

**This factsheet describes what binge drinking is, looks at the associated health and social effects and examines what can be done to combat binge drinking.**

## Binge drinking – risky behaviour

In recent years, there has been a growing national concern about the way that British people drink particularly in relation to the phenomenon of 'binge-drinking'. Last summer's media reports about Britons' anti-social antics in Faliraki brought this issue to a head, but our consumption of alcohol has been on the increase for some time now. Forty percent of all male drinking occasions are binge-drinking sessions, and binge-drinking among young women has risen significantly over the last three years.

Around Christmas and New Year newspapers and magazines are full of advice on survival tactics and how to cope with hangovers. However, when the partying stops, the question arises of just how serious this pattern of drinking is for both individuals and society as a whole. In particular the Government is concerned about the health effects and the impact on anti-social behaviour of this type of drinking, so it is likely to feature in the forthcoming Alcohol Harm Reduction Strategy.

The Government report *Sensible Drinking*<sup>1</sup> (1995) changed the guidelines for sensible drinking from a weekly to a daily measure of consumption, reflecting concern that: *'weekly consumption can have little relation to single drinking episodes and may indeed mask short term episodes which ... often correlate strongly with both medical and social harm'*.

The 1995 sensible drinking guidelines are principally intended to draw people's attention to limits for daily drinking by identifying a safe level for moderate regular drinking, and to help people decide how much to 'drink on a single occasion' and avoid drunkenness.

However, recent data from the Office for National Statistics<sup>2</sup> (ONS) indicates that for some sectors of society these guidelines have little relevance or meaning. For the first time ONS issued figures for 'consumption on the heaviest drinking day in the last week'. This showed that in 1998 21% of men and 8% of women had drunk 'heavily', having consumed more than eight units and six units respectively, on at least one day in the previous week. Young people are more inclined to this pattern of behaviour, with 37% of men and 23% of women in the 16-24 age group having drunk more than eight units and six units respectively, on at least one day in the previous week. This pattern of heavy episodic drinking is a noticeable feature of people's social lives in the United Kingdom and is sufficiently worrying for the Department of Health (DoH) to highlight it as a key issue in its national alcohol strategy in spring 2000.

## Definition

One difficulty faced by the DoH, researchers and others in the broader alcohol field is the lack of consensus on the definition of the term 'binge drinking'. A 1997 report for the US based International Center for Alcohol Policies<sup>3</sup> (ICAP) points to the lack of formal definitions both at international level and amongst studies undertaken within individual countries. Two recent publications define 'binge drinking' as *'ten or more drinks in one session'*<sup>4</sup> (based on one drink as a standardised unit of 7.9g of ethanol) or alternatively drinking over half the recommended number of units for a week in one session, (based on previous Government guidelines) i.e. ten units for men and seven units for women<sup>5</sup>. Neither of these publications provides a rationale for their stated definition and a review of the literature on this subject indicates that researchers tend to employ the most commonly used definition from previous works without giving an accompanying explanation. The editors of *Tackling Alcohol Together* assert that it is difficult to assess the risks of problems or harm arising from the volume of alcohol consumption alone as

*'numerous factors – including personality, mood, sex, level of tolerance to alcohol, and the physical, social and cultural context in which alcohol is consumed – can magnify or diminish the effects of alcohol'*<sup>6</sup>.

Similarly, the ICAP report argues for the need to move away from clinical definitions based on the amount of alcohol consumed to be a clearer *'distinction between responsible and reckless drinking behaviour'*<sup>7</sup> that takes account of variables such as gender, motivation, time interval and social context. This is an attractive alternative and clearly would be of use in qualitative studies into different types of drinking patterns, particularly 'risky' or 'reckless' drinking behaviour.

One possible catchall definition to encompass a range of heavy episodic drinking behavioural patterns is:

- Drinking sufficient alcohol to reach a state of intoxication on one occasion or in the course of one drinking session

In the absence of a DoH measure of 'binge drinking' the ONS definition of heavy drinking (eight or more units for men and six or more units for women on at least one day in the week) could serve as an approximation of 'binge drinking', as it is in line with the sensible drinking guidelines using daily benchmarks. In addition, consuming this quantity of alcohol on one occasion could reasonably be expected to lead to intoxication which is a key feature of this type of drinking and places the individual at risk of harm. The element of 'risk' in this type of behaviour is also picked up in a recent article by Murgraff et al which uses the term 'risky single occasion drinking' (RSOD) to describe episodes of heavy social drinking that are potentially harmful for the individual<sup>8</sup>.

