

# What's the damage?

Negative health consequences  
of alcohol misuse in Wales



Alcohol Concern  
Making Sense of Alcohol



## **Alcohol Concern**

Alcohol Concern is the national agency on alcohol misuse campaigning for effective alcohol policy and improved services for people whose lives are affected by alcohol-related problems.

## **Our work in Wales**

Alcohol Concern opened its office in Cardiff in August 2009. Alcohol Concern Cymru is focusing on policy and public health in Wales, acting as a champion for alcohol harm reduction.

This project was written and researched by Mark Leyshon, and edited by Andrew Misell. It was funded by Alcohol Concern.

The survey work was undertaken by Research and Marketing Plus in February 2010.

### **Published by**

Alcohol Concern, 64 Leman Street,  
London, E1 8EU  
Tel: 020 7264 0510  
Fax: 020 7488 9213  
Email: [contact@alcoholconcern.org.uk](mailto:contact@alcoholconcern.org.uk)  
Website: [www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk)

### **On behalf of**

Alcohol Concern Cymru, Sophia House,  
28 Cathedral Road, Cardiff, CF11 9LJ  
Tel: 029 2066 0248  
Fax: 029 2066 0249  
Email: [acwales@alcoholconcern.org.uk](mailto:acwales@alcoholconcern.org.uk)

Copyright: Alcohol Concern May 2010.

All rights reserved. No part of this publication may be produced, stored in a retrieval system, or transmitted by any means without the permission of the publishers and the copyright holders.  
ISBN: 1 86981484 3

Alcohol Concern is a registered charity no. 291705 and a company limited by guarantee registered in London no. 1908221.

# Contents

|   | Page |
|---|------|
| Executive summary   | 4    |
| Introduction  | 6    |
| What's the damage?  | 8    |
| 1) Liver disease  | 10   |
| 2) The digestive system   | 12   |
| 3) Cancer   | 12   |
| 4) The heart and circulatory system   | 13   |
| 5) The bones, muscle and skin   | 14   |
| 6) The brain and nervous system   | 14   |
| 7) Mental health problems   | 14   |
| 8) Sexual problems / sexually transmitted diseases  | 15   |
| 9) Development of the foetus in pregnant women  | 15   |
| The negative consequences of alcohol misuse –<br>a survey of knowledge and attitudes in Wales | 16   |
| • Summary of survey findings  | 16   |
| • Survey findings – units   | 17   |
| • Survey findings – calories  | 18   |
| • Survey findings – health  | 19   |
| Discussion and recommendations  | 20   |

# Executive summary



Regularly drinking alcohol above recommended guidelines significantly increases risk to long-term health. Studies show that alcohol is linked to more than 60 disease conditions, including liver disease and mouth, food pipe, bowel and breast cancer. It is responsible for around 1,000 deaths each year in Wales.

Alcohol Concern has been keen to find out the levels of awareness and understanding amongst the Welsh public about the health risks that alcohol misuse poses. We commissioned a telephone survey of 1,000 drinkers in Wales in February 2010, asking questions about unit and calorific content of drinks, and the health implications of excessive consumption.

Our survey indicates that many people in Wales remain unaware of the dangers of alcohol misuse and the unit and calorific content of individual drinks. Around half of the respondents stated that they did not know the recommended daily maximum number of units for a man and a woman; more than half of the respondents were unable to correctly recall the number of units in either a standard pint of beer/lager and standard glass of wine; over 80 per cent were unable to correctly identify the number of calories in a standard pint of beer/lager and standard glass of wine; and around 78 per cent failed to identify the link between alcohol and cancer.

In addition, despite a significant growth in consumption levels in Wales over the last 50 years and the rising number of hospital admissions and deaths as a direct result of alcohol misuse, more than three quarters of respondents to our survey stated that they are rarely or never concerned about the amount of alcohol they consume.

