AIM Alcohol in Moderation DIGEST ONLINE

INTERNATIONAL DIGEST PROMOTING THE RESPONSIBLE CONSUMPTION OF ALCOHOL

Vol. 41 No. 3 June 2015

# Contents

(Click on an item/ page no. to be taken directly to your choice of article)

**News from around the world** ..... 2

**Medical News**

Fibre intake may modify the association of alcohol consumption with certain hormone-dependent cancers ..... 3

Why are the harmful effects of alcohol consumption greater among people with low education and income? ..... 6

Prospective evaluation of alcohol consumption and the risk of breast cancer in BRCA1 and BRCA2 mutation carriers

Higher usual alcohol consumption was associated with a lower 41-year mortality risk from coronary artery disease in men ..... 10

Joint and independent effect of alcohol and tobacco use on the risk of subsequent cancer incidence among cancer survivors ..... 11

Mediterranean diet and risk of endometrial cancer

Anti-inflammatory effect of white wine in CKD patients and healthy volunteers ..... 12

The role of alcohol consumption in regulating circulating levels of adiponectin

Does beer, wine or liquor consumption correlate with the risk of renal cell carcinoma? ..... 13

Genomewide association study for maximum number of alcoholic drinks in European Americans and African Americans

Consumption of beer and colorectal cancer incidence: a meta-analysis of observational studies ..... 14

Moderate alcohol consumption diminishes the development of non-alcoholic fatty liver disease (NAFLD)

Exploring the motives and mental health correlates of intentional food restriction prior to alcohol use in university students

Moderate wine intake improves metabolic profile for type 2 diabetes ..... 15

Maternal alcohol consumption before and during pregnancy and the risks of congenital heart defects in offspring

**Social and Policy News**

Personal and perceived peer use of and attitudes toward alcohol among students in seven EU Countries ..... 16

The use of the internet for prevention of binge drinking among the college population

The moderating role of cognitive capacities in the association between social norms and drinking behaviours ..... 17

Behaviour change techniques in popular alcohol reduction apps

A new genetic-epidemiological design applied to drug abuse, alcohol use disorders, and criminal behaviour ..... 18

Modes of daily caffeine consumption among adolescents and the practice of mixing alcohol with energy drinks: relationships to drunkenness

Update on Alcohol statistics for England ..... 19

Drinkaware Monitor 2014: Adults' drinking behaviour and attitudes in the UK ..... 21

Review of late -night levy called for in UK

Loi Evin changed against French government advice

Drinkaware 2014 Underage Drinking Campaign – Summary Evaluation ..... 22

Drink-driving in Scotland down by almost 20% as tough new 'one drink' limits take effect

UK Road Traffic Act amendment

Drinking among British Women and its impact on their pedestrian and driving activities ..... 23

European Alcohol And Health Forum- 16th Plenary Meeting - EU Alcohol Strategy discussion ..... 24

Italy – government campaign against underage drinking ..... 25

Campaign to deter parents from providing alcohol to their teens in US

Report on college aged drinking and social media

European Sponsorship Association and Alcohol Policy ..... 26

AB Inbev have published their annual Global Citizenship report

National Prevention Week in US

Activated coasters encourage responsible drinking with domestic violence reminder ..... 27

Progress on reducing drinking and driving in six countries – new IARD e-book

Temporal changes in alcohol-related morbidity and mortality in Germany ..... 28

AIM Council Member awarded The French Order of Agricultural Merit

Australian Good Sports programme reduces risky drinking

**AIM Digest**
**Frampton House**
**Frampton, Dorchester**
**Dorset DT2 9NH**
T: +44 (0)1300 320 869
E: info@aim-digest.com

**Websites:**
www.alcoholinmoderation.com
www.drinkingandyou.com
www.alcoholforum4profs.org

**AIM Subscription Levels:**

**Individual:** GBP 900-
USD 1,250-
Euro 1000-

**Silver:** GBP 1,500-
USD 2,500-
Euro 2,000-

**Gold:** GBP £3,000-
USD 5,000-
Euro 4,000-

**Platinum:** available on request.

Please contact Sherry.Webster@aim-digest.com for information about AIM's subscription levels.

Please make cheques/drafts in British pounds sterling, dollars or Euros payable to AIM Digest at the above address

Helena Conibear – **Executive Director**
T: +44 (0)1300 320 869
E: helena.conibear@aim-digest.com

Alison Rees - **Editor**
E: alison.rees@aim-digest.com

Sherry Webster – **Finance and Subscriptions**
E: sherry.webster@aim-digest.com



## Portugal

At the end of April, the Portuguese government approved a new law that bans the sale of all alcohol to under-18s, extending the prohibition to beer and wine, which until now could legally be purchased by youngsters aged 16 or 17.

The measure, approved at a cabinet meeting, replaces legislation in force since 2013. Paul Macedo, Minister for Health, said the change makes more sense. "With this change, this new legislation allows for better controls and a clearer message in public spaces and in access to drinks by adolescents," he said.

## Czech Republic

In the Czech Republic, children are to be protected from alcohol by a new bill that has been drafted by the Health Ministry and is waiting for the cabinet´s approval. The bill, which also applies to smoking and illegal drugs, is to take effect as from 2016, if passed by parliament. The bill increases the sanctions for selling alcohol to children and bans the sale of alcohol by vending machines. Internet sales will be allowed with age verification.

The sale of alcohol would be banned in health centres, schools, at children´s events, at open-air stands and markets, and sports events. (although at sports events beer will be exempted from the ban).

According to the latest OECD report, the number of 15-year-old children who have drunk alcohol increased from 70 to 94% in the Czech Republic in 2002-2012, which is the highest level of all countries surveyed.

## Europe

Scandinavian airline SAS has announced new guidelines designed to limit passengers travelling within Europe to three alcoholic drinks per flight, following problems with drunk passengers last summer. The airline is the region's biggest carrier and is part owned by the Swedish, Danish and Norwegian states.

In June, the airline company Jet2 also announced a new "hardline" against any disruptive or inappropriate behaviour from passengers on its flights following a rise in drunken incidents on board. Earlier this year, Ryanair also announced a ban on duty free alcohol between Glasgow Prestwick and Ibiza, a notorious party route, after repeated rowdy behaviour raised fears over passenger safety.

## Iran

The Iran Health Ministry has announced plans to open 150 alcohol treatment centres acknowledging the scale of abuse in a country where drinking is illegal. A ministry's spokesman said the day centres would provide special settings and educational courses to help people give up alcohol. Six of the centres to be opened by March 2016 would also provide in-patient detoxification.

It is estimated that around 200,000 Iranians have an alcohol problem despite a ban on drinking since the Islamic revolution of 1979. There is an exemption for Iran's Christian minority, which is allowed to produce wine for use in mass. However, liquor is produced illicitly and is also smuggled in from other countries, particularly Turkey and Kurdish parts of Iraq.

# Fibre intake may modify the association of alcohol consumption with certain hormone-dependent cancers

Chhim A-S, Fassier P, Latino-Martel P, Druesne-Pecollo N, Zelek L, Duverger L, Hercberg S, Galan P, Deschasaux M, Touvier M. Prospective association between alcohol intake and hormone dependent cancer risk: modulation by dietary fibre intake. Amer J Clin Nutr 2015; pre-publication. Doi: 10.3945/ajcn.114.098418.

Authors' Abstract

**Background:** Alcohol intake is associated with increased circulating concentrations of sex hormones, which in turn may increase hormone dependent cancer risk. This association may be modulated by dietary fibre intake, which has been shown to decrease steroid hormone bioavailability (decreased blood concentration and increased sex hormone–binding globulin concentration). However, this potential modulation has not been investigated in any prospective cohort.

**Objectives:** Our objectives were to study the relation between alcohol intake and the risk of hormone-dependent cancers (breast, prostate, ovarian, endometrial, and testicular) and to investigate whether dietary fibre intake modulated these associations.

**Design:** This prospective observational analysis included 3,771 women and 2,771 men who participated in the Supplémentation en Vitamines et Minéraux Antioxydants study (1994–2007) and completed at least 6 valid 24-h dietary records during the first 2 y of follow-up. After a median follow-up of 12.1 y, 297 incident hormone-dependent cancer cases, including 158 breast and 123 prostate cancers, were diagnosed. Associations were tested via multivariate Cox proportional hazards models.

**Results:** Overall, alcohol intake was directly associated with the risk of hormone-dependent cancers (tertile 3 vs. tertile 1: HR: 1.36; 95% CI: 1.00, 1.84; P-trend = 0.02) and breast cancer (HR: 1.70; 95% CI: 1.11, 2.61; P-trend = 0.04) but not prostate cancer (P-trend = 0.3). In stratified analyses (by sex-specific median of dietary fibre intake), alcohol intake was directly associated with hormone-dependent cancer (tertile 3 vs. tertile 1: HR: 1.76; 95% CI: 1.10, 2.82; P-trend = 0.002), breast cancer (HR: 2.53; 95% CI: 1.30, 4.95; P-trend = 0.02), and prostate cancer (HR: 1.37; 95% CI: 0.65, 2.89; P-trend = 0.02) risk among individuals with low dietary fibre intake but not among their counterparts with higher dietary fibre intake (P-trend = 0.9, 0.8, and 0.6, respectively). The P-interaction between alcohol and dietary fibre intake was statistically significant for prostate cancer (P = 0.01) but not for overall hormone-dependent (P = 0.2) or breast (P = 0.9) cancer.

**Conclusion:** In line with mechanistic hypotheses and experimental data, this prospective study suggested that dietary fibre intake might modulate the association between alcohol intake and risk of hormone dependent cancer.

Forum Comments

The positive association between alcohol intake and certain hormone-dependent cancers (e.g., breast, prostate) noted in some studies has been attributed to the effect of alcohol through an increase in levels of estrogen and other hormones. Higher intake of alcohol has been shown to increase estrogen levels in women, although the effects of light drinking are less clear.

The present study had extensive dietary data on more than 5,000 men and women in France in a clinical trial of the effects of antioxidant vitamin supplementation for 8 years on the risk of cardiovascular disease and cancer developing during a 12-year follow-up period. Comparisons were made between the sex-specific tertile of alcohol intake (≤3.0, >3.0 – 12.1, >12/1 grams/day for women; ≤ 15.3, >15.3 - 35.4, >35.4 g/day for men). The authors report that, in comparison with the lowest tertile of alcohol intake, the risk of any hormone-dependent cancer among men and women was higher in tertile 2 (adjusted HR 1.52, 95% CI 1.13-2.04) and higher in tertile 3 (HR 1.36, CI 1.00 - 1.84).

The key results reported by the authors are that when the risks of cancer were related to alcohol while adjusting for fibre intake, subjects whose fibre intake was below the median value showed higher risks of cancer related to alcohol than subjects with higher fibre intake. For example, when the risk of breast cancer in women was related to the tertile of their alcohol intake, the 2nd tertile showed a HR of 1.55 (1.01 - 2.38) and the 3rd tertile a HR of 1.70 (CI 1.11 - 2.61), when compared with women in the lowest tertile. For prostate cancer in men, however, there was not a linear increase, as the 2nd tertile showed a HR of 1.28 (CI 0.82 - 2.00) and the 3rd tertile a HR of 0.89 (CI 0.55 - 1.45), neither statistically significant.

The interaction terms between alcohol intake and cancer were not significant for all hormone-dependent cancers or for breast cancer. Only the interaction term for prostate cancer reached statistical significance, but here the relationship between tertile of alcohol intake among subjects with low dietary fibre did not show a clear dose response: the HR for the 2nd tertile of alcohol versus the 1st was 2.45 (CI 1.23 - 4.87), and for the 3rd tertile the HR was 1.37 (CI 0.65 - 2.89). Thus, there was not a

clear-cut message from the data. Nevertheless, the authors conclude that fibre intake modulates the effect of alcohol on hormone-dependent cancers, and that several risk factors may cumulate and act in synergy to increase cancer risk.

Specific comments on paper by Forum members: Reviewer Ellison noted: "There was no reference to folate levels in this paper, despite the fact that earlier studies have shown that low folate increases the risk of certain of these cancers. Also, the subjects were involved in a clinical trial in which they were given a placebo or a combination of vitamins C, E, beta-carotene, selenium, and zinc, but no comments were given regarding the potential effect of any of these."

An invited comment from former Forum member Roger Corder stated: "It's conceivable that higher dietary fibre intake is just an indication of higher dietary folate, i.e., consistent with other studies showing high folate confers protection from alcohol-related cancers." Forum member Stockley agreed that folate may be a factor. Reviewer Skovenborg stated: "I also agree with Corder that fibre consumption may be a proxy marker of folate intake. And folate is just one of several possible confounders. People with a high intake of fibre may have a regular consumption of moderate amounts of alcohol/wine with meals as opposed to the participants with small fibre intake, who might prefer beer/spirits, prefer drinking without food and prefer drinking during the weekend. The paper has no information about drinking patterns in this study." Reviewer Lanzmann-Petithory commented: "Fibre is not homogeneous: soluble, non-soluble, different sources with different cancer correlation. In addition to the potential mechanisms of effect regarding the gut described in the paper, there are many other factors affecting intestinal flora. Unfortunately, there are just too many confounders to allow us to reach clear conclusions."

