

Depressing Statistics Herald New Year in Britain

Two new studies have confirmed how Britain and Ireland are leading Europe in unhealthy living, with some of the highest figures for obesity, depression, binge drinking and regularly getting drunk.

The European School Survey Project on Alcohol and Other Drugs (ESPAD) 2003 study of young peoples' alcohol and drug habits in 35 countries, involving over 100,000 students demonstrates clearly the cultural differences amongst 16 year olds in Europe and its adjoining countries. The enlarged 2003 survey follows reports in 1995 and 1999.

Smoking

The report finds that between 50 - 80% of students have tried smoking, but regular smoking varies from 18% in Portugal to 43 - 49% in Germany, Austria and Bulgaria. Greenland has the highest proportion of young smokers (60%) however. The highest percentages of female smokers are found in Britain and Ireland.

Alcohol

90% of 16 year olds have tried alcohol, with the highest proportion of weekly drinkers being in the UK, Ireland, and Denmark with between 43-50%. High rates also occur in Austria, the Czech Republic and the Netherlands. The lowest occurrence of drinking occurs in Turkey, Greenland, Norway and Portugal at between 13-15%.

20% of 16 year olds in Austria, Belgium, the UK and the Netherlands drink three times a week - against an average of 3% in Nordic countries. Beer is the preferred beverage of boys, although wine is popular in producing countries such as Italy and Greece. In the UK and Ireland 37 -39% of the teenagers surveyed drank spirits, with the highest percentage of girls in the countries analysed.

Drunkness

Perhaps the most worrying statistics surround regular drunkenness. Again, Denmark, Ireland and the UK lead the league together with Estonia and Finland with between 26 and 36% of those questioned having been drunk more than 20 times - this compares with 3% in Greece, Portugal and France for example and an

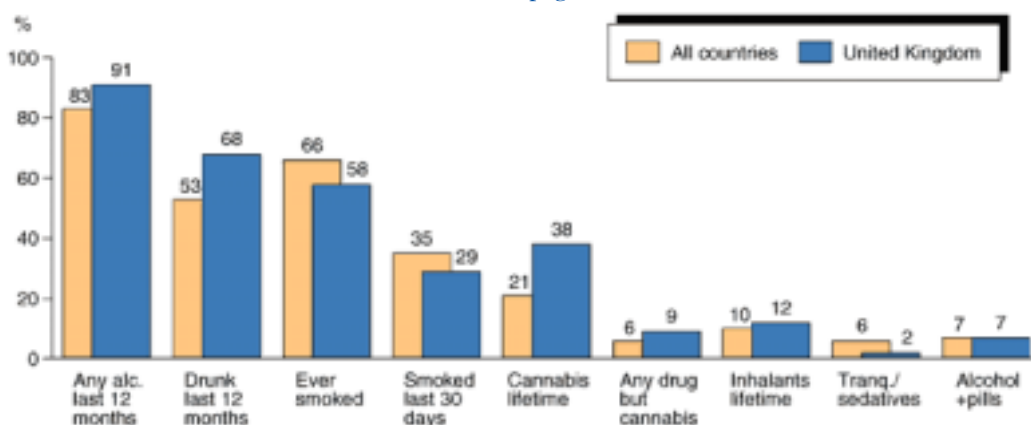
overall average of 10% in the countries participating. This ties in with the prevalence of binge drinking (defined in the report as more than five drinks on one occasion) where 24 - 32% of Danes, British, Irish and Norwegians binge drink.

A second study by the Economic and Social Research Council of Britain reinforces the ESPAD findings for Britain. Thousands of Britons born in 1946, 1958 or 1970 have been assessed. Researchers found that we are getting taller, but also much bigger around the waist. 12 % of adults born in 1970 were obese at 20, compared with 5% of men and 7% of women born in 1946.

The numbers of women drinking alcohol almost doubled in the 1990s, with those in top jobs and with highest qualifications drinking most, also 20% of women born in 1970 suffer from depression or anxiety in their 30s, compared with 12% in 1958. Meanwhile men are drinking less as they get older.

Fewer born in 1958 and 1970 smoked in their 30's than those from 1946, but the number of men smokers has not dropped significantly. Better educated people are less likely to smoke, 47 per cent of men born in 1970 who had no qualifications were smokers compared with 20% of university goers.

The studies confirm the UK Government's concerns published in its November White Paper, which found that 17% of Britain's children are obese, 26% of Britons smoke and 50% of them will die of the habit. It classed 20% of British men as binge drinkers and 10% of women. Quite why Britain and Ireland are failing its youth so miserably is



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yet to be fully assessed in a time of almost full employment and low inflation. Much is believed to be cultural. In addition a study of the British Police force released over Christmas has cited it as 'the worst in the world' failing to tackle anti social behaviour and petty crime.

Further details of the studies can be found via www.esrc.ac.uk and www.espad.org or see a summary of the findings on the AIM website www.aim-digest.com/digest/pages/ESPAD.htm.

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US

At the behest of the National Highway Traffic Safety Administration (NHTSA), members of the U.S. beer industry launched the “Buckle Up America” safety campaign to coincide with the holiday season. The campaign aims to ensure that the nation’s roads and highways are safer by encouraging drivers and their passengers to buckle their seat belts.

Beer wholesalers across the nation displayed brightly-colored “Buckle Up” signs and bumpers stickers on their delivery trucks and vehicles, with an estimated 20,000 vehicles reminding drivers and passengers to buckle up. This is the first time ever that the beer industry has launched a safety campaign that is not directly related to its products.

AUSTRALIA

The Australian Medical Association (AMA) has called for health warnings on alcohol containers. The association wants the Government to introduce warnings similar to those on cigarette packets highlighting the dangers of excessive alcohol consumption.

RUSSIA

Russia’s lower house of Parliament the Duma has passed a second version of a bill that will restrict the sale and consumption of beer.

The original version of the bill, which had been passed by the Duma, was thrown out of the upper house, the Federation Council, after senators felt the law needed revision.

The revised bill bans the sale of beer in cultural institutions, sports centres and public transport, as well as to under-age children, lengthening a list that already includes children’s, medical and educational organisations and the land around them.

Under the bill, beer cannot be consumed in the streets, parks, at stadiums and in other public places, except for restaurants and cafes.

EU

European Union (EU) ministers have agreed to improve co-operation between Member States’ tax authorities when they combat fraud involving excise duties on alcohol, (plus tobacco and fuel).

The EU Council of Ministers has approved a three-month time limit for member countries to respond to information requests about excise duty fraud from customs regimes in other EU states and insisted that governments immediately and automatically circulate alerts about serious cases.

The deal formalises procedures for customs officials from one Member State to carry out investigations in another. National authorities must also transmit statistical information on excise fraud to the European Commission, so it can coordinate national responses.

According to the Finnish Finance Minister, when Finland takes chairmanship of the EU in the second half of 2006, one of the priorities will be harmonisation of excises taxes across Europe.

Denmark is reducing its beer tax by 12.7% this year, and Sweden is debating a 40% reduction in spirit tax, a decision is expected in March 2005.

SWEDEN

Chief Prosecutor in Malmö, Mr Sven-Erik Alhem, proposes that all drivers of trucks and buses leaving ferries should be tested for blood alcohol levels by the ferry lines. Recently an Hungarian truck driver was intoxicated when driving his truck on the wrong side of a motor way killing five people. The Transport company Schenker has said that it will introduce an alco test for its drivers, plus all new trucks ordered by the company will be equipped with alco-locks.

From 2005 Swedish Police will be able to confiscate car keys from drunk persons to avoid drunk driving. The key can be kept by the Police up to 24 hours.

From 2005 all alcohol ads in Sweden must contain a warning text occupying at least 20 % of the ad. Eleven texts have been selected by the Government for advertisers to choose from.

UK Government White Paper Proposes to Ban Smoking in Pubs

The Public Health white paper unveiled on 16th November proposed a ban on smoking in most enclosed public areas, including offices and factories. Although patrons of private clubs and pubs which do not serve prepared food will still be allowed to smoke on those premises, it is expected the ban will effect around 90% of bars.

The white paper follows a blanket ban on smoking put forward by the Scottish Executive. These measures are among initiatives that aim to increase the emphasis within the NHS on preventing illness. Proposals to counter smoking, excessive drinking, obesity and risky sexual behaviour are included in the white paper being studied by John Reid, the Health Secretary.

The white paper aims to tackle alcohol related problems in an attempt to reduce the numbers of deaths associated with its misuse, including death from cancer and liver failure as well as the social harm that is caused, for example, through domestic violence. A recent report by the prime minister's strategy unit estimated that illnesses and injuries caused by alcohol cost the NHS £1.7 billion a year.

The white paper sets out a commitment to tackling alcohol misuse through working with the alcohol industry to improve alcohol labelling and encouraging responsible drinking and improving access to NHS services for the prevention and treatment of alcohol

misuse, with guidance and training to ensure all health professionals are able to identify alcohol problems early.

Professor Ian Gilmore, RCP Registrar and Chair of the Alcohol Committee, said: "We are disappointed that alcohol has such a low profile in the White Paper and that it fails to build on the Government's Alcohol Harm Reduction Strategy. We do not feel that the OFCOM regulations have been strengthened enough and we are surprised that the Government continues to talk about pilot interventions when the evidence base already exists for their implementation. However, mention of new monies for tackling alcohol problems from 2006 is welcome."

RCP Hold Alcohol Action Conference

The Royal College of Physicians have announced an Alcohol Action Conference to be held on January 26th. They state "It is now considered that 1 in 20 people in the UK are dependent on alcohol and a similar number at serious risk of alcoholic liver disease. The Government estimates the annual costs of alcohol to society at up to £1.7bn in health, £7.3bn in crime and public disorder and £6.4bn in the workplace. Liver deaths in young and middle aged people have risen seven fold since the 1970's and the continuing increases in alcohol consumption in young people suggests that the trend is likely to continue". The conference aims to discuss the strategies that are required to deal with the health problems caused by alcohol. Speakers will also discuss the lessons to be learnt from other countries and suggest the strategies on pricing, education, advertising and access that will be needed if the government is to succeed in changing the worrying trends in drinking culture.

