

## J-shaped Curve for All Cause Mortality for Moderate Drinkers Confirmed by Comprehensive 23 Year Study

**The new year has seen a rush of new research being published on alcohol and health, the most important referring to the elderly and to heart disease and all cause mortality**

A comprehensive paper by Doll R, Peto R et al. Mortality in relation to alcohol consumption: a prospective study among male British doctors, published in *International J Epidemiol* 2005;34:199–204 related alcohol consumption patterns to mortality in an elderly population of 12,000 male British doctors over 23-years. The candidates were aged between 48–78 years in 1978.

As expected, vascular disease and respiratory disease accounted for more than half of all the deaths and were both significantly less common among current than among non-drinkers; hence, overall mortality was also significantly lower (RR = 0.81, CI 0.76–0.87,  $P = 0.001$ ) The authors conclude that although some of the apparently protective effect of alcohol against disease is artefactual, some of it is real.

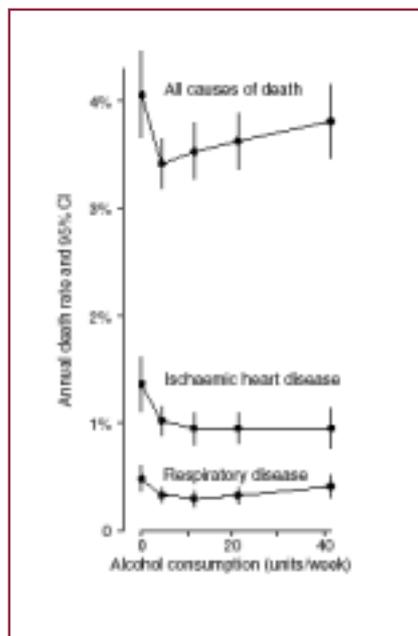
The British physicians consumed an average of 2-3 British units/day (1 ½ to 2 US drinks per day). There had been 7,000 deaths by the time of the survey and, as in earlier reports from this study, the physicians who were moderate drinkers had lower death rates.

For the latter part of their observational period, the authors had data on the amount of alcohol consumed, and found the lowest risk of ischemic heart disease death at 15-28 units/week (about 10-18 US “drinks”/week) and for total mortality at 8-14 units/week. This is in line with UK and US sensible drinking guidelines, although these results may differ for a female population (see analysis on page 6 & 8).

Mortality risks for ex-drinkers differed according to when they quit, with long-term ex-drinkers having the same risk

as life-time abstainers and recent ex-drinkers having risks even higher than current drinkers.

In the table, the points of alcohol consumption are the mean values of each category (4.4, 11.5, 21.2, and 41.5 units/week, respectively). Deaths from ischemic heart disease, respiratory disease, and total mortality were significantly lower among the moderate drinkers.



In the study, the causes of death that are already known to be augmentable by alcohol accounted for 5% of the deaths (1% liver disease, 2% cancer of the mouth, pharynx, larynx, or esophagus, and 2% external causes of death) and occurred among men consuming well above > 2 units/day.

Room R et al. of Stockholm University in Sweden, in an article ‘Alcohol and Public Health’ published in *The Lancet* (2005;365:519-30) concentrates on that percentage stating that alcohol is linked to more than 60 different medical conditions, including oral, liver and breast cancers, heart disease, stroke and cirrhosis.

### Contents

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

<b>Social and Policy News</b>	<b>3</b>
<b>Medical News</b>	<b>6</b>
<b>Articles</b>	<b>11</b>
<b>Alcohol and Health - The Current Picture</b> <i>by Harvey E. Finkel MD</i>	
<b>US Government Releases the Dietary Guidelines for Americans 2005</b> <i>by Elisabeth Holmgren</i>	<b>13</b>
<b>Reviews</b>	<b>14</b>

It also increases the risk of car accidents, drowning, falls and homicides. “Overall, 4 percent of the global burden of disease is attributable to alcohol, which accounts for about as much death and disability globally as tobacco and hypertension,” said Professor Robin Room of Stockholm University in Sweden.

Room calls for a 10% rise in taxes in a bid to reduce per capita consumption rather than targeted approaches to help dependent drinkers, or to counter binge drinking.

In an altogether more balanced approach La Vecchia C et al assess the risk/benefit of lower cardiovascular disease against the increased risk of cancer from heavy drinking (Wine, alcohol and disease:less cardiovascular disease, more cancer? *J Thromb Haemost* 2004;2:2045–2046).

The authors conducted a meta-analysis of 156 papers on 15 alcohol-related conditions, including a total of 116,706 cases. Heavy alcohol drinking was strongly related to the diseases considered: the model-based relative risk (RR) estimates for an intake of 100 g of ethanol per day (about 8 typical “drinks”) were 6.4 for cancer of the oral cancer and pharynx, 3.6 of the esophagus, 3.8 of the larynx, 1.2 of the colon, 1.4 of the rectum, 1.8 of the liver, and 2.4 of the breast.

(Continued on Page 3)

**AIM Digest**  
**PO Box 2282**  
**BATH, BA1 2QY, UK**  
**Tel: (44) (0)1225 471444**  
**Fax: (44) (0)1225 427444**  
**e-mail: [info@Aim-Digest.com](mailto:info@Aim-Digest.com)**  
**Web sites: [www.aim-digest.com](http://www.aim-digest.com)**

**[www.drinkingandyou.com](http://www.drinkingandyou.com)**

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[Sherry.Webster@Aim-Digest.com](mailto:Sherry.Webster@Aim-Digest.com)

**Peter Duff** – Executive Chairman,  
 tel: (44) (0)1225 471444  
 email: [Peter.Duff@Aim-Digest.com](mailto:Peter.Duff@Aim-Digest.com)

**Helena Conibear** – Editorial Director,  
 tel: (44) (0)1300 341601  
 email: [Helena.Conibear@Aim-Digest.com](mailto:Helena.Conibear@Aim-Digest.com)

**Elisabeth Holmgren** – Director of US Operations  
 tel: 001 925 9343226  
 email: [Elisabeth.Holmgren@Aim-Digest.com](mailto:Elisabeth.Holmgren@Aim-Digest.com)

**Sherry Webster** – Communications Manager  
 tel: (44) (0)1225 471444  
 email: [Sherry.Webster@Aim-Digest.com](mailto:Sherry.Webster@Aim-Digest.com)

**Alison Rees** - Assistant Editor  
 email: [Alison.Rees@Aim.Digest.com](mailto:Alison.Rees@Aim.Digest.com)

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 PO Box 2282, BATH, BA1 2QY,

## FRANCE

In response to demonstrations and representations from the wine industry in 2004, the French government has set up a 'Conseil de la Moderation' which will form a 'think tank' for policies relating to wine and the way in which it is portrayed in advertisements and elsewhere. Jean-Marie Poirier, a politician from the Val de Marne region of France, has been appointed as head of the new council which will bring together the French wine industry, health professionals and people in charge of road safety.

## HONG KONG

The Hong Kong government seems likely to reduce taxes on wines and spirits. They have opened a comment period to determine whether the current tax system is still appropriate.

An economic upturn in Hong Kong and improvement in local finances has given the government greater room for manoeuvre, even though it still has to achieve a balance between tax revenue and encouraging the expansion of an industry seriously hampered by high taxes.

Various options have been put forward for comment: the first would be to implement a mixed system still based on ad valorem taxes but with a maximum amount (300 HKD for wines and 500 HKD for spirits), the second is to introduce specific amounts of duty (which might be 15 or 20 HKD per bottle) and the third is to reduce current excise duty to bring it in line with duty in neighbouring countries.

## BRAZIL

Brazil's authorities are to increase their control of spirits by modifying the country's tax stamps. The country's Federal Revenue Department has revealed plans to make the stamps more difficult to falsify.

The number of falsified stamps seized by the Revenue Department last year rose to 94,894 from 67,931 in 2003. The current version of tax stamps will expire on 30 June, with producers having from that date until 31 July to return their stamps to the Revenue Department and be sent an updated version.

## RUSSIA

The Russian Parliament has voted in favour of an amended beer drinking bill that forbids the sale of beer and beer based products in children's educational institutions, medical organisations, on public transport and to underage children.

Also, the Russian authorities look likely to take tighter control of the sale of high-alcohol beverages. The Agriculture Ministry is now working on a bill to give the state control of the production and sales of hard alcohol, which could be approved later this year.

Russia's Agriculture Minister, Alexei Gordeyev, is in favour of the Government creating a state monopoly for the distribution of hard alcohol in the country believing that it would help the government strengthen its control over "grey" sales of alcohol, which now amount to around US\$1.1bn a year.

## SWEDEN

Taxation and customs commissioner Laszlo Kovacs and the Swedish Finance Minister Pear Nuder have agreed on the need to find a solution to distortions caused by widely divergent taxation rates on alcohol and the health concerns of countries like Sweden. The Swedish government has postponed a decision over cutting the country's alcohol tax until the autumn. The tax cuts are proposed to reduce consumers crossing the border into neighbouring Denmark and Finland and Estonia to buy their drinks where taxes are lower. The plan has met with some opposition from within parliament from parties who feared lower prices would give rise to increased alcohol abuse. In Sweden, taxation on alcohol is among the highest in the EU.

## PHILIPPINES

Brewers in the Philippines have increased the price of beer on their domestic market. Beer prices in the country were increased in February by as much as 14% a bottle.

The Philippine Government passed a new law in December last year, increasing taxes on products such as beer, liquor and cigarettes.

## Scotlands to Review Current Liquor Licensing

'Alcohol Focus Scotland's alcohol promotions forum facilitated an event for the Scottish Executive to look closely at the issues surrounding irresponsible alcohol promotions and ways in which they could be tackled in the forthcoming Liquor Licensing Review.