Forum member Zhang had several concerns about the paper: "It is unclear from the paper whether the 'follow-up period' began after the 2-year period during which food diaries were initially collected, which would be correct, or at the beginning of the study. Further, when stratified by median levels of fibre intake, the number of cases of cancer is relatively small. Sometimes there is no indication of trend, but test for trend of alcohol tertile and cancer risk is statistically significant, which is a little bit strange. For example, there was no dose-response relation of alcohol consumption and risk of all hormone-dependent cancer and prostate cancer among those whose fibre intake was below the median, but test for trend was statistically significant. Finally, using the tertile of alcohol as an ordinal variable for testing for trend is also problematic, and few people use this method. The preferred method is to use either the real value of alcohol or the median value of alcohol from each tertile group."

Reviewer Finkel was also worried about the analytic approach used in this paper: "How do the authors know whether any, and which, of the cancers in question are alcohol related, or hormonally related? They seem to me to be mining data that is being contorted to fit another paper. They repeat the mistake of too many others of relying on data that they'd like to see as statistically significant. One sets up statistical standards a priori and sticks to them, come what may." Forum member de Gaetano agreed with Finkel, and added: "Unfortunately, the numbers of tumors for each of the sub-groups were too small to give meaningful results." Added Skovenborg: "I agree with the caveats mentioned so far: there are problems from the small number of cases in sub-groups and lack of statistical significance."

**Forum Summary**

The positive association between alcohol intake and certain hormone-dependent cancers, especially breast cancer) noted in many studies has been attributed to an effect of alcohol through an increase in levels of estrogen and other hormones. The present study had extensive dietary data on more than 5,000 men and women in France, among whom comparisons were made between the sex-specific tertile of alcohol intake and the risk of hormone-related cancers (breast, prostate, ovarian, endometrial, and testicular).

The study found that, overall, the risk of some cancers (e.g., breast) but not others (e.g., prostate) were positively related to reported alcohol intake. The key results reported by the authors are that when the risks of cancer were related to alcohol while adjusting for fibre intake, subjects whose fibre intake was below the median value showed higher risks of cancer related to alcohol, but not subjects with higher fibre intake. For example, when the risk of breast cancer in women was related to the tertile

of their alcohol intake, the 2nd tertile showed a HR of 1.55 (1.01 - 2.38) and the 3rd tertile (HR 1.70, CI 1.11 - 2.61), when compared with women in the lowest tertile.

For prostate cancer in men, however, the 2nd tertile showed a HR of 1.28 (CI 0.82 - 2.00) and the 3rd tertile a HR of 0.89 (CI 0.55 - 1.55). The interaction terms between alcohol intake and cancer were not significant for all hormone-dependent cancers or for breast cancer. Only the interaction term for prostate cancer reached statistical significance, but here the relationship between tertile of alcohol intake even among subjects with low dietary fibre did not show a clear dose-response relation.

Forum members had concerns about the large number of potential confounders in these analyses (e.g., different effects for different types of fibre, the intake of fibre being just a marker for folate intake or for other dietary or lifestyle factors), that made it difficult for the authors to reach firm conclusions. Unfortunately, the numbers of tumors for each of the sub-groups were often too small to give meaningful results. And there was no data on alcohol drinking pattern (regular moderate versus binge drinking) or type of beverage consumed. Thus, while this study indicates that alcohol intake may relate to certain hormone-dependent cancers, the analyses do not present a clear demonstration as to whether it is fibre intake or some other related factor that may modify the association.

Contributions to this critique by the International Scientific Forum on Alcohol Research were provided by the following members*:

Giovanni de Gaetano, MD, PhD, Department of Epidemiology and Prevention, IRCCS Istituto Neurologico Mediterraneo NEUROMED, Pozzilli, Italy

R. Curtis Ellison, MD. Section of Preventive Medicine & Epidemiology, Department of Medicine, Boston University School of Medicine, Boston, MA, USA

Harvey Finkel, MD, Hematology/Oncology, Boston University Medical Center, Boston, MA, USA

Dominique Lanzmann-Petithory,MD, PhD, Nutrition/ Cardiology, Praticien Hospitalier Hôpital Emile Roux, Paris, France

Erik Skovenborg, MD, specialised in family medicine, member of the Scandinavian Medical Alcohol Board, Aarhus, Denmark

Creina Stockley, PhD, MSc Clinical Pharmacology, MBA; Health and Regulatory Information Manager, Australian Wine Research Institute, Glen Osmond, South Australia, Australia

Dag S. Thelle, MD, PhD, Senior Professor of Cardiovascular Epidemiology and Prevention, University of Gothenburg, Sweden; Senior Professor of Quantitative Medicine at the University of Oslo, Norway

Yuqing Zhang, MD, DSc, Clinical Epidemiology, Boston University School of Medicine, Boston, MA, USA

*Also included in this review was an invited comment from Roger Corder, Professor of Experimental Therapeutics, Centre for Translational Medicine and Therapeutics Barts and The London, Queen Mary's School of Medicine and Dentistry in London, UK.

## Prospective evaluation of alcohol consumption and the risk of breast cancer in BRCA1 and BRCA2 mutation carriers

Researchers evaluated whether alcohol is associated in the development of breast cancer among women with a BRCA1 or BRCA2 mutation.

Information regarding baseline daily alcohol consumption was abstracted from a research questionnaire for 3,067 BRCA mutation carriers enrolled in a prospective cohort study. The women were followed biennially until the date of the last follow-up questionnaire, date of breast cancer diagnosis, date of prophylactic bilateral mastectomy, or date of death. Cox proportional hazards models were used to estimate relative risks (RRs) and 95 % confidence intervals (CIs) for invasive breast cancer associated with alcohol consumed at or prior to completion of the baseline questionnaire.

After a mean of 5.4 years of follow-up, 259 incident cases of primary invasive breast cancer had occurred. Compared with non-users, the adjusted RRs were 1.06 (95 % CI 0.78–1.44) for ever use and 1.08 (0.79–1.47) for current alcohol use. For women in the highest versus lowest quintile of cumulative alcohol consumption, the RR was 0.94 (95 % CI 0.63–1.40; P trend = 0.65). The study findings therefore suggest that alcohol consumption is not a risk factor for breast cancer among women with a BRCA1 or BRCA2 mutation.

Source: Prospective evaluation of alcohol consumption and the risk of breast cancer in BRCA1 and BRCA2 mutation carriers. C Cybulski, J Lubinski, T Huzarski, HT Lynch, SA Randall, SL Neuhausen, L Senter, S Friedman, P Ainsworth, C Singer, WD Foulkes, SA Narod, P Sun, J Kotsopoulos. Breast Cancer Research and Treatment. June 2015, Volume 151, Issue 2, pp 435-441.

# Why are the harmful effects of alcohol consumption greater among people with low education and income?

Jones L, Bates G, McCoy E, Bellis MA. Relationship between alcohol-attributable diseaseand socioeconomic status, and the role of alcohol consumption in this relationship: a systematic review and meta-analysis. BMC Public Health 2015;15:400. DOI 10.1186/s12889-015-1720-7

Authors' Abstract

**Background:** Studies show that alcohol consumption appears to have a disproportionate impact on people of low socioeconomic status. Further exploration of the relationship between alcohol consumption, socioeconomic status and the development of chronic alcohol-attributable diseases is therefore important to inform the development of effective public health programmes.

**Methods:** We used systematic review methodology to identify published studies of the association between socioeconomic factors and mortality and morbidity for alcohol-attributable conditions. To attempt to quantify differences in the impact of alcohol consumption for each condition, stratified by SES, we (i) investigated the relationship between SES and risk of mortality or morbidity for each alcohol-attributable condition, and (ii) where, feasible explored alcohol consumption as a mediating or interacting variable in this relationship.

**Results:** We identified differing relationships between a range of alcohol-attributable conditions and socioeconomic indicators. Pooled analyses showed that low, relative to high socioeconomic status, was associated with an increased risk of head and neck cancer and stroke, and in individual studies, with hypertension and liver disease. Conversely, risk of female breast cancer tended to be associated with higher socioeconomic status. These findings were attenuated but held when adjusted for a number of known risk factors and other potential confounding factors. A key finding was the lack of studies that have explored the interaction between alcohol-attributable disease, socioeconomic status and alcohol use.

**Conclusions:** Despite some limitations to our review, we have described relationships between socioeconomic status and a range of alcohol-attributable conditions, and explored the mediating and interacting effects of alcohol consumption where feasible. However, further research is needed to better characterise the relationship between socioeconomic status alcohol consumption and alcohol-attributable disease risk so as to gain a greater understanding of the mechanisms and pathways that influence the differential risk in harm between people of low and high socioeconomic status.

## Forum Comments

Epidemiologists have noted for many years that one of the key factors that modifies the relation between alcohol intake and many diseases is the education, income, or other index of socio-economic status (SES) of subjects. While differences in drinking practices (regular moderate versus binge drinking), other associated lifestyle factors, access to health care, etc., have been suggested as potential mechanisms, there has been little research directed at this association.

The present study describes this relation and attempts to ascertain the reasons why subjects at higher levels of socio-economic status appear to have fewer adverse effects of alcohol consumption. It summarised data from 31 case-control or cohort studies, relating an overall measure of the effects of low SES (variously defined) to the risk of cancers related to alcohol, as well as to liver disease, hypertension, stroke, epilepsy, cardiac arrhythmias, and pancreatitis.

The key findings of the study demonstrate a tendency for greater risk for low-SES subjects than high-SES subjects to develop a number of diseases that are associated with alcohol consumption. The authors suggest that some of the effects may relate to greater amounts of alcohol consumption by lower-SES subjects, or due to their higher levels of smoking.

Unadjusted results in the paper indicate a significant increase for lower SES for head and neck cancer and for stroke, while the risk of breast cancer was greater among high-SES women. When adjusted estimates were used, the higher breast cancer risk for upper-SES women was no longer significant, but the greater risks for head and neck cancers and stroke among lower-SES subjects remained.

While the authors provide a good summary of the relation between SES and diseases, they admit that adequate data to judge the cause of these differences are not yet known. In their discussion, they mention several possible mechanisms for poorer results in lower-SES subjects: (1) different drinking patterns, with more binge drinking, (2) clustering of poor lifestyle factors, and (3) poorer access to health care. They also mention that availability of social support and drinking context, such as when and with whom drinking occurs, as well as neighborhood deprivation may play a role. Thus, while answers are not yet apparent, it is important to note that SES affects

many diseases, and seems to modify the association between alcohol and certain cancers and stroke.

Specific comments on the paper by Forum reviewers: Forum member Finkel commented: "This paper on how socioeconomic status modifies alcohol effects is of great value in focusing our attention on a critically important aspect of our interest in alcohol research — the influences of factors other than alcohol on alcohol's effects. This is clearly most difficult to quantify, or even to decide whether or not a given factor is or is not a confounder. More concrete, thus more useful, information must be developed by further studies along the same lines."

Reviewer Skovenborg agreed: "I agree with Finkel's comments. The issue of confounding in general and confounding of socioeconomic status in particular in alcohol research is at the same time very important to consider and very difficult to solve. The authors write: 'Pooling of the unadjusted findings for these studies showed a significant positive association between risk of breast cancer and high SES.' What the authors found was a significant negative association between low SES and risk of breast cancer; that association did not remain significant with adjustment for confounding. A possible explanation might be a difference in intake of folic acid vitamin supplements according to level of education. However, I do like the conclusion of the authors: 'It is unclear whether the lack of evidence on the interaction between SES and alcohol consumption implies that there is evidence of a lack of significant interactions for the conditions examined.'"

Skovenborg added: "As commented upon by the authors, a previous study in Germany (Kropp et al) found that the risk of breast cancer associated with an alcohol intake ≥19 g/d was increased in women with low levels of education [OR 3.70 (1.23 – 11.15)] but not for women with high education [OR 0.70 (0.39 – 1.27)]. More highly educated women in Germany have been reported to have a higher intake of folate, which may be a factor (Heseker et al)." Reviewer Barrett-Connor was especially interested in the findings regarding folic acid intake and its association with level of education, which suggests that alcohol risk/benefit is related to specific nutrients.

Forum member Van Velden commented: "It is clear that alcohol consumption has different effects on people of different socioeconomic and education status. In South Africa, people of low socioeconomic status drink alcohol of poor quality to 'escape' from reality, usually not with a healthy meal. More affluent people with a higher education level drink alcohol, usually good quality wine, with a balanced meal as part of a healthy and responsible lifestyle, and seldom have binge drinking.

