

### Responsible Promotion

In May more than 32,000 on trade outlets, representing over half of Britain's pubs and clubs, agreed to a strict policy of regulating promotions and 'Happy Hours'. All are members of the Beer and Pub Association who have published a ten page guide on 'Standards for the management of responsible drinks promotions and Happy Hours'. Promotions such as drink as much as you like for a fixed sum, drinking games, and 'women drink free' are banned.

It is hoped that the measures, which aim to improve the drinking environment, will help reduce alcohol related disorder but still allow pubs to be competitive. The original reason for the introduction of happy hours (a US invention) was to attract customers into premises during quiet times – such as early evening or mid week. The BBPA guide advocates good promotions as necessary to show-case new products, to reward customer loyalty and to boost trade during quiet periods. It suggests extending special offers to non-alcoholic drinks and using food as a promotional tool.

Longer term offers are advocated by the Portman Group code, such as collecting coupons to receive a free jacket over a month period for example. Some club groups have not signed up to the code - the club group Luminar for example is keener on a minimum price policy.

John Denahm M.P Chair of the Home Affairs select committee believes part of the problem behind existing irresponsible promoting is the competition between premises in some city centres with drinking zones of similar outlets desperate for trade. He is calling for better city planning 'with diverse activities supported by adequate transport and other facilities'.

The guide gives a useful framework for local authorities to work from when creating licensing policy or when assessing renewal of licenses or considering suspending the license of an outlet acting in a way to promote disruptive or antisocial behaviour. Mark Hastings, Director of Communications of BBPA comments that "the local authorities and the police will be using the standards as a benchmark throughout the sector, and clearly will be considering action against those that fall short".

Few countries in Europe would need such a guide as their youth do not display the 'mob' tendency which has become so synonymous with the sizeable minority of 'antisocial drinkers' who dominate the media and public perception of Britain's youth culture both at home and abroad. The British Medical Association in its recent findings on binge drinking sums up the UK position well: 'Several cultural factors conducive to binge drinking have been identified in the UK and other parts of Northern Europe. In Northern Europe, for example, drinking tends to occur away from the family and apart from meals. In addition in the UK, the practice of buying rounds is widely observed. This encourages everyone to drink at the speed of the fastest'.

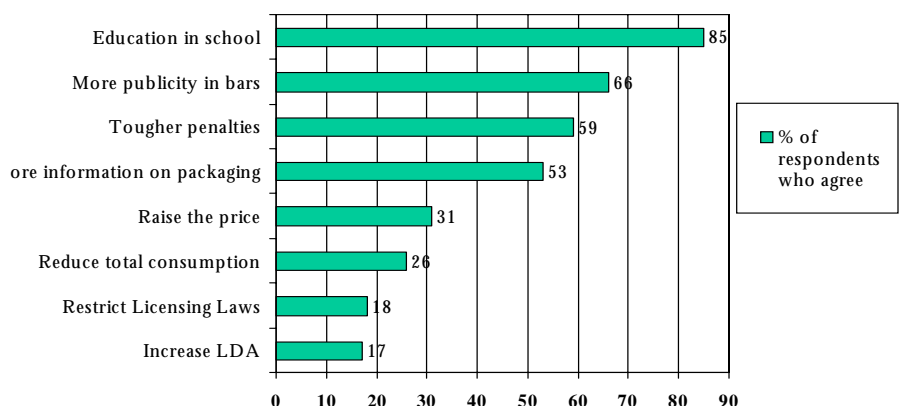
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A study by Generation Europe into the drinking habits of young Europeans (566 participants aged 19-29 from 33 countries) found that peers and friends are deemed the most influential in shaping patterns of drinking (84%) a result echoed by many studies (see AIM forum report issue via [www.aim-digest.com/gateway/pages/binge/articles/HC%20Speech.htm](http://www.aim-digest.com/gateway/pages/binge/articles/HC%20Speech.htm)), followed by family, society and 'mass media'. (Continued on page 3)

### Generation Europe : How would young people best be encouraged to drink more responsibly?



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## EUROPE

The Traffic Injury Research Foundation (TIRF) will host the 6th Annual Ignition Interlock Symposium at L'Impérial Palace in Annecy, France in September 2005.

The theme of the symposium this year will be "A Global Perspective." focussing on the development and expansion of interlock programmes internationally. Of particular interest will be the unique applications of interlock programmes in the EU and beyond such as the commercial use of interlocks, proposals to include an interlock as standard equipment on all new vehicles, and the use of interlocks for special populations.

In Sweden, Saab Automobile is testing alcolocks in its new cars. In two years Saab intends to offer alcolocks as an option in all their new cars. The cost for a lock will be SEK 3000 (330 euros) which is one tenth of today's cost. The current testing is being partly financed by the National Road Traffic Administration. Sweden is the only European Union member state that has implemented the alcolock, with several ongoing programmes including the proposal to install an alcolock in every vehicle in Sweden by 2012.

Several other EU member states, such as the Netherlands and Finland, have taken the initiative to prepare legal implementation of alcolocks. Recently the UK Department of Transport launched an alcolock research project resulting in the set up of a test design to be used with convicted drink-drivers.

## GERMANY

Ulrich Melzer, CEO of Diageo Germany, has called for a general ban on sale of alcohol to persons under 18 years of age. Currently 16 year olds can buy beer and wine. This discriminates against sprits for which the age limit is higher.

## RUSSIA

President Vladimir Putin has called for the introduction of a state monopoly on spirits production. The premier made the comments at a meeting of the State Council on 2nd July.

Putin said that the current system of monitoring alcohol quality does not work because of corruption, adding that around 40,000 people die every year through counterfeit alcohol consumption.

"We could solve the problem if the government introduces a monopoly on liquor," Putin said. "There are various ways of implementing this, which have been worked out in other countries with market economies and without contradicting market principals."

The President has added his voice to a growing number of officials who believe that a state monopoly of liquor in Russia would not only allow stricter controls over production, but would also bring in billions of rubles to the state coffers. In the last six months, the Agriculture Minister, Alexei Gordeyev, has called for the change to be introduced, as has Sergei Mironov, the speaker of Russia's Federation Council.

## SWEDEN

CAN, the Central Council For Information on Alcohol and Drugs, has carried out surveys on young persons' drinking habits since 1971 in which 16 year olds are asked about their alcohol consumption. The number of alcohol consumers in this group has gone down in recent years. In the 2005 survey 68 % of the boys and 70 % of the girls replied that they were alcohol consumers. The aggregate consumption among those people has also gone down. One explanation according to CAN, might be that many youngsters, especially boys, are spending more time at computers and do not want to be affected by alcohol.

(Continued from front page)

Only 26% received alcohol education at school, and of that 26% only 12% of those who received information found it effective. Yet the survey reveals that young people believe the most effective way to promote more responsible consumption (85%) is via more education in schools. The second most important influence (66%) was 'more publicity in bars'. Young people clearly recognise the importance of the drinking environment and if the 'temptation' to drink up to the limit or to drink

more alcohol can be managed better with more imaginative promotions that avoid promoting excess then the adherence by a sizeable proportion of Britain's pubs and clubs to a responsible promotions policy is an excellent step indeed.

The BBPA guidelines have been well received. Mark Hastings commented "we are delighted with the widespread and warm welcome these standards have received from government, police, licensing authorities, media and the trade".

*Irresponsible promotions damage the reputation of the sector and jeopardise the prospects for individual businesses*

*Irresponsible promotions can also expose a business to action by the police and licensing authorities through the nuisance and disturbance they can cause*

*Irresponsible promotions drive down quality and standards and have no place in a well managed licensed business*

*In simple terms, an irresponsible promotion is one that encourages or entices individuals to drink to excess, behave in an anti-social manner, or fuels drunkenness*

## UK Website Encourages Sensible Teenage Drinking



Young people can now log on and learn about the dangers of alcohol abuse with the launch of a new website designed by @Bristol and sponsored by Allied Domecq.

[www.alcoholandyou.org](http://www.alcoholandyou.org) is primarily for 11-14 year olds, and aims to encourage this age group to think sensibly about alcohol through a range of online games, video scenarios, real life stories and interactive quizzes.