Professor John Davies, Director of the Centre for Applied Psychology, University of Strathclyde and Professor Gerard Hastings, Director of the Centre for Social Marketing, University of Strathclyde gave presentations on the issues surrounding promotions, such as, whether changing laws would impact on binge drinking, giving examples of highly irresponsible promotions and products aimed at young drinkers with high appeal to under 18s.

Workgroups explored responsible promotions and existing schemes to curtail irresponsible promotions, such as in Perth & Kinross and Glasgow. Groups also considered the merits and demerits

of minimum pricing and whether minimums should be set at local or national levels, differential pricing and prohibition of 2 for 1, happy hours and magic glass promotions, and whether new rules on promotions should apply to off-sales as well as on sales. Comments and discussion will assist with the drafting of the Licensing Bill, which is expected to be introduced in the Scottish Parliament shortly.

'Alcohol Focus Scotland' has also called for deep discounting by the main supermarket chains, to be clamped down on in exactly the same way as cheap drink promotions in pubs and clubs.

Alcohol is now almost 50% more affordable (in relative terms) than it was 20 years ago. Supermarkets are currently selling cans of strong cider and beer for as little as 40p, bottles of spirits for £7, and offering promotions such as buy 4 alcopops, get 4 free, and buy 1 case of

lager, get the second half price. 'Alcohol Focus Scotland' say prices this low are not sending out the right message to the public. There is no doubt that deep discounting encourages people to buy and consume more than they might normally, and over a period of time this can lead to people drinking at harmful levels.

Jack Law, Chief Executive of Alcohol Focus Scotland, said 'There is no point in regulating one section of the market without regulating the other – people's drinking will simply shift from pubs into the home. If people can buy cheap drink from the corner shop or supermarket then they will drink more before heading out, and pubs will have to deal with a lot of drunk customers. The forthcoming licensing legislation must look at both the on and off-trade – if it fails to address this issue then it will be a lost opportunity as it is likely to be a long time before licensing law is reviewed again.'

## State Patrol Superintendent Teams With NBWA

Nebraska State Patrol Superintendent Colonel Tom Nesbitt recently teamed with the National Beer Wholesalers Association (NBWA) and Nebraska Beer Wholesalers Association to produce a radio public service announcement urging citizens to do their part in the fight against drunk driving and illegal underage drinking by working together and practicing responsibility.

The 30 and 60-second radio spots are a part of NBWA's ongoing alcohol awareness campaign that includes state elected officials from across the country. The Announcements urge listeners to do their part to stop irresponsible and illegal consumption of alcohol, saying "If you choose to drink, please do so responsibly. Never drink to excess and never drive drunk." the advertisement also reminds teens that consuming alcohol is illegal, unhealthy and unacceptable.

## J-shaped Curve for All Cause Mortality for Moderate Drinkers (Continued from Front Page)

For non-neoplastic conditions, corresponding RR estimates for 100 g/day were 4.2 for essential hypertension, 1.1 for coronary heart disease, 4.4 for ischemic stroke, 4.1 for hemorrhagic stroke, 26.5 for cirrhosis, 3.2 for chronic pancreatitis, and 1.6 for injury and violence. For < 25 g/day (about 2 typical drinks), the analyses showed risk ratios less than 1.0 for coronary heart disease, ischemic stroke, and gastro-duodenal ulcer.

The authors conclude that the unfavourable effects of heavy alcohol drinking on health are clearly established.

It describes the increases in the relative risk of a number of cancers and other conditions associated with the consumption of 100 g/day (sensible drinking guidelines vary from country to country between 14g and 24g for women and 24 –32g/day for men). The paper emphasized the need for more research on a clear cut off point at which point drinking becomes 'hazardous for health'.

As ever, the moderation message is clearly confirmed by Doll and La Vecchia; the consumption of alcohol at levels within sensible drinking guidelines reduces your risk of overall mortality.

## 10 Percent of US Women Drink Whilst Pregnant

About 10% of pregnant women use alcohol, and roughly 2 % binge drink or drink frequently, according to a recent study from the federal Centers for Disease Control and Prevention (CDC).

CDC researchers used data from the 2002 Behavioral Risk Factor Surveillance System survey, specifically looking at women ages 18-44 who are or might become pregnant. Participants were questioned on their alcohol use in the previous 30 days; binge drinking was defined as having 5 or more drinks at one sitting, while frequent drinking was defined as consuming seven or more drinks per week.

The CDC also reported that among women not using birth control, half used alcohol and 12.4 percent engaged in binge drinking.

Source: Alcohol Consumption Among Women Who Are Pregnant or Who Might Become Pregnant — United States, 2002. *MMWR* 2004;53:1178-81.

## DISCUS to Make Advertising Complaints Public

The Distilled Spirits Council is to publish a report about complaints on specific alcohol advertisements, decisions of the industry's internal review board and actions taken by each advertiser, for the first time in its 70-year history. Up until now, the distilled spirits industry has relied on self-regulation through the industry's voluntary advertising code. The issuance of public reports will make the spirits industry's self-regulatory process more visible, transparent and understandable to the public.

DISCUS's Code of Responsible Practices for Beverage Alcohol Advertising and Marketing provides for a Code Review Board, comprised of senior member company representatives. It will review complaints about

advertising and marketing materials in the marketplace. Additionally, the Code includes an advisory board made up of outside experts from academia, government and broadcasting.

The first report, released at the beginning of March, includes 15 complaints about the content or placement of specific distilled spirits print advertisements, marketing and website materials that ran in 2004. Each complaint summary in the report identifies the advertisement, advertiser, nature of the complaint, the Code review Board decision and the subsequent action of the advertiser. The report also provides information on how to file a complaint. Future public complaint reports will be issued semi-annually.

## ABI Questions Drink Drive Proposals

The US state of North Carolina is considering a two-tier drink driving law. Senator Brock proposed making a separate legal tier for parents of children under seventeen, forbidding them to have any amount of alcohol in their system when driving with the child. Violators would be treated as drunk drivers and punished as such.

American Beverage Institute executive director John Doyle commented on the proposal "Senator Brock intends to criminalize parents that have even one

beer at a ball game, a glass of wine at dinner or even take communion at church. The ABI argues that this legislation is missing the mark in addressing the true source of today's drunk driving problem - high blood alcohol content drivers and repeat offenders. Doyle argues that focusing on responsible parents that are not a threat to the roads demonstrates that Senator Brock's legislation has more to do with an anti-alcohol agenda than highway safety.

## Young Europeans Contribute to Discussion Commercial Communication Code for Drinks Industry

A report from the commercial communication workshop held in October 2004 hosted by Generation Europe SA in partnership with the Amsterdam Group, the European Forum for Responsible Drinking, has recently been published. This consultation forms part of the Amsterdam Group's commitment to engage with important stakeholder groups on relevant issues, in this case 18 young people from 13 European countries aged 19-29. Commercial communication is an issue that is relevant particularly for youth as a distinct, yet highly diverse, stakeholder group.

The objective of the consultation was to gain a detailed picture of what young

people perceive to be acceptable and unacceptable advertising of alcohol products, to review the Common Standards against their expectations and conduct an evaluation of the provisions of the Common Standards, and to solicit young peoples' feedback about how they might be improved.

Overall, participants' views were not extreme - attendees accepted that self-regulation is in theory a good idea, but in practice, and in order for the system to retain credibility in the eyes of young Europeans self-regulation must be accompanied by enforcement mechanisms that go beyond "naming and shaming" those found to be in breach of codes of responsible marketing conduct.

## EU Health Minister Gives RTD Warning

The European drinks industry has been handed a warning about the marketing of drinks to underage consumers. Markos Kyprianou, the EU commissioner for health and consumer protection, has stated that he wants Europeans to make "informed choices" about their diets and health. However, he added, with children and the young, the drinks industry will be given a chance to self-regulate but, if self-regulation fails, action will follow. Kyprianou specifically singled out alcopops, as products that he believes encourage young people to drink. He stated that if it is proved that the main market for alcopops is young people, then something will have to be done about it.

## Diageo launch US social responsibility ad

Diageo is to launch a social responsibility national television commercial in the US around its Crown Royal brand's inaugural sponsorship of reigning Nextel Cup champion Kurt Busch and Roush Racing's No. 97 race team.

It is the first NASCAR-themed spirits television ad since NASCAR announced it was allowing spirits companies to sponsor race teams. Titled "Pace Car," the ad is punctuated with a voice over declaring, "Pacing is everything, especially when drinking," and closes with the brand's social responsibility tagline, "Be a Champion. Drink Responsibly."

Other suggestions include that a clear and vigorous interpretation of "misuse" is required; the drinks industry should examine how best to encourage responsible consumption; a system of certifying advertisements as suitable for particular audiences should be considered; every advert should display the telephone number of the national SRO; there is a need for better display of alcohol content on packaging and in advertising; sport and physical performance should not be linked to alcohol; athletes should provide examples of alternatives to alcohol consumption; and sponsorship is an area where further action is required.

## Church of Ireland Concerned over Teenage Drinking

The Church of Ireland has called on the drinks industry to monitor which alcoholic beverages and what quantities young people drink, and has suggested that parents should show greater interest in what their children are doing outside the home.

Launching the church's 'Alcohol in the Life of Young People' document in Dublin, its primate Archbishop Robin Eames stated: "In the Republic, there has been a 370% increase in levels of

intoxication in public places by underage drinkers since 1996".