It is clear that more work need to be done to inform the public about unit and calorific content of drinks, the recommended drinking guidelines and the risks to health of excessive consumption. Alcohol Concern makes the following recommendations for action:

## **Recommendation 1**

Current voluntary labelling requirements are ineffective and fail to protect public health. It must be made a mandatory requirement that unit information and safe drinking guidelines appear on the labels of all alcoholic drinks, with tough sanctions for non-compliance. The number of units of each individual drink should be prominently displayed, ideally on the front of the packaging. Labels should also include a cigarette style health warning, determined by either the Department of Health and devolved administrations or an independent health promotion body, for example 'Drinking above recommended guidelines can cause mouth, bowel and breast cancer'. Such warnings should be rotated on a regular basis to ensure maximum impact.

## **Recommendation 2**

The introduction of mandatory labelling should be supported by ongoing campaigns that seek to highlight the potential harms of excessive consumption and increase understanding of units and recommended guideline amounts. The impact on behaviour of such campaigns should be independently evaluated.



### **Recommendation 3**

Awareness amongst consumers about the adverse health consequences of drinking above guidelines is generally poor. All retailers of alcohol have a responsibility to provide clear and accessible information to their customers. Information about units, recommended guideline amounts, and risks to health should therefore be prominently displayed wherever alcohol is sold.

### **Recommendation 4**

Consideration should be given to effective ways of providing calorific information about alcoholic drinks to all consumers. The Welsh Assembly Government has supported moves within the European Union for consumers to have the same energy information on alcoholic drinks labels as found on labels on other foods and drinks. This issue should be further pursued at a European level and the current five year nutritional labelling exemption for wines, spirits and beers removed.

### **Recommendation 5**

A minimum price per unit of alcohol should be implemented, in line with the recommendations of the UK's Chief Medical Officers. Setting a minimum price of 50p per unit will achieve a reduction in consumption and significant improvements to public health. Ideally this should be implemented at an England and Wales level; however, if progress cannot be made in this regard, Alcohol Concern supports moves to devolve the necessary powers to the National Assembly for Wales.

# Introduction



*“Alcohol misuse is already one of the most serious public health challenges in Wales and there is a direct link between how much we drink and how much our health is jeopardised as a result.”*

Chief Medical Officer for Wales (2010)<sup>1</sup>

Alcohol consumption in the UK has risen markedly since the 1960s,<sup>2</sup> whilst the price of alcohol relative to average income has steadily declined during this period.<sup>3</sup> Nearly a half of adults in Wales admit to regularly drinking above recommended guidelines.<sup>4</sup> Indeed, the true figure may be much higher, given that surveys of drinking behaviours typically underestimate actual consumption levels.<sup>5</sup> Consequently, alcohol misuse in Wales is a growing concern and is considered to be a national problem.<sup>6</sup>

Many of us will be familiar with extreme images in the media of drunken and anti-social behaviour, and pledges by governments to ‘crack down’ on binge-drinking and alcohol-related violence.<sup>7</sup> However, these images do not necessarily match the experiences of a typical consumer. There are many people who take part in the night-time economy and enjoy a positive experience, and one that is incident-free, despite the increased risk of violence.<sup>8</sup> In addition, increasing numbers of people are choosing to drink in the perceived safety of their own home: our survey of 1,000 adults in Wales found that 50 per cent of respondents admitted to drinking alcohol exclusively at home, with a further 21 per cent stating they drink equally at home or at the pub.

Another recent survey of drinking amongst a sample of British adults found that the vast majority of those surveyed reported enjoying their past year’s drinking, regardless of whether or not it had been associated with adverse consequences.<sup>9</sup> Further, research by Public Health Wales<sup>10</sup> indicates that most drinkers do not consider their consumption to be impacting on their long-term health. Alcohol is viewed by many as something that enhances their social experiences and a reward that has not resulted in personal negative health consequences.<sup>11</sup>