The audience will include Gastroenterologists, Hepatologists, GPs, Psychiatrists, Specialist nurses, Social workers, Community drug and alcohol teams, Medical Directors and policy makers of Hospital Trusts etc. For more information, visit www.rcplondon.ac.uk/calendar/2005/conf_2005_arh.htm

Portman Group Ms Jekyll or Ms Hyde



A new cinema advertisement highlighting the 'Jekyll and Hyde' effect that binge drinking will have on women who drink to get drunk is to be shown in cinemas across the UK.

The advert features a young woman sitting at her desk in an office dressed in her smart business suit. But when the interviewer asked her what she likes to do at the weekend, we see a different side. Ms Jekyll turns into Ms Hyde!

Along with her two friends, she is seen getting very drunk, putting herself and others in increasingly embarrassing and risky situations... starting with vomiting in the nightclub toilets and ending up in the gutter holding on to one of her friends for support.

The cinema advert was shown nationwide on 170 screens from mid-December.

For more information visit www.portmangroup.org.uk

Beer Packaging to Promote Responsible Drinking

Heineken NV, the world's fourth-largest brewer is introducing messages to encourage sensible drinking on its bottles and cans worldwide. The messages will invite consumers to visit a new website with information about the effects of drinking alcohol and consumption guidelines. "Whilst consumers are responsible for their own drinking behavior, we are nonetheless committed to help remind and inform consumers about responsible drinking and the dangers of alcohol abuse," Heineken Chairman Thony Ruys said.

Heineken said the message on back labels was live in the United States and would be rolled out to the rest of the world. The website asks consumers for their age and where they live, then gives guidelines on how much men and women should drink. It also includes a quiz on the effects of alcohol. Please visit www.enjoyheinenresponsibly.com

Britain's biggest brewer Scottish & Newcastle and Coors Brewing Company have begun to put general health warnings on some beer bottles in Britain from December, with guidance on how many units of alcohol people should drink.

UK Announce Alcohol Interlock Project

TIRF has been awarded a multi-year contract by the Department for Transport in the UK to develop a demonstration alcohol ignition interlock program. TIRF has partnered Alcohol Countermeasure Systems Corp. of Toronto and Reliance Motoring Services in the UK to deliver the interlock program.

The 36 month pilot project will examine the practicalities and social aspects of interlock programs through an investigation of the acceptability of the interlock device to the user and the impact on the lifestyle of the user and household members as a result of having an ignition interlock device installed in the family vehicle.

As a pilot the project will install interlocks in the vehicles of 100 repeat drink drive offenders for a period of 12 months. Interviews will be conducted with interlock participants and the 100 other repeat offenders periodically throughout the 12 month interval, with a follow up interview 6 months later.

The project will help officials determine the value and nature of any future interlock program in the UK.

Diageo Circulate 'Bar Tips' for Responsible Drinking



Diageo has employed TV psychologist Dr Linda Papadopoulos to come up with advice for drinkers. Following on from a project in May where Dr Papadopoulos identified 6 categories or types of young drinkers, and offered advice to each type, the new 'Bar Tips' leaflet is being circulated in pub and clubs in the UK, it offers drinkers practical steps to enjoy alcohol responsibly. It includes the following tips:

- Know what a unit is and how many are in your drink;*
- alternate your drinks with water to stay refreshed;*
- eat before or whilst drinking to slow alcohol absorption;*
- use soft drink 'spacers' between drinks to help pace an evening;*
- avoid top ups so that you can keep track of your unit intake;*
- think about how you're going to get home before you set out- grab a cab or designate a driver.*

News from France

French vintners staged protests in key wine-making regions on 8th December to press the government to help an industry they contend is being pinched hard by overproduction, shrinking exports and changing drinking habits. Winegrowers are also unhappy with the Government's hard hitting anti-alcohol advertising campaign that warns of the dangers of alcoholism which they say is terrorising the industry.

Growers and wine makers demonstrated in Bordeaux, Avignon, Angers, Macon, Nantes and several other cities to urge the Agriculture Ministry to provide financial assistance and help offset their losses.

In response the Agriculture minister Dominique Bussereau announced that the government would offer assistance to help ailing wine growers with a series of short term measures, particularly those with a heavy debt burden.

The amendment of the 'Loi Evin' has been ratified by the French Senate. The amended version will allow wines or spirits of a defined region to refer to distinguishing characteristics of the product, so long as the reference is compatible with moderate consumption. The senate has not however ratified reference to the 'sensory' qualities of the product.

Drinks Industry Supports New York State Legislation Banning AWOL Machines

Both the National Beer Wholesalers Association (NBWA) and Diageo have voiced their support for the proposed New York State legislation banning AWOL (Alcohol Without Liquid) machines until further research is undertaken to understand the risks to consumers.

AWOL machines, currently legal under New York and most other state laws, enable consumers to inhale alcohol vapors. Alcohol without Liquid - a combination of distilled spirits and infused oxygen that can be inhaled directly into the lungs. Because it initially bypasses the stomach and liver, AWOL

gives an intense buzz. But bypassing these organs could be damaging. The stomach helps regulate absorption rates, and the liver filters toxins. According to British toxicologists, alcohol is absorbed much more quickly through the nasal membranes. Prolonged AWOL use could damage the nose and, worse, bathe the brain and other organs in higher levels of alcohol. There is also concern that when people inhale alcohol it may be much harder for them to know when they are too drunk to drive: Breathalyzer tests may be falsely low because of the lag between intoxication and alcohol entering the blood stream.

Guy Smith, Diageo North America's Executive Vice President, External Affairs, said, "AWOL machines should be banned in New York and the rest of the country because of concerns that they could encourage alcohol abuse and drunk driving. We applaud the efforts of Senators Nicholas Spano and Patricia McGee, Assembly men Robin Schimminger and Richard Brodsky, as well as Westchester County Executive Andrew Spano and Suffolk County Legislator Jon Cooper in their efforts to prohibit the use and sale of AWOL machines in New York State and raise awareness about the potential dangers of these machines."

Alcohol Consumption and the Prevalence of the Metabolic Syndrome in the U.S.

Metabolic syndrome has become increasingly common with the rapid increase in obesity in populations around the world, and its combination of metabolic and lipid disorders are strong factors in the development of most cardiovascular diseases.

In this cross-sectional analysis of data from the Third National Health and Nutrition Examination survey 8,125 participants were evaluated for each component of metabolic syndrome, using the National Cholesterol Education Program's criteria, fasting insulin, and alcohol consumption.

After adjustment for age, sex, race/ethnicity, education, income, tobacco use, physical activity, and diet, subjects who consumed 1-19 and 20+ drinks of alcohol per month had odds ratios for

the prevalence of the metabolic syndrome of 0.65 and 0.34, respectively, compared with current nondrinkers. These findings were particularly noteworthy for beer and wine drinkers.

The authors conclude that mild to moderate alcohol consumption is associated with a lower prevalence of the metabolic syndrome, with a favorable influence on lipids, waist circumference, and fasting insulin. This association was strongest among whites and among beer and wine drinkers. This could be due to biologic differences by race, but is more likely to relate to "healthier" drinking practices among whites (smaller amounts per occasion, more regular consumption rather than binge drinking, etc.).

Curtis Ellison Chief of Preventative Medicine and Epidemiology at the

Boston University School of Medicine comments "This significant and rather striking reduction in the risk of metabolic syndrome among drinkers should not be surprising, as we and many others have previously shown that alcohol is the predominant lifestyle factor affecting levels of HDL-cholesterol, favorably affects glucose metabolism and, when consumed moderately, tends to be associated with less obesity: these are three of the key components of the metabolic syndrome. Even though larger intake of alcohol increases blood pressure, the effect is modest in comparison with the beneficial effects on the other components of the syndrome."

Source: David Aguilar D, Skali H, Moye LA, Lewis EF, Gaziano JM, Rutherford JD, Hartley LH, Randall OS, Geltman EM, Lamas GA, Rouleau JL, Pfeffer MA, Solomon SD

The Importance of Drinking at Mealtimes

Epidemiological studies have demonstrated a positive relationship between heavy alcohol use and hypertension, but few studies have directly addressed the role of drinking pattern.

This New York study was designed to investigate the association of current alcohol consumption and aspects of drinking pattern with hypertension risk in a sample of 2,609 white men and women, aged 35 to 80 years, and free from other cardiovascular diseases.

The results suggest that among current drinkers, those who consume alcohol

without food 75% of the time have significantly increased risk of hypertension in comparison with subjects consuming their alcohol with food. Results were not statistically different according to type of beverage, although the estimates of risk of hypertension were slightly higher for spirits drinkers than consumers of beer or wine, including beneficial effects in the post-prandial state on fibrinolysis and lipids, decrease in LDL, susceptibility to lipid peroxidation, a slower increase and lower peak of blood alcohol concentration, and a possible increase in

alcohol elimination rates when associated with food intake.

The association of alcohol intake with food consumption shown in this study is in line with results from a small Italian study, where researchers found that when alcohol of any type was consumed only with meals there was a decrease in the odds ratio for acute myocardial infarction of 45% for subjects consuming 2 drinks per day and 50% for subjects consuming 3 or more. An inconsistent and non-significant pattern was seen for alcohol consumption "also outside meals or outside meals only."

Alcohol and Atherosclerosis Progression

A recent Stockholm study assessed the association of alcohol intake with progression of coronary atherosclerosis. Although moderate drinkers have a lower risk of coronary heart disease than abstainers, the relation of alcohol use and coronary atherosclerosis has not been well studied.

Individual alcoholic beverage consumption was assessed by a standardised questionnaire. The authors used mixed model analysis to estimate the effect of

alcohol consumption on progression of coronary atherosclerosis, as measured by mean luminal diameter change, controlling for age, smoking, body-mass index, education, physical activity, index cardiac event, menopausal status, diabetes, and history of dyslipidemia.

Most of the women were light drinkers: all reporting more than 5 g/day (a typical drink is 10-15 g) were grouped in the highest category, with an average in this group of 8 g/day.