"There are just too many confounders to make any meaningful conclusions. But it is obvious that we need to focus more on education. We also need to clamp down on the distribution of alcoholic beverages of poor quality, sold in plastic containers to the poor. This is a challenge that cannot be addressed by the industry and health authorities alone."

Reveiwer Ellison was not too sure about differential effects according to the "quality" of the beverage, if this is a reference to price. "For example, in terms of wine, the levels of alcohol and polyphenols in a wine do not relate to the cost of the beverage. Certain types of wine, or those from certain parts of the world, are higher in key polyphenols (Burns et al, Corder et al), but wines that are 'higher quality' in terms of taste and ratings by experts may not have greater health benefits. It is more likely that differences relate to the amount of alcohol consumed, or especially, to the drinking pattern of individuals."

Reviewer Goldfinger stated; "We know that lower sociological class is associated with greater risk of all types of disease, both potentially alcohol-related and alcohol-independent diseases. This is an unfortunate truth and thus the focus on alcohol in this paper becomes irrelevant." Forum member Svilaas agreed: "There are too many confounders to make a conclusion about this topic."

Reviewer Thelle also had difficulties with this paper. "First, most chronic disorders are socially unequally distributed with only a few exceptions. Breast cancer is one. Second, alcohol consumption is also skewed with the more affluent drinking more. Add to this that the origin of the British way to socially classify people was originally based upon the mortality rates. Those with the highest death rates were considered belonging to the lowest social classes, and the population was categorised accordingly. So, in

some sense the association between assigned social class and disease is a self-fulfilling prophecy. Social class induces an array of confounding variables, and I am not sure whether this paper contributes further to our understanding of the association between alcohol and health."

Forum members noted that factors other than drinking patterns may be a cause for the greater adverse effects among subjects with lower SES. This has been suggested by Mäkelä & Paljärvi, who reported on such differences among Finns, concluding: "Compared with non-manual workers, manual workers had a 2.06-fold hazard of alcohol-related death or hospitalisation. Adjustment for drinking patterns explained only a small fraction of the excess hazard among manual workers. Additionally, in each category of total consumption and in each level of the volume drunk in heavy drinking occasions, the risk of alcohol-related death and hospitalisation was higher for manual than for non-manual workers."

Forum member Lanzmann-Petithory also thought that the type of beverage consumed may play a role: "Ruidavets et al reported that 'the typical pattern in middle-aged men in France, is associated with a low risk of ischemic heart disease, whereas the binge drinking pattern more prevalent in Belfast confers a higher risk . . . only wine drinking was associated with a lower risk of hard coronary events, irrespective of the country.'" Lanzmann-Petithory points out that the authors of the present paper (Jones et al) made no difference between the different types of alcoholic beverages, wine, beer, or spirit. She added: "This should be precisely one of the key criteria. Moreover, they made an almost pure Anglo-Saxon Scandinavian analysis: only 7 Mediterranean or wine-drinking countries studies around the 31 selected. But relation between alcoholic beverages drinking and SES varies considerably by country of origin, by culture, especially between Anglo-Saxon countries and Mediterranean countries, following the availability and then price of different alcoholic beverages. Wine is a luxury in some northern countries, as shown by Johansen, whereas in our studies in Nancy, France, unlike most of the studies mentioned, wine drinkers were not higher socio-economic status than other drinkers, and middle class and workers were even more likely to drink wine than the highest social status (Renaud et al). With such shortcomings, this study cannot solve the problem of interactions between SES and the relation alcohol consumption to diseases."

Reviewer de Gaetano had comments as well: "Recent studies from our group have shown that the current economical crisis is associated with a significant decrease of adherence to the Mediterranean Diet in a Southern Italian population (the Moli-sani study). Such a decline is more obvious in less affluent people and is associated with higher prevalence of obesity. Thus, adjustment for the dietary habits associated with alcohol consumption is essential. Another limitation of the analysis here discussed is that only few studies reported a dose-related alcohol consumption. The common confusion between alcohol abuse (or high alcohol consumption) and alcohol consumption tout court is present in this paper too."

Insights into the topic from a new publication from Denmark: Forum member Skovenborg identified a new publication that adds information on the topic of inequaltiy and disease. "A new Danish study has found that smoking and alcohol use are the main explanation for the increase in social inequality in mortality since the mid-1980s (Koch et al). The question about what drives the health gap is even more intriguing in a Nordic welfare state such as Denmark, where income inequality is low, and has declined through most of the twentieth century. A major strength of the Koch et al study is that it is based on nationwide registers and therefore includes the whole adult Danish population aged 30 years or more over a period of 25 years.

"In the oldest Danish population, exceeding the sensible drinking limits is more frequent among the most highly educated part of the Danish population. Even though a social gradient is seen in alcohol intake, the consequences from alcohol use, for example, hospitalisation and mortality, is negatively associated with social position. The fact that alcohol-related mortality is negatively associated with social position might be due to social differences in drinking patterns, because a higher rate of non-frequent drinking is found among the Danish population with the lowest level of education. The fact that alcohol plays an important role and that high alcohol consumption among the middle aged and the elderly is still more prevalent among the most highly educated also indicate that there might not

only be a differential exposure but also a differential susceptibility to the health effects of alcohol." After seeing this paper, Reviewer Thelle added: "There is a susceptibility issue here, most likely due to effect modification of hitherto unrecognised factors, albeit not likely to be unknown. There is more to do."

### References from Forum review

Burns J, Mullen W, Landraul N, Teissedre P, Lean MEJ, Crozier A. Variations in the profile and content of anthocyanins in wines made from cabernet sauvignon and hybrid grapes. Journal of Agricultural and Food Chemistry 2002;50:4096-4102.

Corder R, Mullen W, Khan NQ, Marks SC, Wood EG, Carrier MJ, Crozier A. Oenology: red wine procyanidins and vascular health. Nature 2006;444:566. doi:10.1038/444566a.

Heseker H, Adolf T, Eberhardt W, et al. VERA-Schriftenreihe, Band III: Lebensmittel- und Naehrstoffaufnahme Erwachsener in der Bundesrepublik Deutschland. Niederkleen, Germany: Wissenschaftlicher Fachverlag Dr. Fleck, 1994.

Johansen D, Friis K, Skovenborg E and Gronbaek M. Food buying habits of people who buy wine or beer : cross sectional study. Br Med J 2006;332:519-522.

Koch MB, Diderichsen F, Grønbæk M, et al. What is the association of smoking and alcohol use with the increase in social inequality in mortality in Denmark? A nationwide register-based study. BMJ Open 2015;5:e006588. doi:10.1136/bmjopen-2014-006588

Kropp S, Becher H, Nieters A, Chang-Claude J. Low-to-moderate alcohol consumption and breast cancer risk by age 50 years among women in Germany. Am J Epidemiol 2001;154:624–634.

Mäkelä P, Paljärvi T. Do consequences of a given pattern of drinking vary by socioeconomic status? A mortality and hospitalisation follow-up for alcohol-related causes of the Finnish Drinking Habits Surveys. J Epidemiol Community Health 2008;62:728-33.

Renaud SC, Gueguen R, Schenker J, et al. Alcohol and mortality in middle-aged men from eastern France. Epidemiology 1998;9:184–8.

Ruidavets J-B, Ducimetière P, Evans A, Montaye M, Haas B, Bingham A, Yarnell J, Amouyel P, Arveiler D, Kee F, Bongard V, Ferrières J. Patterns of alcohol consumption and ischaemic heart disease in culturally divergent countries: the Prospective Epidemiological Study of Myocardial Infarction (PRIME). BMJ 2010;341:c6077.

Johansen D, Friis K, Skovenborg E and Gronbaek M. Food buying habits of people who buy wine or beer : cross sectional study. Br Med J 2006;332:519-522.

### Forum Summary

Epidemiologists have noted for many years that one of the key factors that modifies the relation between alcohol intake and many diseases is the education, income, or other index of socio-economic status (SES) of subjects. While differences in drinking practices (regular moderate versus binge drinking), other more moderate lifestyle factors, better access to health care, etc., have been suggested as potential mechanisms, there has been little research directed at this relation.

The present study is a systematic review of published reports to investigate the relationship between SES and risk of mortality or morbidity for each alcohol-attributable condition and, where feasible, to explore alcohol consumption as a mediating or interacting variable in this relationship. It summarised data from 31 case-control or cohort studies, relating an overall measure of the effects of low SES (variously defined) to the risk of cancers related to alcohol, as well as to liver disease, hypertension, stroke, epilepsy, cardiac arrhythmias, and pancreatitis.

The key findings of the study demonstrate a tendency for greater risk for low-SES subjects than for high-SES subjects to develop a number of diseases that are associated with alcohol consumption. Specifically, the authors report higher and statistically significant increases in risk of head and neck cancer and of stroke associated with alcohol consumption among lower-SES subjects than among higher-SES subjects. There was a tendency for lower risk of breast cancer among lower-SES women, but differences were not significant when adjusted for known confounders. The authors suggest that some of the effects shown may relate to greater total amounts of alcohol consumption by lower-SES subjects, or due to their higher levels of smoking.

Forum members thought this was a valiant attempt of the authors to unravel what has been a mystery: why do people at lower levels of SES seem to have more adverse effects of alcohol consumption than subjects at higher levels of SES. Unfortunately, as the authors admit, current scientific data do not allow firm answers. Suggested theories for reasons why low-SES subjects may have more adverse effects from alcohol include (1) different drinking patterns, with more binge drinking, (2) clustering of poor lifestyle factors, and (3) less access to health care. In some studies, even though the reported total alcohol intake of low- and high-SES subjects may be similar, the latter seem more likely to drink moderate amounts of alcohol on a regular basis, while lower-SES subjects are more likely to binge drink on fewer days per week. However, other studies do not support such a finding. Further, there may be differences according to the type of alcoholic beverage consumed, which was not considered in this study.

Forum members pointed out that differences in factors other than drinking patterns probably contribute to the greater adverse effects among subjects with lower SES. One member suggested that lower SES affects susceptibility to many diseases, most likely due to effect modification of hitherto unrecognised factors. The Forum concluded that there are too many confounders to make a conclusion about this topic, and much more research will be needed to understand how socio-economic factors affect the risk of disease and may modify the relation between alcohol consumption and disease.

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

David Van Velden, MD, Dept. of Pathology, Stellenbosch University, Stellenbosch, South Africa

Andrew L. Waterhouse, PhD, Department of Viticulture and Enology, University of California, Davis, USA

Dag S. Thelle, MD, PhD, Senior Professor of Cardiovascular Epidemiology and Prevention, University of Gothenburg, Sweden; Senior Professor of Quantitative Medicine at the University of Oslo, Norway

Arne Svilaas, MD, PhD, general practice and lipidology, Oslo University Hospital, Oslo, Norway

Erik Skovenborg, MD, specialised in family medicine, member of the Scandinavian Medical Alcohol Board, Aarhus, Denmark

Dominique Lanzmann-Petithory,MD, PhD, Nutrition/ Cardiology, Praticien Hospitalier Hôpital Emile Roux, Paris, France

Tedd Goldfinger, DO, FACC, Desert Cardiology of Tucson Heart Center, University of Arizona School of Medicine, Tucson, AZ, USA

Giovanni de Gaetano, MD, PhD, Department of Epidemiology and Prevention, IRCCS Istituto Neurologico Mediterraneo NEUROMED, Pozzilli, Italy

Harvey Finkel, MD, Hematology/Oncology, Boston University Medical Center, Boston, MA, USA

R. Curtis Ellison, MD. Section of Preventive Medicine & Epidemiology, Department of Medicine, Boston University School of Medicine, Boston, MA, USA

Elizabeth Barrett-Connor, MD, Chief of the Division of Epidemiology, Distinguished Professor in the Departments of Family and Preventive Medicine & Medicine, University of California, San Diego, La Jolla, CA, USA.

## Higher usual alcohol consumption was associated with a lower 41-year mortality risk from coronary artery disease in men

Evidence that alcohol consumption is inversely associated with long-term coronary artery disease (CAD) mortality independent of genetic and early life environmental factors is lacking. A study evaluated whether alcohol consumption was prospectively associated with CAD mortality risk independent of familial factors.

843 male twins (396 pairs and 51 unpaired twins) aged 42-55 y (mean 48 y) without CAD reported beer, wine, and spirits consumption at baseline (1969-1973) and were followed up to 2010 in the prospective National Heart, Lung, and Blood Institute Twin Study. Data on usual alcohol consumption over the past year were collected. Outcome was time to event, where the primary event was death from CAD and secondary events were death from cardiovascular disease and all causes. HRs were estimated by using frailty survival models, both overall and within-pair.