## Prevalence

Analyses of the prevalence and character of binge drinking across the UK population are scarce. British drinkers are usually characterised, in common with those from other north European countries as 'episodic drinkers' but this does not necessarily imply binge drinking.

British drinkers are usually characterised as being heavy episodic drinkers in common with those from other northern European countries. This does not necessarily imply binge-drinking but it is more prevalent in the UK than in other countries:

- In the UK binge-drinking accounts for 40% of all drinking occasions among men and 22% by women.<sup>9</sup>
- 5.9 million people drink more than twice recommended daily guidelines on some occasions.<sup>10</sup>

Binge drinking is most characteristic of the young:

- Those aged 16-24 are more likely to binge-drink with 36% of men reporting and 27% of women binge-drinking at least once a week.<sup>11</sup>
- Between 1998 and 2001 the proportion of young women binge-drinking in this age group has increased from 23% to 27%.<sup>12</sup>

However,

- For some people, this type of drinking continues into middle age with around one in three men one in five women drinking twice daily limits at least once a week.

There have been few detailed studies of this type of drinking in the community. A 1993<sup>13</sup> survey of drinking patterns in nine Welsh health districts extended beyond young people and students and showed that 28.2% of men and 8.2 % of women reported binge drinking (over half the weekly recommended units on one occasion) at least weekly. Binge drinking was not confined to those drinking consistently at risky or harmful levels and not all

those drinking at harmful levels engaged in binge drinking. The study also looked into the effect of demographic variables such as occupation, marital status and educational attainment and established a clear link between binge drinking and other types of health behaviour. For example, binge drinking was more prevalent among those who smoked regularly (33.4%) and those classified as being overweight (24%).

Published results from this type of study in the UK are rare and if the DoH plans to tackle binge drinking it will need to establish a much clearer, up-to-date picture of its prevalence, what distinguishes it from common episodic drinking, e.g. during weekend socialising, and the demographic variables that influence drinking patterns.

## **Binge drinking: a matter for concern?**

So far the British public has yet to be convinced of the dangers of binge or RSOD drinking as opposed to long term alcohol misuse. Often this pattern of drinking is seen as a subject for amusing anecdotes, a cultural norm or a rite of passage for young people. Studies show that those who engage in this type of drinking are rarely motivated to change. In the 1993 Welsh survey, 41-43% of those who regularly binged recognised that their drinking was harmful to their health but only 24.4% of men and 31% of women said they would like to cut down.

The recent international GENACIS study on gender and drinking found that people feel ambivalent about the adverse effects of binge drinking. Many people seem prepared to accept the negative experiences as the “price they pay for enjoying their drinking”.<sup>14</sup>

There are two types of risk for the binge or RSOD drinker: ‘long term health consequences’ and the more immediate behavioural costs’<sup>15</sup>. While the report *Sensible Drinking* advises against binge drinking, it provides limited evidence of the health consequences of this pattern of drinking and focuses more on the behavioural consequences.

## **Long term health effects**

Researchers point to the ‘lack of longitudinal studies to determine the relationship between patterns of alcohol consumption and the development of diseases’<sup>16</sup>. The few existing studies include:

A Finnish study showing that the relative risk of death from all cause mortality for middle-aged men who usually binge on six or more bottles of beer compared to those who usually drink three or less bottles, from all cause mortality increased by 3.01. The relative risk of death for the first group from fatal myocardial infarction (sudden cardiac death) increased by 6.5. The clear association between this pattern of drinking and increased risk of death was not explained by total alcohol consumption<sup>17</sup>.

An association between binge drinking and cardiovascular disease is also highlighted in a study by McKee at al looking into the significant increase in sudden cardiac death at weekends among young and early middle-aged men in Moscow. The study concludes that in binge drinking the cardio-protective benefit of regular moderate alcohol drinking does not apply. McKee identifies four main mechanisms by which binge drinking can cause cardiovascular disease:

- affecting the type and density of lipoproteins present in the body
- increasing the risk of thrombosis
- having an adverse effect on the myocardial conducting system
- causing acute or sustained hypertension (high blood pressure)<sup>18</sup>.

