ago, beer made up three quarters of all alcohol consumed, but now makes up under half at 41%. Wine's share has increased over the same period from 12% to 38%.

Australians currently consume more white wine than red wine - 270 million litres of white wine compared with 190 million litres of red wine in 2013-14, while full strength beer remains the most popular type of beer, accounting for around three quarters of all beer in 2013-14.

Spirits including Ready to Drink (pre-mixed beverages) increased from 13% of all pure alcohol consumed in 1963-64 to 19% in 2013-14. Cider accounted for a small but growing proportion, at 2% in 2013-14.

[www.abs.gov.au/ausstats/abs@.nsf/Lookup/4307.0.55.001main+features12013-14](http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4307.0.55.001main+features12013-14)

## Sweden - Trends in views on alcohol

IQ is an organisation that promotes a smarter approach to alcohol in Sweden and is an independent subsidiary of Systembolaget. IQ's Alcohol Index is an annual survey on the attitude to alcohol in Sweden with emphasis on binge drinking. The report is based on the results of a total of 10,000 responses during the period 2010-2014 among persons aged 16 years and older.

The IQs report, Alcohol Index 2014 released in April identifies three trends on the attitude to alcohol in Sweden, finding an increasingly disapproving view of drunkenness in public, a mixed perception of binge drinking privately and a great acceptance for everyday drinking:

1. Increasing disapproval of drunkenness in public - Drunkenness in for example, restaurants or at an office party has become less socially accepted. Fewer believe that it is right and more think it is wrong.
2. A more relaxed attitude to binge drinking in private settings - Being drunk in private settings is clearly more socially accepted than in public. The trend is that fewer believe that it is right and more people think that it is neither right nor wrong.
3. A permissive approach to everyday drinking - Now there is a great acceptance for drinking alcohol in everyday situations. The report IQs Alcohol index in 2014 is responsible, for example, only 18 percent said that it is wrong to drink a few glasses of wine or beer at the restaurant per day.

[www.iq.se/public/assets/documents/alkoindex/iqs-alkoholindex\\_2014.pdf](http://www.iq.se/public/assets/documents/alkoindex/iqs-alkoholindex_2014.pdf)

## North Carolina campaign to reduce underage drinking

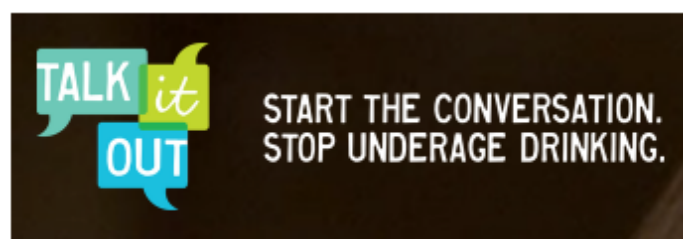
North Carolina's commission that regulates alcohol is starting a new campaign to fight underage drinking.

During the 2015 NCPTA Parent Education & Leadership Conference in Raleigh on 17 April, the North Carolina Alcoholic Beverage Control Commission (ABC) launched a new resource for PTA and community leaders across the state.

The Talk It Out presentation toolkit, part of the ABC Commissions statewide campaign targetting underage drinking, provides resources to lead a successful and effective meeting about the issues of underage drinking. The toolkit empowers local

groups to target parents with a message that builds awareness about the issue and equips them to talk to their kids about the dangers of underage drinking.

Talk It Out is a multimedia campaign, the website is at [www.TalkItOutNC.org](http://www.TalkItOutNC.org)





## ASA to police alcohol advertising on social media in the UK



The Advertising Standards Authority has said that it plans to take action to prevent children being exposed to alcohol marketing on social

media in response to concerns about age-gating on websites and ease of access to accounts on services such as Twitter and Instagram.