"60% of boys and 54% of girls aged between 15 and 17 years of age admit to having been 'really drunk'," he continued. "One in five cases of emergency admissions to Irish hospitals are alcohol related.....In Northern Ireland the statistics are just as dramatic. Almost 80% of teenagers surveyed claim to have consumed alcohol by the age of 16."

Describing the Alcohol in the Life of Young People document as "one of the most important church reports on young people for some time" he welcomed it as "a serious and balanced study".

Alcohol is "an issue for the whole of society and, as well as looking at how we can educate young people about the effects of over-indulgence in alcohol, this report looks at how people in other countries are tackling the same issues," he said.

## Health Warnings on Alcohol Products in Australia

The Australian Medical Association is calling on the Federal Government to legislate for health warnings on all alcohol products. AMA president Dr Bill Glasson said the Australian public, especially young people, should be fully informed about the harmful effects of alcohol misuse in the same way they are warned of the health risks associated with smoking. "The most effective way to do this is to label alcoholic drinks with clear warnings and health information. Every bottle or can of alcoholic beverage would remind consumers about the harmful effects of alcohol just as smokers are reminded that smoking kills every

time they buy a packet of cigarettes," Dr Glasson said. The difference between smoking and drinking however, is that cigarettes have no health benefits whatsoever.

Some suggested warnings are: Drinking Alcohol During Pregnancy Can Damage Your Baby; Drinking Alcohol Affects Your Ability To Drive A Car Or Operate Machinery ; Drinking Too Much Alcohol Causes Cancer, Liver Disease and Stroke; Drinking Too Much Alcohol Can Make You Violent. The AMA is justifying its call by pointing to similar initiatives currently being mulled in New Zealand, the UK, France and Japan.

The Australian Wine Research Institute argue that health warning labels implemented in other countries, particularly the US appear ineffective in changing consumer behaviour, where awareness and knowledge of labels are now not necessarily associated with behavioural change. This lack of linkage applies particularly to the two at risk groups; young people and habitual consumers of alcohol. While generally more aware of the potential harms associated with their behaviour, these groups are also less likely to modify their risky behaviour than 'not at risk' consumers.

## Social Victims of Norwegian Heavy Drinking

Amidst concerns about the increasing number of young people regularly drinking to excess, this study asks 'Who are the other victims affected by heavy drinkers?'

Ingeborg Rossow and Ragnar Hauge, of the Norwegian Institute for Drug and Alcohol research, interviewed 2,170 people in Norway, a country experiencing similar drinking trends to those in the U.K, especially regarding the increasingly frequent binge drinking of younger women.

The researchers enlisted a random sample of households and interviewed one person (aged 15 years or older) from each household. Respondents were asked whether, and how often, in the last year, a drunken person (or persons) had 'harassed or bothered them' in public, or at a private party; hurt them physically; damaged them or their property; verbally abused them; frightened them in the street; or kept them awake at night. The

interviewers also asked them about their own drinking behaviour, including frequency of visiting public drinking places.

Almost a third (over 30%) had been affected by a drunken person in one of these ways over the previous year. Over 21% reported being kept awake at night, but less than 5% reported more severe consequences (being physically hurt, or damage of clothes or belongings). Younger people were more likely than older people to report such 'problems' – as were women, heavier drinkers and those who frequented public drinking places. Young women who frequented bars and got drunk were the most likely to report having suffered in some way because of other people's drunken behaviour. These findings highlight the link between heavy drinking and victimization: those who drink heavily and/or frequently are more likely to be harmed – often repeatedly – by drunken people.

The authors note that "the cost of drinking in terms of the social harms seems, largely, to be paid for by the heavy drinkers themselves, and particularly the young ones." It does not seem to be a question of 'bad guys' (or 'drunks') and innocent (sober) victims. It is rather that "heavy drinkers fill the roles of both villain and victim when it comes to social harm from drinking." The Norwegian findings add further concern regarding the problem of young women and alcohol. It seems that women's risk of interacting with drunken people in public places is much higher nowadays as compared with some years ago – and women seem to suffer more than men do from the range of social harms from others' drinking.

Who pays for the drinking? Characteristics of the extent and distribution of social harms from others' drinking. *Addiction* (2004), 99, 1094–1102. Rossow, I., & Hauge, R., Norwegian Institute for Drug and Alcohol Research, Oslo, Norway.

## Alcohol and Cognitive Function in Women

The controversial paper by Stampfer MJ et al looked at moderate consumption and cognitive function in women (NEJM 2005;352:245-253). Using data collected between 1995 and 2001, the authors evaluated cognitive function in 12,480 participants in the Nurses' Health Study who were 70-81 years old, with follow-up assessments in 11,102 two years later.

Among moderate drinkers, as compared with nondrinkers, the relative risk (RR) of impairment was 0.77 on the test of general cognition (95% CI: 0.67, 0.88) and 0.81 on the global cognitive score (95% CI: 0.70, 0.93). The results for cognitive decline were similar; In this very large study of women aged 70-81, those who consumed up to 15 g/day of alcohol (an average of up to a little over one "typical drink" per day) had about 20% better cognition and memory than nondrinkers. For example, the RR for substantial decline in the cognitive function score over a 2-year period was 0.85 for moderate drinkers (versus nondrinkers), with 95% CI: 0.74, 0.98). There were no significant associations between higher levels of drinking (15 – 30g/day), but heavier drinkers were not studied. There were no significant differences according to type of beverage. The apoE genotype was also studied, but different genotypes gave similar results. The authors conclude: **"Our data suggest that up to one drink per day does not impair cognitive function and may actually decrease the risk of cognitive decline."**

The authors excluded women who had recently changed their alcohol intake (to exclude people who may have changed their intake due to health problems), ex-drinkers, and also the few women reporting more than 30 g/day, so that their focus was on stable moderate drinkers (versus nondrinkers).

The instrument they used to judge cognitive functioning has been validated as giving reliable indices of general cognition and verbal memory. In their study, 51% were nondrinkers, 44% in the 1.0 - 14.9 g/day (up to a little more than one typical drink, which is usually

considered to be about 12 g), and 5% (648 subjects) reported 15 - 30 g/day.

The upper limit for alcohol consumption associated with improved cognition might be up to 30 g/day, although the findings in the higher-consumption group were not statistically significant.

These results are similar to many other recent studies showing a decrease in the risk of cognitive dysfunction and dementia for moderate drinkers. While the authors in the present study adjusted for education, they did not include pattern of drinking in their analyses.

The authors point out that cognition normally declines with age. They suggest that the degree of protection from 1.0 - 14.9 g/day of alcohol is the cognitive equivalent of being about one and one-half years younger. The authors conclude "Although the adverse effects of excessive alcohol intake are well known and caution should be exercised in recommending even moderate alcohol intake, our results combined with those of other studies suggest that women who consume up to one drink per day have less cognitive impairment and better cognitive function than nondrinkers."

An editorial by Evans DA, Bienias JL et al counters Stampfer's results, stating that demonstrating definitively that the changes in cognition seen in this study were actually attributable to alcohol consumption is impossible, since this was an observational study and not a trial. However, the investigators realized this and they described approaches they used in attempting to deal with such a limitation. The observed effect of cognitive change to alcohol, could be confounded by the fact that healthier people may be the ones drinking, so the effects being attributed to alcohol are really due to their general good health. In response to this, it can be pointed out that (1) Stampfer et al adjusted their analyses for a number of social and health characteristics that strongly relate to cognitive function and, more importantly, that such adjustments had little effect on their estimates; (2) that in the follow-up analyses the

investigators adjusted for the baseline cognitive values and still demonstrated a decreased risk of dysfunction to be associated with drinking; (3) that the analyses excluded people who changed their intake in the years preceding the study, so persons who may have been beginning to decrease their intake because of increasing dementia were not included, (4) that similar effects were seen for all beverages (whereas social and educational factors tend to differ by beverage), and (5) most importantly, that most previous large studies from markedly different populations around the world have also found protection against cognitive decline from moderate drinking. All of these factors strongly suggest that the direction of the observed effect is, in all probability, correct.

R. Curtis Ellison, MD, Institute on Lifestyle & Health at Boston University comments 'I personally feel that there is very strong evidence from observational studies, animal experiments, and even certain objective measures in humans (from arterial function studies, brain scans, etc.) that there is no harm in terms of many of the problems of aging from moderate alcohol use, and strong suggestions of benefit for coronary disease, ischemic stroke, and (from this and many other studies) even cognitive decline. There are theoretical worries that any encouragement to the elderly to drink moderately will lead many to become abusers of alcohol, but I await evidence of the extent that this occurs among patients being encouraged to drink by their doctors. While being cautious about recommending alcohol use to the general public makes sense, I am less concerned about a physician who knows the medical and social history of an individual patient encouraging him or her to consume small amounts of alcohol, given no contraindications. "Do no harm" should dictate physicians' practices, but doing harm can occur from sins of omission as well as sins of commission.'

## Study Isolates Role of Polyphenols in Isolation from Alcohol

An new study has isolated an additional role of polyphenols in cardiovascular disease reduction.

The study on rats, which assessed the role of an alcohol free red wine on the cholesterol rich diet of the rats proved that the polyphenols had a marked effect on decreased adherence of platelets (their stickiness) and prolonged clotting time. This protection against clotting occurred whether the red-wine substances were given throughout the 5-month trial or only added for the last month, suggesting that much of the effects are short term.' The message often reiterated is 'little and often'.

The study suggests that whereas the polyphenols from wine have little effect on lipids, they may have important effects

on coagulation. In lay terms this means alcohol-free wine has no effect on high blood cholesterol levels of animals given a very high-cholesterol diet, but markedly decreased the tendency for blood to clot. Alcohol (from any alcoholic beverage) is known to stimulate an increase in beneficial HDL-cholesterol, and to reduce the damaging LDL's associated with a cholesterol rich diet and this study points out that the additional substances in wine, or indeed dark beers and ciders may be important in blocking the increased clotting tendency that occurs with a high-fat diet.