The authors conclude that among middle-aged women with coronary heart disease, moderate alcohol consumption (over 5 g/day) was protective of coronary atherosclerosis progression in patients who already have evidence of severe coronary artery disease

Source: Alcohol consumption and coronary atherosclerosis progression - the Stockholm Female Coronary Risk Angiographic Study. Janszky I et al. *Atherosclerosis* 2004;176:311-319

Effects of Red and White Wine in Endothelial Function

Levels of anti-oxidant polyphenols are higher in red than in white wine and are thought to contribute to the reduced cardiovascular risk associated with moderate consumption of wine observed in epidemiological studies. The objective of this study was to compare the effects of acute ingestion of white and red wine on endothelial function in subjects with coronary artery disease (CAD).

Fourteen subjects with proven CAD were randomised to consume white and red wine with a light meal in a single

blind cross-over study. Flow-mediated dilatation (FMD) of the brachial artery was measured using high-resolution ultrasonography. Endothelial function, lipid profile, plasma alcohol and polyphenols were measured at baseline, 60 and 360 min after wine consumption.

At baseline, FMD was similar and 360 minutes after ingestion of wine there was no difference in FMD, which improved nearly threefold after both wines. There was no detectable change in plasma polyphenol levels after either wine,

although analysis of the wine revealed higher levels of total phenolics in red than in white wine.

These data suggest that wine acutely improves endothelial function in patients with CAD. This improved endothelial function might contribute to a reduced risk of cardiovascular events.

Source: Effects of Red and white Wine on endothelial function in subjects with coronary artery Disease. Whelan AP et al. Intern. Med J 34 (2004)

Specific Gene Linked with Upper Aero-Digestive Tract Cancer

Excessive drinking is a major risk factor for the development of upper aerodigestive tract cancer (UADTC). As most heavy drinkers smoke and a minority of them (10-20%) develop UADTC, it is thought that constitutional factors predisposing some alcoholics to develop these tumours may play a role. Acetaldehyde appears to be a carcinogenic factor associated with chronic heavy drinking and alcoholics with the ADH1C*1 allele seem to be at particular risk because this allele codes for a rapidly metabolizing enzyme leading to elevated blood acetaldehyde levels. This study investigated for the first time the ADH1C genotype and allele frequency on heavy drinkers with various types of UADTC.

The ADH1C genotype was analysed in 107 Caucasian heavy drinkers with UADTC and 103 alcoholic controls without cancer age-matched to the UADTC group. Both groups had similar mean drinking levels. In addition, alcohol (0.3 g/kg) was administered to 21 healthy volunteers with the ADH1C*1/*1, ADH1C*1/*2 and ADH1C*2/*2 genotypes and to 12 healthy male volunteers with different ADH genotypes who drank alcohol at appetite. Subsequently, salivary acetaldehyde levels were measured.

Results showed that the frequency of the ADH1C*1 allele was higher in the UADTC group than in age-matched alcoholic controls without cancer (61.7%

vs. 49.0%). Healthy volunteers with ADH1C*1 allele (ADH1C*1/*1) had higher salivary acetaldehyde levels after alcohol ingestion than healthy volunteers heterozygous for that allele (ADH1C*1/*2) or homozygous for the ADH1C*2 allele (ADH1C*2/*2).

These findings demonstrate that heavy drinkers with the ADH1C*1/*1 genotype are predisposed to develop upper aerodigestive tract cancer, possibly due to elevated salivary acetaldehyde levels upon alcohol consumption.

Source: Visapää J-P, Götte K, Benesova M et al. Increased cancer risk in heavy drinkers with the alcohol dehydrogenase 1C1* allele, possibly due to salivary acetaldehyde. Gut 53(2004) 871-876

Alcohol Intake and 8-year Weight Gain in Women

This study examined the relationship between alcohol and 8-year weight gain in women, the investigators studied 49,324 women, 27 to 44 years old, who did not have a history of cardiovascular disease, cancer, or diabetes, who were not pregnant during the study period, and who reported weights in 1991 and 1999.

At baseline, the alcohol consumers were leaner, smoked more, and tended to consume the same number of non-alcohol calories than abstainers, but consumed more calories when adding those from alcohol. As shown in Table 2 of the paper, the largest increase in weight over follow up were in the never drinkers and ex-drinkers (who had the same amount of weight gain of 5.9 kg), followed by the heaviest drinkers (5.83

kg). The lowest weight gain was among the consumers of 15.0-29.9 g/day (about 1 to slightly over 2 typical "drinks"), where the increase was 5.35 kg.

When evaluated by the odds ratio of an increase of 5 or more kg, the lowest adjusted value was for the consumers of 15.0-29.9 g/day where, in comparison with abstainers, the OR was 0.86 (95% CI = 0.76, 0.98). The reduction in risk of weight gain was particularly strong in women with a BMI between 25 and 30, who for an intake of 15-29.9g/day showed an OR for weight gain of 0.63 versus abstainers; women with a baseline BMI > 30 had a tendency to actually increase their risk of weight gain at this level of drinking.

Results were different for African-American women, who were much more obese than whites (BMI 27.1 vs. 24.6), drank much less, and showed a positive relation between alcohol intake and weight gain. Weight changes for beer and wine intake were similar, although liquor consumption did not show a reduction in risk of obesity with moderate drinking. Episodic heavy drinkers tended to show increased risk of weight gain, but there was little difference between moderate drinkers consuming alcohol on 4-7 days per week versus 1-3 days per week.

Source: Wannamethee SG, Field AE, Colditz GA, Rimm EB. Obes Res 2004;12:1386 - 1396

Mortality in England and Wales Attributable to Alcohol Consumption

Adverse health consequences of alcohol use include various cancers, hypertension, liver disease, accidents and violence, but moderate drinking decreases the risk of ischaemic heart disease (IHD). For that reason, all-cause mortality has a U-shaped relationship with alcohol use. The precise shape of the U depends on various factors including age and sex since IHD afflicts a larger proportion of older than younger people.

The aim of this study was to quantify mortality attributable to any alcohol use and mortality attributable to consumption above specified levels based on a previous study in England and Wales in which the nadir was found to be zero use for men under 35 and women under 55 years of age, increasing to 8 units/week for men over 65 and 3 units/week for women over 65, with 1 unit corresponding with 9g alcohol.

All-cause mortality correlated with alcohol use based on cause-specific mortality models from a systematic review and the distribution of alcohol use and causes of death by age and sex in England and Wales in 1997. The deaths and person-years of life lost until the age of 65 were estimated that were attributable to any alcohol use, drinking above the nadir (the drinking level associated with the lowest risk), and drinking in excess of the British Royal Colleges' recommended limits of 21 units/week for men and 14 units/week for women.

IHD deaths prevented by alcohol use (11,276 men, 4050 women) roughly balanced deaths attributable to drinking (9246 men, 4216 women). Overall, 0.8% of all deaths in men were prevented by alcohol use while 0.1% of all deaths were prevented in women. Drinking

above the recommended limits was responsible for 2.1% of deaths for men and 0.8% for women while 2.8% and 1.2% of deaths, respectively, were attributable to drinking above the nadir. Of all person-years of life lost until the age of 65, 10.3% and 5.6% were attributable to any alcohol use in men and women, respectively, 8.5% and 4.0% to drinking above recommended limits and 12.6% and 6.0% to drinking above the nadir.

Although overall risks and benefits of alcohol use appear to be roughly equal, the authors conclude that drinking above recommended limits remains responsible for many deaths and a large loss of person-years of life.

Source : White IR, Altmann DR, Nanchahal K. Mortality in England and Wales attributable to any drinking, drinking above sensible limits and drinking above lowest risk level, *Addiction* 99 (2004) 749-756

Resveratrol May Bring Further Cardiac Benefits

New research on rat heart cells suggests that the antioxidant resveratrol, may benefit heart tissue by limiting the effects of a condition called cardiac fibrosis.

Diseases such as hypertension and heart failure can cause fibrosis, a hardening or stiffening of the heart tissue. This condition arises when heart cells called cardiac fibroblasts are activated. These cells secrete collagen, a protein that provides structural support for the heart.

Overactive cardiac fibroblasts cause fibrosis of the heart tissue, which then loses its ability to efficiently pump blood, said Joshua Bomser, a study co-author and an assistant professor of human nutrition at Ohio State University.

While resveratrol is already known for helping to prevent blood clots and also possibly reducing cholesterol, this is the first time that scientists have studied the compound's direct effects on these heart cells.

In the case of hypertension and heart failure, a potent hormone called angiotensin II is produced at a high level, which is the body's way of trying to repair damage to the heart and to increase blood pressure.

But often the hormone causes cardiac fibroblast production to go into overdrive, and, as a result, these cells produce excessive amounts of collagen - a fibrous substance found in bone, tendons, ligaments and other connective tissues.

"This hyper-secretion of collagen leads to a stiffening of the heart muscle," Bomser said. "So the heart has to work harder to pump blood, which causes further damage to the myocardium."

The researchers pretreated rat cardiac fibroblasts with resveratrol prior to adding angiotensin II to the cells. Resveratrol treatment inhibited

angiotensin II's ability to cause growth and proliferation of the cardiac fibroblasts. Resveratrol also prevented these cells from turning, or differentiating, into myofibroblasts, a specialized type of fibroblast that produces large quantities of collagen.

"These results suggest that resveratrol has anti-fibrotic properties in the myocardium," Bomser said.

While the researchers can't say how much resveratrol is needed to be beneficial, previous studies suggest that drinking red wine in moderation - one or two five-ounce glasses a day - may offer protective effects.

Source: Olson ER et al. Inhibition of cardiac fibroblast proliferation and myofibroblast differentiation by resveratrol. *Am J Physiol Heart Circ Physiol* (October 21, 2004).

Wine and Health – a Question of Style? by Dr. Erik Skovenborg

“Wine is as old as civilisation and has been a part of the rituals and religions of every culture of the Western world. An extensive body of research exists documenting the positive role wine has played in society for more than 6,000 years. Articles and papers on the health benefits of wine have proliferated in a variety of scientific journals and magazines.” With this tribute to wine professor Hilliard J. Katz introduced Proceedings of WINE, HEALTH & SOCIETY - a symposium that took place November 13-14, 1981, San Francisco, California. Part of the objectives of the symposium were defined as providing a broad, positive cultural/medical view of wine through interdisciplinary research and providing a scientific forum for reports of recently completed research or work-in-progress on the medical uses of wine. Among the topics of the symposium were “Alcohol and high density lipoproteins” (John P. Kane, M.D.) and “A ten-year study of alcohol use, total and cardiovascular mortality” (Arthur L. Klatsky, M.D.).