Visitors to the site can explore information on how alcohol is made and how alcohol is used (in addition to being a beverage). There is an interactive time line showing how alcohol's role in society has changed through history. An on-line calculator allows users to discover how many calories and alcohol units are contained in different drinks.

Visitors can find out about how alcohol affects the body through an interactive diagram which, when a certain area is highlighted, illustrates how alcohol affects that particular area of the body. There are also sections on how alcohol can affect your mood and judgement as well as your appearance.

The site looks at the cost of irresponsible drinking to society.

Video links also transport the viewers to the heart of a house party to discover a series of alcohol-fuelled dramas taking place. By exploring the behavioural highs and lows of their peers at a party, students get to vote on what happens next and learn about the damaging effects drinking irresponsibly can bring.

Whilst warning users of the dangers of alcohol abuse, the site also presents the health benefits of moderate drinking and gives tips on how to ensure young people have a safe and enjoyable night out.



## Portman Group Campaign Targets Women's Safety



The Portman Group have launched a new poster campaign focusing on women's safety. The poster will appear in more than 500 pub washrooms around the country for one month. The poster which features the strapline 'Who's looking out for you?' Conveys the message that drinking too much could make young women vulnerable to danger such as getting into an unlicensed minicab, going home with a stranger, having unprotected sex, losing valuables, even assault or rape.

Jean Coussins, Chief Executive of The Portman Group, comments: "the facts speak for themselves: among young women aged 16-24, the proportion drinking more than 35 units per week has more than tripled over the past 15 years, rising from 3% to 10%."

"Alcohol affects your judgement; you might think that taking that shortcut or going home with a stranger is a good idea, but you could be taking a huge risk."

## US Government Reviews the Need for Possible Changes to the Labeling and Advertising Requirements of Alcoholic Beverages

The US Alcohol and Tobacco Tax and Trade Bureau (TTB) believes “it is now appropriate to consider revising the alcohol beverage labeling and advertising regulations” and therefore seeks public comments on several issues such as nutrition and ingredient labeling. TTB’s action is in response to petitions to mandate additional information, including ingredient, allergen, alcohol, calorie, and carbohydrate content and requests by some to use labels with at least some of the additional information on a voluntary basis under existing rules. In fact, TTB explains that “the agency has long required certain labeling, such as brand name, class and type, alcohol content (in the case of wines containing more than 14 percent alcohol by volume and distilled spirits), net content and last year published updated standards for the use of carbohydrate and calorie claims.”

The alcohol industry and public interest groups such as the Center for Science in the Public Interest (CSPI) have distinctly different ideas about these issues leading to an ongoing debate and the need for further government clarifications. In fact, the TTB issued a formal request in the April 29, 2005 Federal Register for Public Comment on the Labeling and Advertising of Wines, Distilled Spirits, and Malt Beverages, with comments due by September 28.

The recent history on the labeling issue dates back to December 2003, when a coalition of 69 health groups, including the National Consumer League and CSPI petitioned the TTB to add a variety of information to alcohol labels, including the beverage’s alcohol content expressed as a percentage of volume; the serving size; the amount of alcohol per serving; the number of calories per serving; the ingredients (including additives) from which the beverage is made; the number of standard drinks per container; and the US Dietary Guidelines’ advice on moderate drinking for men and women.

In response to these issues and questions and concerns by industry groups, TTB released an April 7, 2004 ruling which allows for the use of truthful and specific statements about carbohydrate and calorie while prohibiting statements that are “false, misleading, or imply that consumption of low-carbohydrate alcohol beverages may play a healthy role in a weight maintenance or weight reduction plan. TTB believes that such claims are misleading in that they provide incomplete information about the health effects of alcohol consumption”.

However, as part of the ruling, TTB issued interim standards where the term “low carbohydrate” may be used only in the labeling and advertising of alcohol beverages that contain no more than 7 grams of carbohydrates per serving. Furthermore, TTB outlined the information that should be included in a “Serving Facts” panel on alcoholic beverages, including the serving size in fluid ounces; servings per container; calories; grams of fat; grams of carbohydrates; grams of protein; ounces of alcohol to the nearest tenth of an ounce; and the statement, “A standard drink contains 0.6 fl. oz. of alcohol. A serving of this beverage is XX standard drink(s)” or “... XX of a standard drink.”

These positions are in line with TTB’s 2003 published final rule on the use of health-related statements in the labeling and advertising of alcohol beverages. Specifically, TTB regulations on the use of health-related statements in labeling and advertising provide “TTB with authority to require the use of disclaimers or additional information to ensure that consumers are not misled by statements that present only a partial picture of the health effects of alcohol consumption.” Specifically, TTB has articulated that “unlike most low-calorie and low-carbohydrate foods, alcohol beverages are dangerous when consumed in excess. Even the moderate consumption of alcohol beverages poses health risks for some people”.

However, CSPI called the TTB proposal “a small positive step in providing useful consumer information about the consumption of alcoholic beverages...For the first time, it will allow the labeling of important information about calories, alcohol content, serving size and number of servings per container. Such information will help consumers to manage more effectively their calorie intake and better understand their level of alcohol consumption.”

The different segments of the industry have important perspectives on the issue and CSPI does not recognize that the industry has been proactive in bringing e.g. increased consumer visibility to the US Dietary Guidelines’ definition of moderation through various educational outreach efforts on responsible drinking. In fact, Wine Institute spearheaded a request to TTB for a directional label leading consumers to the US Dietary Guidelines message. In response, in its final rule effective June 1, 2003, the TTB lifted a 1999 moratorium on its approval of health-related directional statements, such as a wine label referring consumers to the US Government’s ‘Dietary Guidelines for Americans’ to learn the health effects of wine consumption or to their family doctors for such information.

The TTB determined that wine, beer and spirits could carry directional health statements, provided a disclaimer is included such as “This statement should not encourage you to drink or increase your alcohol consumption.” The TTB ruling states “...we recognize that the producers of alcohol beverages may have a protected right under the First Amendment to convey the message on labels and in advertisements that consumers should refer to their doctors or the Government’s Dietary Guidelines for additional information.”

As this public policy debate on advertising and labeling will continue,

the most recent Federal Register notice will lead to more clarifications and guidelines as, "TTB is soliciting public comment on a wide range of alcohol beverage labeling and advertising issues to help the agency determine what regulatory changes in alcohol beverage labeling and advertising requirements, if any, TTB should propose in future rulemakings. Because of increased interest in including nutrition and ingredient information on alcohol beverage labels, TTB believes it is now appropriate to consider amending the alcohol beverage labeling and advertising regulations to provide

more specific information to the consumer." Some of the issues TTB will consider include the question whether the labelling changes would be mandatory or voluntary; to what extent, if at all, nutrition information (carbohydrates, fats, proteins) should be included; whether labels should list all ingredients, calories, serving size, number of servings per container, allergens, alcohol content, and a definition of moderate drinking; as well as whether TTB requirements should be harmonized with those of other major alcohol producing nations. Furthermore, the question

will be reviewed whether the benefits to consumers are sufficient to warrant the economic costs associated with label revisions, and; whether the labeling requirements should apply to advertising as well.

In its effort, TTBG will consider the concerns and suggestions by CSPI, industry associations and any other public comments that have been submitted by September 28th.

For more information, the TTB notice can be accessed at <http://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/pdf/05-8574.pdf>

## WHO Resolution

The World Health Assembly, decision-making body of the World Health Organization, adopted a resolution in May that calls on the WHO to intensify international collaboration in reducing public health problems caused by the harmful use of alcohol.

Changing global drinking patterns, rising rates of consumption, and drinking to excess particularly among young people are some of the factors which contribute to the harmful use of alcohol becoming a leading risk to health with 4% of the global burden of disease and as a causal factor in more than 60 diseases, including mental disorders, road traffic injuries and death, and high-risk behaviours.

WHO's Secretariat is requested to address a number of areas related to the issue of harmful use of alcohol, including: gathering and sharing scientific information on alcohol consumption and related public health problems; preparing research and policy initiatives and making recommendations for effective policies and interventions; providing support to Member States in monitoring alcohol-related harm and implementing effective strategies and promoting identification and management of alcohol-use disorders in primary health care.