Compared with animals fed a standard diet, those on the cholesterol-rich diet showed a several-fold increase in lipids and FVII levels with a concomitant

significant increase in both thrombotic tendency and platelet adhesion.

Alcohol-free red wine supplementation almost completely reverted the prothrombotic effect of the cholesterol-rich diet. Indeed, the OT was prolonged from 78 to 122 (P<0.01), while platelet adhesion to fibrillar collagen was reduced from 49 to 2.8%. Neither the increase in lipid levels induced by the cholesterol-enriched diet nor FVII or fibrinogen levels were modified by wine supplementation.

Source: De Curtis A, et al Alcohol-free red wine prevents arterial thrombosis in dietary-induced hypercholesterolemic rats: experimental support for the 'French paradox'. *J Thromb Haemost* 2005;3:346-350.

## Use of Oral Contraceptives, Alcohol, and Risk for Invasive Breast Cancer

A direct association between moderate drinking and breast cancer incidence has been found in most epidemiological studies albeit the association is less clear for premenopausal than for postmenopausal women. The underlying mechanisms are not firmly established but may include an influence on circulating oestrogen, immune function, enhanced permeability of chemical carcinogens, decreased absorption of nutrients or the established carcinogen acetaldehyde. The aim of this study was to examine, in a large prospective population-based follow-up study, the Norwegian Women and Cancer Study (NOWAC), how the use of oral contraceptives (OC) interacts with alcohol on breast cancer risk.

Between January 1991 and January 1997, a total of 179,388 women aged 30-70 from the general population of Norway drawn at random from the central person register were invited to participate in the NOWAC cohort. The study questionnaire contained 28 dietary questions including four questions about alcohol use (alcohol use per se and, for drinkers, average frequency of use of beer, wine and spirits). On the basis of these answers, women were classified as non- drinkers, light drinkers (<2 drinks/week), moderate drinkers (2-4 drinks/

week) and heavy drinkers (>4 drinks/week).

A total of 1,130 cases of invasive breast cancer were diagnosed during 618,638 person-years of follow-up. Use of >10 g alcohol per day was associated with a PR of 1.69 (95% CI 1.32-2.15), consistent with a linear relationship (P<0.0001 for trend). Among drinkers, an excess risk of breast cancer was found for total duration of OC use only for those drinking less than 5 g/day (P = 0.0009 for trend). Duration of OC showed a negative interaction with alcohol consumption effects (P = 0.01 for interaction). The association between heavy drinking and breast cancer risk was more prominent for postmenopausal than for premenopausal women (P = 0.01 for heterogeneity). There was no interaction between alcohol use and duration of OC use after stratification on menopausal status

These findings, in conjunction with biological data, imply that alcohol use and OC use have antagonistic effects on breast cancer risk through a common pathway. Whether the interactive effect differs by menopausal status remains to be clarified.

Source: Dumeaux V, Lund E, Hjartiker A. Use of oral contraceptives, alcohol, and risk for invasive breast cancer. *Cancer Epidemiol Biomarkers Prev* 13 (2004) 1302-1307.

## Alcohol and Bone Mineral Density

Researchers at St. Thomas' Hospital in London, UK have found that moderate consumption of alcohol is associated with slightly higher bone mineral density (BMD) in women.

Dr. F. Williams and colleagues conducted a twin study to examine the effect of moderate alcohol consumption on BMD and fracture risk after controlling for genetic effects and other potential risk factors. The team assessed BMD at the hip and lower spine in 46 pairs of identical twins who consumed different amounts of alcohol.

The twins identified as 'minimal drinkers' consumed a mean of 0.2 units of alcohol per week, while those identified as 'drinkers' consumed a mean of 8.0 units per week. The drinkers and minimal drinkers had mean BMD values of 0.982 and 0.964 grams per square centimeter, respectively, at the hip, and 1.020 and 1.011 grams per square centimeter at the spine.

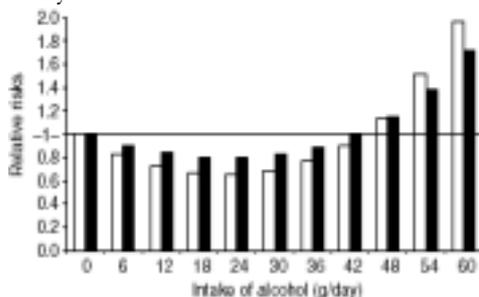
"Alcohol consumption was found to be positively associated with BMD at the lumbar spine and sites at the hip reflecting both cortical and trabecular bone," Dr. Williams' team reports.

Source: Williams FMK et al. The effect of moderate alcohol consumption on bone mineral density: a study of female twins. *Annals of the Rheumatic Diseases* 2005;64:309-10.

## Is Wine or Alcohol More Beneficial in Women?

An inverse association between low to moderate alcohol intake and cardiovascular disease (CVD) has been demonstrated in many studies, but whether or not males and females differ in their response to alcohol is not known. This study tested whether alcohol effects differ by sex. The investigators performed a new meta-analysis of studies reporting dose-response effect of alcohol intake on vascular risk, separately for males and females. The study included altogether 184,791 persons across 12 studies. Dose-response curves (relative risks at different amounts of alcohol intake) for each study were used to construct an average “trend” curve for both men and women. The best fitting models include a negative linear term and a positive quadratic term, resulting in a “J-shaped curve,” similar to that previously reported for studies on general populations.

The authors report that the predicted dose-response models were very similar for both sexes, but the estimates of effect were slightly greater for women. At 12 g of ethanol per day the relative risk was 0.83 in males and 0.72 in females. A maximum reduction of 0.80 in males and 0.66 in females was predicted in both groups at 18-24 g of ethanol per day, but statistical significance was only reached up to the amount of 12 g of ethanol per day.



The graph above from the paper shows the predicted relative risks for vascular disease for different categories of alcohol consumption, separately for females (white bars) and males (black bars). The reference was the category of no consumption.

**The figure shows that the protection against vascular disease is greater for women at lower levels of alcohol intake, whereas at the upper levels, adverse effects was higher for women than for men.**

The authors state that a better effect of alcohol in women might be explained by several factors, such as increased high density lipoprotein cholesterol levels, better endothelial protective effects, or decreased insulin resistance; or because equivalent alcohol doses result in higher blood levels of alcohol in women due to women’s smaller size, larger body fat proportion, and reduced gastric metabolism of ethanol. The latter interpretation seems to be consistent with the data presented, that the small (though non-significant) advantage of women over men observed at the lowest amounts of alcohol was lost and even reversed at the highest doses.

The authors point out that one should also consider that men binge-drink more frequently than women. As a different sex-related protective role of alcohol was mainly observed for wine consumption in a meta-analysis by the authors, and in the study of Klatsky et al (in which women were more likely to drink wine), the authors cannot exclude that sex-related differences might be related not only to alcohol itself, but also to additional properties of wine. They were

unable, however, to retrieve studies evaluating wine effects in comparable groups of male and female subjects.

Finally, the protective effect of moderate alcohol consumption has also been related to the regions where studies were conducted; e.g., in the Mediterranean area, the effect of alcohol appears to be stronger than in other areas, and this can be partially explained by the different pattern of consumption (generally, the regular consumption of wine with meals). However, the authors could not collect enough information on sex-related effect of alcohol in different regions, because 11 out of 12 studies included in their meta-analysis were conducted in non-Mediterranean areas. Thus, a sex-related difference of alcohol or wine might be confined to Mediterranean populations.

The authors conclude that large studies are needed to test either whether women are more susceptible to the benefit of wine (or alcohol) or whether they are more likely to drink lower amounts, thus taking its maximal advantage. In relation to the reported association between even moderate alcohol consumption and increased risk of female breast cancer, the overall effect of moderate wine intake may actually be favorable in postmenopausal women, in whom the protective effect on cardiovascular events might overcome the risk of breast cancer, but further epidemiological evidence is needed to definitely assess this important issue.

Source: Di Castelnuovo A, Iacoviello L, Furman K, Donati MB, de Gaetano G. Wine, alcohol and cardiovascular risk: open issue. Is wine or alcohol more beneficial in women? *J Thromb Haemost* 2004;2:2042-2044.

## Beer May Raise Gout Risk, Wine May Not

Harvard researchers have found that there is a substantial difference between alcoholic drinks in their effect on blood levels of uric acid, and this could affect the likelihood of developing gout. In the medical journal *Arthritis and Rheumatism* they report “**beer confers a larger increase than liquor, whereas moderate wine drinking does not increase serum uric acid levels.**”

Because of this, and because gout is caused by the deposition of uric acid

crystals in joints, different drinks may result in “variation in the risk of incident gout,” Drs. Hyon K. Choi and Gary Curhan, from Harvard School of Public Health, Boston, conclude.

The researchers examined the association between consumption of beer, liquor, and wine in relation to blood levels of uric acid in a nationally representative sample of subjects.

Uric acid levels were greatest for high beer consumers, followed by those with

the highest intake of liquor. No association was found between wine intake and uric acid levels. This pattern held true for men and women, and for all categories of body weight.

Source: Choi HK et al. Beer, liquor, and wine consumption and serum uric acid level: The Third National Health and Nutrition Examination Survey. *Arthritis Care & Research* 2004;51:1023-9.