October 20, 2002, professor Federico Leighton opened another Wine and Health-symposium in Santiago - Vinalud Chile 2002 – where more than 50 scientists from different countries were introduced to the latest investigations related to moderate consumption of wine and health. During the 21 years that had gone by since the Wine, Health & Society-symposium in San Francisco the body of research documenting the health benefits of wine had grown with hundreds of epidemiological studies; the structure, activity and bioavailability of polyphenols had been studied in detail; in a growing number of papers different wine polyphenols had been shown to modulate the function of cellular components involved in the process of hemostasis and thrombosis in several systems; the role of red wine polyphenols in reducing the oxidation of LDL cholesterol had moved from in vitro studies to studies of wine taken with meals.

In conclusion the results of international comparisons and some prospective studies strengthened by the observed mechanisms of action of red wine polyphenols suggest that wine is more protective against CHD than liquor and beer. However, the awareness that the lower mortality of wine drinkers may be connected with a healthier pattern of drinking is increasing; wine drinkers tend to consume moderate amounts of wine with meals. More favorable risk traits in wine drinkers may also be involved. As Arthur L. Klatsky concluded in Santiago: “We have to accept that wine drinkers do better, but at present it is not possible to separate out the three possible explanations of that fact.”

The recent Danish Diet Cancer and Health study showed that preference of wine was associated with a higher intake of fruit, fish, vegetables, salad and a higher frequency of use of

olive oil for cooking compared with preference of beer and spirits in both men and women. The habit of sensible wine drinking seems to be married to healthy eating habits. Hugo Dunn-Meynell, Director of the International Wine & Food Society, spoke of the marriage of wine and food at a Robert Mondavi Mission Symposium in Brussels, October 1990. “Wine is, as Thomas Jefferson put it, living proof that God loves us and wants us to be happy. We believe this to be the case, and feel a responsibility to make sensible use of wine, to drink it in moderation and to value its benefits. To serve wine at a foolish temperature, on an unsuitable occasion, with inappropriate food, or to excess, shows, in our philosophy, a lack of respect for the people who worked so hard to make it.”

The egg and the hen story – which came first, the habit of sensible wine drinking or the habit of sensible Mediterranean style eating habits? Is the wine drinker a rational person with sensible decisions regarding food, drink and exercise amounting to a sensible lifestyle – who just happens to be born in a culture where wine is a common choice of beverage? Or may we believe with Hugo Dunn-Meynell, a propagandist for a civilized way of life, that “all one need to do was to make people aware of the pleasures and benefits of wine and demonstrate that point by matching a fine cheddar with a glass of nourishing Nuits-St-Georges, a piece of turbot with half a bottle of Chablis, or a lamb cutlet with one of Bob Mondavi’s splendid Cabernet Sauvignons, the day was won and another vinophile born.”

The health benefits enjoyed by wine drinkers may be a question of a sensible life style and the virtues of wine may well be just a part of the explanation. However, if serving wine with a meal inspires people to a sensible diet with plenty of fruit, fish, vegetables, salad and olive oil this might open a hedonistic short cut to healthy eating habits. Even so many vinophiles would agree with Gerald Asher, who gave a talk after the dinner at the end of the first day of the Wine, Health & Society symposium. “Since this is a seminar dedicated to a scientific understanding of wine and medicine, let me confess right away that I do not drink wine for subversive purposes like improving my ratio of high density lipoproteins or helping my digestive system extract more nutrients from food. I drink wine because I like it, it makes me happy, and it encourages me to like my fellow men. I think it is great that wine does wonders for our kidneys, our cardiovascular system, our digestion. But its blessing lies beyond that. “Bronze is the mirror of form” said Aeschylus, the Greek poet, “wine, of the heart.”

Erik Skovenborg is a member of the The Scandanavian Medical Alcohol Board and a member of the AIM Council

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, 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,
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Women, Alcohol and Lifestyle Issues Related to Breast Cancer - Overview of Studies published in 2004

by Elisabeth Holmgren

Data on the effects of moderate alcohol consumption in women have continued to show that sensible consumption of wine, beer and spirits appears to be associated not only with reduced risk of coronary heart disease but also reduced risk of overall mortality rates. This has been acknowledged by leading researchers and public health groups including in a recent expert report by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). In fact, drawing from pools ranging in size from 85,000 women in the Harvard University's Nurses' Health Study to more than 250,000 women in the Cancer Prevention Study II, over the last decade extensive studies have reported that light-to-moderate consumption may result in reduced all-cause mortality for women.

Despite a large number of research studies around the world, there is no scientific consensus on the effects of moderate alcohol consumption and breast cancer, but clear risk increases have been reported with higher consumption levels. In fact, many research studies have found an association between heavy alcohol intake and elevated breast cancer risk, but the data on moderate intake is not clear. Some studies have revealed no increase while others reported a slight increase.

The current Dietary Guidelines for Americans explain that taking more than one drink a day for women can raise the risk of certain types of cancer. They specifically state, "Even one drink per day can slightly raise the risk of breast cancer." An often cited 1998 published study by Smith-Warner concluded, "Women consuming 30 to less than 60 grams per day of alcohol had a 41% higher risk of invasive breast cancer." At the same time they reported a modest 6% increase for those women consuming 5 to 15 grams a day, results which underscore that moderation within governmental guidelines should not be of concern for most women. In fact, a 1999 Boston University study by Zhang and colleagues reported, "light consumption of alcohol of any type of alcoholic beverage is not associated with an increased breast cancer risk." The authors also commented, "We believe that estimated effects of this magnitude do not justify public health interventions to warn all women not to drink alcohol because of the dangers of breast cancer. For now, the best approach seems to be to provide women with scientifically sound, balanced information on the effects of light drinking so that they can make informed decisions regarding their own lifestyle habits."

While the relationship between alcohol and breast cancer is an important concern needing ongoing study, scientists emphasize that cardiovascular disease and overall mortality data should be included in any risk-benefit analysis for women who drink moderately. Considering this type of data, leading public health groups such as the American Cancer Institute have stressed moderation –no more than one drink a day–for those women who choose to drink. This is also echoed in the US Dietary Guidelines which further underscore the importance of consuming alcohol in conjunction with a healthy well balanced diet and lifestyle. Along those lines, Harvard University

researchers have found that a well balanced lifestyle that includes a diet sufficient in folate (Vitamin B12) may diminish any potentially negative effects of alcohol. However, further studies on the important interactions of diet, alcohol and lifestyle issues are warranted and in the meantime, women are advised to talk to their healthcare providers on these and related alcohol and health questions.

The following is an overview of selected studies published in peer reviewed journals over the last year. This data further underscores the importance of sensible consumption habits and overall healthy lifestyles for those women who choose to drink.

Healthy Lifestyle May Decrease Women's Risk of Developing Cancer

Post-menopausal women who follow recommended dietary and lifestyle guidelines may reduce their risk of developing and dying from cancer, with those in highest compliance experiencing the best outcomes. Conversely, those women who followed one or none of the nine recommended guidelines for diet and lifestyle had a 35 percent higher risk of developing cancer and a 42 percent greater risk of dying from cancer than women who adhered to at least six of the recommendations considered for the study. The study examined data collected from 29,564 women, aged 55 to 69 upon entry into the study, who were followed over a 13-year period to determine the impact of dietary lifestyle factors on the incidence and death rate from cancer. The investigators evaluated women's cancer risk and other health outcomes based on how many of those categories the women followed as part of their normal lifestyle. Those recommendations included having maximum body mass index less than 25 kg/m²; having gained no more than 11 pounds since age 18; engaging in daily moderate and weekly vigorous physical activity; eating of 5 or more servings of vegetables and fruit daily; consuming more than 400 grams (about 14 ounces) of complex carbohydrate per day; limiting alcohol intake to less than 14 grams per day (one drink); limiting red meat consumption to less than 80 grams per day (about 3 ounces); limiting daily consumption of fat to no more than 30 percent of total caloric intake; and limiting use of sodium to less than 2,400 milligrams per day. The investigators emphasize, "Our study suggests that older women may be able to have a fairly large impact on their cancer risk by not smoking, controlling body weight, exercising and eating a healthy, and balanced diet. Besides having an impact for individuals, following these recommendations would also have a large impact on reducing cancer in our communities as a whole."

It has to be noted that the study examined the self-reported dietary and lifestyle habits of women, but did not evaluate the effect that changes to improved, recommended diets would have on the risk of cancer incidence and mortality, which would need to be tested in a randomized clinical trial.

Reference: James Cerhan et al. Adherence to the AICR Cancer Prevention Recommendations and Subsequent Morbidity and Mortality in the Iowa Women's Health Study Cohort. *Cancer Epidemiology, Biomarkers and Prevention*, 13, 2004

Diet, Alcohol and Breast Cancer Risk

According to Harvard University researchers the role of specific dietary factors in breast cancer causation is not completely resolved. They explain that results from prospective studies do not support the concept that fat intake but rather weight gain in middle life has a major relation to breast cancer risk. They further write, "Alcohol is the best established dietary risk factor, probably by increasing endogenous estrogen levels." Hypotheses relating diet during youth to risk decades later will be difficult to test. The researchers conclude, "Nevertheless, available evidence is strong that breast cancer risk can be reduced by avoiding weight gain during adult years, and by limiting alcohol consumption."

Another study addressing this subject area explained that the major risk factors for breast cancer are hormone-related, and explain that the only well-established diet-related risk factors for breast cancer are obesity and alcohol consumption. The authors write that obesity increases breast cancer risk in postmenopausal women by around 30%, probably by increasing serum concentrations of bioavailability oestradiol. Furthermore it is stated that "moderate alcohol intakes increase breast cancer risk by about 7% per alcoholic drink per day, perhaps also by increasing estrogen levels." The authors also suggest that phyto-oestrogens can affect hormone metabolism, but data on phyto-oestrogen consumption and breast cancer risk are inconsistent. Nutrition might affect breast cancer risk by altering levels of growth factors such as insulin-like growth factor-I. They conclude, "Current dietary advice should be to avoid obesity, limit alcohol intake, and maintain a varied diet."