The British Medical Journal from January 2000 published the results of a Scottish health survey between 1986-1995 which found an excess of deaths from coronary heart disease on Mondays (3% above the daily averages) among people, including those under fifty, with no previous hospital admission for this disease. The authors of this study argued that these deaths were partly attributable to weekend binge-drinking<sup>19</sup>.

The latter two studies point to the clear need for further research into the link between binge drinking or heavy episodic drinking and heart disease.

Certain individuals are more vulnerable to the adverse effects of binge or RSOD as shown in research into the following areas:

- **the effect of heavy episodic drinking on pregnant women.** UK Government guidelines recommend a limit of four units of alcohol per week for pregnant women, a limit of two units on any one occasion and avoidance of intoxication. Research indicates that blood alcohol level rather than dose is 'critical in determining effects from pre-natal exposure' on the physical and mental development of the foetus so 'drinking five units per occasion once or twice a week probably has a greater impact than the same amount consumed over a longer period'<sup>20</sup>. Given the continuing international debate surrounding the issue of safe limits for pregnant women, the question of what constitutes a 'binge' for pregnant women remains unsolved. However, it is clear that intoxication is to be avoided, both for its effects on the foetus and as a potential cause of accidents.
- **the link between alcohol misuse and mental illness.** While it is difficult to establish causality in cases of morbidity, it is clear that there is a strong association between heavy drinking, depression and suicide. Studies in the UK show that 39% of men and 8% of women who attempted suicide were chronic problem drinkers. Alcohol had been consumed before 70% of attempted suicides by men and 40% of attempted suicides by women<sup>21</sup>.

## Behavioural consequences

The immediate behavioural consequences of binge-drinking are very apparent, particularly to those working in emergency services with responsibility for mopping up the consequences of people's drinking:

Behavioural consequences include:

**Accidents**<sup>22</sup> - 25% of all alcohol-related deaths are due to accidents and it is estimated that alcohol is a factor in 20-30% of all accidents<sup>23</sup>. The DETR estimated that in 1997 nearly 2% of drivers/riders breathalysed following road accidents failed the test with 4.45 of male drivers/riders aged 20-24 failing the test. Over a third of pedestrians killed in road accidents had more alcohol in their blood stream than the legal drink drive limit<sup>24</sup>.

**Violence** – in 41% of 'contact crime' the victim said the offender had been drinking. This included 32% of incidents of domestic violence, 17% of muggings, 53% of assaults by a stranger and 45% of assaults by an acquaintance<sup>25</sup>. Violence is now a leading cause of facial injury in Britain with a recent survey estimating that 125,000 people out of a total of half a million, incur the injury in violent circumstances. In 61% of these cases either the victim or assailant had been drinking alcohol<sup>26</sup>. Research undertaken in Cardiff and Bristol A&E departments provides clear evidence of the 'increased vulnerability of binge drinkers to injury', particularly to assault<sup>27</sup>.

**Poor social behaviour** – an HEA survey (1996) found that one in five men admitted to having an argument after drinking in the previous year and more than one third had witnessed a fight between people who had been drinking. Among 16-24 year olds 42% of men and 25% of women said they had had an argument after drinking and almost seven out of ten had witnessed a fight after people had been drinking.

**Drunkenness** – a Home Office report recorded that in 1995 19,789 people in England and Wales were found guilty of offences of drunkenness, and police formally cautioned a further 22,809<sup>28</sup>.

**Workplace** – 8-14 million days are lost each year in the UK as a result of alcohol-related problems<sup>29</sup>. A 1998 Institute of Personnel and Development survey of personnel professions found that 46% of firms experienced problems with alcohol misuse in 1997-1998 (up on 11% on 1996)<sup>30</sup>.

**Unsafe sex** – possibly leading to unwanted pregnancies or sexually transmitted diseases including HIV/AIDS. Bagnall and Plant (1991)<sup>31</sup> reported that in a group study of 16-30 year olds 82% of respondents reported drinking prior to engaging in sexual activity. A 1998 HEA survey of 16-24 year olds found that after drinking alcohol:

- one in seven have had unsafe sex (i.e. without using a condom)
- one in 5 had sex they later regretted
- one in ten were unable to remember whether they had sex the night before
- 40% agreed that they would be more likely to have casual sex.

Murgraff argues that, although studies of alcohol consumption and unsafe sexual practices do not directly address RSOD drinking 'such association is likely to be strongly implicated... because of the greater release of inhibitions at high alcohol doses'<sup>32</sup>.