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**AIM – Alcohol in Moderation was founded in 1991 as an independent organisation whose role is to communicate ‘The Sensible Drinking Message’ and to act as a conduit for information from the industry, associations and relevant medical and scientific research, legislation, policy and campaigns.**

#### **AIM Mission Statement**

- **To promote the sensible and responsible consumption of alcohol**
- **To encourage informed debate on alcohol issues**
- **To communicate and publicise relevant medical and scientific research in a clear and concise format via AIM Digest and the AIM Research Highlights**
- **To publish information via the ‘AIM Gateway to Sensible Drinking and Health’ website containing a unique archive of research on moderate drinking and health – comprehensively indexed and fully searchable**
- **To publish information to the consumer on sensible drinking and health via the ‘Drinking and You’ website based on national government guidelines with sections for the UK, USA, Canada, Spain, France Sweden and Germany**
- **To distribute AIM Digest without charge to the media, legislators and researchers involved in alcohol affairs**
- **To direct enquiries from the media and others towards full and accurate sources of information.**

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## Alcohol and Health –The Current Picture

By Harvey E. Finkel, M.D.



The Psalmist (Psalms 104:15) tells us that wine brings joy to life. The Talmud (tractate Baba Bathra) warns, “Only where there is no wine are drugs required.” Shakespeare observes (*Othello* II:iii), “good wine is a good familiar creature if it be well used,” but, “every inordinate cup is unblest and the ingredient is a devil.” That about sums it up, but only centuries later is the science catching up.

A mountain of evidence based upon sound medical science indicates that abstinence can be considered a health risk, that heavy drinking dangerously damages health and shortens life, and that moderate drinking improves health and lengthens life. The J-shaped curve rules. Alcohol itself appears to supply at least half of the ‘cardio- protective’ benefit. Those beverages, red wine, dark beers and traditional ciders in particular, that are imbued with polyphenolic antioxidants are especially salutary. We are just beginning to understand the remarkably complex mechanisms at work.

I have written overviews of wine’s influences upon health from time to time, when it seemed updates were needed. Most are fully referenced (qv). The last in AIM, under the same title, was in 1999. The current piece will review significant developments mainly during the past couple of years.

Most qualified observers continue to believe that the healthiest drinking is moderate in quantity, say two glasses of wine daily for men, one for women, regularly, with meals. All agree that spreading out consumption in modest doses is far better than concentrating one’s drinking. (One well-done study concluded, however, that only the frequency of doses counts, within

reasonable limits of quantity, not what one drinks, nor whether with meals.) We must continue to support research, and to demand that conclusions are based upon objective scientific data.

Cardiovascular disease (atherosclerosis), the most frequent cause of death and disability in the developed world, is the most studied and carries the greatest weight of evidence of the beneficial effects of moderate drinking: dramatic reductions or risk of heart attack, ischemic stroke, and of obstruction of arteries elsewhere in the body. (It takes very prolonged and heavy drinking to damage the heart.) Most of the such benefits can be demonstrated only in those over 40 years of age, but neither the disease nor its alleviation would be apparent in young people. We know that the atherosclerotic process begins early in life, and we all hope to attain older age with healthy hearts and blood vessels.

It is worth reviewing the now numerous cardiovascular risk factors known to be affected by moderate drinking.

Blood fat (lipid) deposition into the walls of arteries in the heart and elsewhere is a prime step in the development of atherosclerosis. Alcohol stimulates the liver to increase production of high-density lipoprotein (HDL) cholesterol, the “good cholesterol,” which purges arteries of low-density lipoprotein (LDL) cholesterol, “ – the bad cholesterol,” and carts it back to the liver for excretion in the bile. Other potentially noxious fats, such as triglyceride and lipoprotein(a), may also be favourably impacted by drinking.

LDL cholesterol is particularly toxic after it is oxidized. Antioxidant polyphenols of wine, and perhaps HDLs, coat LDLs, protecting them from potential oxidation.

A blood clot is the coup de grâce of a heart attack or ischemic stroke, obstructing the flow of blood with its oxygen and nourishment to the unfortunate tissue beyond. Both alcohol and wine’s polyphenols beneficially modulate several

facets of an overactive coagulation cascade. (The risk of much less frequent hemorrhagic strokes is increased by drinking.)

Homocysteine, an amino acid, when overabundant due to genetic factors or lifestyle, encourages harmful blood clotting, and may directly injure arterial walls. Abusers of alcohol are often deficient in the important vitamin folic acid. This deficiency and perhaps alcohol itself may raise the homocysteine level. Supplemental folic acid or vitamins B12 or B6 protect against homocysteine excess.

The inner endothelial layer of the blood vessel wall is a vital working tissue. Nitric oxide elaborated by endothelial cells relaxes vessel walls, allowing freer blood flow, reduces aggregation of platelets, decreasing clot risk, and inhibits excessive muscle growth within the vessel wall. Polyphenols of wine stimulate production of nitric oxide.

A red-wine polyphenol extract strongly inhibits production of endothelin-1, a human peptide that may play a role in the development of coronary disease.

The inflammatory process initiated by endothelial injury is thought to perpetuate the atherosclerotic process. Drinking reduces blood concentrations of C-reactive protein and other signs of inflammation correlating with coronary risk. Gallic acid, a polyphenol of wine, was recently reported to inhibit inflammation, and perhaps thrombosis and cancer.

Wine polyphenols also appear to protect against *Helicobacter pylori* and *Chlamydia pneumoniae*, bacteria suspected of provoking atherosclerosis. They both make other mischief (see below).

Diabetes mellitus, a common and dangerous disorder, renders its sufferers highly susceptible to atherosclerosis, often at unusually young age. Moderate drinking

protects diabetics at least as much as others, from heart disease and improves insulin sensitivity, thus enhancing control and reducing cardiovascular risk and the risk of developing type 2 diabetes to begin with. Both alcohol and polyphenols are operative. Benefits may be greater among those who drink wine or beer than for spirit drinkers. Dry wine contains almost no carbohydrate and few calories. Diabetics must eat when drinking to avoid hypoglycemia.

Elevated blood pressure (hypertension) a stealthy, potentially disabling and lethal disorder, may be ameliorated by moderate drinking and, in keeping with the J-shaped curve, exacerbated by excessive drinking.

Excessive weight, another well-recognized cardiovascular risk, may be lost with the aid of moderate consumption.

The production of antioxidant polyphenols in the vine, where they act in fungal protection and likely in other ways, is stimulated by various stresses. They help protect wine from premature senility, and contribute to colour, flavour, and texture. Abundant in grape skins, they are found abundantly in red wines, our main source, also to a lesser extent in white wine, beer, especially the darker types, cask-aged spirits, traditional cider and fruits, nuts, and vegetables.

Resveratrol, quercetin, and the catechins are among the most familiar and most biologically active polyphenols. Specific beneficial effects of these compounds continue to be elucidated. Oxidative reactions, part of normal living, additionally incited by smoking, noxious chemicals, radiation, and acetaldehyde, a breakdown product of alcohol, lie at the core of most of the damaging sequences leading to aging, cancer, dementia, immune dysfunction, inflammation, cataract formation, and other degenerative disorders. It is hoped that the antioxidants can inhibit these pathological processes.

Mimicking severe calorie restriction, polyphenols activate sirtuin genes, thus stabilizing DNA and preventing lethal accumulation of toxic products in older cells, in this manner increasing maximum

life span. Resveratrol extends yeast life span by 70 percent. The sirtuins are operative in roundworm, insect, and in mammalian cells, where they play a role in fat metabolism. Research continues.

In addition to anti-inflammatory effects, wine has been found to combat a number of infections. Contrary to what one might assume, it is mostly the polyphenols, not the alcohol, that do the job. Wine effectively inhibits growth of bacterial terrors of the gastrointestinal tract, including *H. pylori*, implicated in causing gastritis, ulcers, stomach cancer, and perhaps atherosclerosis. It likewise retards the virus of hepatitis A and *C. pneumoniae*, a bacterium which causes upper and lower respiratory infections of varying severity and duration, and which also may provoke atherosclerosis.

We know that prolonged excessive consumption of alcohol increases the risk of several cancers. Alcohol can stimulate the growth of blood vessels in tumours, thereby promoting the spread of cancer. There are reasons to believe that antioxidants may help protect against cancer. Still unresolved is the question of whether moderate drinking might increase the risk of breast cancer and perhaps of colorectal cancer. If there is an increase, it is small, and it would appear outweighed by the cardiovascular benefits. (Remember that heart disease is also women's most frequent cause of death.) Individualized risk assessment can be provided only by one's own physician. A recent study found a substantial reduction of prostate cancer, particularly of the more aggressive types, associated with red wine consumption. (Might the wine's contribution of boron have played a role?)

Evidence continues to come in suggesting that even modest drinking may be a bad idea for those trying to conceive and during early pregnancy. Both male and female alcohol intakes of ten or more drinks during the week of conception increased the risk of early pregnancy loss. Women who drank four or more drinks per week had increased risk of preterm delivery, especially those who drank seven or more drinks per week. The female offspring of rats fed low to moderate amounts of alcohol during pregnancy developed more breast tumours than those of abstinent pregnancies. Some adolescent children

of human mothers who had averaged even fewer than one drink per day during pregnancy continued to exhibit growth deficit.

At the other end of life, mental function is of great concern. Studies continue to demonstrate an association between moderate drinking and a substantial reduction in risk of dementia. Of course, heavy drinking is well known to damage the brain and nerves.

The liver, in its sensitivity to alcohol, surprisingly, in one study of rats, regenerated more briskly after injury if the rats partook of light libation. A study of mice suggested that obesity might increase risk of liver damage from drinking. Cirrhosis of the liver remains the chief fatal consequence of prolonged excessive drinking.