There were 129 CAD deaths and 219 cardiovascular deaths during 41 y of follow-up. In the whole cohort, after adjustment for caloric intake and cardiovascular disease risk factors, overall HRs per 10g increment in alcohol intake was 0.94 (95% CI: 0.89, 0.98) for CAD and 0.97 (95% CI: 0.93, 1.00) for cardiovascular mortality. The within-pair adjusted HRs for a twin with 10g higher daily alcohol consumption than his co-twin were 0.90 (95% CI: 0.84, 0.97) for CAD and 0.95 (95% CI: 0.90, 1.00) for cardiovascular disease mortality in the cohort pooled by zygosity, which remained similar among monozygotic twins. All 3 beverage types tended to be associated with lower CAD mortality risk within-pair to a similar degree. Alcohol consumption was not associated with total mortality risk overall or within-pair.

The authors conclude that higher usual alcohol consumption is associated with lower CAD mortality risk, independent of germline and early life environment and adulthood experience shared among twins, supporting a possible causal role of alcohol consumption in lowering CAD death risk.

Source: Higher usual alcohol consumption was associated with a lower 41-y mortality risk from coronary artery disease in men independent of genetic and common environmental factors: the prospective NHLBI Twin Study. Dai J; Mukamal KJ; Krasnow RE; Swan GE; Reed T. American Journal of Clinical Nutrition. Published online 6 May 2015.

## Joint and independent effect of alcohol and tobacco use on the risk of subsequent cancer incidence among cancer survivors

Drinking excess alcohol and smoking tobacco are major modifiable risk factors for cancer. However, little is known about whether these modifiable factors of cancer survivors are associated with subsequent primary cancer (SPC) incidence, regardless of the first cancer sites.

27,762 eligible cancer survivors diagnosed between 1985 and 2007 were investigated for SPC until the end of 2008, using hospital-based and population-based cancer registries. The association between drinking, smoking and combined drinking and smoking (interaction) at the time of the first cancer diagnosis and incidence of SPCs (i.e. all SPCs, alcohol-related, smoking-related and specific SPCs) was estimated by Poisson regression.

Compared with never-drinker/never-smoker, the categories ever-drinker/ever-smoker, current-drinker/current-smoker, and heavy-drinker/heavy-smoker had 43-108%, 51-126% and 167-299% higher risk for all, alcohol-related and tobacco-related SPCs, respectively.

The interaction of drinking and smoking had significantly high IRRs for SPCs among ever-drinker/ever-smoker and current-drinker/current-smoker, although ever drinking did not show a significant risk. Ever-drinker/ever-smoker had also significantly higher IRRs for esophageal and lung SPCs than never-drinker/never-smoker.

Among comprehensive cancer survivors, ever and current drinkers only had a SPC risk when combined with smoking, while ever and current smokers had a SPC risk regardless of drinking status. Heavy drinking and heavy smoking were considered to be independent additive SPC risk factors.

Source: Joint and independent effect of alcohol and tobacco use on the risk of subsequent cancer incidence among cancer survivors: a cohort study using cancer registries. Tabuchi T; Ozaki K; Ioka A; Miyashiro I. International Journal of Cancer, published early online 5 May 2015.

## Mediterranean diet and risk of endometrial cancer

Some components of the Mediterranean diet have favourable effects on endometrial cancer, and the Mediterranean diet as a whole has been shown to have a beneficial role on various neoplasms.

A study pooled data from three case-control studies carried out between 1983 and 2006 in various Italian areas and in the Swiss Canton of Vaud. Cases were 1,411 women with incident, histologically confirmed endometrial cancer, and controls were 3,668 patients in hospital for acute diseases. The researchers measured the adherence to the Mediterranean diet using a Mediterranean Diet Score (MDS), based on the nine dietary components characteristics of this diet, that is, high intake of vegetables, fruits/nuts, cereals, legumes, fish; low intake of dairy products and meat; high monounsaturated to saturated fatty acid ratio; and moderate alcohol intake. Odd ratios (OR) were estimated and the corresponding 95% confidence intervals (CI) for increasing levels of the MDS (varying from 0, no adherence, to 9, maximum adherence) using multiple logistic regression models, adjusted for major confounding factors.

The adjusted OR for a 6–9 components of the MDS (high adherence) compared with 0–3 (low adherence) was 0.43 (95% CI 0.34–0.56). The OR for an increment of one component of MDS diet was 0.84 (95% CI 0.80–0.88). The association was consistent although somewhat stronger in older women, in never oral contraceptive users and in hormone-replacement therapy users.

The study provides evidence for a beneficial role of the Mediterranean diet on endometrial cancer risk, suggesting a favourable effect of a combination of foods rich in antioxidants, fibres, phytochemicals, and unsaturated fatty acids.

Source: Mediterranean diet and risk of endometrial cancer: a pooled analysis of three italian case-control studies. M Filomeno, C Bosetti, E Bidoli, F Levi, D Serraino, M Montella, C La Vecchia and A Tavani. British Journal of Cancer 112, 1816-1821 (26 May 2015).

## Anti-inflammatory effect of white wine in CKD patients and healthy volunteers

Mediterranean-style diet has been considered for its important beneficial effects on the progression of CV disease. Wine is an important component of the Mediterranean diet, and moderate wine drinkers have lower mortality rates than nondrinkers and heavy drinkers in epidemiologic studies. The beneficial effects of red wine are thought to be dependent on the polyphenol compounds such as resveratrol that exhibit potent antioxidant activity. However, white wine, although lacking polyphenols, contains simple phenols, such as tyrosol (Tyr) and hydroxytyrosol (OH-Tyr), characteristic also of extra-virgin olive oil, which may share similar antioxidant and inflammatory properties.

The effect of white wine and extra-virgin olive oil on inflammatory markers was evaluated in 10 healthy volunteers and in 10 patients with CKD (chronic kidney disease) K-DOQI stage III-IV in a prospective, single blind, randomised, cross-over trial. After two weeks of wash-out from alcoholic beverages, subjects were randomised to a cross-over design A-B or B-A of a 2-week treatment with white wine (4 ml/kg body weight, 0.48 g/kg of alcohol 12%, corresponding to 2-3 glasses/daily) and extra-virgin olive oil (treatment A) or extra-virgin olive oil alone (treatment B). The two study periods were separated by a two-week wash-out period. At baseline and at the end of each treatment, plasma levels of inflammatory markers C-reactive protein (CRP), interleukin-6 (IL-6), tumor necrosis factor-alpha (TNF-alpha), and interleukin-8 (IL-8) concentration were determined. Urinary levels of Tyr, OH-Tyr, and their metabolites were measured at the same time.

During combined consumption of white wine and extra-virgin olive oil (treatment A), plasma levels of CRP and IL-6 decreased from 4.1 ± 1.8 to 2.4 ± 1.9 mg/l ($p < 0.05$) and from 5.3 ± 3.2 to 3.4 ± 2.3 mg/l ($p < 0.05$) in CKD patients. CRP decreased from 2.6 ± 1.2 to 1.9 ± 0.9 mg/l ($p < 0.05$), and IL-6 decreased from 2.2 ± 1.8 to 1.7 ± 1.3 mg/l ($p = ns$) in healthy volunteers. No significant variation versus baseline was observed during treatment B. A significant increase in urinary Tyr and OH-Tyr was observed during treatment A (white wine and extra-virgin olive oil).

Plasma markers of chronic inflammation were significantly reduced in CKD patients during the combined consumption of white wine and olive oil, suggesting a possible anti-inflammatory effect of this nutritional intervention.

Source: Anti-inflammatory effect of white wine in CKD patients and healthy volunteers. Migliori M, Panichi V, de la Torre R, Fitó M, Covas M, Bertelli A, Muñoz-Aguayo D, Scatena A, Paoletti S, Ronco C. Blood Purif. 2015;39(1-3):218-23. doi: 10.1159/000371570. Epub 2015 Mar 31.

## The role of alcohol consumption in regulating circulating levels of adiponectin

The role of alcohol intake in influencing longitudinal trajectories of adiponectin is unclear. This study explored the association between alcohol intake and changes in circulating levels of adiponectin over repeat measures.

The prospective cohort study included data from 2,855 men and women (74% men with a mean age of 50 years at baseline) drawn from the Whitehall II study. Data from study phases 3 (1991-1993), 5 (1997-1999) and 7 (2002-2004) were used.

Adiponectin serum concentrations (ng/mL) were measured and alcohol intake was defined in terms of number of UK units (1 unit = 8g ethanol) consumed in the previous 7 days on three occasions. Cross-sectional associations between alcohol and adiponectin levels were calculated using linear regression. A bivariate dual change score model was used to estimate the effect of alcohol intake on upcoming change in adiponectin. Models were adjusted for age, sex, ethnicity and smoking status.

Alcohol intake is not associated with changes in circulating adiponectin levels in this cohort. This finding provides evidence that adiponectin levels are unlikely to mediate the relationship between moderate alcohol consumption and reduced risk of type 2 diabetes.

Source: The role of alcohol consumption in regulating circulating levels of adiponectin: a prospective cohort study. Bell S, Britton A. J Clin Endocrinol Metab. 2015 May 22.

## Does beer, wine or liquor consumption correlate with the risk of renal cell carcinoma?

Although plenty of evidence supports an inverse association between alcohol drinking and risk of renal cell carcinoma (RCC), sex-specific and beverage-specific dose-response relationships have not been well established.

This association was examined by performing a systematic review and meta-analysis of prospective studies. Studies were identified by comprehensively searching PubMed and EMBASE databases. Categorical and dose-response meta-analyses were conducted to identify the effects of alcohol on RCC. A total of eight publications (including seven cohort studies and one pooled analysis of 12 cohort studies) were eligible for the meta-analysis.

Dose-response analysis showed that each 5 g/day increment of alcohol intake corresponded to a 5% decrease in risk of RCC for males and 9% for females.

Alcohol intakes from wine, beer, and liquor were each associated with a reduced risk of RCC. When these associations were examined separately by gender, statistically significant inverse associations were restricted to alcohol from wine among females (RR = 0.82, 95% CI 0.73-0.91) and to alcohol from beer and from liquor among males (RR = 0.87, 95% CI 0.83-0.91 and RR = 0.95, 95% CI 0.92-0.99, respectively).

In conclusion, gender-specific and beverage-specific differences in the association between alcohol intake and RCC risk exist.

Source: Does beer, wine or liquor consumption correlate with the risk of renal cell carcinoma? A dose-response meta-analysis of prospective cohort studies. Xu X, Zhu Y, Zheng X, Xie L. Oncotarget. 2015 Apr 29.

## Genomewide association study for maximum number of alcoholic drinks in European Americans and African Americans

Researchers conducted a genomewide association study (GWAS) for 'maximum number of alcoholic drinks consumed in a 24-hour period' (MaxDrinks), in 2 independent samples comprised of over 9,500 subjects, following up on the GWAS samples for alcohol dependence in European Americans (EAs) and African Americans (AAs).

Data was from GWAS samples (Yale-UPenn) recruited for studies of the genetics of drug or AD, and a publicly available sample: the Study of Addiction: Genetics and Environment (SAGE). Genomewide association analysis was performed for ~890,000 single nucleotide polymorphisms (SNPs) using linear association random effects models. EAs and AAs were separately analysed.

The results confirmed significant associations of the well-known functional loci at ADH1B with MaxDrinks in EAs and AAs. The region of significant association on chromosome 4 was extended to LOC100507053 in AAs but not EAs. The researchers also identified potentially novel significant common SNPs for MaxDrinks in EAs in the Yale-UPenn sample: rs1799876 at SERPINC1 on chromosome 1 and rs2309169 close to ANKRD36 on chromosome 2. After adjusting for the peak SNP rs1229984 on ADH1B, rs1799876 was nearly significant and rs2309169 remained highly significant.

The results provide further support that ADH1B modulates alcohol consumption. Future replications of potential novel loci are warranted, the authors suggest.

Source: Genomewide Association Study for Maximum Number of Alcoholic Drinks in European Americans and African Americans Ke Xu, Henry R. Kranzler, Richard Sherva, Carolyn E. Sartor, Laura Almasy, Ryan Koesterer, Hongyu Zhao, Lindsay A. Farrer and Joel Gelernter. Article first published online: 3 Jun 2015.

## Consumption of beer and colorectal cancer incidence: a meta-analysis of observational studies

Several meta-analyses and reports from the World Cancer Research Fund supported a risk association between alcohol consumption above 20g per day and colorectal cancer (CRC). However, the association for beer consumption, the common type of alcoholic beverage, remains unclear.

A research team identified studies by a literature search of PUBMED and EMBASE through 30 June 2014. Summary relative risks (SRRs) with their 95% CIs were calculated with a fixed or random effects model.