Whilst it is true that many people enjoy alcohol in moderation, increasing numbers are regularly drinking above recommended guidelines. The potential health implications of doing so may not be immediately apparent to an individual, but there is overwhelming scientific evidence that excessive consumption significantly increases risk to long-term health. In particular, alcohol is directly linked to liver disease and mouth, food pipe, bowel and breast cancer.<sup>12</sup> Indeed, alcohol is estimated to be the third highest of 26 risk factors for ill health in the European Union, and the World Health Organisation (WHO) identifies the need for the formulation of ‘effective public health-orientated counter-measures in order to minimize the harm caused by alcohol use.’<sup>13</sup>



The increasing strain on the NHS as a consequence of alcohol misuse is well documented. In England in 2006-7, alcohol was estimated to account for £2.7 billion of NHS expenditure, almost double the figure in 2001,<sup>14</sup> whilst the number of alcohol-related hospital admissions increased by around 70 per cent between 2002/03 and 2008/09.<sup>15</sup> In Wales the estimated health service cost of alcohol-related chronic disease and alcohol-related acute incidents is between £70 million and £85 million each year.<sup>16</sup> 15 per cent of hospital admissions in Wales are due to alcoholic intoxication.<sup>17</sup>

The Welsh Assembly Government's (WAG) Substance Misuse Strategy for Wales 2008-18<sup>18</sup> recognises the harms associated with the misuse of alcohol in Wales. As Action Area 1 of the strategy acknowledges:

'It is... crucial that we do more to increase people's awareness of the amount they are drinking and the associated risks, particularly to their health.'<sup>19</sup>

Alcohol Concern considers alcohol misuse in Wales to be a public health issue with the same importance as tobacco, obesity and drugs misuse. This report examines the potential health harms associated with excessive drinking and highlights that many people in Wales remain in the dark regarding the recommended levels of consumption and the potential risks to their long-term health. It concludes with making a number of recommendations that will help empower people to make informed choices about their drinking.

### Key statistics in Wales

- 45 per cent of adults in Wales admit to drinking more than the daily recommended guidelines on at least one day in the past week, including 28 per cent reporting binge drinking (drinking more than double the recommended daily amount over a short period)<sup>20</sup>
- Alcohol accounts for 1,000 deaths in Wales per year<sup>21</sup>
- 15 per cent of hospital admissions in Wales are due to alcoholic intoxication
- 30,000 hospital bed days are related to the consequence of alcohol consumption<sup>22</sup>
- There were around 15,300 referrals for treatment of alcohol misuse in Wales in 2007-8, including 1,600 for patients aged 19 and younger<sup>23</sup>
- The estimated health service cost of alcohol-related chronic disease and alcohol-related acute incidents is between £70 million and £85 million each year<sup>24</sup>

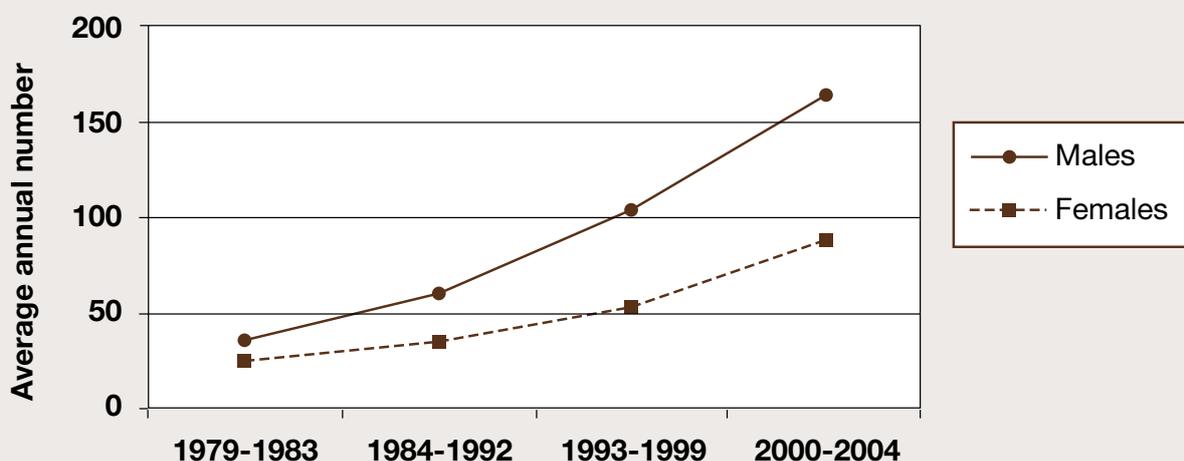
# What's the damage?