Isolated reports on miscellanea continually appear, then await, hopefully, confirmation, or, fearfully, denial or silence. Although of interest, they should not arouse credence. Moderate drinking has been reported to reduce risk of visual loss from macular degeneration, preserve hearing of the elderly, both impair and improve lung function and bone strength. The acidity of wine can erode dental enamel in those who must have wine in their mouths for long periods. The carbon dioxide of Champagne enhances absorption of alcohol.

Finally, a general prescription that is largely common sense and mostly heart healthful, but which cannot be taken as individual advice. If no contraindication and you are so inclined, enjoy wine moderately: say two glasses per day for men, one for non-pregnant women (a US 'drink' is 14g). Drinking regularly with meals is probably best. Red wine, with its higher content of polyphenols, is likely more beneficial than white. Do not binge. Drinking excessively risks damage to your liver, brain, heart, and neighbour's automobile. Wine should be used to enrich life, not medicate it.

Dr. Finkel writes and lectures internationally on wine's influences upon health. He is a member of AIM's Social, Scientific, and Medical Council, an award-winning wine writer, and retired as clinical professor of medicine (hematology/oncology) at the Boston University Medical Center

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## US Government Releases the Dietary Guidelines for Americans 2005 with Emphasis on Weight Control and Physical Activity

The US Department of Health and Human Services (DHHS) and Department of Agriculture (USDA) released the Dietary Guidelines for Americans 2005, which represent the federal government's science-based advice to promote health and reduce risk of chronic diseases through nutrition and physical activity. Eating a healthy balance of nutritious foods continues as a central point in the Dietary Guidelines, but the sixth edition places much stronger emphasis on reducing calorie consumption and increasing physical activity. In a major departure from prior reports, DHHS and USDA developed the Dietary Guidelines for Americans 2005 report for health education specialists such as doctors and nutritionists, as well as a consumer-oriented brochure, *Finding Your Way to a Healthier You* based on the Dietary Guidelines for Americans.

The Dietary Guidelines for Americans 2005 message with respect to alcoholic beverages continues to emphasize moderation for those who choose to drink and cautions about excessive consumption, outlining circumstances and groups of individuals who should not drink. One of the key alcohol

recommendations leads with the wording, "Those who choose to drink alcoholic beverages should do so sensibly and in moderation—defined as the consumption of up to one drink a day for women and up to two drinks a day for men..." The 2005 report is more technical and in-depth and includes an expanded discussion on moderation, emphasizing in the lead that "The consumption of alcohol can have beneficial or harmful effects depending on the amount consumed, age and other characteristics of the person consuming the alcohol, and specifics of the situation." In keeping with the emphasis found throughout the report, the discussions on alcohol also elaborate on the calorie content.

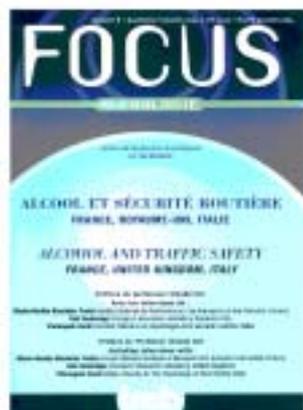
The consumer brochure, *Finding Your Way to a Healthier You*, provides the same above definition of moderation under the "About Alcohol" section but does not acknowledge any potential lifestyle benefits, emphasizing in the lead, "If you choose to drink alcohol, do so in moderation", and cautions that "Generally, anything more than moderate drinking can be harmful to your health. And some people or people in certain situations shouldn't drink at all." The

consumer message also emphasizes that "alcoholic beverages have calories but are low in nutritional value" and suggests to consumers to consult with their doctor or healthcare provider on any questions or concerns. The pictures surrounding both documents show a table with glasses and a bottle and plates, underscoring the adjunct to food and meals. However, in contrast to the prior guidelines, there is no verbal message of drinking wine, beer, and spirits preferably with meals.

This joint project of the Departments of Health and Human Services and Agriculture is the latest of the five-year reviews required by federal law. In addition to these two new policy documents USDA's upcoming Food Guidance System also will serve as a tool to educate consumers on the Dietary Guidelines for Americans. The Food Guidance System, currently called the Food Guide Pyramid, is undergoing revision and will be released in the spring of 2005 as a major consumer education tool.

For more information visit [www.healthierus.gov/dietaryguidelines](http://www.healthierus.gov/dietaryguidelines) and corporate subscribers can review Aim's detailed analysis in our Policy News Alert

## IREB- Alcohol and Traffic Safety in France, United Kingdom and Italy



This IREB report gives an insight into road safety and alcohol related accident in Italy France and the UK, through statistics, analysis and interviews with Pierangelo, President of the Italian Society for the Psychology of Road Safety, Rob Tunbridge, Director of the Department for the study of Motor Disturbances, Transport Research Laboratory, UK and Maries-Berthe Biecheler Fretel, Research Director at the Joint Unit for Epidemiologic Research on Transport, Work and Environment survey (National Institute for Research in to Transport Safety).

The report shows that each of the countries is at a different stage in their

fight against alcohol related accidents.

Italy reports that only 1% of road deaths are alcohol related. but Italy has no rigorous detection of alcohol after accidents, testing only 100,000 drivers a year in comparison to 9 million in France. In Italy a large proportion of the population is still unaware of the dangers of drinking and driving

In France, after 2002 there was a clamp down on drink driving with the introduction of new penal procedures. Figures in 2003 show a reduction of road deaths by 2,500 (20.9%), with average speeds falling and alcohol related deaths dropping by 14%. In France there are major inconsistencies across the regions, with some regions not using alcohol testing on weekend nights, which is when 65% of accidents involving illegal levels of alcohol occur.

The situation in the UK is found to exemplary. The UK has developed accurate and inexpensive electronic alcohol tests which are used and the drink driving policies have been in place for many years. Disuasion is so effective that alcohol related deaths in the UK are about 4 times fewer than in France.

## ICAP -Alcohol Education and its Effectiveness

A report on “Alcohol Education and Its Effectiveness” by the International Center for Alcohol Policies (ICAP) focuses on the importance of education in addressing alcohol problems. The report demonstrates that targeted interventions based on realistic and defined goals, are effective in reducing the risk of harm, especially when conducted in partnership between the public and private sectors.

The report seeks answers to a central question - do education measures work? And the short answer is - yes, they can work, but some approaches show more promise than others.

The first lesson from the report is that targeted interventions for potentially “at-risk” populations, such as young people, pregnant women or native communities, more effectively raise awareness than broad programmes aimed at the population as a whole.

The second message, especially valid for young people, is that these interventions are most successful when they involve families, peers and reach out to the broad community.

The report found that education needs to be relevant to people’s lives. It needs to be able to relate to the advice you are given. Attitudes, especially among young people, strongly influence whether education is effective.

Successful alcohol education combines formal approaches with informal influences. It begins with defined and realistic goals that are targeted to a well defined audience. Like any measure, education cannot stand on its own. Alcohol education is part of the larger picture along with legislation, enforcement and other policy and prevention efforts

Please visit [www.icap.org](http://www.icap.org) for more details

## Peer Alcohol Education project with Secondary School Students

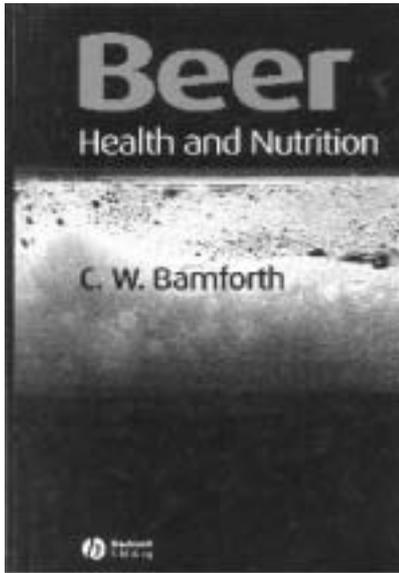
In July 2003 Tacade, a leading not-for-profit charitable organisation working in the field of personal, social, health and citizenship education for children and young people was funded by Diageo Great Britain to work with four secondary schools in England and Wales to pilot a project that aims to enhance young people’s knowledge and understanding of alcohol related issues. It provides opportunities to explore attitudes and values associated with alcohol in society and develop effective models of alcohol peer education. The work with these four pilot schools – in Cardiff, Melbourn, Leicester and London - was informed by a review of relevant literature and a scoping activity to identify

existing examples of alcohol peer alcohol education work with young people. The substantive work with schools began in January 2004 and much of the peer educator’s work continued into the Autumn term (2004). An evaluation of the work was carried out by an Independent Evaluator.

The project has been recently extended to work with schools in Manchester, Portsmouth, Salford and West Sussex. A further briefing paper and peer alcohol education toolkit for schools will be published by Tacade in 2005.

For more information please visit <http://www.tacade.com/Resources/Newsletter.pdf>

## Beer Health and nutrition by Professor C.W. Bamforth



Charles Bamforth's book on beer and health offers both a walk through history as well as complex summary of the role of alcohol in heart disease, diabetes and cognitive function for example. He also analyses the various components in beer and explains the role of its trace elements, polyphenols and vitamins in relation to other food sources and the bodies' needs.

'The supermarket shelves are loaded with all manner of food stuffs fortified with this or that. Beer is no different except that there is no overt fortification going on... beer is rich in valuable nutrients' These include complex B

vitamins, potassium, magnesium, silicon and selenium.

### Social issues

Bamforth makes an interesting point that is often forgotten, whereby alcohol is often used as an excuse for anti-social behaviour central to the binge drinking debate.