Shahriar Coupal, director of advertising policy and practice at the ASA, told a Westminster Social Policy Forum in March: **"We'll very shortly be introducing measures that will better limit children's exposure to alcohol ads on social media."**

Although the ASA has received only around 10 complaints per year about social media campaigns for alcohol, researchers suggest that the higher use of some social media among young people makes them vulnerable to this content. Time spent on the internet

now surpasses that spent watching TV among 12-15-year-olds and 70% of that age group have a social media profile or accounts, with Facebook, Instagram and Twitter the most popular. While Facebook blocks access to alcohol advertising for those who declare their age to be under 18, others, including Twitter and Youtube do not.

The issue was highlighted in March after Diageo's Ciroc vodka announced that it would be the first alcohol brand to run paid for advertising on Instagram. Smirnoff and Stella Artois have both used Instagram campaigns and Heineken has publicised music festival content through Snapchat.

The ASA received 236 complaints about 123 alcohol campaigns across all types of media in 2014, down from 445 notifications about 164 drinks campaigns in 2012. Approximately half related to TV ads and less than 10% to the internet, cinema or outdoor.

## High school programme Canberra

A new \$100,000 education programme is being trialled in Canberra for High school students that will highlight the dangers and sometimes life-altering consequences of alcohol consumption. Six schools were chosen to participate in the programme which takes students into Canberra Hospital to talk to paramedics and emergency department staff as well as trauma survivors and their families.

Dr Fitzgerald said the programme allowed students to hear about the "graphic" alcohol-related situations seen by medical staff. "The key message is to think about the choices you make, that there are risks and with risks there are long-term consequences."

Shannon Cameron, the executive teacher for health and physical education at Caroline Chisholm School, said the chance for students to hear and see the impacts of "poor decision making firsthand was extremely powerful". About 40 students from the school recently participated in the programme.

The Prevent Alcohol and Risk Related Trauma in Youth programme is being trialled in Canberra by ACT Health with the NRMA Road Safety Trust providing more than \$100,000 to fund the pilot.

Health Minister Simon Corbell said **"We know when young people are under the influence of alcohol and drugs they are more at risk of being victims of crime, involved in road incidents as well as other injuries, accidental death and suicide. The aim of the**

**programme is to reduce the incidence of alcohol and risk-related trauma in youth by providing the real-life clinical reality that paints a vivid picture for the students involved. By providing young people with information about incidents and the associated trauma, we are helping them recognise the situations that may cause them or their friends serious injury."**

The programme has been running in other states for the past decade and longer in other parts of the world. Funding for the ACT pilot ends in June and RACS is keen for it to be extended so the program can continue.

## Non-drinkers on the increase in Italy

In Italy, new statistics presented by the Italian Institute of Health on 'Alcohol Prevention Day' show that the consumption of alcohol continues to fall and the number of non-drinkers is increasing.

Although the incidence of binge drinkers is decreasing, the phenomenon remains widespread involving, it is estimated, around 8 million consumers. The highest rates of binge drinking exist among people aged under 25 years, with a peak in the age group 18-24 and quotas above the national average for girls between 16 and 17 years.

[www.west-info.eu/it/aumentano-gli-astemi-in-italia-ma-lalcol-continua-a-uccidere/](http://www.west-info.eu/it/aumentano-gli-astemi-in-italia-ma-lalcol-continua-a-uccidere/)

## Drinking patterns in US counties from 2002 to 2012

Research conducted by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington, and published in the American Journal of Public Health gives estimates of the prevalence of any drinking and binge drinking from 2002 to 2012 and heavy drinking from 2005 to 2012 in each county in the US.

The study found that there were large differences between counties in all measures of alcohol use: in 2012, any drinking prevalence ranged from 11.0% to 78.7%, heavy drinking prevalence ranged from 2.4% to 22.4%, and binge drinking prevalence ranged from 5.9% to 36.0%. Moreover, there was wide variation in the proportion of all drinkers who engaged in heavy or binge drinking. Heavy and binge drinking prevalence increased in most counties between 2005 and 2012, but the magnitude of change varied considerably.