Alcohol misuse is a major cause of illness, injury and death. Alcohol-related deaths in Wales have risen significantly over the previous twenty years (Figure 1). Recent statistics suggest alcohol is now responsible for around 1,000 deaths per year in Wales<sup>25</sup> and directly accounts

for 8,000 potential years of life lost in Wales and indirectly for an additional 5,000.<sup>26</sup> The average number of alcohol-related hospital admissions per year for residents of Wales is approximately 8,400 for males and 4,500 for females.<sup>27</sup>

**Figure 1:**

## Alcohol related deaths in Wales



Source: NPHS for Wales (based on ONS data)<sup>28</sup>

Alcohol harms health through three mechanisms:

- acute intoxicating effects, occurring after a binge
- chronic toxic effects, following prolonged periods of drinking at harmful levels
- propensity for addiction leading to physical and psychological dependency.<sup>29</sup>

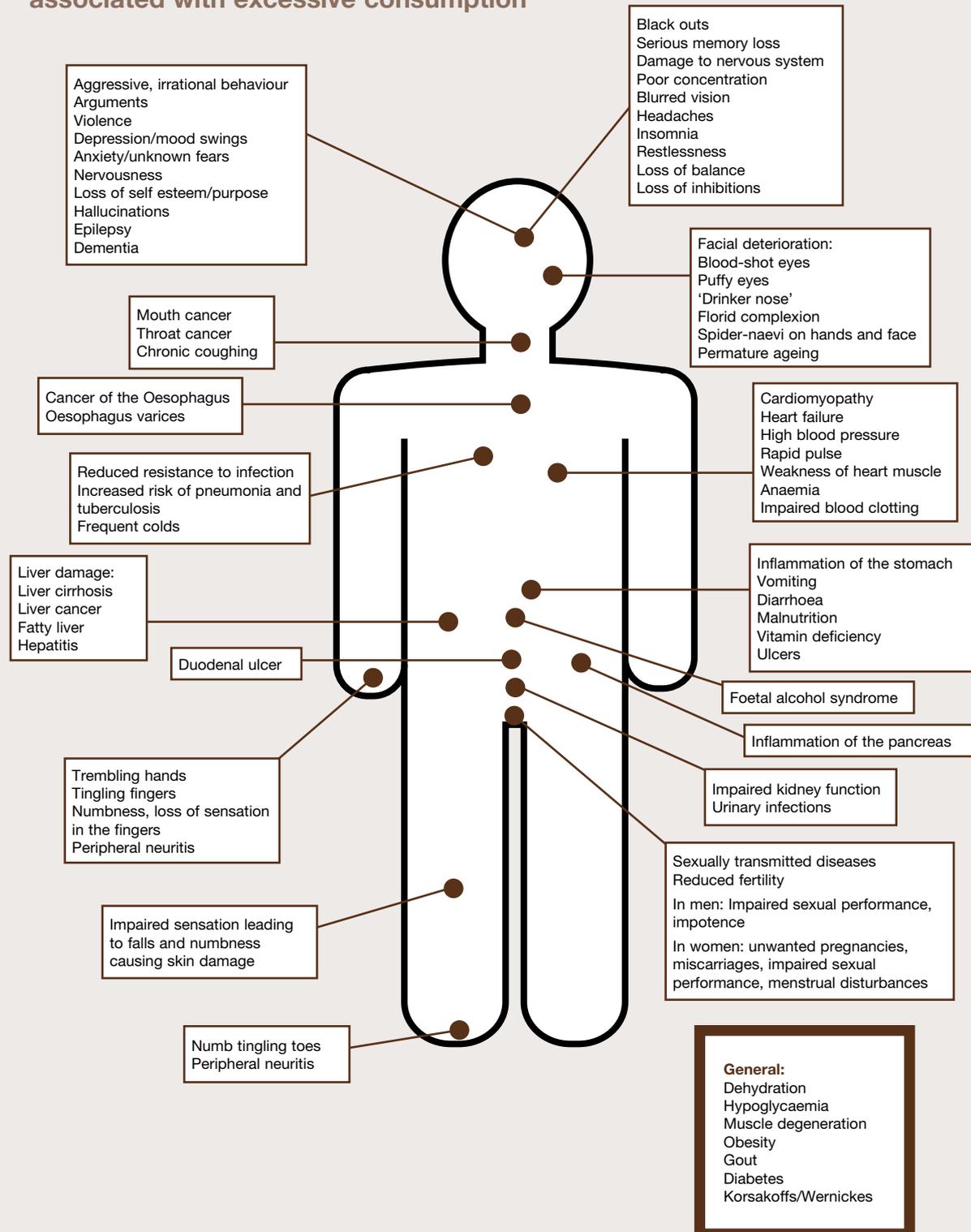
The immediate intoxicating effects of alcohol - reduced inhibitions, impaired judgement, slurred speech, and nausea/vomiting, for example - are often easily identifiable; however the longer-term health consequences of excessive drinking, despite their serious and potentially deadly