Twelve case-control and nine cohort studies were included. Compared with non-alcohol drinkers or non-beer drinkers, any beer drinkers were associated with an increased risk of CRC (SRR = 1.20, 95% CI, 1.06-1.37; p(heterogeneity) <0.001, I(2) = 73.3%), which was stronger in the rectum than in the colon. The categorical meta-analysis indicated that heavy (≥ 2 drinks/day) beer drinking was related to increased risk of CRC (SRR = 1.37, 95% CI 1.26-1.49), while light or moderate beer drinking was not. The dose-response analysis demonstrated that an increase of one drink per day in beer consumption was related to an increased risk of CRC (SRR = 1.13, 95% CI, 1.06-1.21). There was evidence of a potential nonlinear association between beer intake and CRC incidence (p = 0.002 for nonlinearity).

The results from this meta-analysis suggest that heavy (≥ 2 drinks/day) beer drinking may be associated with increased CRC risk. The authors state that more research with improved control of confounding and actual measurement of beer consumption are needed to confirm these findings.

Source: Consumption of beer and colorectal cancer incidence: a meta-analysis of observational studies.Zhang C, Zhong M. Cancer Causes Control. 2015 Apr;26(4):549-60. Epub 2015 Feb 13.

## Moderate alcohol consumption diminishes the development of non-alcoholic fatty liver disease (NAFLD)

Using ob/ob mice as a model of non-alcoholic fatty liver disease (NAFLD), researchers investigated the effect of moderate alcohol intake on the development of NAFLD and molecular mechanisms involved. The Ob/ob mice were fed water or ethanol solution (2.5 g/kg body weight/day) for 6 weeks, and markers of liver injury, insulin signalling and adiponectin in visceral adipose tissue were determined.

Whereas bodyweight and the degree of liver steatosis did not differ among ob/ob mouse groups, those consuming ethanol had markedly less macrovesicular hepatic fat accumulation, inflammatory alterations and significantly lower transaminase levels. Despite similarly elevated protein levels of tumour necrosis factor$\alpha$, protein concentrations of plasminogen activator inhibitor 1 were significantly lower in livers of ob/ob mice consuming ethanol in comparison with controls. The hepato-protective property of moderate alcohol ingestion in ob/ob mice was associated with an induction of the sirtuin-1/adiponectin-signalling cascade in visceral fat tissue and an activation of Akt in the liver. Similar effects of moderate alcohol exposure were also found in vitro in 3T3-L1 and AML-12 cells.

These data suggest that moderate alcohol intake may diminish the development of NAFLD through sirtuin-1/-adiponectin-dependent signalling cascades.

Source: Moderate alcohol consumption diminishes the development of non-alcoholic fatty liver disease (NAFLD) in ob/ob mice. Kanuri G1, Landmann M, Priebs J, Spruss A, Löscher M, Ziegenhardt D, Röhl C, Degen C, Bergheim I. Eur J Nutr. 2015 May 24.

## Exploring the motives and mental health correlates of intentional food restriction prior to alcohol use in university students

This study explored the prevalence of and motivations behind 'drunkorexia' - restricting food intake prior to drinking alcohol. For both male and female university students (N = 3,409), intentionally changing eating behaviour prior to drinking alcohol was common practice (46%). Analyses performed on a targeted sample of women (n = 226) revealed that food restriction prior to alcohol use was associated with greater symptomology than eating more food. Those who restrict eating prior to drinking to avoid weight gain scored higher on measures of disordered eating, whereas those who restrict to get intoxicated faster scored higher on measures of alcohol abuse.

Source: Exploring the motives and mental health correlates of intentional food restriction prior to alcohol use in university students. Roosen KM, Mills JS. J Health Psychol. 2015 Jun;20(6):875-86.

## Moderate wine intake improves metabolic profile for type 2 diabetes

New research presented at this year's European Congress on Obesity in Prague suggests that drinking a glass of red wine each night with dinner in patients with well controlled type 2 diabetes can improve a person's metabolic profile over two years. The research was carried out by Professor Iris Shai, Ben-Gurion University of the Negev and Professor Meir Stampfer, Harvard School of Public Health.

Recommendations for moderate alcohol consumption remain controversial, especially in the management of type 2 diabetes (T2D). By adding to the relative lack of long-term randomised controlled trials (RCTs) in this area, the authors hoped to expand understanding of its impact. Prof Shai said: "This first long-term large scale alcohol trial suggests that initiating moderate wine intake, especially red-wine, among well-controlled T2D, and as part of healthy diet, is apparently safe and decreases cardiometabolic risk. While the genetic interaction supports specific causal roles for ethanol, the red-wine's superiority suggests that non-alcoholic constituents of red wine could be having a positive impact".

"The differences found between red and white wine were opposed to our original hypothesis that the beneficial effects of wine on lipids are mediated predominantly by the alcohol. Yet, the differential effects in patients with the genetic variation for alcohol metabolism on their blood sugar control support a causal role of alcohol on blood sugar control. Thus, genetic profiling may assist in identifying patients with type 2 diabetes in whom moderate wine consumption may induce greater clinical benefit."

The authors did a 2-year RCT [the two-year CArdiovaSCulAr Diabetes & Ethanol (CASCADE) trial] among 224 controlled diabetes patents, who had been abstaining from alcohol, following a previous 3-month alcohol pilot trial. They kept to a standard Mediterranean diet, not restricted by calories, but were randomised into three groups – those who drank 150 ml of mineral water after dinner, and either white wine or red wine. The trial was performed in Israel, at Ben-Gurion University, by Professor Shai's research group which is focused on performing long-term dietary randomised controlled trials.

87% patients completed the two-year study. The results showed that red wine was found to be superior in improving metabolic profiles, by modestly increasing good (HDL) cholesterol and apolipoprotein A1 (one of the major constituents of HDL cholesterol), while decreasing the ratio between total cholesterol and HDL cholesterol.

A fifth of the participants were found to be fast alcohol metabolisers, identified through genetic tests showing they had a particular variation related to alcohol metabolism. Slow alcohol metabolisers who drank wine were found to have better blood sugar control than fast alcohol metabolisers who drank wine.

Wine of either type did not affect medication usage, blood pressure, or liver function tests. Although both wine groups modestly improved glucose metabolism, overall, improvements in the metabolic profiles were mainly attributed to red-wine.

easo.org/wp-content/uploads/2015/05/ECO2015THURSPRESSABSTRACTS.pdf

## Maternal alcohol consumption before and during pregnancy and the risks of congenital heart defects in offspring

Epidemiologic studies have reported conflicting results regarding maternal alcohol consumption before and during pregnancy, and the risk of congenital heart defects (CHDs). However, a systematic review and meta-analysis of the association between maternal alcohol consumption and CHDs in offspring has not been conducted.

MEDLINE and EMBASE were searched for articles catalogued between their inception and February 16, 2015; The reseachers identified relevant published studies that assessed the association between maternal alcohol consumption and CHD risk. From the 1,527 references, a total of 19 case-control studies and four cohort studies were enrolled in this meta-analysis. The summary of 23 studies related to CHDs indicated an overall pooled relative risk of 1.13 (95% confidence interval: 0.96, 1.29) among mothers drinking before or during pregnancy. In summary, the meta-analysis provided no positive association between maternal alcohol consumption and risk of CHDs.

Source: Maternal Alcohol Consumption before and during Pregnancy and the Risks of Congenital Heart Defects in Offspring: A Systematic Review and Meta-analysis. Sun J, Chen X, Chen H, Ma Z, Zhou J. Congenit Heart Dis. 2015 Jun 1.

## Personal and perceived peer use of and attitudes toward alcohol among students in seven EU Countries

A study explored the perceptions of peer substance use and related attitudes among European students. The authors state 'Challenging perceptions about peer substance use has become the basis of a form of prevention and intervention known as the social norms approach, which can be delivered using personalised online feedback. This article reports baseline alcohol use and attitudes data for university students across Europe collected as part of the Social Norms Intervention for the prevention of Polydrug usE project (Project SNIPE)'.

Students from universities in Belgium, Denmark, Germany, the Slovak Republic, Spain, Turkey, and the United Kingdom were recruited to take part in an online survey by the use of email invitations, social media, classroom announcements, flyers, and stalls in social areas, such as in cafeterias and bars on campus. A total of 4,482 students agreed to participate.

Overall, respondents reported both perceived alcohol use and perceived acceptance of alcohol use among their peers that were higher than their own use or acceptance. Perceived peers' behaviours and attitudes were found to be predictive of personal behaviours and attitudes, with some variation across countries and by sex.

The results suggest that students at the participating institutions across selected European countries exhibit overall similar patterns of perceptions as have been found on American college campuses. In conjunction with the finding that the perceived norm is predictive of personal behaviour and attitudes, this research provides support to the view that the social norms approach may be a viable method to reduce alcohol consumption among students at European universities.

Source: Personal and Perceived Peer Use of and Attitudes Toward Alcohol Among University and College Students in Seven EU Countries: Project SNIP J McAlaney, SM Helmer, C Stock, B Vriesacker, G Van Hal, RC Dempsey, Y Akvardar, F Salonna, O Kalina, F Guillen-Grima, BM Bewick, R Mikolajczyk J. Stud. Alcohol Drugs, 76, 430–438, 2015.

## The use of the internet for prevention of binge drinking among the college population

There are many consequences of binge drinking compared with light or moderate drinking behaviours and the prevalence rate and intensity of binge drinking is highest among the college-aged population, authors of a review state. Given the popularity and high use of the Internet among college students, a novel approach for programming is through Internet-based interventions. A systematic review of Internet-based interventions targeting binge drinking among the college population was conducted.

Eligibility criteria included peer-reviewed articles evaluating Internet-based interventions for binge drinking prevention among college students published between 2000 and 2014. After a systematic screening process, a total of 14 articles were included for the final review. From each article the following variables were extracted: study design and sample size, average age of participants, underpinning theoretical framework, and intervention description and duration. This review also synthesised a methodological assessment with variables such as outcome measures, sample size justification, number of measurements and use of process evaluations.

All studies but one reported a significant reduction in the frequency and quantity of alcohol consumption and problems related with heavy drinking. Furthermore, Internet-based interventions appeared to be more effective than traditional print-based interventions; however, face-to-face interventions were typically more effective.

The review supports using the Internet as a brief intervention approach that can effectively support efforts to reduce binge drinking among college students.

Source: The Use of the Internet for Prevention of Binge Drinking Among the College Population: A Systematic Review of Evidence. Amir Bhochhibhoya , Logan Hayes, Paul Branscum , Laurette Taylor. Alcohol and Alcoholism, first published online June 2015.

## The moderating role of cognitive capacities in the association between social norms and drinking behaviours

There are two related yet distinct social normative influences on adolescent drinking. Descriptive norms refer to perceptions of how much others engage in a particular behaviour, whereas injunctive norms refer to the extent to which others approve of a particular behaviour. Theoretical formulations suggest that whether descriptive or injunctive norms guide drinking behaviour depends on cognitive factors related to executive functioning. Cognitive capacities, specifically inhibitory control (IC) and preplanning, were tested as moderators of the association between social norms and alcohol use.

This longitudinal study included 387 adolescents and 3 annual waves of data. Behavioural tasks assessed IC and preplanning and social norms and drinking were assessed using self-report measures.

Significant interactions were found for descriptive and injunctive norms with preplanning and descriptive norms with IC. As hypothesised, descriptive norms were stronger prospective predictors of alcohol use at low levels of cognitive preplanning, whereas injunctive norms were stronger prospective predictors at high levels of cognitive preplanning. Descriptive norms prospectively predicted alcohol use at high, but not at low levels of IC.

These findings highlight the complexity of normative influences and suggest that descriptive and injunctive norms have differential effects on future drinking for individuals with different cognitive capacities.

Source: The Moderating Role of Cognitive Capacities in the Association Between Social Norms and Drinking Behaviours SN Meisel, CR Colder and LW. Hawk, 22 May 2015. Alcoholism: Clinical and Experimental Research. Volume 39, Issue 6, pages 1049–1056, June 2015.

## Behaviour change techniques in popular alcohol reduction apps

Mobile phone apps have the potential to reduce excessive alcohol consumption cost-effectively. Although hundreds of alcohol-related apps are available, there is little information about the behaviour change techniques (BCTs) they contain, or the extent to which they are based on evidence or theory and how this relates to their popularity and user ratings.

Researchers assessed the proportion of popular alcohol-related apps available in the United Kingdom that focus on alcohol reduction, identify the BCTs they contain, and explore whether BCTs or the mention of theory or evidence is associated with app popularity and user ratings.

The iTunes and Google Play stores were searched with the terms "alcohol" and "drink", and the first 800 results were classified into alcohol reduction, entertainment, or blood alcohol content measurement. Of those classified as alcohol reduction, all free apps and the top 10 paid apps were assessed for BCTs and for reference to evidence or theory. Measures of popularity and user ratings were extracted.