Reference: Holmes MD et al, Does Diet Increase Breast Cancer Risk?, *Breast Cancer Res.* 2004, Epub 17, 2004; Key TJ et al, *Nutrition and Breast Cancer*, *Breast*, Dec;12(6), 2003

Alcohol Found to Increase Risk of Hormonally Sensitive Breast Cancer

Older women with a history of alcohol use are significantly more likely than nondrinkers to be diagnosed with hormonally sensitive forms of breast cancer, according to researchers at Fred Hutchinson Cancer Research Center. Lead author Dr. Christopher I. Li and colleagues explained, "Women who were current drinkers who reported consuming at least 30 grams of alcohol a day – roughly the equivalent of two drinks – had an 80% higher risk of breast cancer compared to nondrinkers." The risk of the less common lobular breast cancer was especially increased among women who drank two to three or more drinks a day. The researchers found no association between alcohol use and increased incidence of hormonally insensitive cancers. They theorize that hormonally sensitive tumors are stimulated through the increased estrogen production triggered by alcohol. The investigators also emphasize, "This is one of the first studies to evaluate the relationship between alcohol use and breast cancer and how alcohol consumption modifies the risk of different types of breast cancer. While our results

suggest that alcohol is strongly associated with hormonally responsive types of breast cancer, they need to be confirmed by other researchers." This study was funded by the National Cancer Institute.

Reference: Li Cl et al., the Relationship between Alcohol Use and Risk of Breast Cancer by Histology and Hormone Receptor Status among Women 65-79 Years of Age, *Cancer Epidemiology Biomarkers Prevention*, 12, 2003

California Teachers' Study: Drinking Patterns and Risk of Breast Cancer

The researchers explain that alcohol consumption of around two drinks a day has been associated with elevated breast cancer risk in many studies. In this study they specifically looked at drinking patterns and concluded, "Recent alcohol consumption equivalent to two or more drinks per day increases the risk of invasive breast cancer, with greatest relative risks observed among heavy drinkers who are postmenopausal and have a history of benign breast disease or who use hormone replacement therapy."

Reference: Horn-Ross PL, et al, Patterns of Alcohol Consumption and Breast Cancer Risk in the California Teachers Study Cohort, *Cancer Epidemiology Biomarkers and Prevention*, 13, 3, 2004.

Heavy vs. Moderate Consumption and the Risk of Breast Cancer

Using questionnaire data from 13,074 Danish women aged 20–91 years (473 cases of breast cancer), researchers sought to clarify the effect of the type and amount of alcohol intake on breast cancer risk.

This Danish study has confirmed that heavy drinking increases the risk of breast cancer, particularly among premenopausal women. However, the research also found light-to-moderate drinking appears to have little effect on a woman's risk for breast cancer. According to the investigators the study confirms earlier reports that heavy alcohol consumption is a risk for breast cancer. The investigators state that there seems to be no difference in the effect of the different types of alcoholic beverages, which indicates that it is ethanol itself and not the type of drink that is associated with breast-cancer development. The research investigation involved more than 13,000 women between 20 and 91 years of age and concluded, "Total alcohol intake of more than 27 drinks per week increases breast cancer risk in premenopausal women independently of the type of alcohol. Among postmenopausal women, an intake of spirits of more than six drinks per week increases breast cancer risk."

Reference: Petri, Annette et al, Alcohol Intake, Type of Beverage, and Risk of Breast Cancer in Pre- and Postmenopausal Women. *Alcoholism: Clinical & Experimental Research*. 28(7), July 2004

Lifetime Alcohol Consumption and Postmenopausal Breast Cancer Rate in Denmark.

Research has suggested that alcohol intake may be one of the few modifiable risk factors for breast cancer. In a prospective cohort of 29,875 women with 423 cases of breast cancer during 1993-2000, the Danish researchers examined the relationship

between postmenopausal breast cancer incidence rate and alcohol consumption in different life periods. When alcohol intake during four age ranges, twenties, thirties, forties and fifties was evaluated, only the intake in the fifties increased the risk of breast cancer [rate ratio (RR) = 1.12 (95% CI: 1.05-1.19)] per 10 g/d increase in alcohol intake. After adjustment for intake at study entry, this association was no longer present [RR = 1.01 (95% CI: 0.91-1.13)]. The cumulative lifetime alcohol intake, adjusted for recent intake, showed no association with postmenopausal breast cancer risk. Recent alcohol intake, adjusted for the alcohol intake in the other life time periods, showed a significant association of RR = 1.09 (95% CI: 1.00-1.18) per 10 g/d.

There was no indication of a higher risk among women who started drinking early, nor did women who started to drink before their first birth have a higher risk than women who started to drink later in life. Specifically, the researchers write, "Our results suggest that baseline (at the beginning of their study) intake of alcohol is a more important determinant of postmenopausal breast cancer risk than earlier lifetime exposure."

Reference: Tjonneland A et al, Lifetime Alcohol Consumption and Postmenopausal Breast Cancer Rate in Denmark: A Prospective Cohort Study, *Journal of Nutrition*, Vol. 134, 2004

Drinking Patterns and Risk of Breast Cancer in Danish Cohort

This study investigated how the breast cancer risk for a given total alcohol consumption may depend on the drinking frequency. Within the prospective study on 'Diet, Cancer and Health', the researchers examined the relationship between breast cancer, intake of total alcohol and frequency of drinking among 23,778 postmenopausal women, among whom 425 cases of breast cancer accrued during a median follow-up of 4.8 years. The dose-response relationship between total alcohol intake and breast cancer showed an increase in the rate ratio of 1.10 per 10 g/day (95% CI: 1.04-1.16) with no evidence for differences by type of alcohol beverage. No interaction was found between drinking frequency and total alcohol intake in the risk of breast cancer. The investigators concluded, "The present study supports previous ones in showing a monotonic increase in the risk of breast cancer among postmenopausal women with increasing average daily intake of alcohol, and this relationship with alcohol intake did not depend on drinking frequency."

Reference: Tjonneland A et al, Alcohol Intake, Drinking Patterns and Risk of Postmenopausal Breast Cancer in Denmark: a Prospective Cohort Study, *Cancer Causes Control*. 2003, Apr; 14(3).

High Fat and Alcohol Intake: Risk Factors for Postmenopausal Breast Cancer

Results from the Swedish Malmo Diet Cohort (MDC) revealed that high intakes of alcohol and fat can increase the risk of the development of breast cancer. Associations between intakes of relative fat, total alcohol and alcoholic beverages and risk of breast cancer were examined in a sub sample of 11,726 postmenopausal women. The MDC conducted baseline

examinations from 1991 to 1996; the end of follow-up was December 2001. Data were obtained by an interview-based diet history method, a structured questionnaire, anthropometric measurements and national and regional cancer registries. During 89,602 person-years of follow-up, 342 incident cases of breast cancer were documented. According to the study, women who drank more than roughly 1.5 glasses of wine per day were twice as likely to get the disease compared to women with little or no alcohol intake. Moderate drinkers, meanwhile, were found to be at a 12 percent lower risk of breast cancer. High dietary fat, long suspected to be a culprit in breast cancer, also was associated with the disease. As amounts of fat in women's diets increased, so did their risk of breast cancer. Those who consumed the highest amounts saw their risk of getting breast cancer rise by 34 percent.

Specifically, Cox regression analysis examined breast cancer risks adjusted for potential confounders and the researchers conclude that while there was no increase with moderate drinking, "High total alcohol intake was associated with a nonsignificantly elevated risk. High wine intake was associated with a significantly elevated breast cancer risk. There were significant trends of increased breast cancer risk across quintiles of relative fat intake." They add that mutual adjustment did not affect risk estimates for total alcohol or relative fat intakes. Providing some dietary advice, the authors explain that women should drink moderately, if they choose to drink, as the research debate on alcohol and breast cancer is still evolving. The same journal featured other studies looking at potential breast cancer risk factors such as a women's height.

Reference: Mattison I et al, High Fat and Alcohol Intakes are Risk Factors of Postmenopausal Breast cancer: A Prospective Study from the Malmo Diet and Cancer Cohort", *International Journal of Cancer*, Vol 110, No 4, 2004

Alcohol, Breast Cancer and Folate Status

The objective of this study was to determine the effects of moderate alcohol intake on folate and vitamin B12 status in healthy, well-nourished, postmenopausal women. The researchers state that alcohol may increase the risk of breast cancer by altering the status of folate and vitamin B12, two vitamins required for DNA methylation and nucleotide synthesis, and thus cell integrity. Although the effects of heavy alcohol intake on folate and vitamin B12 status have been well documented, few studies have addressed the effects of moderate alcohol intake in a controlled setting. The study design was a randomized, diet-controlled crossover intervention. Postmenopausal women received three 8-week alcohol treatments in random order: 0, 15, and 30 g/day. Treatment periods were preceded by 2-5-week washout periods. Blood collected at baseline and week 8 of each treatment period was analyzed for serum folate, vitamin B12, homocysteine (HCY), and methylmalonic acid (MMA) concentrations. After adjusting for body mass index (BMI), a significant 5% decrease was observed in mean serum vitamin B12 concentrations from 0 to 30 g of alcohol/day. The investigators concluded, "Among healthy, well-nourished, postmenopausal women, moderate alcohol intake may diminish vitamin B12 status."

Reference: Laufer EM et al, Effects of Moderate Alcohol Consumption on Folate and Vitamin B12 Status in Postmenopausal Women, *European Journal of Clinical Nutrition*, Vol 58, No11, 2004

Commentary on Alcohol and Breast Cancer Risk by Canadian Researcher

According to a review and commentary by a Canadian researcher from Queen's University, "Both alcohol and tobacco are known to have important causal roles in a variety of cancers, and breast cancer has not escaped the epidemiologists' critical examination." The author highlights findings from a review study published in the 'British Journal of Cancer' and explains "through this combined analysis, the collaborative group found that alcohol is clearly an independent risk factor for breast cancer, with no confounding by smoking or other risk factors such as parity and age at birth of first child." The commentary reviews the strength and weaknesses of this and other studies and discusses the complex issue of alcohol and health in light of some of the reported benefits with respect to heart disease. The author theorizes that alcohol may account for 4% of breast cancer cases in Canada and that it was important to acknowledge that alcohol was one of the few modifiable behaviors at both the individual and the societal level. As part of the closing paragraph, the author states, "I believe that public health messages on the benefits of drinking must be heavily weighted by the many negative consequences. At the individual level we should also think in terms of who is at risk and direct recommendations accordingly."