## Legislation Challenge for UK Drinks Industry

The UK drinks industry is facing impending legislation that will fundamentally change the way alcohol is bought and sold over the next few years, according to market analysts Euromonitor.

Central to the changes in consumer behaviour are the introduction of extended opening hours, changes in advertising, and limitations on smoking, all of which were discussed at a seminar at the London International Wine Fair, featuring leading trade figures.

Decisions on whether to grant late licences are now dependent on local authorities, which make running national promotions far more complex. because of the need to comply with strict local legislation "In recent years the focus has shifted from the producers to the trade and their promotions, and they have been slow to respond to the criticism," said David Poley of drinks regulatory body the Portman Group.

New advertising restrictions are not as stringent as the industry once feared. The new ban on showing children at all, coupled with restrictions on sexual content were welcomed by the industry.

But with future growth likely to come from increased consumption by existing consumers rather than increased penetration, the industry needs to resist the temptation of pushing the boundaries too far.

"Ads are a soft target, and it's up to us to be really responsible now," said Mike Paul of the importer Western Wines. "The future lies in our own hands."

The impending ban on smoking caused arguably the greatest concern, since it will have an enormous effect on the on-trade - an area many, certainly in the wine world, had targeted as offering real potential for growth.

As of January 2006, any outlets that serve food will have to enforce a smoking ban, something which may well lead to a 'twin-track' approach, whereby pubs will either ban smoking or stop serving food.

"We have to accept that we will lose custom," said Pamela Gregory of bar group Mitchells and Butler - a point echoed by Western Wines' Mike Paul.

"Sales are already moving from the on-to the off-trade," he said, "and this can only accelerate that. Staying in is the new going out."

## Alcohol Consumption and Renal Dysfunction

Researchers at Brigham and Women's Hospital, in Boston have found that consuming moderate amounts of alcohol, about one drink a day, may prevent kidney function decline in men.

The researchers examined patient blood samples and questionnaires collected from more than 11,000 men enrolled in the ongoing Physicians' Health Study. They found that men who consumed at least seven drinks per week were at a 30 percent lower risk of elevated levels of a compound called creatinine in the blood, compared to men who had one or no drinks per week. High blood creatinine levels are a strong indicator of kidney dysfunction.

In previous studies, the association between alcohol consumption and renal dysfunction has been unclear,

and most studies found a harmful effect on the kidneys. Dr. Tobias Kurth, a researcher in the Division of Aging at Brigham and Women's Hospital, stated "This is the first study to show a consistent reduction in the risk of chronic kidney disease with light to moderate drinking. Given the new findings that traditional cardiovascular risk factors are associated with kidney disease, the data is not surprising. This study may be broadening our knowledge of alcohol and disease prevention".

Kurth noted that this study only included data from healthy men and that more research is needed in this area to confirm the findings, especially for women and sicker individuals.

Source: Schaeffner ES et al. Alcohol Consumption and the Risk of Renal Dysfunction in Apparently Healthy Men. Arch Intern Med. 2005;165:1048-53.

## Beer Has A Protective Effect For Adult Acute Leukemia

Some studies have found an inverse correlation between alcohol use and risk of haematopoietic cancer. This large case-control study examined associations with alcohol use in adult acute leukaemia.

Between January 1986 and June 1989, 811 incident cases of adult acute leukaemia were recruited at diagnosis. Controls were frequency-matched to cases by age, sex, race and region of residence. There were 765 cases and 618 controls. All participants in the study were asked about their weekly consumption of beer, wine and spirits. Subjects were classified into 'irregular', 'light', 'moderate' or 'heavy' drinkers (< 1, 1-5, 6-8 and > 8 drinks/week respectively).

Weekly alcohol use was reported by 50% of cases and 57% of controls. The beverage most commonly drunk on a

regular basis was beer (37%), followed by spirits (21%) and wine (20%). Relative to irregular drinkers, regular drinkers had a reduced risk of acute leukaemia (regardless of beverage type). However logistic regression modelling revealed an inverse association with risk of acute adult leukaemia for light and 'moderate' beer drinkers (RR 0.75, 95% CI 0.60-0.93). In contrast a positive correlation was found for 'moderate' and 'heavy' wine drinkers (RR 2.1, 95% CI 1.2-3.8).

The study concludes that wine may be a moderate risk factor for adult acute leukaemia while beer has a protective effect. The divergent effects might reflect the effect of different nutrients in beer and wine.

Source: Rauscher GH, Shore D, Sandler DP. Alcohol intake and incidence of de novo adult acute leukaemia. Leukemia Res 28 (2004) 1263-1265

## Drinking and Mental Health Risk

Women who drink to excess are more likely to experience depression and anxiety according to new research.

Work done by Dr Rosa Alati, a research fellow from The University of Queensland's School of Population Health, and colleagues from UQ and the University of Bristol, showed women who have more than 15 drinks a week have an increased risk of experiencing mental illness.

However Dr Alati said heavy drinking was also linked to smoking and women from low income groups were more likely to be heavy drinkers. "In part these relationships may be responsible for the association between heavy drinking and symptoms of anxiety and depression," Dr Alati said.

The research is part of the Mater-University of Queensland Study of Pregnancy (MUSP), which is Australia's largest longitudinal study tracking mothers and their children from pre-birth to early adulthood.

Dr Alati said light drinking - up to 5 drinks per week - was associated with the lowest rates of anxiety and depression when women were in their early 30s. But at all three assessments, conducted when women were aged in their 20s, 30s and 40s, showed those who drank six or more drinks per week were more likely to have symptoms of depression and anxiety than those drinking less.

She said the latest results point to a varying relationship between alcohol and depression and anxiety over the course of a woman's life.

Source: Alati R et al. Is there really a 'J-shaped' curve in the association between alcohol consumption and symptoms of depression and anxiety? Findings from the Mater-University Study of Pregnancy and its outcomes. Addiction 2005;100:643-51.

## Effects of Moderate Alcohol Consumption on Folate and Vitamin B12 Status

Consumption of alcohol has been positively associated with breast cancer risk in epidemiologic studies, but the mechanism by which alcohol might increase risk for breast cancer is not known. One possibility is that alcohol changes the metabolism of two vitamins, folate and vitamin B12, and the changes in these vitamins affects DNA stability and synthesis.

While the effects of excessive consumption of alcohol on folate and vitamin B12 metabolism are well-known, the effects of moderate alcohol consumption are not. In this study, researchers investigated the effects of moderate consumption of alcohol (1

or 2 drinks each day) in fifty-three postmenopausal, healthy, well-nourished women.

Each woman received in a random order, no drinks, one drink or two drinks per day for 8-weeks. After eight weeks, blood was collected and analyzed for serum folate, vitamin B12, homocysteine (HCY), and methylmalonic acid (MMA) concentrations.

After correcting for body mass index, there was a 5% decrease in the amount of serum vitamin B12 concentrations from 0 to 1 drink/d treatment. Alcohol intake had no significant effects on serum folate or MMA and

HCY concentrations. Among healthy, well-nourished, postmenopausal women, moderate alcohol intake may diminish vitamin B12 status.

These data are important for postmenopausal women who are interested in making dietary choices that can decrease risk for disease, as well as health professionals and policy makers who provide guidelines concerning alcohol consumption.

**Source:** Laufer EM, Hartman TJ, Baer DJ, Gunter EW, Dorgan JF, Campbell WS, Clevidence BA, Brown ED, Albanes D, Judd JT, 2004. The Effects Of Moderate Alcohol Consumption Of Folate And Vitamin B12 Status In Postmenopausal Women. *European Journal Of Clinical Nutrition*.

## Alcohol Consumption and Risk of Non-Hodgkins Lymphoma

An analysis of nine studies involving 15,000 people from the United States, Britain, Sweden and Italy showed that people who drank alcohol had about a 27 percent lower chance of developing non-Hodgkin lymphoma than non-drinkers.

**“Our pooled analysis of alcohol consumption and non-Hodgkin lymphoma (NHL) risk suggests that people who drink alcoholic beverages have a lower risk of NHL than those who do not,”** said Dr Lindsay Morton of the National Institutes of Health (NIH) in the United States.