'Certainly excessive alcohol intake can reduce inhibitions that could increase the likelihood that a football yob will wreak havoc. However it is not the alcohol any more or less than the soccer itself that has made the thug what he is'

Historically, beer was the staple family drink, brewed by women, as water was unsafe to drink. It was only in the C18th with the advent of cleaner water and the introduction of tea and coffee that Britain, in particular, moved away from beer. It was the industrialisation of Britain and the move away from villages to towns that led to the advent of the great breweries to 'slake the nation's thirst'. There were 48,000 ale houses by 1810 for a population of 8 million and beer was accepted as part of the daily diet (see below) Queen Victoria said 'Give my people plenty of beer, good beer and cheap beer and you will have no revolution among them.' It was the increasing use of cheap gin (no tax) in Britain and whisky in the US that led to prohibition movements as these were not

drunk as a 'food' but for inebriation and escapism, leading to poverty and destitution in some cases.

It was acceptable for beer to be marketed as healthy, and a pregnant or nursing mother was expected to drink a bottle of stout a day. Both Guinness and Mackesons were advertised as 'good for you' up until the 1950's

The book also reveals, that contrary to the press, there are fewer drunken offenders in the UK now, than since records began in 1964 (average of 16 per 10,000 people, against 11.7 in 1988 and 7.7 in the year 2000).

On the drinking patterns of the Mediterranean countries, where excess is rarely a feature, against Northern Europe, Bamforth makes the following observations:

'Drinking tends to be unproblematic when it is a normal, wholesome, enjoyable aspect of everyday life - not an unwholesome, dangerous and mysterious activity to be done in peculiar contexts that are set apart from friends, family and the normal routine of living. Drinking is much like eating, in the salutary view of Italians and many others, a view that contrasts markedly with the special quest for relaxation, relief of psychic stress, delusions of power or escape that prevail in much of Northern Europe and North America'.

Diet 1 15 <sup>th</sup> -century meat-eating classes (per day)	Diet 2 Sailor's diet 1615 (per day)	Diet 3 St Bartholomew's Hospital, 1687 (per day)	Diet 4 Navy ration, 1745 (per week)	Diet 5 Navy ration, 1811 (per day)
cheese, 4 oz	cheese, 8 oz	cheese, 1.5 oz	cheese, 12 oz	cheese, 1.75 oz
meat, 1.5 lbs	bacon, 4 oz	milk pottage, 1 pint	salt beef, 4lbs	beef, 4.5 oz
herring, 6 oz	butter, 4 oz	beef or mutton, 4 oz	salt Pork, 2 lbs	pork, 2.25oz
fat, 1 oz	biscuit, 1 lbs	broth, 3 pints	butter, 8oz	butter, 0.9 oz
bread, 1 lbs	oatmeal, 3 oz	butter, 1 oz	biscuit, 7lbs	suet, 0.25 oz
wine, 1 pint	beer, 8 pints	bread, 30 oz	oatmeal, 2.5 lbs	sugar, 0.9 oz
ale, 2 pints		beer, 3 pints	pease, 2 pints	bread, 1lb
<b>Diets through History in England</b>			beer, 7 gallons	flour, 3oz
				beer, 2 pints

Bamforth concludes 'For a vast part of society's history, and in a great number of countries, beer has been a staple part of the diet, more so than any other alcoholic beverage. It is the drink of moderation for the general classes.... beer has never been so wholesome. Bamforth argues that an intake of 2 pints a day has a beneficial impact on the body, especially in reducing CHD... but this is still a message that sits uncomfortable at the highest levels.... I do not believe that any producer of alcohol containing beverages should overtly market a product on the basis of health benefit, but I do believe that beer and other alcoholic drinks can form a rich and pleasurable aspect of a fulfilling lifestyle'.

Beer Health and Nutrition is published by Blackwell Science via [www.blackwellpublishing.com](http://www.blackwellpublishing.com) ISBN 0-632-06446-3

Food	Size of Serving	Thiamine	Riboflavin	Niacin (mg)	B6 (mg)	Folate (ug)	B12 (ug)
Beer*	UK pint(568ml)	0.003-0.08	0.02-0.8	3-8	0.07-1.7	40-600	3-30
Cola	12 fl oz (355ml)	0	0	0	0	0	0
Milk	1 cup	0.1	0.4	0	0.1	12	0.9
Tea (black)	6 fl oz (178ml)	0	0	0	0	9	0
Coffee (black)	6fl oz (178ml)	0	0	0	0	0	0
Wine, White	5 floz ( 148ml)	0	0	0	0	0	0
Wine, Red	5 fl oz (148ml)	0	0	0	0	3	0
Whisky (80 proof)	1.5 fl oz (44ml)	0	0	0	0	0	0
Apple	1 medium	0	0	0	0.1	4	0
Banana	1 medium	0.1	0.1	1	0.7	23	0
Cabbage, cooked	0.5 cup	0	0	0	0.1	15	0
Carrot, cooked	0.5 cup	0	0	0	0.2	11	0
Lettuce, Iceberg	1 cup	0	0	0	0	31	0
Tomato	1 medium	0.1	0.1	1	0.1	18	0
Potato	1	0.2	0.1	3	0.7	22	0
Bread, white	1 slice	0.1	0.1	1	0	24	0
Cornflakes	1 cup	0.4	0.4	5	0.5	99	0
Spaghetti, cooked	0.5 cup	0.1	0.1	1	0	49	0
Sirloin steak, broiled	3 oz	0.1	0.2	3	0.3	8	2.3
Pork Susages, cooked	3 oz	0.6	0.2	4	0.3	2	1.5
Chicken breast, roasted	3 oz	0	0.1	12	0.5	3	0.3
egg raw	1 large	0	0.3	0	0.1	24	0.5
cod, cooked	3 oz	0.1	0.1	2	0.2	7	0.9
cheese, cheddar	1.5 oz	0	0.2	0	0	8	0.4
chocolate, milk	1 bar (1.5 oz)	0	0.1	0	0	4	0.2

**Vitamin Content of beers in comparison with other foodstuffs**

## Moderate Drinking and US Health-care Costs

A recent American study of health-care workers suggests that moderate alcohol consumption may reduce the use of prescribed medications.

Individuals with a history of heavy drinking have higher health-care costs than those who drink less, and that current (lighter) drinkers have the lowest costs – even lower than non-drinkers. It is likely that non-drinkers are a 'mixed bunch' comprising some who may have a long-term poor health status. To guard against such confounding effects, health researchers at Albuquerque, USA, recruited 685 female health-care workers who provided detailed medical histories, diet and behavioural (life-style) information. All women completed a health risk appraisal (HRA). The women were categorized as moderate drinkers (two or more times a week and/or three or more drinks per occasion) or

abstainers/light drinkers. This latter group comprised those who never drank, or drank 'less than one day a week and only 1–2 drinks per occasion'.

The researchers sorted out one-to-one pairs of moderate drinkers and abstainers/light drinkers – who were closely matched in terms of HRA, age, employment history, total health care costs (last 2 years), and very recent prescription drug use.

The researchers calculated the total costs of company-funded and self-funded health-care utilization, by type of service (in-patient, outpatient, pharmacy), during the subsequent 6-month period after completing the health risk survey. Overall costs did not differ between moderate drinkers and abstainers/light drinkers; nor did outpatient and in-patient costs (during the 6-month observation period).

However, pharmacy costs were significantly lower (by about 43 US dollars) for moderate drinkers, primarily due to less use of prescribed central nervous system depressants (such as barbiturates, benzodiazepines, hypnotics and sedatives). Abstainers/light drinkers had about 17% more prescription orders relative to moderate drinkers.

What, then, might account for this difference? Interestingly, an independent study in the same population of health-care workers revealed high levels of stress. So the stress-reducing properties of alcohol may be part of the answer. The observed differences in the use of prescribed medication may reflect a difference in the way certain employees cope with stress.

Source: *Addiction* (2004), 99, 612–620. McMillan, G.P., & Lapham, S.C., Behavioral Health Research Center of the South-west, Albuquerque, NM, USA.

# ORGANISATIONS

## UNITED KINGDOM

### Alcohol Concern

Waterbridge House, 32-36 Loman Street, London SE1  
OEE Tel: (0207) 928 7377 Fax: (0207) 928 4644  
website [www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk)

### Alcohol Education And Research Council

Abell House, John Islip Street, London SW1P 4LH  
Tel: (0207) 217 5276

### Health Education Authority

Hamilton House, Mabledon Place, London WC1 9TX  
Tel: (020) 72985656 Fax: (020) 77259031  
email: [enquiries@hpe.org.uk](mailto:enquiries@hpe.org.uk)  
website: [www.hpe.org.uk](http://www.hpe.org.uk) and [www.wrecked.co.uk](http://www.wrecked.co.uk)

### The Medical Council on Alcoholism

3 St. Andrew's Place, London, NW1 4LB  
Tel: (0207) 487 4445 Fax: (0207) 9354479

### The Portman Group

7-10 Chandos Street, Cavendish Square, London W1G 9DQ  
Tel: 020 7907 3700 Fax: 020 7907 3710  
website: [www.portman-group.org.uk](http://www.portman-group.org.uk)

### Alcohol Focus Scotland

2nd Floor 166 Buchanan Street, Glasgow G1 2NH  
Tel: 0141-572 6700 Fax: 041-333 1606

### British Beer and Pub Association

Market Towers, 1, Nine Elms Lane, London. SW8 5NQ  
Tel: 020 7627 9191 Fax: 020 7627 9123  
email: [jwitheridge@beerandpub.com](mailto:jwitheridge@beerandpub.com)  
website [www.beerandpub.com](http://www.beerandpub.com)