Sources: Aronson K, Alcohol: A Recently Identified Risk Factor For Breast Cancer, *CMAJ*, 168(9), 2003

Review on Alcohol and Cancer

The researchers write, "Epidemiological data have identified chronic alcohol consumption as a significant risk factor for upper alimentary tract cancer, including cancer of the oropharynx, larynx and the esophagus and of the liver. The increased risk attributable to alcohol consumption of cancer in the large intestine and in the breast is much smaller. However, although the risk is lower, carcinogenesis can be enhanced with relatively low daily doses of ethanol. Considering the high prevalence of these tumors, even a small increase in cancer risk is of great importance, especially in those individuals who exhibit a higher risk for other reasons."

Reference: Pöschl G et al, Alcohol and Cancer, *Alcohol and Alcoholism*, Vol 39, No 3, 2004

Moderately Drinking Women found to be in Overall Better Health

A new study finds that women who drank alcohol moderately were in better health overall than those who didn't drink. The study was done by the Oregon Health and Science University, in collaboration with the Kaiser Permanente Center for Health Research in Portland. The researchers surveyed 3,069 men and 2,600 women members of Kaiser Permanente Northwest. The investigators write, "For both genders, light to moderate consumption and more frequent drinking were associated with

better health and functioning; relationships were stronger among women than men."

The research found that women who drank moderately had better health and physical functioning than nondrinkers. On the other hand, women who drank heavily were in worse health. Because women have more body fat than men, blood alcohol concentration for a given amount of consumption is greater in women than that of men, who have more body water that tends to dilute alcohol. The greater blood alcohol in women appears to increase the benefits of light and moderate drinking, but also raises the danger of heavy drinking. The investigators cautioned that they did not find that better health is a result of moderate drinking. In fact, a Kaiser Permanente report several years ago found moderate drinkers also tended to lead healthier and more balanced lifestyles. Moderate drinking was defined as one to two drinks per occasion, two or three times a week, or 15 to 29 drinks spread out throughout the month.

Reference: Green, C et al, Gender Differences in the Relationships between Multiple Measures of Alcohol Consumption and Physical and Mental Health. , *Alcoholism: Clinical & Experimental Research*. 28(5), May 2004

The Bottom Line:

As more research will clarify the many remaining questions, the most important recommendation for women is to maintain a healthy lifestyle and to stay within governmental drinking guidelines, which emphasize moderation for those who choose to drink. The bottom line recommendation by the American Cancer Society reads as follows, "It always pays to be prudent when it comes to your health, and that applies to alcohol and breast cancer. Excessive drinking will cause problems, and not only with breast cancer. But an occasional alcoholic beverage is unlikely to make a large difference in a woman's risk profile for this disease, especially if you have a healthy diet, a healthy weight, and get regular exercise." Therefore, those who choose to drink should stay within the limits given through authoritative advice such as the US Dietary Guidelines for Americans, which emphasize, "... Limit intake to one drink per day for women..., and take with meals to slow alcohol absorption." Furthermore, women are encouraged to consult with their physician on questions pertaining to alcohol and health as their individual risks may need to be considered.

For more information please visit:

http://www.cancer.org/docroot/SPC/content/SPC_1_Breast_Cancer_and_Alcohol_Explainer_2002.asp#what

Elisabeth Holmgren is AIM Director of US Operations.

Can Histamine in Wine Cause Adverse Reaction for Consumers?

by Creina Stockley, of The Australian Wine Research Institute

Introduction

In the 1960s it was postulated that dietary biogenic amines such as histamine might cause adverse reactions such as migraine headaches. Subsequently a number of adverse reactions have been ascribed to dietary biogenic amines, including hypotension or low blood pressure, facial flushing, nasal congestion and/or gastrointestinal and respiratory distress. The foods implicated in these adverse reactions were cheese, chocolate, fish and fermented foods such as wine (Morrow *et al.* 1981, Askar and Treptow 1986, Malone and Metcalf 1986).

An adverse reaction to a food can either be a food allergy or a food intolerance. An immune or IgE-mediated allergy occurs on subsequent exposure of an individual to an allergen, such as a food protein, where the sensitised mast and blood basophil cells release histamine and other anaphylaxis-associated chemicals. In Australia, similar to the USA, approximately 2.5% of the population has a food allergy, and specifically, 4-8% of children under three years of age and 1-2% of the adult population have a food allergy. A food intolerance, on the other hand, is a form of hypersensitivity and is not mediated by the immune system. A relatively large amount of a food is needed to trigger a histamine induced food intolerance in contrast to a small amount needed to trigger an IgE-mediated food allergy. After the oral ingestion of histamine, however, a food intolerance can be indistinguishable from a food allergy since histamine is also a mediator in a food allergy.

Accordingly, those individuals who experience an adverse reaction when consuming wine frequently attribute their reaction to the histamine content of wine. The current scientific literature suggests, however, that there is no correlation between wine intolerance and the histamine content of wine (Dahl *et al.* 1986, Kanny *et al.* 1999, 2001) although wine may contain histamine releasing compounds.

What is histamine?

The biogenic amine, histamine, is an endogenous compound. It is produced in the body by both mast cells and their related blood basophils. The lungs produce the highest concentration of histamine.

Histamine exerts its effects or adverse reaction by interacting with receptors on cellular membranes; there are H1 and H2 receptors, which have different effects on the body. These receptors are also located in more than one organ of the body, which explains why histamine is responsible for numerous symptoms. In the cardiovascular system, histamine interacts with both H1 and H2 receptors. Interaction with H1 receptors causes dilatation of extravascular or peripheral blood vessels, capillaries and arteries, which results in hypotension, facial flushing and headache. Interaction with H2 receptors, however, causes contraction of cardiovascular smooth muscle that accelerates heart rate (Beavan and Horakova 1978, Taylor 1985). In the gastrointestinal system, histamine interacts with H1 receptors to contract intestinal smooth muscle, which results

in nausea, abdominal cramps, vomiting and diarrhoea (Taylor 1985), and in the lungs to contract bronchial smooth muscle, which results in bronchospasm. Histamine also interacts with H2 receptors in the parietal cells of the stomach, which regulate gastric acid secretion (Taylor 1986). In addition, histamine acts as a neurotransmitter in the central nervous system to stimulate motor and sensory neurons, which result in urticarial lesions (Taylor 1986). Other cutaneous or skin reactions are rash, edema and localised inflammation.

Histamine is metabolised or broken-down in the human body primarily by two enzymatic pathways. The first pathway is methylation by histamine N-methyltransferase, which is followed by either oxidation by monoamine oxidase enzymes and/or by acetylation by diamine oxidase. Both pathways are present in the gastrointestinal tract and liver (Granerus 1968, Taylor and Lieber 1979, Hui and Taylor 1985, Taylor 1986). Putrefactive amines (putrescine and cadaverine) and other biogenic amines such as tyramine, tryptamine and phenylethylamine, inhibit the metabolism of histamine (Voigt *et al.* 1974, Summer and Taylor 1979, Taylor and Lieber 1979, Lyons *et al.* 1983, Hui and Taylor 1985, Taylor 1986). These other amines, which are also observed in wine, compete with histamine for metabolism in the gastrointestinal tract, which results in an increased intestinal uptake and urinary excretion of unmetabolised histamine.

Histamine is also involved in IgE-mediated allergic reactions. For example, on contact with, or ingestion of, a substance (antigen) to which an individual is 'allergic', histamine is released from mast cells and basophils as the antigen attaches to, and cross-links with, the IgE molecule (antibody) which is bound to the surface of the mast cell. This results in exocytosis, which is the discharge of histamine-containing granules from the cell. These granules circulate throughout the body to cause different reactions. Histamine is, however, readily metabolised and excreted in urine from the body.

It is often postulated, therefore, that the ingestion of foods that contain histamine can result in symptoms similar to an allergic reaction. Furthermore, foods, including wine, can inhibit the monoamine oxidase enzyme and hence delay the metabolism of histamine, and increase the concentration of histamine in blood. In addition, the ethanol and acetaldehyde constituents of wine can stimulate the release of endogenous histamine (Lowenberg *et al.* 1981, Zimatkin and Anichtchik 1999).

Which foods contain histamine?

Histamine, in addition to other biogenic amines, is present in measurable quantities in: aged cheese; fish such as mackerel and tuna; meat; yeast extract and products; vegetables such as egg plant, spinach and tomatoes (Malone and Metcalf 1986); and wine (Ough 1971, Subden *et al.* 1979, Buteau *et al.* 1984, Baucom *et al.* 1986). In particular, foods that have been exposed to microorganisms during ripening, processing or storage can contain a relatively high concentration of histamine and other biogenic amines.

Histamine occurs naturally in these foods and wine, and is generated by the bacterial and microbial decarboxylation of the amino acid L-histidine. Approximately 5 to 80mg/L of L-histidine is present in grapes and juice depending on the grape variety (Rankine 1989, Spayd and Andersen-Bagge 1996, Gloria *et al.* 1998, Stines *et al.* 2000). It is hypothesised that bacterial growth, during the alcoholic or malolactic fermentation of the winemaking process, is responsible for the decarboxylation (Cilliers and van Wyk 1985, Vidal-Carou *et al.* 1989). It has been established that there is generally a greater concentration of histamine in red wine than in white wine, which may be partly attributed to the greater susceptibility of red wine to malolactic fermentation (Zee *et al.* 1983, Vidal-Carou *et al.* 1990, Radler and Fäth 1991, Costello *et al.* 1993, Costello *et al.* 1996, Jarisch and Wantke 1996).

How much histamine is in wine?