Of the 800 apps identified, 662 were unique. Of these, 13.7% were classified as alcohol reduction, 53.9% entertainment, 18.9% blood alcohol content measurement and 13.4% other. The 51 free alcohol reduction apps and the top 10 paid apps contained a mean of 3.6 BCTs (SD 3.4), with 7/61 not including any BCTs. The BCTs used most often were "facilitate self-recording" (33/61), "provide information on consequences of excessive alcohol use and drinking cessation" (26/61), "provide feedback on performance" (25/61), "give options for additional and later support" (15/61) and "offer/direct towards appropriate written materials" (14/61). These apps also rarely included any of the 22 BCTs frequently used in other health behaviour change interventions. Evidence was mentioned by 16.4% of apps, and theory was not mentioned by any app.

Multivariable regression showed that apps including advice on environmental restructuring were associated with lower user ratings and that both the techniques of "advise on/facilitate the use of social support" and the mention of evidence were associated with the popularity of the app.

The authors conclude that only a minority of alcohol-related apps promoted health while the majority implicitly or explicitly promoted the use of alcohol. Alcohol-related apps that promoted health contained few BCTs and none referred to theory. The mention of evidence was associated with more popular apps, but popularity and user ratings were only weakly associated with the BCT content.

Source: Behaviour change techniques in popular alcohol reduction apps: content analysis. Crane D; Garnett C; Brown J; West R; Michie S. Journal of Medical Internet Research. Vol 17, No 5, 2015, Art No e118, 12pp.

## A new genetic-epidemiological design applied to drug abuse, alcohol use disorders, and criminal behaviour

The authors sought to clarify the sources of parent-offspring resemblance for drug abuse, alcohol use disorders, and criminal behaviour, using a novel genetic-epidemiological design.

Using national registries, the authors identified rates of drug abuse, alcohol use disorders, and criminal behaviour in 41,360 Swedish individuals born between 1960 and 1990 and raised in triparental families comprising a biological mother who reared them, a "not-lived-with" biological father, and a stepfather.

When each syndrome was examined individually, hazard rates for drug abuse in offspring of parents with drug abuse were highest for mothers (2.80, 95% CI=2.23–3.38), intermediate for not-lived-with fathers (2.45, 95% CI=2.14–2.79), and lowest for stepfathers (1.99, 95% CI=1.55–2.56). The same pattern was seen for alcohol use disorders (2.23, 95% CI=1.93–2.58; 1.84, 95% CI=1.69–2.00; and 1.27, 95% CI=1.12–1.43) and criminal behaviour (1.55, 95% CI=1.44–1.66; 1.46, 95% CI=1.40–1.52; and 1.30, 95% CI=1.23–1.37). When all three syndromes were examined together, specificity of cross-generational transmission was highest for mothers, intermediate for not-lived-with fathers, and lowest for stepfathers. Analyses of intact families and other not-lived-with parents and stepparents showed similar cross-generation transmission for these syndromes in mothers and fathers, supporting the representativeness of results from triparental families.

The authors state that 'A major strength of the triparental design is its inclusion, within a single family, of parents who provide, to a first approximation, their offspring with genes plus rearing, genes only, and rearing only. For drug abuse, alcohol use disorders, and criminal behaviour, the results of this study suggest that parent-offspring transmission involves both genetic and environmental processes, with genetic factors being somewhat more important. These results should be interpreted in the context of the strengths and limitations of national registry data'.

Source: Triparental Families: A New Genetic-Epidemiological Design Applied to Drug Abuse, Alcohol Use Disorders, and Criminal Behaviour in a Swedish National Sample Kenneth S. Kendler, M.D.Henrik Ohlsson, Jan Sundquist, Kristina Sundquist. Am J Psychiatry. 2015

## Modes of daily caffeine consumption among adolescents and the practice of mixing alcohol with energy drinks: relationships to drunkenness

Adolescent use of alcohol mixed with energy drinks (AmED) has recently received increased attention. Previous studies have established a strong link between AmED and drunkenness and suggest the importance of understanding associations with AmED use. This study categorised caffeine intake as daily consumption of coffee, tea, cola drinks, and energy drinks, and examined whether daily caffeine consumption relates to AmED use and drunkenness.

Data was taken from the 2013 Youth in Iceland cross-sectional survey among students aged 16-17 years, who attended all of Iceland's 31 junior colleges (N = 5,784; 75% response rate; 51% girls). Multilevel structural equation modeling (SEM) was performed.

Of the four daily caffeine consumption variables, coffee had the strongest relationship with AmED for both girls and boys, followed by energy drink consumption. The direct relationship between the daily caffeine consumption variables and drunkenness was generally weak for both genders, but the majority of the total relationship between all daily caffeine consumption variables and drunkenness was attributable to mediation through AmED. In the primary model, AmED consumption was also very strongly related to drunkenness.

The results suggest that caffeine use among adolescents ages 16-17 years is strongly related to increased consumption of AmED, irrespective of mode of caffeine consumption. AmED is strongly and positively associated with drunkenness on both individual and school levels.

Source: Mode of daily caffeine consumption among adolescents and the practice of mixing alcohol with energy drinks: relationships to drunkenness. Kristjansson AL; Mann MJ; Sigfusdottir ID; James JE, Journal of Studies on Alcohol and Drugs, Vol 76, No 3, 2015, pp397-405.

# Update on Alcohol statistics for England

New figures from Public Health England (PHE) were published 2 June 2015 in the latest update to the Local Alcohol Profiles for England (LAPE) data tool. They show a continuing decrease in the rate of hospital admissions due to alcohol among under 18s, evidence of a continuing decline in young people's harmful drinking.

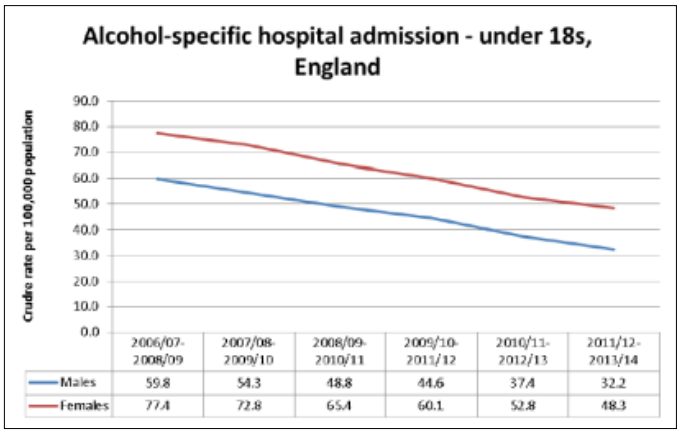
Alcohol-specific hospital admissions for under 18s over the last 3 years are down to 13,725. This shows a fall of 41% against the earliest comparable figures, 22,890 between 2006 to 2007 and 2008 to 2009 and down 11% in the latest period (11/12-13/14) with reductions in all regions and all deprivation deciles.

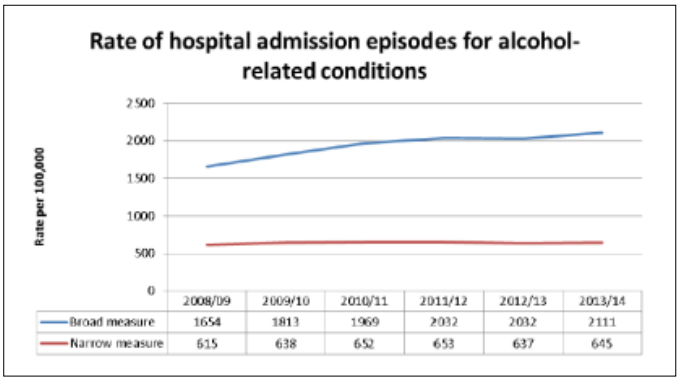
For under 18s, the rate of admissions for females is consistently higher than for males in contrast to most alcohol-related indicators. However, the strong downward trend is observed for both males and females. The biggest reductions have been seen in northern regions and the most deprived deciles leading to a reduction in the inequality gap between the most and least deprived. The largest reduction was in the most deprived decile (down 14% since 2006-08) and there were reductions in all deciles except the least deprived.

59% of local authorities in England (193 out of all 326 local authorities) saw a slight increase in hospital admissions in adults where the main reason for admission was alcohol. These admissions have risen by 1.3% to 333,000, up from 326,000 last year, with a larger increase seen in women (2.1% increase while for men this was 0.7%). There continues to be large variations between the most deprived and the least deprived areas.

Hospital admissions for alcohol-related conditions were 55% higher in the most deprived. The rate of alcohol-related mortality– deaths from conditions wholly or partially caused by alcohol increased slightly (+0.6%) in 2013 driven by an increase for men (+1.1%). The rate for women reduced for a second successive year. The rate of alcohol-specific mortality remains largely unchanged since the beginning of the LAPE series (2006-08). There were over 20,000 deaths in 2013. The rate of mortality from chronic liver disease continued to fall in the latest period (down 1.7%) and has fallen by 7% since the beginning of the LAPE series (2006-08). The inequalities in alcohol-related deaths are particularly stark in relation to chronic liver disease with the most deprived areas experiencing double the rate of death compared with the least deprived.

The LAPE tool presents data for 19 alcohol-related indicators in an interactive tool, which helps local areas assess alcohol-related harm and monitor the progress of efforts to reduce this. The profiles and related interactive information are available online at www.healthprofiles.info




## Statistics on Alcohol, England 2014

The annual report Statistics on Alcohol, England 2014 was published on May 29. This report acts as a reference point for health issues relating to alcohol use and misuse, providing information obtained from a number of sources. It covers topics such as drinking habits and behaviours among adults (aged 16 and over) and school children (aged 11 to 15), drinking-related ill health and mortality, affordability of alcohol, alcohol related admissions to hospital and alcohol-related costs. The report contains previously published information and also includes additional new analyses.

**Drinking behaviour among adults and children**

- Between 2005 and 2012 the proportion of men who drank alcohol in the week before being interviewed fell from 72% to 64%, and the

proportion of women fell from 57% to 52% in Great Britain.

- Among adults who had drunk alcohol in the last week, 55% of men and 53% of women drank more than the recommended daily amounts, including 31% of men and 24% of women who drank more than twice the recommended amounts in 2012.
- In real terms, between 2009 and 2012 household spending on alcoholic drinks in the UK increased by 1.3%, whilst that bought for consumption outside the home fell by 9.8%.
- In 2012, 43% of school pupils (aged 11-15) said that they had drunk alcohol at least once. This continues the downward trend since 2003, when 61% of pupils had drunk alcohol.

**Drinking related costs, ill health and mortality**

The report used a revised methodology for estimating alcohol-related hospital admissions following a review by Public Health England, the Department of Health and the Health and Social Care Information Centre. Consequently estimates of alcohol-related hospital admissions for 2012-13, reported in this publication, are not comparable to estimates in earlier years' publications. A time series of estimates of alcohol-related hospital admissions, calculated using the revised methodology, for the years 2003-04 to 2011-12 have been made available to provide a comparable 10 year time series from 2003-04 to 2012-13.

- In 2012/13, there were an estimated 1,008,850 admissions related to alcohol consumption where an alcohol-related disease, injury or condition was the primary reason for hospital admission or a secondary diagnosis. Of the estimated 1,008,850 alcohol related admissions:

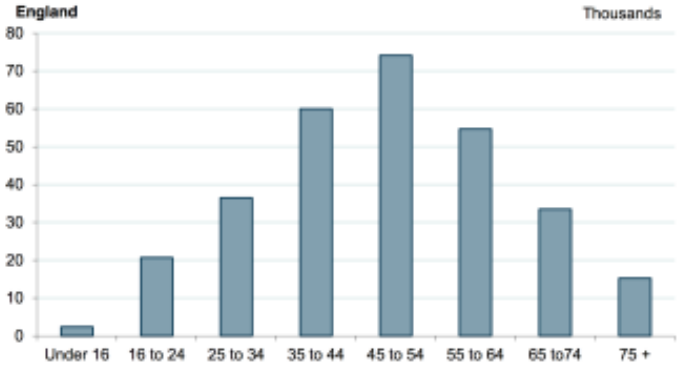
  65% (651,010) were due to conditions which were categorised as partly attributable chronic conditions and 6% (60,830) were for conditions categorised as partly attributable acute conditions.

  Overall, males were more likely to be admitted to hospital with alcohol related diseases, injuries and conditions than females, with 65% of the admissions being male patients. However, amongst under 16s, the opposite is true where females were more likely to be admitted to hospital with alcohol related diseases, injuries and conditions than males, with females accounting for 55% of all admissions.