The report found that overall, heavy drinking in the US has risen by 17.2% since 2005 and binge drinking has increased by 8.9% over the same period.

The study highlighted how nationwide levels of binge drinking have been affected by changes in drinking trends among women. Overall, Binge drinking among women rose by 17.5% compared with a rise of 4.9% among men between 2005 and 2012.

In 2012, 8.2% of Americans were defined as heavy drinkers and 18.3% were considered to be binge drinkers. The lowest levels of binge drinking (5.9% of residents) were found in Madison County, Idaho, and the highest (36% of residents) were in Menominee, Wisconsin. Hancock County, Tennessee, had the lowest levels of heavy drinking (2.4%), with Esmeralda County, Nevada, having the greatest proportion of heavy drinkers (22.4%).

Although rates of heavy drinking and binge drinking have risen between 2005 and 2012, the researchers found, however, that the national rates of drinking

any alcohol are unchanged. In both 2005 and 2012, 56% of Americans reported drinking any alcohol.

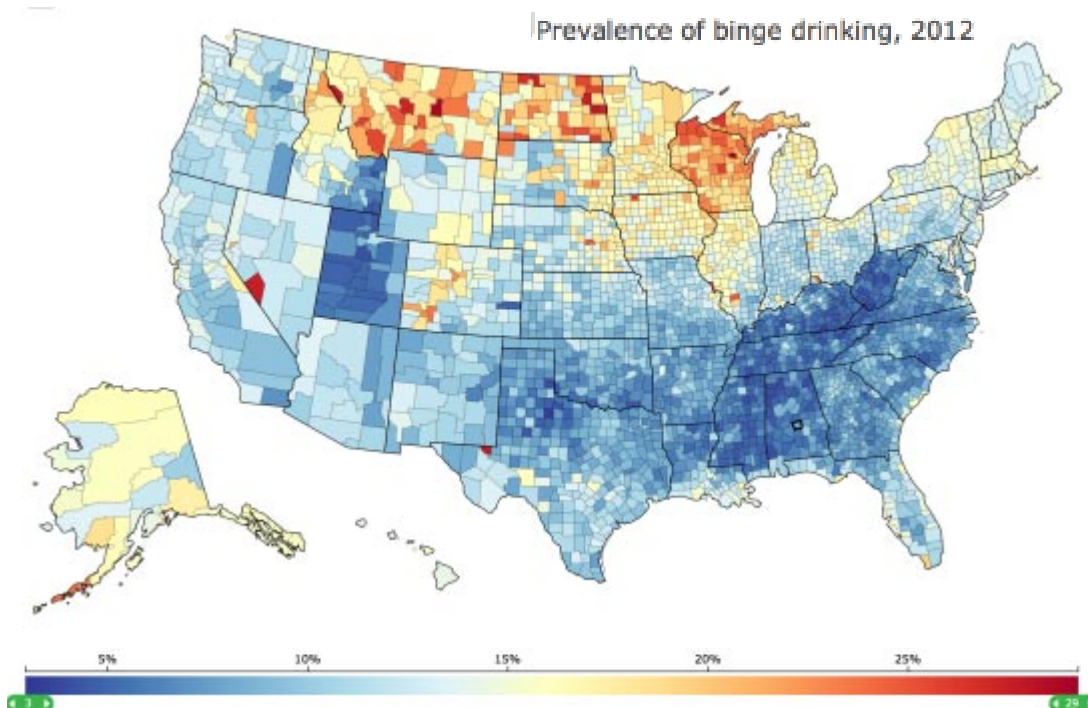
Although some regional drinking patterns were observed at a national level - the West, Midwest and New England all exhibited higher levels of alcohol consumption in comparison with other regions, for instance - the authors say that the "most striking" disparities were found within states.

As an example, the researchers explain that rates of overall binge drinking in Texas ranged from 10.8% in Collingsworth County to 35.5% in Loving County - so while one Texan county was well below that national binge drinking average of 18.3%, another county in the same state had levels of binge drinking nearly twice that average.