Drinking alcohol raises the odds of several cancers, but drinkers had a lower risk of NHL regardless of the type of alcohol, the amount they consumed or how long they had been drinking.

**“We think this is a new kind of clue that might give us a handle on the biology of the illness,”** Patricia Hartge, of the NIH and a co-author of the study, said in an interview. **“For us this is a real window on what might influence non-Hodgkin lymphoma.”**

NHL includes cancer of the lymph nodes, spleen and other organs of the lymphatic system. There are 20 different types of non-Hodgkin lymphoma. They usually affect people older than 50, and organ transplant patients and people with a suppressed immune system have a higher risk of developing the illness.

Cases of NHL have risen worldwide in the past few decades. The researchers studied 6,500 patients with NHL and 8,600 healthy people. They found that a family history of NHL, age, sex, and a history of smoking did not change the effect of alcohol on the illness.

**“We don’t know whether other lifestyle factors or ... true effects of alcohol on the immune system explain the association,”** said Morton.

Alcohol had the biggest impact on Burkitt’s lymphoma, according to the analysis, published in *The Lancet Oncology*, with drinkers’ risk of developing the cancer about half that of non-drinkers.

Studies have suggested that antioxidants in the skin of grapes

reduce the risk of NHL particularly in red wine drinkers. But the researchers said their findings did not show any difference between drinkers of white and red wine and other beverages.

The reason why drinking might lower the risk of non-Hodgkin’s lymphoma remains unclear, but there may be a biological basis for the finding. **“There is some biologic data on the effect of alcohol on the immune system,”** said Patricia Hartge, deputy director of the Epidemiology and Biostatistics Program at the National Cancer Institute. **“It is imaginable that there is a real biologic influence of current alcohol consumption and lymphoma risk.”**

Since the mechanism behind alcohol’s effect on lymphoma risk is unclear, Morton stressed that their study is not definitive. **“The finding should not be seen as a recommendation to start drinking or to drink more,”** she added.

**Source:** Lindsay M. Morton, Ph.D.; Patricia Hartge, D.Sc.; David L. Katz, M.D., M.P.H.; Len Lichtenfeld, M.D.; June 7, 2005, *The Lancet Oncology* online

## Two Studies Offer Clues About How Alcoholic Behaviour is 'Switched'

As part of an ongoing effort to understand the biochemical basis of alcohol abuse, scientists at the US Department of Energy's Brookhaven National Laboratory have published two studies on how modulating receptors for dopamine, a chemical 'signaler' in the brain's reward circuits affects drinking behaviour in mice and rats.

'Stopping alcohol abuse will never be as simple as turning on or off a switch, but finding ways to modulate the brain's reward circuits could play a role in developing successful treatments,' said Panayotis Thanos, lead author of both studies.

In the first study, the scientists increased the number of dopamine 'D2' receptors in strains of mice with genetically varying levels of D2 receptors. Earlier Brookhaven studies have shown that 'up-regulating' D2 receptors by delivering the D2 gene directly to the brain's reward center decreased drinking behavior in rats trained or genetically predisposed to drink large quantities of alcohol.

The Life Sciences study demonstrates this same 'alcoholism-quenching' effect of D2 'gene therapy' in mice with normal to moderately low levels of D2s, supporting the idea that

receptor up-regulation could play a role in the treatment of alcoholism.

Also in that study, however, so-called 'knockout' mice, which initially had no D2s, drank more in response to D2 up-regulation. 'This suggests that there may be a threshold level of D2 receptors needed for animals to respond to the reinforcing effects of alcohol,' Thanos said. 'When we up-regulated D2 levels in the knockout mice, we may have approached or obtained D2 levels close to this threshold, thus producing the reinforcement and an increase in ethanol intake, but...we could speculate that further increases in D2, above this threshold, would result in a decrease in ethanol consumption in this group as well.'

In the second study, Thanos' group tested the idea that blocking the activity of another kind of dopamine receptor, known as D3, might reduce alcohol consumption. They tested their hypothesis in rats with a genetic predisposition to prefer alcohol when given a choice between a 10 percent ethanol solution and pure water, comparing them with rats that had no prior preference for alcohol. Both sets of animals were treated with varying doses of 'SB-277011-A,' a known D3 receptor 'antagonist' (a chemical that binds to the receptor thus blocking

dopamine's ability to bind and send its pleasure/reward signal).

The two higher doses of the antagonist (10 and 30 milligrams per kilogram body weight) reduced drinking behavior in the alcohol-preferring rats; the highest dose decreased drinking (though less dramatically) in the non-preferring group, which drank less to begin with. The lowest dose (3mg/kg) had no effect in either group. None of the doses caused any side effects.

'Recent studies have demonstrated that SB-277011-A is a highly selective D3-blocker and also reduces cocaine-seeking behavior, as well as behavior involving other drugs of abuse, such as nicotine and heroin,' Thanos said, 'these two studies provide further insight into the complex roles of dopamine and may help us better understand the mechanism(s) of alcohol abuse and assist in the development of specific, molecular-based treatments.'

Source: Thanos PK et al. Dopamine D2R DNA transfer in dopamine D2 receptor-deficient mice: Effects on ethanol drinking. *Life Sciences* 2005;77:130-9; and The selective dopamine D3 receptor antagonist SB-277011-A attenuates ethanol consumption in ethanol preferring (P) and non-preferring (NP) rats. *Pharmacology Biochemistry and Behavior* 2005.

## U-Shaped Curve Confirmed For Alcohol and All-Cause Mortality for Men Over 35, But Not For Younger Men

Most studies that support the benefits of moderate drinking have focused on middle-aged men. To examine whether younger men also experience these benefits, investigators assessed alcohol consumption, vital status, and all-cause mortality in 17,279 male construction workers (aged 25-64 years) in Germany. Subjects underwent an occupational health examination at baseline and were followed for an average of 10 years; during follow-up, 698 died.

In analyses adjusted for age, nationality and smoking, the relationship between alcohol

consumption and all-cause mortality among men aged 35-64 years was J or U-shaped (i.e., higher risk among nondrinkers and heavier daily drinkers than in occasional drinkers).

However, for men aged 25-34 years, the relationship was linear: mortality increased as consumption increased from 0 drinks per day (relative risk [RR] 0.9 compared with occasional drinking) to  $\geq 8$  drinks per day (RR 2.5) ( $P$  for trend=0.02).

Results did not change substantially when analyses were also adjusted for disorders at baseline that could influence drinking behavior and

mortality (e.g. liver diseases, cancer)

This study showed that moderate alcohol consumption appears to lower all-cause mortality in middle-aged and older men. This is likely due to the protective effects of moderate consumption on coronary heart disease. Any benefit from moderate drinking among younger people, who have a lower risk of heart disease, is not apparent. Thus, the "U-shaped" curve does not apply to the young.

Source: Arndt V, Rothenbacher D, Krauledat R, et al. Age, alcohol consumption, and all-cause mortality. *Ann Epidemiol.* 2004;14(10):750-753.



**AIM was established in 1991 to communicate about sensible drinking and health.  
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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, its associations and relevant medical and scientific researchers, 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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## Wine and Dental Health by Herbert F. Spasser DDS, CWE

It has long been demonstrated by dental research that bacteria reacting with sugars in the mouth will result in acids that can attack enamel and lead to its breakdown and the decay of teeth. Our goal in dental health is to maintain a relatively neutral oral environment to lessen this acid activity. I discovered clinically that there were many individuals in the wine industry with abnormal amounts of enamel abrasion. This type of dental problem has not been a demonstrable concern for almost all occasional/social wine drinkers. An esthetic worry over the superficial staining of anterior teeth caused by red wine can easily be eliminated by simple stain removal with dental prophylaxis (cleaning). It is on the individual who, because of his occupation, has wine in his mouth for long periods, that our attention must be focused. These include winemakers, wine buyers, and

wine judges, among others. Low pH levels in the mouth (pH 3-4 is a common range of acidity of fine wines) for prolonged periods can begin to affect the external enamel rods (the structure which creates the protective coating of teeth), especially at the necks of the teeth, where they are shortest. As the surface rods are broken down, any trauma (e.g., toothbrushing) will exacerbate this destruction. Over time this can lead to erosion of the cervical enamel.