  There were 1,890 alcohol-related hospital admissions per 100,000 population in England. The rate of alcohol-related admissions varied regionally from an estimated 2,500 per 100,000 population in North East Region to 1,500 admissions per 100,000 population in South East Region.
- In 2012/13, there were an estimated 325,870 admissions where the primary diagnosis or external causes recorded in secondary diagnosis fields were attributable to the consumption of alcohol.
- In 2013, 183,810 items were prescribed (in a primary care setting or NHS hospital) for the treatment of alcohol dependency and dispensed in the community. The Net Ingredient Cost (NIC) of these prescription items in 2013 was £3.13 million, which is an increase of £0.2 million since 2012 and just over double the NIC in 2004 of £1.51 million.
- In England, in 2012 there were 6,490 alcohol-related deaths. This is a 19% increase from 2001 (5,476) but a 4% decrease from 2011 (6,771).
- The number of male deaths decreased from 4,498 in 2011 to 4,230 in 2012 and the number of female deaths decreased from 2,273 in 2011 to 2,260 in 2012.
- The most common alcohol-related death was alcoholic liver disease, which accounted for 63% (4,075) of all alcohol-related deaths in 2012.

www.hscic.gov.uk/catalogue/PUB14184/alc-eng-2014-rep.pdf

**Figure 4.1 Number of alcohol-related NHS hospital admissions where there was a primary or secondary diagnosis of a disease or condition wholly attributable to alcohol, by age, 2012/13**




**Source:** Figures based on Hospital Episode Statistics admissions data and Public Health England attributable fractions

## Drinkaware Monitor 2014: Adults' drinking behaviour and attitudes in the UK

In 2014, Drinkaware undertook a survey of UK adults to provide a picture of drinking behaviour. The research was based on a nationally representative sample of 2,294 UK adults aged 18-75. New standardised research tools were used in addition to the online and face-to-face surveys used in previous years.

The report findings estimate that around 3.4 million middle aged people are regularly drinking above the lower risk limits despite many recognising the potential health harms. Unlike young adults (aged 18-24) who tend to drink large amounts on one or two occasions a week, middle aged drinkers (aged 45-64) are more likely to spread their drinking across the week. Two-thirds of increasing or higher risk middle aged drinkers consume four or more times a week.

According to the report, this group of middle aged frequent drinkers is drinking the equivalent of almost three pints of 4% ABV lager five times a week for men or almost three standard 175ml glasses of 13% ABV wine five times a week for women. 5% of all drinkers aged 45-64 get drunk every time or most of the time they drink compared to 30% of all 18-24 year old drinkers. 48% of 45-64 year olds who drink to increasing or higher risk levels believe that moderate drinking is good for their health and the same proportion believe they are unlikely to have increased health problems in later life if they continue to drink at their current level.

When asked to identify the main types of health harms related to alcohol, most of the 45-64 and 18-24 year olds surveyed say they associate drinking with liver disease but many struggle to identify other alcohol related health conditions: liver disease was identified by 77% of 45-64 year olds and 57% of 18-24 year olds; coronary heart disease by 20% of 45-64 year olds and 12% of 18-24 year olds; weight gain/obesity by 15% of 45-64 year olds and 7% of 18-24 year olds; cancer by 8% of 45-64 year olds and 7% of 18-24 year olds 45-64 year old drinkers appear reluctant to change their drinking behaviour despite many of them acknowledging that alcohol can harm health. 59% say they don't want guidance on how to moderate their drinking compared with 37% of 18-24 year olds who drink. However, when asked, 17% of 45-64 year old drinkers said they had a feeling of guilt or remorse after drinking and 11% said they failed to do what was normally expected of them because of their drinking.

The report also identifies five key adult population drinking 'segments' as: 1. Comfortable social drinkers; 2. Controlled home drinkers; 3. Risky social and coping drinkers; 4. Self-contained moderate drinkers; 5. Risky career drinkers.

Drinkaware says it is most interested in groups 3 and 5 as 'those that exhibit the most risky drinking behaviours'. Drinkaware says as well as work to target younger drinkers, where some positive shifts are apparent, it also needs to work with 'older age groups among whom there appears to be a growing trend towards more frequent drinking above the low risk limits'.

Elaine Hindal, Chief Executive of alcohol education charity Drinkaware commented "In contrast to public perceptions that young adults are the more risky drinkers in the UK, in fact over the course of the week, their parents' generation are drinking more. Our research shows that 45-64 year olds could potentially be sleepwalking into long term health problems as a result of their drinking patterns.

www.drinkaware.co.uk/about-us/research-and-impact/drinkaware-research/drinkaware-monitor-2014-adults'-drinking-behaviour-and-attitudes-in-the-uk/

## Review of late -night levy called for in UK

Senior trade figures have called on the new government to review the late-night levy (LNL) following the release of figures revealing that Cheltenham Borough Council has raised less than half the money expected from the fee and that one in five licensed premises cut their hours.

## Loi Evin changed against French government advice

MPs voted on 11 June for an amendment that could challenge the strict alcohol advertising controls in France enforced by the Loi Evin. The amendment to the Macron law differentiates between information and advertising. Health Minister Marisal Touraine had strongly opposed the measure.

## Drinkaware 2014 Underage Drinking Campaign – Summary Evaluation

Drinkaware has published an evaluation of its 2014 campaign on underage drinking. The campaign focused on the pivotal role parents have in influencing the relationship their child develops with alcohol, specifically by talking to them. Through the campaign Drinkaware aimed to support parents by reminding them to have conversations about alcohol with their children, to be better informed when they do and providing factual information about alcohol in an accessible way to help them structure these conversations.

- The survey was conducted in two waves; pre-campaign (n= 488) and post- campaign (n=1,005). The evaluation found that post the campaign:
- 78% of respondents said they had talked to their children about alcohol: +7 percentage points on the pre-campaign level
- 86% of respondents said they intended to have conversations in the future: +20 percentage points on the pre-campaign level
- 41% of respondents considered sexual activity as one of the main risks associated with children drinking: +12 percentage points on the pre-campaign level
- 71% of respondents considered it unsafe for children to drink any alcohol: +9 percentage points on the pre-campaign level
- 77% of respondents believed that alcohol makes other harmful behaviours much more likely: +9 percentage points on the pre-campaign level
- 16% of respondents reported having used the Drinkaware website for information: +12 percentage points on the pre-campaign level
- 51% of respondents said they would use the Drinkaware website for advice to help with discussing alcohol with their child: +7 percentage points on the pre-campaign level.

Most perceptions of the campaign were positive, with 'thought-provoking' the most common (64%). Most respondents agreed that the message was important (85%), and clearly communicated through the adverts (83%). Many respondents (68%) agreed that the advertising 'made me realise it is important to talk to my children about drinking alcohol'

www.drinkaware.co.uk/media/363433/2014_underage_campaign_evaluation_approved_01.06.15.pdf

## Drink-driving in Scotland down by almost 20% as tough new 'one drink' limits take effect

According to official police statistics, drink-driving offences in Scotland dropped by 17% in the first three months of the year, following the introduction of a tough new drink-drive limit in December. Between January and March, the number of motorists found to be over the drink-drive limit fell to 997 compared to the1,209 recorded over the same period in 2014.

The new drink drive-laws are believed to be behind a drop in the amount of alcohol sales in pubs and bars, with licensed premises saying in March that sales were down by 10% since December. A poll of more than 400 outlets carried out by the industry said that with millions of pounds had been lost in over-the-counter alcohol sales as people stay at home or consume soft drinks.

Justice Secretary Michael Matheson, said: "Since the introduction of the new lower drink-drive limit six months ago, Scotland is starting to see a real change in behaviour. The 17% reduction in drink-driving offences indicates that Scottish drivers are avoiding alcohol when they are driving. Fewer drink-driving offences is a positive story for Scotland and shows that we're leading social and legislative change in the UK".

## UK Road Traffic Act amendment

A Private Members' Bill sponsored by Lord Brooke of Alverthorpe had it's first reading in the House of Lords on 3 June. The proposed bill amendment to the Road Traffic Act 1988 would lower the prescribed limit of alcohol in relation to driving or being in charge of a vehicle from .08 grams of alcohol in every 100ml of blood to .05. The limit in Scotland is already .05. The second reading - the general debate on all aspects of the Bill - is yet to be scheduled.

## Drinking among British Women and its impact on their pedestrian and driving activities

A literature review commissioned by the Rees Jeffreys Road Fund found that although overall rates of alcohol consumption are falling, among affluent older women drinking above the recommended limits is on the increase. There was also some evidence that women may be unaware of what constitutes a unit of alcohol, and how much they can drive after drinking without being above the legal limit.

The empirical survey included 430 women (with a small control group of 45 men) who drank alcohol and who were also drivers. The interviews were held in Brighton, Leicester, Newcastle and Preston during the Spring of 2013. In addition 20 women convicted of driving over the prescribed limit were interviewed in depth.

The study found that a quarter of the sample of women in the empirical survey drank either most days or every day. Wine was the most usual drink with 75% citing wine as their usual drink. The home was the most usual place to drink - either their own or someone else's. Drinking patterns differed depending on the venue, and in general respondents claimed to drink less at home than when out. Almost 60% of respondents claimed never to drive after drinking alcohol, with women above 50 the least likely to drive after drinking alcohol. Comparison with a small male sample indicated that men were nearly twice as likely to drive after drinking alcohol as women.

The survey revealed that knowledge about how much alcohol women can drink before driving and remain under the legal blood alcohol limit was poor overall. Over a third of women in the survey said that they could drive legally after drinking a pint or more of beer (2.8 units), which could place at least some women at risk of a drink-drive offence and almost 15% of women thought that they could drink more than a standard (175 cc) glass of wine and still drive safely (at least 2 units). This lack of awareness of the risk of being over the limit was also apparent amongst some of the women convicted of drink driving.

Over 80% of respondents claimed not to have driven when over the limit within the last year, although the authors point out that this should be considered in conjunction with some poor levels of knowledge about alcohol consumption and driving limits. Driving when over the limit appeared to be infrequent for most respondents although 5% of those in the 40-49 age group indicated this was a more frequent occurrence. Comparison with the male sample indicated than men were more likely to occasionally drive when they considered they were over the legal limit (42% of men and 15% of women respondents).

The most common reason given for driving over the limit was not necessity, but that they felt it was 'OK' or alright to drive, meaning that they thought they could drive without incident or accident. The authors suggest that this was reinforced by the emphasis on drink and also anti-drink advertising which predominantly features men and led to a view that women were relatively 'under the radar' in terms of being stopped and breathalysed. However, the more detailed interviews with convicted drivers also showed the effect of alcohol itself in reducing the ability to make rational decisions at the time of deciding to drive over the prescribed limit.

Respondents indicated that a driving ban would have serious or very serious consequences in all areas of their lives. Some of the convicted women drivers had given up driving altogether.

90% of those questioned said they would be concerned or very concerned to be driven by someone who they thought was over the limit. However, women who thought that they had driven over the limit at some point were very much less likely to be very concerned than those who had not (30% compared with over 80%).

The authors conclude that several important messages are not getting across sufficiently well. There needs to be greater emphasis on communicating how drinking alcohol seriously impairs driving ability, and that driving 'carefully' is no solution to this; getting caught is a real risk and there is almost always an alternative to drink driving.

The interviews showed that there is a lack of clarity among women about the amount of alcohol that would put a driver over the legal limit, and therefore their responses about drinking when over the limit should be treated with caution.

www.reesjeffreys.co.uk/wp-content/uploads/2010/10/Drinking-among-British-Women-Social-Research-Associates.pdf

# European Alcohol And Health Forum- 16th Plenary Meeting - EU Alcohol Strategy discussion

The 16th plenary meeting of the European Alcohol and Health Forum (EAHF) took place on 18th May 2015 in Brussels. It was chaired by John F. Ryan, Acting Director for Public Health, Directorate General Health and Food safety and co-chaired by Philippe Roux, Head of Unit, Health Determinants Unit.

The meeting mainly focused on the Forum's new governance mechanism, membership obligations and on the preliminary results of the 2015 commitments report. The topic of the thematic discussion was "underage drinking".

http://ec.europa.eu/health/alcohol/docs/ev_20150518_flash_en.pdf

Vytenis Andriukaitis the EU's Health and Food Safety Commissioner, presented the Commission's work on reducing alcohol-related harm in Europe at the meeting in Brussels.

In this speech he stated that the executive does not intend to submit a new strategy to reduce alcohol-related harm in Europe and suggested that the issue will be tackled as part of a broad range of "risk factors" affecting chronic diseases. He emphasised the need for a broad and holistic approach to reduce premature deaths related to alcohol misuse. Therefore, alcohol-related harm would not be treated in a separate strategy as was previously done, but would instead be called a "risk factor" in a wider strategy to tackle chronic diseases.

"I would like to place action on the main causes of chronic diseases, including alcohol but also tobacco, nutrition and physical inactivity. It is less important for me what word we are using to define the paper setting out such a joint commitment. What matters is the results," Andriukaitis said.

Mariann Skar, Secretary General of Eurocare said that it is both surprising and disappointing that the Commission was not responding to calls for a new strategy from the Parliament and the EU member states.

Malte Lohan, Global Corporate Affairs Director at AB InBev, said businesses, NGOs and other stakeholders are already working together in the EAHF to help reduce alcohol abuse in Europe: "Let's not get hung up on words. Whether it is called an Alcohol Strategy or something else, the EU needs to renew the political foundation that underpins the EAHF so that we can build on and reinforce this important work," he said.