### The Wine & Spirit Association

Five Kings House, 1 Queen Street Place,  
London EC4R 1XX Tel: 020 7248 5377  
Fax: 020 7489 0322 e-mail: [wsa@wsa.org.uk](mailto:wsa@wsa.org.uk)  
Website: [www.wsa.org.uk](http://www.wsa.org.uk)

### Brewers of Europe

Rue Caroly 23-25, B-1060 Bruxelles Tel: (+32.2) 672 23  
92 Fax: (+32.2) 660 94 02  
email: [info@brewersofeurope.org](mailto:info@brewersofeurope.org)  
website: [www.brewersofeurope.org](http://www.brewersofeurope.org)

### Forum of Taste and Education

Livornostraat 13 b 5 rue de Livourne – Brussel 1050  
Bruxelles, Belgium  
Tel: 32 2 539 36 64 Fax: 32 2 537 81 56  
email: [forum.taste.education@skynet.be](mailto:forum.taste.education@skynet.be)  
website [www.forum-taste-education.com](http://www.forum-taste-education.com)

### Enterprise et Prevention

13, Rue Monsigny, 75002 Paris, France  
Tel: 00-33-53-43-80-75  
email: [enterprise@wanadoo.fr](mailto:enterprise@wanadoo.fr)  
website: [www.soifdevivre.com](http://www.soifdevivre.com)

### IREB

19, avenue Trudaine, 75009 Paris  
Tel: +33 (1) 48 74 82 19 Fax: +33 (1) 48 78 17 56  
email: [ireb@ireb.com](mailto:ireb@ireb.com) website: [www.ireb.com](http://www.ireb.com)

### OIV

18 rue d'Aguesseau, 75008 Paris, France  
Tel: +33 (0) 1 44 94 80 94 Fax: +33 (0) 1 42 66 90 63  
email: [oiv@oiv.int](mailto:oiv@oiv.int) website: [www.oiv.int](http://www.oiv.int)

### STIVA

Benoordenhoutseweg 22-23, 2596 BA, The Hague, The  
Netherlands  
Tel: +31 (0)70 314 2480 Fax: +31(0) 70 314 24 81  
email: [Hanneke.Heeres@STIVA.nl](mailto:Hanneke.Heeres@STIVA.nl)  
website: [www.stiva.nl](http://www.stiva.nl)

### Fundacion Alcohol Y Sociedad

Diego de Leon 44,2 ES 28006 Madrid  
Tel: + 34 91 745 08 44 Fax: + 34 91 561 8955  
website: [www.alcoholysociedad.org](http://www.alcoholysociedad.org)

### Scandinavian Medical Alcohol Board

Vandværksvej 11 DK - 5690 Tommerup  
Tel: 45 64 75 22 84 Fax: 45 64 75 28 44  
email: [smab@org](mailto:smab@org)  
website: [www.smab.org](http://www.smab.org)

## EUROPE

### Deutsche Wein Akademie GMBH

Gutenbergplatz 3-5, 55116 Mainz  
Tel: 49-2641-9065801 (home office)  
49-6131-282948 (head office) Fax: 49-2641-203667  
email: [fradera@deutschewinakademie.de](mailto:fradera@deutschewinakademie.de)  
website: [www.deutschewinakademie.de](http://www.deutschewinakademie.de)

### FIVIN

Plaza Penedés, 3, 3,08720 Vilafranca del Penedés,  
Barcelona, Spain  
Tel: 0034 (93) 890 45 45  
Fax: 0034 (93) 890 46 11

### GODA

Gode Alkoholdninger, Kattesundet 9, DK-1458  
København K, Denmark Tel: 33 13 93 83 Fax: 33 13 03  
84 email: [info@goda.dk](mailto:info@goda.dk)  
website: [www.goda.dk](http://www.goda.dk)

### FIVS International Federation of Wines & Spirits

18, rue d'Aguesseau, F-75008 - PARIS France  
Tél. 33 01 42 68 82 48 Fax 33 01 40 06 06 98  
email: [fivs.ass@wanadoo.fr](mailto:fivs.ass@wanadoo.fr)  
website: [www.fivs.org](http://www.fivs.org)

### The Amsterdam Group

Rue Wiertz 50/28  
B-1050 Brussels Belgium  
Tel: +32 2 401 61 35 Fax: +32 2 401 68 68  
email: [info@amsterdamgroup.org](mailto:info@amsterdamgroup.org)  
website [www.amsterdamgroup.org](http://www.amsterdamgroup.org)

### MEAS Limited

Merrion House  
1/3 Fitzwilliam Street Lower  
Dublin 2, Ireland  
Tel: 00 353 1 611 4811 Fax: 00 353 1 611 4808  
website [www.meas.ie](http://www.meas.ie)

### The European Federation Of Wine & Spirit Importers And Distributors (EFWSID)

Five Kings House  
1 Queen Street Place  
London EC4R 1XX  
Tel +44 (0) 20 7248 5377 Fax +44(0) 20 7489 0322  
email: [EFWSID@wsa.org.uk](mailto:EFWSID@wsa.org.uk)

## USA, CANADA, SOUTH AMERICA, AUSTRALIA

### Wine America

1200 G Street NW, Suite 360, Washington DC 20005  
Tel: (800) 879 4637 Fax: (202) 347 6341  
email: [info@americanwineries.org](mailto:info@americanwineries.org)  
website: [www.americanwineries.org](http://www.americanwineries.org)

### American Wine Alliance For Research And Education

website: [www.alcohol-AWARE.com](http://www.alcohol-AWARE.com)

### American Council On Science And Health

1995 Broadway, 2nd Floor, New York, NY 10023-5860  
Tel: (212) 362-7044 Ext. 234 Fax: (212) 362-4919  
email: [kava@acsh.org](mailto:kava@acsh.org) website: [www.acsh.org](http://www.acsh.org)

### Beer Institute

122 C Street, NW #750,  
Washington DC 20001  
Tel: (202) 737-2337 Fax: (202) 737-7004  
email: [info@beerinstitute.org](mailto:info@beerinstitute.org)  
website: [www.beerinstitute.org](http://www.beerinstitute.org)

### Distilled Spirits Council Of The US

1250 Eye Street, NW, Suite 400,  
Washington DC 20005  
Tel: (202) 628-3544  
website: [www.discus.org](http://www.discus.org)

### Proyecto Ciencia Vino Y Salud

Facultad de ciencias Biológicas,  
Casilla 114 D. Santiago, Chile  
Tel: /Fax: (56-23) 222 2577  
email: [vinsalud@genes.bio.puc.cl](mailto:vinsalud@genes.bio.puc.cl)

### Educ' Alcool

606, Cathcart, Suite 700, Montréal, Québec, H3B 1K9  
Canada Tel: (514) 875-7454  
email: [hsacy@educalcoool.qc.ca](mailto:hsacy@educalcoool.qc.ca) website:  
[www.educalcoool.qc.ca](http://www.educalcoool.qc.ca)

### The American Beverage Institute

1775 Pennsylvania Avenue NW, Suite 1200  
Washington, D.C. 20006 Tel: 202.463.7110  
website: [www.americanbeverageinstitute.com](http://www.americanbeverageinstitute.com)

### FISAC

(Fundacion de Investigaciones Sociales A.C.) Francisco  
Sosa 230. coyoacan CP 04000 Mexico DF - Mexico

### The Wine Institute

425 Market Street, Suite 1000, San Francisco, CA 94105,  
USA Tel: (415) 512-0151 Fax: (415) 442-0742

### The Beer Wine And Spirits Council Of New Zealand

level 4, 70 The Terrace, Wellington, PO Box 5384  
Tel: +64-4-472 2959  
email: [bwsc@zra.co.nz](mailto:bwsc@zra.co.nz)  
website: [www.beerwsc.co.nz](http://www.beerwsc.co.nz)

### Traffic Injury Research Foundation.

Suite 200, 171 Nepean Street, Ottawa, Ontario,  
Canada, K2P 0B4 Tel: 613-238-5235  
email: [barbarak@trafficinjuryresearch.com](mailto:barbarak@trafficinjuryresearch.com)  
website: [www.trafficinjuryresearch.com](http://www.trafficinjuryresearch.com)

### ICAP

International Center for Alcohol Policies  
1519 New Hampshire Avenue, NW  
Washington DC 20036  
Tel: (202) 986-1159 Fax: (202) 986-2080  
website: [www.icap.org](http://www.icap.org)

### The Century Council

1310 G Street, NW, Suite 600,  
Washington, DC 20005-3000  
Tel: (202) 637-0077 Fax: (202) 637-0079  
email: [washde@centurycouncil.org](mailto:washde@centurycouncil.org)  
website: [www.centurycouncil.org](http://www.centurycouncil.org)

### California Association Of Winegrape Growers

601 University Avenue, Suite 135 Sacramento, CA  
95825 email: [karen@cawg.org](mailto:karen@cawg.org)  
website: [www.cawg.org](http://www.cawg.org)

### Lodi-Woodridge Winegrape Commission

2545 West Turner Road Lodi, CA 95242 USA  
email: [mark@lodiwine.com](mailto:mark@lodiwine.com)  
website [www.lodiwine.com](http://www.lodiwine.com)

### Oldways Preservation & Exchange Trust

266 Beacon Street Boston, MA 02116 617.421.5500  
Fax: 617.421.5511 website: [www.oldwayspt.org](http://www.oldwayspt.org)

### The Australian Wine Research Institute

PO Box 197, Glen Osmond 5064, South Australia,  
Australia. Tel: 61 8 8303 6600 Fax: 61 6 303 6601  
website [www.awri.com](http://www.awri.com)