Sensitivity of the teeth, especially to cold, will occur as the underlying dentin is neared. Once the erosion has taken place, only restoring the affected teeth will alleviate this condition. This can be done readily using new bonding materials and techniques. The procedure is routine and can be accomplished in one visit of approximately 1/2 - 1 hour,

depending on the extent of the restoration.

It is hoped that awareness will lead to prevention. Individuals at high risk should rinse their mouths with water often while tasting. A slightly basic solution (sodium bicarbonate and water) can be used to neutralize the acid of the wine. Ideally fluoride should be included to harden the remaining surface. Toothbrushing should be delayed until well after the tasting has been completed. Commercial fluoride rinses (Act, Phos Flor) are available for use after each brushing as well. It is important for wine professionals to be alert to this problem, and to do as much as possible to minimize it.

*Dr. Spasser is a retired dentist now living in Atlanta. He practiced in Manhattan and was Clinical Professor of Endodontics at New York University College of Dentistry. He is a Fellow of the American College of Dentists.*

## Alcohol May Have Greater Effect on Women's Livers

A study in rats suggests that females metabolize alcohol differently in their bodies and may be more susceptible to alcohol-related liver damage than males, especially if they also consume a high-fat diet.

*“Our research suggests that women should be cautious about the amount of alcohol they consume, since they’re highly susceptible to more severe liver injury than men, and thus to potentially serious complications,”* study author Patricia Eagon, of the Pittsburgh School of Medicine and the Pittsburgh Veterans Affairs Medical Center, said.

Her team used a rat model to analyze differences in liver damage suffered by females and males due to chronic alcohol ingestion.

The rats were divided into two groups and given either no alcohol or alcohol, and either a diet high in carbohydrates or a low-carb, high-fat diet for eight weeks. The high-carb diet contained a mixture of vegetable oils, while the high-fat diet contained fatty fish oils.

Researchers assessed the degree of the rats’ liver injury and measured levels of bacteria in the lymph nodes, as well as blood levels of compounds called endotoxins.

Previous research found that endotoxins — bacterial products that escape from the intestine — appear to be a major factor in the development of alcohol-induced liver injury.

The study found that female rats given alcohol and fed the high-fat diet had much greater escape of bacteria from

the gastrointestinal tract to abdominal lymph nodes, higher blood endotoxin levels, and more severe liver damage than male rats on the same diet or rats of either sex on the high-carb diet.

This suggests the intestines of the female rats became more permeable as a result of the combination of alcohol and high-fat fish oil, the researchers explained.

All the rats given alcohol showed some degree of fatty changes in their livers. However, liver inflammation was only evident in those females that were given alcohol and fed the high-fat fish oil diet.

The findings were presented at the annual Digestive Disease Week 2005 meeting in Chicago.

## Women's Vulnerability to Alcohol by Creina Stockley

Women, worldwide, appear to be drinking alcohol more in 2005 than in they did in 1985 and even in 1995, and drinking alcohol in a similar amount and pattern to men. In the USA in 1970s, the age-specific rate of initiation of alcohol use (measured in person years) in 10- to 14-year-olds showed a male female ratio of approximately 2:1, which had equalized to 1:1 by the 1990s and has remained equal (Substance Abuse and Mental Health Services Administration 1997, 1999). This trend has potentially significant clinical and public health implications as there are gender differences in vulnerability to the harmful effects of alcohol. For example, harm occurs for women after a shorter period of drinking smaller amounts of alcohol than for men (Brady and Randall 1999) such as alcohol-associated cognitive impairment (Crawford and Ryder 1986), alcohol-related liver disease (Morgan and Sherlock 1977, Becker et al. 1996), hypertension, malnutrition and intestinal haemorrhage (Ashley et al. 1977). Indeed, alcohol-related liver disease occurs in women after approximately 13.6 years of drinking alcohol at a hazardous level compared with 20.4 years in men. Hazardous consumption has been defined by the National Health and Medical Research Council of Australia as greater than two to four units of absolute alcohol per day (1987, 1992). In Australia, one unit, which is also referred to as a standard drink, represents 10 g of absolute alcohol or ethanol.

Hence the basic or general guideline for alcohol drinking in Australia to minimise both longer-term and short-term risks, and to gain longer-term benefits effects, is that men should not exceed 4 units or 40 g of absolute alcohol per day on a regular basis, or 28 units per week, and that women should not exceed 2 units of 20 g of absolute alcohol per day on a regular basis, or 14 units per week. For a 12% v/v alcohol wine, one standard drink is approximately 100 mL, and for a 17–22% v/v alcohol fortified wine,

such as a port or liqueur, one standard drink is approximately 60 mL.

The different guidelines for men and women, whereby men are considered to be able to safely consume twice as much wine per day as can women, are directly related to blood alcohol concentration (BAC), and there are several metabolic and physiological differences between men and women which contribute to women recording a significantly higher maximum BAC than men when they consume a comparable amount of alcohol (Jones and Jones 1976). First, the physiology or body composition of men is different to that of women. Men have a larger proportion of body water than women into which the alcohol rapidly distributes from the blood, that is, the absorbed alcohol is diluted more in the body fluids of men than it is in that of women (Marshall et al. 1983, Van Thiel et al. 1988). In addition, women have a larger proportion of fat, 33% compared with 12% that increases with age, into which the alcohol distributes slowly from their blood. Second, men are able to deal with a greater metabolic load of alcohol than women, because they generally have more of the alcohol-degrading liver enzymes, alcohol dehydrogenase and aldehyde dehydrogenase, than do women. These alcohol-degrading enzymes are also more active in men than in women. Unmetabolised alcohol continues to circulate in the blood to the body organs and tissues, passing through the liver, until it is completely broken down by the liver. Thus, it follows that women consuming comparable amounts of alcohol to men have a higher circulating BAC at any one time, where their organs and tissues are also exposed to a higher BAC and hence more damaging or toxic effects of alcohol for a longer period of time.

Another gender difference in alcohol metabolism is that although alcohol metabolism occurs mainly in the liver, it begins in the stomach, called first pass metabolism. When more alcohol is metabolised in the stomach, less is

absorbed directly from the stomach into the blood stream and less is also presented to the liver for metabolism. Women also have less alcohol-degrading stomach enzymes and therefore less first pass metabolism of alcohol than men (Frezza et al. 1990, Pozzato et al. 1995, Baraona et al. 2001).

In addition, the organs and tissues of women appear inherently more vulnerable to the toxic effects of alcohol. It has been suggested that this inherent vulnerability is related to gender differences in estrogen concentration (Day et al 1998). Estrogen may increase the permeability of the gastrointestinal tract to bacterial cell wall products or endotoxins, which may activate or upregulate receptors for endotoxins on liver Kupffer cells, that produce oxidative free radicals, enhancing the production of tumor necrosis factor (Enomoto et al. 1999).

Furthermore, recent research suggests that pattern of alcohol drinking may independently influence the gender difference in vulnerability to alcohol-associated liver disease (Stranges et al. 2004), such that drinking alcohol while eating food is potentially less harmful for women than drinking without eating food; this was not observed for men. There were no beverage specific differences observed. Binge drinking by both men and women, however, was more potentially harmful and daily drinking by men was also more potentially harmful.

Thus, if the current trend of alcohol drinking by women continues without sufficient advertisement and advice about the gender differences in alcohol-related harm, alcohol-related harms in woman will begin to occur at an earlier stage of life and have a greater social and public health impact.

For a complete set of references, please email [alison.rees@aim-digest.com](mailto:alison.rees@aim-digest.com)

*Creina Stockley is Health and Regulatory Manager at The Australian Wine Research Institute, and a valued member of the AIM Council.*

## EBC Congress Address by Jo Williamson

**This paper entitled 'Wine therapy: your good health!' was presented by Jo Williamson at the 30th European Brewery Convention congress in Prague, as part of a session on 'consumer confidence in beer and the brewing chain'.**

I would like to examine why wine, when consumed in moderation, is perceived by both the consumer and medical profession to be beneficial to health? Why has the European beer market continued to fall between 1990 and 2000 whilst the European wine market has continued to grow? I will look at European beer consolidation and the growth of fewer beer brands in the context of European beer health and finish with some potential lessons the European beer industry can learn from the international wine industry.