The authors conclude that there are large differences within the United States in levels and recent trends in alcohol use. They suggest that their estimates should be used as an aid in designing and implementing targeted interventions and to monitor progress toward reducing the burden of excessive alcohol use.

Source: Dwyer-Lindgren L, Flaxman AD, Ng M, Hansen GM, Murray CJL, Mokdad AH. Drinking patterns in US counties from 2002 to 2012. *American Journal of Public Health*. 2015 April 23; e1-e8. doi:10.2105/AJPH.2014.302313.

[www.healthdata.org/research-article/drinking-patterns-us-counties-2002-2012](http://www.healthdata.org/research-article/drinking-patterns-us-counties-2002-2012)



## FAAR distributes underage drinking prevention videos for Alcohol Responsibility Month in the US

As part of April's Alcohol Responsibility Month activities, the Foundation for Advancing Alcohol Responsibility teamed up with 19 state attorneys general to release Public Service Announcements (PSAs) throughout their respective states. The PSAs call upon parents to have a conversation about alcohol responsibility and feature attorneys general and Jessica Shyba, author of Momma's Gone City blog and popular internet sensation Theo & Beau.

"It is important to remember that the most significant role model for kids is parents – research has shown that parents are the most important influence on their kid's decision not to drink alcohol," said South Dakota Attorney General Marty Jackley, president-elect of the National Association of Attorneys General. "It's a great pleasure to be able to work with Jessica Shyba on these PSAs and as a popular blogger in the parenting world she has a great understanding of these issues and how to get these important messages out to other parents."

"April is Alcohol Responsibility Month and we want to remind parents to continue to talk with their kids

of all ages about the dangers of underage drinking and irresponsible drinking," said Ralph Blackman, president and CEO of the Foundation for Advancing Alcohol Responsibility. "We are very pleased to be able to work with Jessica Shyba and so many of our country's attorneys general this year. We hope that these PSAs will help encourage more parents to open up the lines of communication with their kids around alcohol responsibility."

In the PSAs the attorneys general spoke on one of four issues. The topics included college binge drinking, talking early and often about underage drinking with your kids, beginning a lifetime of conversations with your kids about alcohol responsibility, and encouraging parents to be a positive role model for their kids especially behind the wheel of a car.

[Responsibility.org](http://Responsibility.org)



## World wine production and consumption trends

The figures released in April by International Organisation of Vine and Wine (OIV) in their Global State of Conditions report show that in 2014, world wine consumption was estimated at 240mhl, a decrease of 2.4mhl compared with 2013. The traditional consumer countries continued their downward trend (or stagnation), but there was growth in new consumer countries both in Europe and in the rest of the world.

With 30.7mhl, the United States is the biggest global consumer country. France (27.9 mhl) and Italy (20.4 mhl), continued their decline between 2013 and 2014, by 0.9 mhl and 1.4 mhl respectively. The level of consumption in China is estimated at 15.8 mhl: a reduction of 1.2 mhl compared with 2013. The report, which incorporates Hong Kong into its Chinese figures, highlighted a number of reasons behind the strong market for red wine in particular. These include its perceived health benefits, especially in comparison to rice-based spirits, as well as the positive associations of red in Chinese culture as a whole, where the colour is associated with wealth, power and good luck.

China is now the second-largest wine-growing area in the world with 799,000 hectares (1.97 million acres) of land devoted to wine growing, after Spain (1.02 million hectares), with France third. France remains the biggest producer of wine, producing 46.7 million hectolitres (mhl).

The biggest importers of wine were Germany, the UK and the US with total global trade valued at €26bn.

[www.oiv.int/oiv/info/en\\_conjoncture\\_viticole\\_mondiale\\_OIV\\_avril\\_2015](http://www.oiv.int/oiv/info/en_conjoncture_viticole_mondiale_OIV_avril_2015)



**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](http://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](http://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, charities, companies and associations to create programmes, materials and policies built around the responsible consumption of alcohol.

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