## Binge drinking as a predictor of alcohol problems

One US study<sup>33</sup> found that in a longitudinal study of high school students 30% significantly altered their drinking patterns during the transition from adolescence to adulthood either increasing, decreasing or indulging in a time-limited fling. Of the overall sample 20% went from frequent binge drinking to little or no binge drinking by the end of transition, but 165 had either increased their binge drinking or maintained a pattern of chronic binge drinking by the end of transition.

The assumption of adult roles, including employment, marriage and parenthood, generally militates against this pattern of drinking. However, demographic analysis of drinking patterns such as the one undertaken in Wales (1993)<sup>34</sup> indicates that adverse life events such as divorce are associated with this type of drinking, with 29.6% of separated and divorced people engaging in weekly binges in contrast to 17.9% of married people (the figure for single people is 33.9 %).

Demographic changes in society, including changing employment patterns and increasing numbers of people remaining single, affect the way people socialise and ultimately the role alcohol plays in their recreation. For a significant proportion of young people binge or RSOD drinking is not simply a youthful phase but a possible precursor of later, harmful drinking behaviour.

## Tackling binge drinking

To date planned interventions in the UK to prevent/reduce binge or RSOD drinking have been aimed at young people, particularly the student population. Studies in the UK, USA and Australia show that young people who engage in frequent risky drinking episodes do not acknowledge that their drinking is problematic and often rate themselves as moderate or light drinkers. For them, long-term health risks appear remote and immediate behavioural consequences are deemed avoidable or not significant. Despite this apparent resistance to health interventions, Foxcroft et al in their 1997<sup>35</sup> review of interventions reported 33 well-designed and evaluated studies based on a combination of social skills training and knowledge-based education of which 22 showed 'significant reductions in drinking behaviour'. Key successful aspects of these interventions include:

- media campaigns aimed at changing young people's perception of drinking norms for partying
- peer led discussion about factors that encourage alcohol use and the need for individuals to make their own decisions about health
- provision of basic facts about alcohol and the risks of intoxication

Health psychologists<sup>36</sup> argue that motivating people, whether young or adult, to change their drinking behaviour depends upon beliefs surrounding issues such as their vulnerability to harm as a result of their behaviour, the benefits of change, and whether people believe that they can implement strategies for change. Clearly these beliefs vary according to factors such as age, sex or social habits, so planned interventions aimed at different population groups need to be refined to take account of these factors.

However, targeted intervention alone cannot reduce the prevalence or acceptability of binge drinking. Alcohol Concern's *Proposals for a National Alcohol Strategy for England*<sup>37</sup> proposes the development of a multi-faceted public alcohol policy which includes a policy mix incorporating preventative and reactive action, combined with targeted population-wide approaches.

Key areas of Alcohol Concern's proposals include:

- maintenance of taxation and pricing regulations to prevent a serious escalation in alcohol consumption and misuse
- development of appropriate licensing laws to regulate the sale and consumption of alcohol

- situational planning and preventative initiatives to reduce alcohol-related violence and disorder in public places
- introduction of additional drink-drive measures to reduce alcohol-related accidents
- firmer controls on the promotion of alcohol, especially in relation to advertising, sponsorship and media portrayal of alcohol
- campaigns to promote responsible drinking
- provision of appropriate alcohol treatment services

Areas for further research:

- Alcohol Concern's proposed strategy identifies the need for co-ordinated research to inform and underpin policies to reduce alcohol-related harm. In relation to binge drinking, research on the following areas would help to target and refine appropriate policies:
- research into the prevalence of binge drinking across the UK population as a whole and identification of specific groups at risk from this behaviour
- clinical research into the health risks of this particular pattern of drinking as distinct from chronic heavy drinking
- sharing of information on effective targeted interventions

## Updated – December 2003

<sup>1</sup> Department of Health, (1995), *Sensible Drinking: the report of an inter-departmental working group*, London

<sup>2</sup> Office for National Statistics, (1999), *First release: Living in Britain 1998, General Household Survey*, London

<sup>3</sup> International Centre for Alcohol Policies, (1997), *The limits of binge drinking, ICAP Reports no 2*, Washington

<sup>4</sup> Broomfield K et al, (1999), *Alcohol consumption and alcohol problems among women in European countries*, Institute for Medical Informatics, Biostatistics and Epidemiology, Free University, Berlin