I joined a well known international brewing firm Arthur Guinness Son and Company Limited in 1971 as an underbrewer. This was my first experience of working life and my first experience of the alcohol drinks industry. I was immediately introduced to the positive benefits of consuming moderate quantities of Guinness and soon learnt that part of the marketing strategy at that time was to promote the slogan Guinness is good for you.

"Guinness is good for you" was used in the first U.K. advert as a slogan from 1929, and export bottlers who opened up foreign markets advertised directly to the medical profession. By 1900 Guinness was selling its stout in bottle as invalid stout and this continued until the 1920s mainly in Ireland.

Right up to the 1980s there was a genuinely held belief that naturally conditioned bottle Guinness consumed in moderation was a tonic and a health benefit to the consumer.

Guinness was often gifted to hospitals as well as being prescribed by G.P.s to pregnant mothers, mothers who had recently given birth, patients recovering from operations and people suffering from feeling run down and low, as a pick you up.

When I left the production side of Guinness and moved into sales in 1976 some of my best customers were chemists who were stockists of naturally conditioned bottle Guinness.

During this period Guinness would invite medical students to the brewery for a tour and lunch as part of their ongoing strategy to continue the link between Guinness, the medical profession and the health benefits of the product. These lunches were always a great success and very lively affairs after the recommended intake levels were inevitably exceeded!

It was in 1960 that Guinness was challenged by a doctor in the U.K. courts under the then Trades Description Act to

substantiate the claim that Guinness is good for you. Sadly Guinness were unable to prove the statement and therefore the claim that Guinness is good for you had to be withdrawn.

I recount these memories of only some thirty years ago to remind us that Guinness and many other beers were seen as a health benefit by the consumer and the medical profession. This sadly is no longer the case so what has gone wrong with the beer industry? Why today is regular moderate consumption of wine and especially red wine perceived by both the medical profession and the consumer as being beneficial to health and especially coronary heart disease?

What then is the truth about alcohol?

In October 1991 Sir Richard Doll, professor of medicine at Oxford University, told delegates at the medicinal virtues of alcohol in moderation conference that "light or moderate consumption of alcohol reduces the risk of coronary disease". He went on to say that "men and women who regularly drink small amounts of alcohol tend to have a lower morbidity and mortality from coronary disease and a lower mortality from all causes combined than those who permanently abstain". This protection was evident at drinking levels of up to two drinks of wine, beer, or spirits a day.

It had taken 65 years for the truth about alcohol to be accepted. In 1926 an American biologist Raymond Pearl reported that people who drank moderate amounts of alcohol lived longer than people who didn't drink at all and was the first to enunciate the 'u' or 'j-shaped' curve that is accepted today.

What it amounts to is that abstaining may be a health risk for certain individuals. Moderate drinking may be good for you, but heavy and binge drinking are definitely very bad for you.

In 1978 a young scientist based in Cardiff, Wales Dr. A. Selys St. Leger carried out a random search for clues to the causes of coronary heart disease. By pure chance he was able to get details of alcohol consumption by country, split into its components, beer, wine, and spirits. He decided to break down the figures to see if any one type of beverage was better than any other. The results were astonishing.

When applied to coronary heart disease for men aged 55 to 64, the highest risk period for males, it was quite clear that wine was easily the winner. The traditional beer and spirit bastions of Finland, Scotland, USA, Canada, New-Zealand, England, Wales, Ireland and Norway had the highest death rates from coronary heart disease. The lowest rates of heart disease were the wine consuming countries,

France, Italy, Switzerland and Austria. He concluded that if wine had such a positive impact on coronary heart deaths then it was more likely to be due to constituents other than alcohol.

It was two scientists at the Wistar Institute of Anatomy and Biology in Philadelphia, David Klurfeld and David Kritchevsky who in 1980 conducted animal experiments to compare the effects of wine, beer, and spirits in protecting against Atherosclerosis the formation of fatty deposits in the arteries.

They developed a food regime equivalent to the north american full fat diet! They fed the diet to 48 male rabbits for three months with the rabbits divided into six groups given respectively water, the control group, ethanol, red wine, white wine, beer and whisky. At the end of three months the rabbits were sent to heaven and their hearts and arteries examined. Fatty foam similar to the fatty streaks found in human arteries were in evidence. The scientists were surprised at the speed with which the north american-style diet had produced atherosclerosis in rabbits. One hundred percent of the control group and the group fed beer had developed fatty lesions in their coronary arteries. Those on red wines were down to forty percent and they therefore concluded that aortic atherosclerosis was significantly reduced by red wine.

The evidence that wine and especially red wine is beneficial to coronary heart disease was given a further boost in May 1995 when a paper was published in the British Medical Journal by a dane Dr Morten Gronbaek. The report was based on research relating to six thousand men and seven thousand women between the ages of thirty and seventy-nine over a twelve year period.

The report showed that nearly all the heart-and life-protective benefits came from drinking wine. It showed that up to a level of three to five glasses of wine a day reduced the risk of dying from a heart attack or stroke and indeed the less risk of dying of any disease! This report went a long way to explaining the french paradox which had hit the world four years earlier.

In November 1991 in the space of twenty minutes the wine industry was hit by something akin to a hurricane. Millions of north americans tuned into a t.v. programme the CBS news magazine 60 minutes and learnt for the first time from Serge Renaud a french doctor that in his view red wine was the most powerful drug yet discovered in preventing coronary heart disease. This phenomenon became known as the french paradox and sent many north americans to the liquor store to purchase red wine where by the end of the week sales of red wine were up a staggering forty percent. Never underestimate the power of television.

What then is the paradox? The french, particularly those living in south west france defy all the health rules by smoking heavily, eating large quantities of saturated fats and taking little exercise. They have one of the lowest heart attack rates in the world. In contrast, Glasgow in Scotland has among the highest heart attack rates in the world.

A woman in Glasgow is twelve times more likely to die of a heart attack than a woman living in Toulouse. Canadian and American males are nearly three times as likely to die from cardiovascular disease as males from Toulouse.

Coronary heart disease claims more lives in Canada and America than any other disease, up to forty percent of all deaths therefore it is not surprising that the CBS news programme had such an impact. Doctors refer the so-called "bible-belt" in Southern America where there is a high incidence of teetotallers as "strokealley"!

Wine, and red wine in particular go to work defending the body on two fronts. The alcohol it contains reduces harmful cholesterol and clotting agents whilst the antioxidants fight illness and even the ageing process. However the real secret of the french paradox relates to how wine is consumed. In general the french will consume wine slowly with their meal whilst both beer and spirits tend not to be consumed with food.

It must be stressed that it is the moderate consumption of wine with food that has the beneficial effects. There are many people in France drinking large quantities of wine each day which can lead to high cirrhosis and cancer rates as well as traffic deaths and high rates of suicide.

In recent years scientists have concluded that many human diseases are caused by a group of "free radicals". These rogue particles attack healthy cell membranes through the process of oxidation. The best protection against these rogue particles comes from "antioxidants".

Exposure to toxic substances will release free radicals, which is why smoking has a negative effect on the human system. The body has its own defence against free radicals. However, if the free radicals are produced in large numbers and swamp the body's defences, then, the only answer is antioxidants. These antioxidants come in the form of vitamin C, vitamin E and beta-carotene.

A group of compounds called flavonoids first discovered in the 1930s also have some antioxidant properties. Flavonoids are found in tea, onions, apples and red wine. Red wine contains more than a hundred flavonoids but not all of them are antioxidants.

Work was done at UC Davis in 1993 which showed that in the test tube red wine could inhibit oxidation of the "bad" LDL cholesterol and that some wine flavonoids were

up to twenty percent more effective at inhibiting oxidation than vitamin E.

It is generally in red wine and not white wine that the benefits of flavonoids are found, as the flavonoids are found in the skin of the grape. The production method of red and white wine vary as the juice is quickly run off the skins of white wine whilst with many red wines the skins are macerated for a number of days.

Antioxidants are unstable and in fruit and vegetables can be lost in transportation and storage, however in red wine they are preserved and remain intact. It has been estimated that two glasses of red wine may enhance the flavonoid content for a human by up to forty percent.