The amount of histamine in foods commonly consumed is generally ten-fold more than that measured in wine (Malone and Metcalf 1986, Mahendradatta and Schwedt 1996). The concentration of histamine in wine has generally been observed to be less than 5mg/L; the average concentration in Australian wine is generally less than 1mg/L (Costello *et al.* 1993, Costello *et al.* 1996, unpublished data). Wines that exhibit significant spoilage, however, may have a higher concentration of histamine.

Where does the histamine in wine come from?

Biogenic amines, including histamine, are primarily produced by both indigenous and commercial strains of lactic acid bacteria (LAB) in wine (Lonvaud-Funel and Joyeux 1994, Coton *et al.* 1998, Soufleros *et al.* 1998, Coton *et al.* 1999, Lonvaud-Funel 2001). The bacteria enzymatically decarboxylate the amino acid, L-histidine, to the amine, histamine. The ability of different LAB genera to produce histamine varies significantly. For example, detectable histamine (greater than 0.1mg/L) was produced by nine of 22 *Leuconostoc* and *Oenococcus* spp., four of nine *Lactobacillus* spp. and all seven *Pediococcus* spp. examined by Costello *et al.* (1993, 1996 and unpublished data). The maximum concentration of histamine produced by LAB strains isolated from wine was 3.8mg/L for *Leuconostoc* and *Oenococcus* and 2.4mg/L for *Lactobacillus* and *Pediococcus*. Histamine was also produced by four of seven commercial *Oenococcus oeni* (formerly *Leuconostoc oenos*) strains; the maximum concentration of histamine produced was 1.5mg/L, although some strains have been reported to produce histamine at concentrations up to 33mg/L (Guerrini *et al.* 2002). The production of biogenic amines in wine can, therefore, be limited and minimised by restricting bacterial activity to strains selected for their inability to produce them.

In addition to a difference in the susceptibility of red and white wine to undergo malolactic fermentation, the difference in histamine concentration between red and white wine may also be attributed to different winemaking practices. Contrary to white wine, red wine vinification is usually carried out in the presence of grape skins and pulp, which enables extraction

of a higher concentration of L-histidine into the must (Quevauviller *et al.* 1969, Meléndez *et al.* 1999, Stines *et al.* 2000). Furthermore, only white wines are generally clarified/fined with bentonite at doses

greater than 50g/hL, which may remove biogenic amines from wine (Kállay and Szalkai 1996). The difference in histamine concentration may also be attributable to the antimicrobial use of sulfur dioxide during vinification. For example, less sulfur dioxide is generally added to red wine. Consequently bacterial growth and the bacterial formation of amines is more prevalent in red rather than white wine (Plumas 1970, Coton *et al.* 1999).

In addition to bacteria, the yeasts used in alcoholic fermentation are also responsible for the production of histamine but to a lesser extent (Vidal-Carou *et al.* 1989, Torrea *et al.* 2001, Caruso *et al.* 2002, Torrea *et al.* 2002). The autolysis of yeast cells can release cellular amines, including histamine, into wine (Blackwell *et al.* 1969).

In 1992, a pilot study was undertaken at The Australian Wine Research Institute where Riesling and botrytised Riesling juices were fermented with 12 *Saccharomyces cerevisiae* yeast strains under controlled laboratory conditions. While there was only a small difference between the histamine concentration of the juice and resultant wine for both the botrytised and non-botrytised Riesling (0.47 ± 0.01 mg/L and 0.60 ± 0.12 mg/L, respectively and $0.069 \pm .007$ and 0.064 ± 0.012 mg/L, respectively), there was a tenfold difference between the botrytised and non-botrytised Riesling juice and wine (The Australian Wine Research Institute; unpublished data). This implies that the majority of this small amount of histamine was present in the juice prior to the addition of yeast, and may also indicate that some histamine was produced prior to alcoholic fermentation. In addition, this suggests that there was some microbial activity on the vine, although it has not been confirmed whether *Botrytis* promotes decarboxylation of amino acids in the berry and juice (Ribéreau-Gayon 1988).

Furthermore, there was no significant difference between the 12 different *S. cerevisiae* strains in their ability to promote histamine production (Australian Wine Research Institute; unpublished data). This implies that these 12 particular *S. cerevisiae* strains contributed little to histamine production under the experimental conditions employed. Such an observation is also in accordance with the data of Ough *et al.* (1987), Torrea *et al.* (2001) and Caruso *et al.* (2002), which indicates that the amino acid decarboxylase enzymes are not uniformly distributed amongst *S. cerevisiae* and other yeast strains.

The significance of histamine in wine

Histamine, when administered intravenously, can briefly cause vasoactive symptoms such as facial flushing and mild headaches, and asthma. These symptoms can occur at a concentration in blood of 0.1mg, but when ingested with food, the effect of histamine is considerably reduced.

On ingestion, histamine is readily metabolised by the enzymes in the gastrointestinal tract and liver (Malone and Metcalf 1986). As a result, a significantly decreased concentration is available to circulate in the bloodstream. An adverse reaction generally occurs only when a large amount exceeding the normal dietary intake of histamine is ingested, for example, greater than 25 to 250mg. While these amounts are far in excess of those observed in wine, individuals 'intolerant' or 'sensitive' to histamine will exhibit an adverse reaction from the ingestion of wine containing a significantly lower concentration of histamine (Wantke *et al.* 1994, Jarsich and Wantke 1996, Wantke *et al.* 1996).

Three primary hypotheses have been proposed to explain why the occasional consumer's adverse reactions to wine may be attributed to the histamine in wine. First, it has been suggested that the ethanol constituent of wine may accelerate the absorption of histamine. Second, as previously stated, ethanol, and in particular its primary metabolite acetaldehyde, which is a known monoamine oxidase enzyme inhibitor, may delay the metabolism of histamine in the liver. This delay would increase the plasma concentration of histamine and the amount of time that histamine circulates in the blood stream, consequently potentiating its adverse effects.

Third, it has been suggested that gastrointestinal diamine oxidase activity may be significantly reduced in 'intolerant' individuals compared to that in 'tolerant' individuals (Sattler *et al.* 1988, Sattler *et al.* 1989, Lessof *et al.* 1990, Sattler and Lorenz 1990, Wantke *et al.* 1993, Wantke *et al.* 1994, Jarsich and Wantke 1996, Wantke *et al.* 1996, Raithel *et al.* 1998a, 1998b). Genetic polymorphisms or differences for diamine oxidase have been identified between intolerant and tolerant individuals (Petersen *et al.* 2003, Schwelberger *et al.* 2003). Gastrointestinal histamine-Nmethyltransferase activity may also be significantly reduced in intolerant individuals (Kuefner *et al.* 2004). Indeed, after consuming wine containing a 20mg/L of histamine, healthy tolerant individuals have been observed to have a significantly increased plasma concentration of diamine oxidase, and there was no change in their plasma histamine concentration (Wantke *et al.* 1999). In addition, no change was observed in the plasma concentration of histamine of healthy tolerant subjects consuming wine containing 22.8mg/L histamine. No change also was observed in the concentration of histamine and its primary metabolite methylhistamine in their urine, and no subject exhibited an adverse reaction (Kanny *et al.* 1999).

While an intolerant individual, after consuming wine containing as little as 0.2mg/L and 3.7mg/L of histamine, has been observed to have a significantly increased plasma histamine concentration and exhibited facial flushing and bronchoconstriction (Wantke *et al.* 1996), this has not been consistently observed in other studies. For example, in a clinical study by Kanny *et al.* (2001) approximately 90% of wine 'intolerant' subjects exhibited an adverse reaction after consuming wines containing 0.4mg/L and 13.8mg/L histamine, respectively. No corresponding increase, however, in the plasma and urine concentration of histamine and methylhistamine was observed up to 45 minutes after consumption of the wine.

Wine has also been implicated in the aetiology of migraine headaches (Trethewie and Khaled 1972, Mariné *et al.* 1986) and the histamine H2 receptor antagonist, cimetidine, has been observed to block the headache provoked by the ingestion of red wine (Glaser and de Tarnowsky 1983). No relationship between histamine ingestion and migraine headaches, however, was observed when histamine-spiked beverages were administered (Lüthy and Schlatter 1983).

These observations support the emerging evidence, which suggests that there is no relationship between an intolerance to wine and the concentration of histamine in wine (Jansen *et al.* 2003). Clinical studies suggest, therefore, that an intolerance to wine is not related to the concentration of histamine in wine, but that a substance other than histamine or biogenic amines in wine may be involved, such as a 'histamine-releasing' substance (American Academy of Allergy and Immunology Committee on Adverse Reactions to Foods 1984, Dahl *et al.* 1986, Kanny *et al.* 1999, 2001, Zuberbier *et al.* 2002). Indeed, the involvement of the histamine-releasing acetaldehyde in wine intolerance has previously been suggested (Lowenberg *et al.* 1981, Shimoda *et al.* 1996, Zimatkin and Anichtchik 1999), in particular for consumers who have significantly reduced acetaldehyde dehydrogenase activity (Harada and Agarwal 1981).

Summary

Much anecdotal evidence, which forms the basis of the many articles and comments in the media, points to histamine as the 'culprit' in wine causing headache and other adverse reactions.

While it is accepted that the excessive consumption of alcohol will cause adverse reactions, research, however, clearly demonstrates that histamine is a minor constituent of wine and that there is no relationship between its concentration in wine and histaminemediated adverse reactions in either healthy tolerant or wine intolerant consumers.

A fourth and final hypothesis is that although the amount of histamine in individual foods is below the amount generally thought necessary to induce an adverse reaction, consumption of multiple histamine-containing foods on an occasion may result in ingestion of sufficient histamine to produce symptoms as the body's capacity to metabolise histamine is exceeded (Chin *et al.* 1989).

A full set of references will be published on the AIM gateway in March 2005. For a copy please contact alison.rees@AIM-Digest.com

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Doctor-Winemakers believe Wine and Health Message is still ‘Bottled-Up’

An international panel of 6 eminent medical doctors, who are also accomplished winemakers, met On Friday December 3, at the Commonwealth Club of California in San Francisco. The panel discussed the healthfulness of wine, alcohol’s misuse and abuse, and how the full message of moderate consumption’s benefits have yet to be aired in the main-stream media.