SpiritsEurope said it would have no objection for the Commission to address harmful use of alcohol as a "risk factor" within the broader framework of non-communicable diseases "We do not want to become distracted, or preoccupied, by the process or structure the Commission decides to follow: The only important consideration is whether or not the new mechanism will make a greater impact on alcohol-related harm," SpiritsEurope said.

More than 20 public health organisations have resigned from the EAHF after expressing deep concern that the interests of the alcohol industry have been prioritised over public health. In an open letter to Vytenis Andriukaitis, the signatories expressed their deep concern over a lack of plans to develop a comprehensive European alcohol strategy.

The resigning bodies – some of whom were founding members of the EU Alcohol and Health Forum – say this approach will not sufficiently address the burden of alcohol harm in Europe. Their resignation letter also claims that there is a lack of evidence that voluntary measures from the alcohol industry are effective and that there is not a sufficient opportunity to discuss effective policies in the absence of vested interest groups.

The NGOs resigning from the EAHF include:

European Alcohol Policy Alliance (Eurocare)
European Public Health Alliance (EPHA)
Standing Committee of European Doctors (CPME)
European Cancer Leagues (ECL)
European Association of the Study of the Liver (EASL)
Alcohol Policy Youth Network (APYN)
European Mutual Help Network for Alcohol related problem (EMNA)
United European Gastroenterology (UEG)
European Midwives Association (EMA)
Nordic Alcohol and Drug Policy Network (NordAN)
European Medical Students' Association (EMSA)
EAHF Science Group
Institute of Alcohol Studies (IAS), UK
Scottish Health Action on Alcohol Problems (SHAAP)
Royal College of Physicians London, UK (RCP)
Association Nationale de Prévention en Alcoologie et Addictologie (ANPAA)
No Excuse Slovenia
Eurocare Italy
Estonian Temperance Union
Alcohol Action Ireland
German Centre for Addiction (DHS).

## Italy – government campaign against underage drinking

The Italian health ministry unveiled Una Serata Special, a national campaign against teenage drinking in May involving a popular music group. Elio e le Storie Tese has made a music video in their famously irreverent style called, "A special evening". One of the song's lyrics goes, "a lot of litres of alcohol, a ride in an ambulance, it's a new kind of tourism".

The music video was shot in spherical cam, allowing the viewer to see all possible angles as the video shows the damaging effects of alcohol.

More than 775,000 young people aged 11-17 consume alcohol in Italy, according to the Higher Health Institute (ISS). Minors under the age of 14 account for 17% of all alcohol poisoning cases that end up in the emergency room.

www.unaserataspeciale.it/

## Campaign to deter parents from providing alcohol to their teens in US

With High school graduations in full swing in May, a joint campaign has been running in Utah between the mayoral office, the police department and ParentsEmpowered.org, an outreach arm of the Utah Department of Alcoholic Beverage Control.

For the next six months from April, the rear doors squad cars will display a public health advertisement: "Seat reserved for adults who provide alcohol to minors." The new stickers represent the first phase of the campaign. Rather than addressing children and teens directly, the campaign targets parents and other adults who provide the majority of all alcohol consumed by minors.

Adults who provide alcohol to a minor can be charged with a class B misdemeanor, and face up to $1,000 in fines and up to one year in jail. Workshop on social media, web and mobile interventions for college drinking


## Report on college aged drinking and social media

According to a recent report from the Boston University School of Public Health Excessive alcohol consumption is the major threat to the health, safety and success of college students in the United States. With the support of the Conrad N Hilton Foundation, researchers convened a workshop of experts on college aged drinking and social media to explore if and how emerging technologies can be coupled with screening, brief intervention and referral to treatment programmes, or other effective screening and intervention methods to reduce alcohol harm to students. This brief summarises the key themes that emerged at the workshop and suggested next steps.

The workshop participants concluded that the emerging technologies offer an unprecedented opportunity to build and implement effective prevention and treatment interventions at scale, particularly in screening and brief intervention. The effectiveness of these technologically supported interventions will ultimately depend on using them in the context of a multi-pronged, comprehensive strategy to prevent, reduce and treat alcohol related problems in college students.

www.bu.edu/sph/files/2015/05/Hilton-Final-4.pdf

## European Sponsorship Association and Alcohol Policy

ESA have produced a document that outlines their activity related to alcohol sponsorship.

The report states 'ESA's role in the alcohol debate has been to produce data and research in order to bring balance to an argument that states that sponsorship, due to its promotion of alcohol, has a role in causing alcohol-related harm and influencing young people. The main activity has been to advise on self-regulation and best practice, to emphasise the partnership aspects of sponsorship with rights holders having the choice about contracting an alcohol sponsor, and the benefit of sponsorship in encouraging a healthy lifestyle. Sponsorship from alcohol companies has also supported thousands of sports, arts and community events, very many of which are at a local rather than national or international level.

ESA also has a formal role in this debate, being a signatory to the European Alcohol & Health Forum'.

sponsorship.org/resources/esa-policy-alcohol-sponsorship-may-2015/

## AB Inbev have published their annual Global Citizenship report

AB Inbev have published their annual Global Citizenship report, giving an update on the company's progress against goals for social responsibility and highlighting some of the campaigns which AB Inbev has initiated around the world including the introduction of Family Talk in Korea, designed to encourage conversations between parents and children about alcohol, Selling Responsibly in Argentina, to promote ID checking among retailers Preventing Drunk Driving, with the Bob campaign in Belgium, and Celebrities Promoting Safe Rides Home in China.

There are also details of efforts to inform consumers about Ab Inbev's beers and customer choices, the multiple languages website tapintoyourbeer.com contains valuable information about responsible drinking, such as alcohol truths and myths and helpful tips for a safe, fun night out.

www.ab-inbev.com/social-responsibility/global-citizenship-report.html

## National Prevention Week in US

National Prevention Week 2015, which took place May 17-23, 2015 is a SAMHSA-supported annual health observance dedicated to increasing public awareness of, and action around, substance abuse and mental health issues. The theme for 2015 was "The Voice of One, the Power of All."

The three primary goals of National Prevention Week were:

- To involve communities in raising awareness of behavioural health issues and in implementing prevention strategies
- To foster partnerships and collaboration with federal agencies and national organisations dedicated to behavioural and public health
- To promote and disseminate quality behavioural health resources and publications.

National Prevention Week is held each year during the third week of May, near the start of summer. Summer is a season filled with celebrations and recreational activities where substance use and abuse can happen, such as graduation parties, proms, weddings, sporting events, and outdoor activities.

National Prevention Week is timed to allow schools to take part in a prevention-themed event before the school year ends, raising awareness in students of all ages. The percentages of marijuana, cigarette, and alcohol initiates among youth increase between spring (April and May) and summer (June and July)1, and the timing of National Prevention Week helps to educate young people and their families at this crucial time of year.

Each day of the week focussed on a different issue, with Tuesday, May 19 being dedicated to the prevention of Underage Drinking & Alcohol Abuse.

## Activated coasters encourage responsible drinking with domestic violence reminder

A campaign from Yaocho Bar Group in Japan uses innovative design and technology to make Japanese consumers aware of the pitfalls of excess alcohol consumption

Although Japan is reportedly one of the safest countries in the world, there has been an increase in alcohol-related crimes in recent years, especially against vulnerable young women. To combat this, Yaocho Bar Group has released a campaign that focuses on alcohol related domestic violence.



Violent Coasters is a new series of traditional drink mats that feature portraits of typical Japanese women that reveal cuts and bruises on the subject's faces when an alcoholic drink is placed on top of them. The material used was printed with a thermochemical ink technology that reacts to form a change in colour when a cold object comes into contact with it.

A cold drink creates purple and red cuts and bruises strategically placed over the victim's face reminding drinkers of the potentially tragic consequences that can occur from domestic violence through drinking heavily.

## Progress on reducing drinking and driving in six countries – new IARD e-book

As part of the implementation of the Commitments, International Alliance for Responsible Drinking IARD continues to coordinate the work on the drink driving initiative that began in 2010 in six countries: China, Colombia, Mexico, Nigeria, Russia, and Vietnam. The Drink Driving Initiative 2014 Summary Reports e-book is now available online. It provides an overview of the progress that has been made in the countries. Highlights from 2014 activities include:

China: Multiple drink driving awareness campaigns were launched to reach groups at high risk for drinking and driving, such as motorcycle riders and novice drivers.

Colombia: Proyecto Patrullero (Project Patrolman) was implemented in six cities to facilitate seminars on checkpoint protocols for law enforcement and educate officials and the general public about responsible drinking.

Mexico: Law enforcement experts participated in checkpoints twice per month and held follow-up meetings to share observations and recommendations with local police in Puebla.

Nigeria: A research protocol and questionnaire was developed in order to conduct roadside surveys in six geopolitical zones; the North Central zone was completed in 2014.

Russia: The Avtotrezvost (Auto Sobriety www.avtotrezvost.ru) training module for novice drivers on drinking and driving was launched as a supplement to the driving schools' existing course on traffic regulations.

Vietnam: With support from the Vietnam Road Administration and municipal departments of transport, the programme focused on reaching professional drivers with don't drink and drive communications; checkpoints were also conducted by local law enforcement.

www.joomag.com/magazine/2014-drink-driving-summary-reports-full-version/0714376001430762073

## Temporal changes in alcohol-related morbidity and mortality in Germany

Trends in morbidity and mortality, fully or partially attributable to alcohol, for adults aged 18-64 were assessed for Germany.

Trends of 100% alcohol-attributable morbidity and mortality over thirteen and eighteen years, respectively, show an increase in rates of hospitalisations and a decrease in mortality rates. Comparisons of alcohol-attributable morbidity including diseases partially caused by alcohol revealed an increase in hospitalisation rates between 2006 and 2012. The proportion of alcohol-attributable hospitalisations remained constant. Rates of alcohol-attributable mortality and the proportion among all deaths decreased.

The increasing trend in mortality due to alcohol until the mid-1990s has reversed. The constant proportion of all hospitalisations that were attributable to alcohol indicates that factors such as improved treatment and easier health care access may have influenced the general increase in all-cause morbidity. To further reduce alcohol-related mortality, efforts in reducing consumption and increasing treatment utilisation are needed, the authors state.

Source: Temporal changes in alcohol-related morbidity and mortality in Germany Kraus L; Pabst A; Piontek D; Gmel G; Shield KD; Frick H; Rehm J. European Addiction Research. Vol 21, No 5, 2015, pp262-272.

## AIM Council Member awarded The French Order of Agricultural Merit

AIM Council Member Creina Stockley has been awarded The French Order of Agricultural Merit. Creina has served OIV since 1999 initially as the Australian delegate within the "Safety and Health" Commission, then as Vice-President of the "Nutrition and Wine" Expert Group (2000-2006), President of the "Food Safety" Expert Group (2007-2012), and President of the "Safety and Health" Commission since 2012.

The French Order of Agricultural Merit has been presented to all of the Presidents that constitute the Steering Committee of the OIV, and who were elected by the General Assembly of the OIV Member States in Izmir (Turkey) in June 2012. Their three-year mandate will end during the Geneal Assembly in Mainz (Germany) in July 2015.

Ms Catherine Geslain-Lanéelle, Director General for Agricultural, Agri-food and Territorial Policies in the Ministry of Agriculture, stressed the importance that France attaches to the OIV's activities by awarding the Order of Agricultural Merit to the scientists elected to the highest positions within the Organisation.

## Australian Good Sports programme reduces risky drinking

An independent study by University of Newcastle, Hunter New England Population Health and Deakin University has found that the Australian Drug Foundation's Good Sports programme reduces the risk of risky drinking at sports clubs by 37% and the risk of alcohol-related harm to club members by 42%.

Good Sports is Australia's largest preventive health programme for the community sporting sector, with 7,000 clubs involved nationally.

"Heavy drinking and sport have long been seen as inseparable, but this study shows that Good Sports can change even entrenched risky drinking cultures - it's great news." Mr Rogerson said.

Director of Hunter New England Population Health and University of Newcastle Professor John Wiggers said "Not only does Good Sports reduce risky drinking at the club, it reduces the overall harm from alcohol both at the club and in other settings."

"Research conducted by KPMG using the trial data shows Good Sports saves the community and government millions of dollars a year treating alcohol-related harms. It found that every $1 invested in Good Sports clubs returns more than $4 saved in alcohol-related harm." said Professor Wiggers.

Source: Tackling risky alcohol consumption in sport: a cluster randomised controlled trial of an alcohol management intervention with community football clubs. J Epidemiol Community Health doi:10.1136/jech-2014-204984. M Kingsland, L Wolfenden, J Tindall , BC Rowland, C Lecathelinais, K Gillham, P Dodds, MN Sidey, JC Rogerson, P McElduff, I Crundall, JH Wiggers.

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

## AIM Mission Statement

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

## AIM SOCIAL, SCIENTIFIC AND MEDICAL COUNCIL