One of the most promising flavonoids discovered in red wine is resveratrol a natural anti-fungicide found on the skin of the grape. Resveratrol has been known for centuries in China and Japan where it has been used as a medicine. The resveratrol content of red wines varies dramatically by grape variety, geographical location and production method.

Resveratrol is more abundant in cool, damp climates like Burgundy or Oregon compared to warmer drier climates. Different grape varieties produce different levels of resveratrol. The "king" at producing resveratrol is the pinot noir noted as one of the hardest varieties to grow anywhere in the world!

Another antioxidant being studied is quercetin found in fruit, vegetables and red wine and also beneficial to coronary disease. There were, initially, some concerns that quercetin may be cancer – causing. If this was true it would have had devastating effects on fresh fruit and vegetable consumption.

Terrance Leighton, who discovered that quercetin does not give any evidence of gene toxicity but acts as an anticarcinogen, i.e. is an anti cancer agent carried out extensive tests. Quercetin was found especially effective in stopping or preventing cancer of the colon when artificially induced into mice. It blocked the activity of compounds that promote cancer growth therefore turning off the cancer before it started.

Quercetin, unlike resveratrol is not specific to a grape variety. It appears that the amount of sunshine is the only factor in determining quercetin levels in the grape. The length of time the skin is left in contact with the juice will determine how much quercetin is extracted. However, quercetin at this stage of the process is inactive and is only converted to active quercetin when allowed to remain for a time on the lees, the yeast leftovers.

It is the flavanoids in the skins of red wines that appear to bear out the french paradox and the relative low rate of coronary disease in France. For a nation whose diet and

lifestyle on the face of it leave a lot to be desired the french have over the years realised that moderate consumption of red wine with a meal is good for you.

Here then are some details concerning wine and in particular red wine. I have no doubt many members of the audience will be getting slightly hot under the collar and thinking yes but beer also has many positive properties including antioxidant benefits, complex B vitamins, folates, minerals and more.

Many people will say that it is in fact the alcohol which provides at least 50% of the health benefits attributed to wine and this is no different to beer.

This may well be the case but the important thing for the beer industry to grasp is that wine and especially red wine are perceived to deliver health benefits ahead of beer by both the consumer and the medical profession.

Why is this and what can be done to change the image of beer? One of the worst reputations beer has is of being fattening and causing the beer belly. I would suggest that this image is not helped when beer is often promoted to the consumer by large beer bellied, loud, well know characters.

The life style of the beer drinker and wine drinker tend to be different with beer drinkers tending to have a poorer diet to wine drinkers. It is therefore a marketing challenge for beer to become more aspirational to the consumer and to borrow some of wines positive images.

If we look at the European market over the past 30 years there have been huge socio-economic changes that have impacted on the consumption of beer and wine. In the U.K the market was dominated in the 1970s by half a dozen major brewers who also owned the pubs and off licenses where beer was purchased.

In the main these brewers were mash tun driven and the pubs and off sales the engine room for the mash tuns.

At the same time there was the decline and in many cases the death of heavy industry, mining, steel, shipbuilding to name a few. These industries provided the cannon fodder for the brewers mash tuns where consumers would replace the liquid they had lost at work by consuming large quantities of low abv beer.

In the UK in 1989 there was a change in the law and brewers had to release a number of the pubs they owned to break the monopoly that existed. This revolutionised the UK beer industry and fast forwarded consolidation.

The pubs of the 1970s and 80s did not offer the consumer a market place choice and if wine was offered it was usually of poor quality. Was there any incentive for the brewer to sell wine? Some of the brewers did have wine interests but the mash tun was still king.

After 1989 a new type of pub started to appear on the high street. These outlets were owned by entrepreneurs who recognised they needed to meet the consumers needs. This meant improving the drinking environment and providing a range of different products including wine and food.

The type and mix of the consumer visiting the on trade was changing with many more females attracted to the new environment. The UK consumer of the 90s and 2000s is more affluent with more disposable income than their parents.

The growth in the on trade of the female consumer, with high disposable income, who was generally marrying and having a family much later in life, has had a big impact on the u.k drinks mix. this same female consumer is often the person responsible for carrying out the weekly shopping in the high street and therefore influencing the choice of alcoholic drink consumed at home.

During this same period of time another revolution was taking place in the u.k. high street where the consumer purchases their alcohol to consume at home. in the 1970s and 80s many of the high street chains of off licenses were owned by the brewers and therefore were also outlets for the mash tun. the brewery owned pub was also a main take home source of alcohol for the consumer.

The growth of the supermarket through the late 80s, 90s and current decade has changed the way the consumer purchases their alcohol. The supermarket is totally consumer focused and therefore will provide the customer with the product they want. This turns the mash tun philosophy on its head.

There were other important dynamics taking place at the time including the consolidation of the brewing industry especially post 1989 which has led to fewer breweries, a much smaller range of beers on offer for the consumer to choose and fewer regionally produced beers. At the same time there was a huge growth into Europe of new world wines made to meet the consumers expectations.

These factors, along with a rise in the number of positive television programmes portraying food and wine, have had a major influence on how the consumer now views beer, wine and their link to health. In the UK between 1990 and 2002 beer consumption in the UK fell by thirteen and a half litres per head whilst wine consumption increased by seven litres per head.

Wine is aspirational, has a clean healthy image, with the majority of wine drinking occasions involving food. The major wine brands have a range of products with a ladder which trades the consumer up to higher margin products and there is the excitement of a new range of wines appearing each year.

There is constant wine training being carried out by the Wine and Spirit Education Trust who have four levels for the trade to aspire to. Regular wine tastings take place for staff in both the on and off trade so the staff can recommend a wine with confidence. Wine is served with food in quality glassware and very often with a little theatre.

In europe some countries have been actively promoting beer with food, Belgium for many years and more recently Spain. In many Belgium bars you are given a beer menu not unlike a wine list and will often consume the beer with food and with the appropriate branded glass. Some european countries are much better with their presentation of beer to the consumer especially with food than others.

What then is the way forward for the beer industry? it has to be marketing led with a total quality package offered to the consumer backed up with on going staff training and sampling in both the on and off trade.

The beer industry will waste time and money by researching the health benefits of beer and trying to score points over the wine industry. The beer industry must get away from the beer belly image and make beer more aspirational to the consumer. There needs to be a major generic beer in moderation with food campaign over a minimum period of five years funded by the industry. The beer industry should learn from the Australian wine industry which entered the european market 20 years ago and marketed Australia and the image of Australia first and foremost. Australian wine and brands followed on and now Australian wine has a firm foothold in many european countries being number one in value in the UK

There is no turning the clock back for the european beer industry to the heady days of 1990 when average consumption per head was eighty-seven and a half litres. The european beer industry with the big brands needs to actively get together to change beers image to the european consumer and the medical profession. Between 1990 and 2000 only the Republic of Ireland with its 1990s tiger economy and Italy have seen a growth in per capita consumption of beer.

It is your industry and up to you as an industry to find the funds to change the consumers image of beer for the future health of european beer.

Jo Williamson was chairman of the Wine and Spirits Association after a distinguished career with Waverley Vintners (Scottish and Newcastle).

**Reference: The Save Your Heart Wine book by Frank Jones.**

**Brewers of Europe Beer Facts 2002**



## Report from the First Alzheimer's Association's International Conference on the Prevention of Dementia in Washington

A series of new research studies - examining topics including level of social activity, heart disease risk factors, education, consumption of fruit and vegetable juices, exercise and alcohol intake - add to the growing body of scientific evidence that lifestyle habits are closely linked to risk of Alzheimer's disease and dementia.

"These studies suggest that we can maintain a healthy brain and perhaps reduce our risk for Alzheimer's disease by living a healthful lifestyle - in particular staying socially involved, remaining mentally active, improving our diets and exercising," said Ron Petersen, M.D., Ph.D., director of the Mayo Clinic Alzheimer's Disease Center (Rochester, MN) and member of the Alzheimer's Association's Medical and Scientific Advisory Council.