<sup>5</sup> Raistrick D et al, eds, (1999), *Tackling alcohol together: The evidence base for a UK alcohol policy*, Free Association Books, London

<sup>6</sup> *ibid*

<sup>7</sup> *op cit* ICAP Report

<sup>8</sup> Murgraff V et al, (1999), *Risky single-occasion drinking amongst young people – definitions, correlates, policy and intervention: a broad overview of research findings*, *Alcohol and Alcoholism* vol.34, no.1, pp3-14

<sup>9</sup> Cabinet Office Strategy Unit Alcohol Harm Reduction Project (2003) *Interim analytical report*, London, [www.pm.gov.uk/pdf/SUinterim\\_report2.pdf](http://www.pm.gov.uk/pdf/SUinterim_report2.pdf)

<sup>10</sup> *ibid.*

<sup>11</sup> Office for National Statistics(2002) *Living in Britain: Results from the 2002 General Household Survey*, London, TSO.

<sup>12</sup> *ibid.*

<sup>13</sup> Moore L, (1994), *Binge drinking: prevalence, patterns and policy*, *Health Education Research*, vol.9, no.4, pp497-505

<sup>14</sup> Plant, M., Plant M. and Mason, W. (2002) *People who enjoy drinking: findings from a survey of British adults*, *The Drug and Alcohol Professional*, Vol 2 Issue 4, pp26-37.

<sup>15</sup> *ibid*

<sup>16</sup> *ibid*

<sup>17</sup> Kauhanen J et al, (1997), *Beer bingeing and mortality: results from the Kuopio ischaemic heart disease risk factor study, a prospective population based study*, *British Medical Journal*, no 7112, pp846-851

<sup>18</sup> McKee M and Briton A, (1998), *The positive relationship between alcohol and heart disease in eastern Europe: potential physiological mechanisms*, *Journal of the Royal Society of Medicine*, no.91 pp402-407



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- <sup>19</sup> Evans C et al, (2000), *I don't like Mondays: day of the week coronary heart disease deaths in Scotland: study of routinely collected data*, BMJ, no 7729, pp218-219
- <sup>20</sup> Guar C et al, (1999), *Commentary on the recommendations of the RCOG concerning alcohol consumption in pregnancy*, Alcohol and Alcoholism, vol.34, no.4, pp497-501
- <sup>21</sup> op cit DoH, Sensible Drinking
- <sup>22</sup> ibid
- <sup>23</sup> Honkanen R, (1993), *Alcohol in home and leisure injuries*, Addiction, vol.888, pp939-944
- <sup>24</sup> DETR, (1999), *Road Accidents Great Britain 1998*, London
- <sup>25</sup> *The 1996 British crime survey England and Wales*, Home Office statistical bulletin, Issue 19/96
- <sup>26</sup> Deehan, A, (1999), *Alcohol and crime: taking stock*, Home Office
- <sup>27</sup> Shepherd J & Briskly M, (1996), *The relationship between alcohol intoxication, stresses and injury in urban violence*, Brit.J, criminal. Nol.36, no.4 pp546-566
- <sup>28</sup> op cit Deehan
- <sup>29</sup> Holtermann, S and Burchell A. (1981), *The costs of alcohol misuse*, Government Economic Service Working Paper no 37
- <sup>30</sup> Feeney S, (1999), *Testing times in the workplace*, Healthlines, no.66, pp13-15
- <sup>31</sup> Bagnall G and Plant M, (1991), *HIV/AIDS risks, alcohol and illicit drug use among young adults in areas of high and low rates of HIV infection*, Aids Care, no.3, pp355-361
- <sup>32</sup> op cit Murgraff
- <sup>33</sup> Schulenberg J et al, (1996), *Getting drunk and growing up: trajectories of frequent binge drinking during the transition to young adulthood*, Journal of Studies on Alcohol, vol.57, no.3, pp289-304
- <sup>34</sup> op cit Moore
- <sup>35</sup> Foxcroft D.R et al, (1997), *Alcohol misuse prevention for young people: a systematic review reveals methodological concerns and lack of reliable evidence for effectiveness*, Addiction, vol.92, no.5 pp531-537.
- <sup>36</sup> Ben-Ahron, V et al, (1995), *Encouraging drinking at safe levels on single occasions: the potential contribution of protection motivation theory*, vol.30, no.5, pp633-639
- <sup>37</sup> Alcohol Concern, (1999), *Proposals for a National Strategy for England*, London