Moderator Gene Ford, the author of *The Science of Healthy Drinking*, said in his opening address that a recent Gallup poll showed “74% of Americans still believe that alcohol has either little to no, or even a negative effect on health.”

Eight doctors made-up the panel: Dr. F. Wells Shoemaker: Pediatrician and owner of Salamandre Wine Cellars, Aptos; Dr. Thomas Fogarty: Professor of surgery at Stanford University Medical Center, and owner of Thomas Fogarty Winery,

Santa Cruz; Dr. Philip Norrie: Family Practitioner and owner of Pendarves Estate, Hunter Valley, Australia; Dr. Ellen Mack: Neurologist and co-owner of Russian Hill Winery, Russian River Valley; Dr. Donald Olson: Neurosurgeon and owner of Torii Mor Winery, Willamette Valley, Oregon; Dr. Joseph Gungelman: Doctor of Osteopathic Medicine and owner of Robert Karl Cellars, Columbia Valley, WA; Dr. Charles Thomas: ObGyn, owner Chateau Thomas Winery, Plainfield Indiana; and Dr. Alfred deLorimier: Pediatric surgeon and owner deLorimier Winery.

Among the issues they discussed were:

- Medicinal history (“Wine is the most documented medicine in history.”-Dr. Philip Norrie)
- Cardiovascular benefits (“Elements from grape skin extract relax blood vessels, decrease blood clotting and

create a blood pressure lowering effect.”-Dr. Thomas Fogarty)

- The educational system (“Schools are missing an essential discussion on alcohol and drugs, and what the limits are.”-Dr. Alfred de Lorimer)

- Antioxidants (“Alcohol antioxidants are many times more effective than food antioxidants.”-Dr. Charles Thomas)

- Diabetes (“There’s a 33-59% reduction of risk of early onset diabetes, in an at-risk population, with 1-3 glasses of wine a-day. And for people with diabetes (1-3 glasses of wine per-day) substantially lowers the risk of the onset of cardiovascular disease.”-Dr. Donald Olson)

For more information, an event program, a taped transcript, or a review copy of *The Science of Healthy Drinking*, call Bryan Imelli at (650) 866-3513 ext. 22 or email Bryan@wineappreciation.com.

Study Finds Heavy Drinking Linked to Higher Ischemic Stroke Risk

A new study led by researchers at Beth Israel Deaconess Medical Center (BIDMC) and the Harvard School of Public Health (HSPH) has found that heavy drinkers, men who consume an average of three or more alcoholic beverages per day, are nearly 45 percent more likely to suffer an ischemic stroke compared with non drinkers. The study also found that while light and moderate drinkers appear to be at neither greater risk nor greater advantage than abstainers when it comes to ischemic stroke, the frequency with which they consume alcohol may modestly influence their risk.

The findings help shed light on a subject that has been the source of some confusion, and reinforce the importance of what the authors call “drinking patterns,” the number of days per week that alcohol is consumed and the amount consumed on drinking days.

“In this study, the participants who were at lowest risk for stroke were the men who consumed one or two drinks on three to four days of the week,” says lead author Kenneth Mukamal, MD, MPH, a general internist at BIDMC and Assistant Professor of Medicine at Harvard Medical School “The importance of drinking pattern for stroke

risk parallels our previous findings among this same group of men regarding alcohol consumption and the risk of developing diabetes and coronary heart disease. Among all three types of disease, the lowest risk seems to occur when consumption is limited to one or, at most, two drinks, approximately every other day, with little benefit shown above three to four drinking days per week.”

During the course of the 14-year study the authors followed 38,156 participants who are part of the HSPH-based Health Professionals Follow-up Study. Beginning in 1986 and continuing every four years thereafter until 2000, the male participants, who ranged in age from 40 to 75, responded to a detailed questionnaire regarding diet and medical history, including alcohol consumption.

The researchers examined the following factors to gauge the influence of alcohol consumption on the risk for ischemic stroke: average amount of alcohol consumed; drinking patterns (number of days per week alcohol was consumed); and type of beverage consumed (beer, red wine, white wine, or spirits). They also looked at the incidence of both subtypes of ischemic stroke - thrombotic and embolic. During the course of the

study, they confirmed 412 cases of ischemic stroke among the study participants.

Their findings showed that men whose average alcohol intake was three or more drinks per day had a 42 percent higher risk of ischemic stroke (particularly embolic stroke) than did abstainers. This finding, says Mukamal, may be attributable to alcohol’s association with both high blood pressure and atrial fibrillation. The light and moderate drinkers who consumed alcohol three to four days per week had a modest 32 percent lower stroke risk than did nondrinkers. “Compared with other types of alcohol, red wine was associated with a step-wise lower risk of ischemic stroke,” according to Mukamal. “This is curious, because among this population of men, red wine is not linked to a lower risk of heart disease any more than any other type of alcohol, so it’s unclear why this would be the case with stroke.” He adds that further research will be needed to help clarify this finding.

Source: Mukamal KJ et al. Alcohol and Risk for Ischemic Stroke in Men: The Role of Drinking Patterns and Usual Beverage. *Annals of Internal Medicine* 2005;142:11-9.

Wine Trade Action Group Reports on Binge Drinking

The Wine Trade Action Group (WTAG), a pressure group formed last year by 33 leading UK wine companies, has released the results of its recent independent study of binge drinking. Mike Paul, Chairman of the WTAG, introduced a presentation of the research, which was conducted by IPSOS and MCM Research, the commercial arm of the Social Issues Research Centre, by saying:

“We wanted to understand the problem and wine’s role in it, so that we can play our part in tackling it. We were surprised how little hard evidence was available, so we commissioned an independent study...The lessons for us are very clear. Wine may not yet be as significant a factor in binge drinking as other drinks categories but it could well become one if we don’t take action.”

The stated objectives of the study which used a population of 18-34 year olds were “to understand and explore attitudes, behaviour and repertoires in relation to binge-drinking and, in particular the role which wine plays in it” More specifically “to identify and profile binge drinkers by demographics, behaviour and attitude; to understand typical patterns of binge drinking, and types of drinks most commonly consumed; as well as assessing the role of wine in binge drinking and to identify specific issues for the wine industry to address in relation to binge drinking”.

Within the report, binge drinking is put in its historical context, as an ingrained long established tradition in historically ‘temperance’ societies such as Britain and the Nordic countries. This is as opposed to ‘integrated’ societies like Italy and France, where alcohol is part of the fabric of everyday life and hence bingeing is rarely seen due to the lack of taboo.

The report found that men account for the majority of binge drinking sessions. Of those drinking atleast 6-8 units in a session more than 10 times a month, 70% were male. Men accounted for 76% of the group who drank atleast 12 units in a session more than 10 times per month). But despite the clear male bias of binge drinking, women are also doing it: Just under half of 18-34 women exceed 6 units 3 or more times per month and around a fifth exceed 6 units, 6 or more

times/month. 48% of 18-34 women breach the 12 unit threshold at least once per month, 22% report consuming 12+ units more than 3 times per month and 10% more than 6 times per month.

The report looks at the drinks that are fuelling binge drinking, and finds, unsurprisingly, that men prefer beer and spirit chasers, whereas women drink more spirit mixers and tend to mix their drinks more. Wine is more likely to be consumed by female or mixed groups. Wine drinkers are predominantly female, white collar. They drink most often at lunchtime and early evening. Bar staff interviewed in the survey however, have increasingly noticed men drinking wine. They believed that this is motivated by social aspiration.

Currently wine consumption is not significantly implicated in instances of binge-drinking. Where wine is implicated it nearly always involves the consumption of other alcoholic drinks. Although wine is sometimes consumed as part of a binge drinking session, it is extremely rare for wine to account for all 6+units in a session.

The study found that many young consumers ‘load up’ on drinks at home before going out, or choose cheap environments for their first drinks, after that the fashionability of the venue is more important. Wine is most frequently consumed at the beginning of the evening or ‘session’, either at home or in a bar as a ‘mood enhancer’.

The study identified a number of factors that could be influencing the uptake of wine as part of binge drinking repertoires. these include:

- an increased availability in pubs and bars;
- modern wine styles are easier to consume ‘just as a drink’ (ie without food);
- one or more bottles of wine are easier to carry in a crowded pub environment than pints of beer;
- it’s now a very popular drink generally;
- wine can offer better value than other forms of alcohol, particularly when on promotion (increase in average ABV);
- there has been a rise in the practice of “Up-selling” where wine is promoted in bars and pubs (eg buy two 250ml glasses, get the rest of the bottle free);
- the servings themselves (up to 250ml) are

much bigger than they used to be, with the number of units in a single third of a bottle (250ml) glass at 13% is equal to the daily UK guidelines of 2-3 units.

The factors thought to fuel binge drinking included competitive marketing between rival establishments, drinks promotions and the practice of upselling. There report also draws attention to the licensing restrictions which encourage consumption of significant quantities of alcohol in a short period of time. Also the the city environment has an impact on the levels of binge-drinking. A large number of bars and clubs in a relatively confined geographical area will increase incidents of antisocial behaviour particularly at peak ‘throwing out’ times and competition between neighbouring venues leads to irresponsible promotions and discounting practices.

The report also finds that heavy drinking is not confined to 18 - 24 year olds, and that the age group 25-34 are almost as likely to binge drink.

Bar staff believe in many cases that incidences of binge drinking are already declining, due to the employment of better door staff, better trained bar staff and the implementation of schemes such as Pub Watch and better liason with police.

The report concludes that the issues to be resolved by the wine trade are as follows:

Heavily discounted wine – in both retail and leisure outlets – may increase its profile and association with binge-drinking.

There is some evidence to suggest that the alcoholic content / cost ratio of wine represents an attractive proposition to the binge-drinker.

While, at present, wine escapes an association with binge-drinking ‘out on the town’ it is more significantly implicated in incidents of domestic violence, particularly involving middle class families.

Ironically, wine’s appeal to the socially aspiring may be influencing less desirable patterns of consumption.

For further details please contact MCM research Ltd, email group@sirc.org

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The Beer Wine And Spirits Council Of New Zealand

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Traffic Injury Research Foundation.

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ICAP

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The Century Council

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