### Twins study reveals several modifiable risk factors for dementia

Margaret Gatz, Ph.D., of the University of Southern California and Karolinska Institute in Stockholm, Sweden, and colleagues evaluated participants in the Study of Dementia in Swedish Twins, which followed more than 100 pairs of identical twins from the Swedish Twin Registry in which one twin had dementia and the other did not.

The researchers found that no single risk factor could explain in all cases why one twin would become demented or why the twin sibling would not. However, they did discover several patterns. The twin with dementia was more likely to have had a stroke, periodontal disease earlier in life (an index of exposure to inflammation), and fewer years of education. "While genetic factors are significant in explaining why some people develop dementia and others do not, our research suggests that there are certain risk factors over which an individual may be able to exert some influence earlier in his or her life," Gatz said.

### Antioxidant rich drinks may reduce risk for Alzheimer's disease

Amy Borenstein, Ph.D., M.P.H., of the University of South Florida's College of Public Health, and colleagues presented research suggesting that antioxidants abundant in fruit and vegetable juices (wine and many beers and ciders) may play an important role in reducing the risk of Alzheimer's disease.

The researchers studied more than 1,800 older Japanese American men and women from the Kame Project in Seattle, in which participants were dementia-free at the onset of the study and were followed for up to nine years.

Borenstein and her colleagues found that participants who drank fruit or vegetable juices at least three times per week had a 75 percent reduced risk of developing Alzheimer's disease compared with those who drank these juices less than once per week. By comparison, there was no apparent

dementia-related benefit from dietary or supplemental vitamin E, C or beta-carotene intake. "These findings suggest that something as simple as incorporating more fruit and vegetable juices into our diet may have a significant impact on our brain health," commented Borenstein.

### Exercise and moderate alcohol consumption may boost brain health

In a fourth study presented at the conference, researchers reported that simple lifestyle modifications - such as exercise and moderate alcohol consumption - may influence cognitive and memory abilities later in life.

Mark Sager, M.D., professor of Medicine at the University of Wisconsin-Madison Medical School, and colleagues studied nearly 500 adult children of persons with Alzheimer's participating in the Wisconsin Registry for Alzheimer's Prevention (WRAP). The goal of the longitudinal study was to characterize early cognitive and neurobiological changes in pre-clinical Alzheimer's disease and identify health and lifestyle variables that influence the course of the disease. Participants, ages 40-65, underwent extensive neuropsychological testing, genotyping and health assessments as part of the study.

Baseline data analyses indicated that higher levels of homocysteine, an amino acid implicated in the development of dementia, were associated with lower verbal memory scores. Researchers also found that lifestyle variables such as exercise and moderate alcohol consumption were associated with better performance on several cognitive measures.

"These findings contribute to the growing body of evidence that health and lifestyle variables in middle age may be associated with the subsequent risk of developing Alzheimer's in later life," said Sager. "They also suggest that simple lifestyle modifications may influence the prevalence of Alzheimer's in the future." For more information, visit [www.alz.org](http://www.alz.org).

**Sources:** Jane Saczynski - The Effect of Social Engagement on Incident Dementia and Hippocampal Volume: the Honolulu-Asia Aging Study (funders: National Institutes of Health/National Institute on Aging, National Heart, Lung and Blood Institute)

Margaret Gatz - Potentially Modifiable Risk Factors for Dementia: Evidence from Identical Twins (funders: Alzheimer's Association, National Institutes of Health/National Institute on Aging)

Amy Borenstein - Consumption of Fruit and Vegetable Juices Predicts a Reduced Risk of Alzheimer's Disease: The Kame Project (funder: National Institutes of Health/National Institute on Aging)

Mark Sager - Wisconsin Registry for Alzheimer's Prevention (WRAP): Prospective Cohort Study of Pre-Clinical Alzheimer's Disease (funders: Helen Bader Foundation, Extendingcare Foundation, Northwestern Mutual Foundation) Antioxidants in wine, fruit and vegetable juices help prevent onset of alzheimers in children of sufferers

## Heavy Or Binge Drinking And Its Effect On The Brain

By Helena Conibear

An interesting seminar was hosted by the Portman Group on 'The effects of heavy drinking on brain function, cognition and psychomotor performance' in May.

Professor Theodora Duka, an experimental psychologist reported on her studies involving 500 18 - 32 year old students and staff from Sussex, UK. Her research defined bingeing as actual drunkenness followed by sober periods.

According to Duka, the frontal lobe part of the brain is not fully developed until your early twenties, making age of onset of drinking an important factor. Her studies found that binge drinkers showed less strategic thinking than moderate drinkers in carrying out mental tasks and that females are affected more severely than males. Thuka also cited a study by Randall et al 2004 which found that moderate drinkers demonstrated better planning than non-drinkers.

Townshend and Duka 2005 conclude that although it is not yet proved, whilst comparing moderate drinkers versus binge drinkers that females are more susceptible to cognitive damage and that the younger the age of onset of binge drinking the greater the effect. The study however only looked at short term cognitive effects of drinking through students carrying out a series of mental tasks.

Dr Adele McKinney of the University of Belfast looked at the immediate effects of hangover on 48 students at 9 am, 11 am and 1pm respectively and compared their motor performance against those who had abstained from drinking for 24 hours. The students drank a mean of 11 units between 10pm and 2pm and had not eaten during that period (until breakfast at 8pm, allowing no caffeine). Her studies found that 'free recall' recovers by 11 am in drinkers but their motor performance remains poorer. Those with hangover were particularly distracted by stress - white noise was used in this incidence.

Professor Joris Verster of Utrecht University looked at the effect of over 21 units of 12g of alcohol on 46 -50 year olds. 10% of the Dutch population (14% men and 6% women) drink at these levels. Former studies by Verster have proved the effect of increasing BAC levels on driving through analysis of the 'swerve factor' or deviation from a straight road.

Verster demonstrated how heavy and dependent drinkers have smaller brains, less grey focal matter and larger ventricles than moderate, light or non drinkers. Again his studies showed that moderate drinkers (5-20 units a week) perform best in cognitive recognition than heavy drinkers or abstainers.

Verster also looked at the genetic contribution of having an alcoholic relative on cognitive function by use of ECG, MRI scans, behavioural and cognitive tests. His results showed there was increased synchronisation of meta and gamma bands with heavy drinking (which are involved with memory and learning). Functional brain activity is impaired by heavy drinking although no differences were found through the behavioural tasks. This may have been because they were too easy.

Interestingly, amongst males consuming up to 20 units a week (defined as moderate drinking), there was a positive increase in white brain matter, although no change was seen in females consuming up to 15 drinks a week. Conversely there is a decrease in grey focal matter as drinking increases. Verster cannot account for gender differences, it could be due to metabolic differences, lower mean alcohol consumption, different patterns of drinking and or beverage choice.

Verster concluded that there is no doubt that persistent heavy drinking irrespective of genetic input is linked to cognitive impairment in older drinkers.

### Obituary - Gene Ford



Gene Ford, 77, wine writer and educator, died June 10 after complications during heart surgery. He promoted an ethic of true temperance, and wrote extensively about the health benefits of moderate drinking well before they were widely recognized.

In 2001, Gene Ford was named Wine Writer of the Year by the Wine Appreciation Guild. His book "The Science of Healthy Drinking" received an international award as Best Wine Literature of 2003.

He was one of the first wine writers to focus strongly on the scientific basis for the purported health benefits of wine

and spirits. He always gave the same toast, whether in person as he lifted his glass or at the end of his many written works: "To Your Health".

Ford was born in Cedar Rapids, Iowa, and graduated from Catholic University in Washington, D.C. He first became interested in wine when he began working when he became the Washington and Montana sales manager for Christian Brothers Wine in the 1960s.

After retirement he became a wine writer and educator, publishing eight books including "The French Paradox & Drinking for Health" (1993) and "The Science of Healthy Drinking". He also produced wine-tasting videos and spoke widely about wine. The latter book argued that, as Ford told an interviewer in 2004, "the healthiest people on the face of the Earth are people who drink moderately."

# ORGANISATIONS

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### Alcohol Concern

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### Alcohol Education And Research Council

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### The Medical Council on Alcoholism

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### Alcohol Focus Scotland

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### Scandinavian Medical Alcohol Board

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