nature, may remain undetected. Studies show that alcohol is linked to more than 60 disease conditions,<sup>30,31</sup> including liver disease, cancer, osteoporosis, stomach ulcers, raised blood pressure, stroke and dementia.

The remainder of this section of the report explores some of these major alcohol-related health effects in more detail.

**Figure 2:**

**Potential negative health effects of and behaviours associated with excessive consumption**





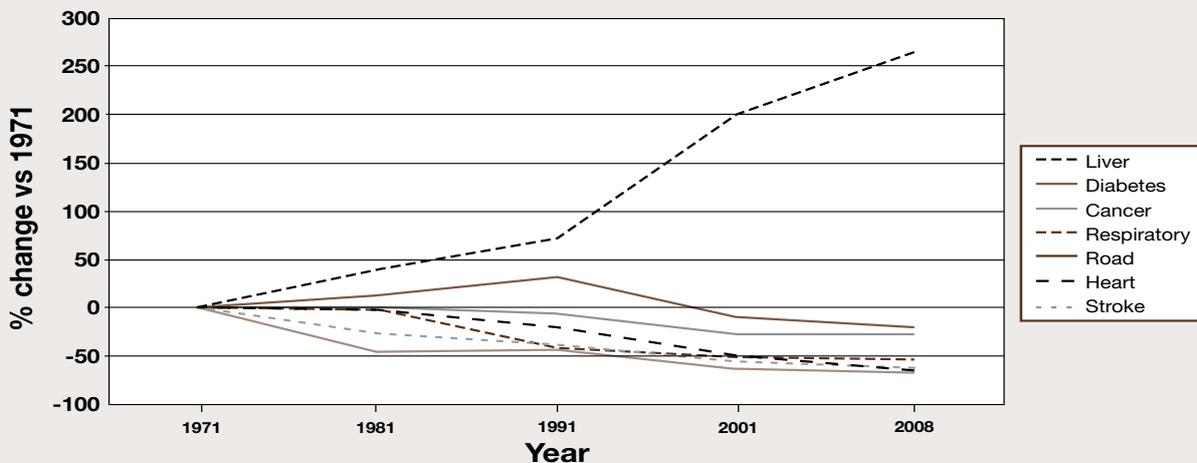
## 1) Liver disease

Liver disease is the fifth biggest killer in England and Wales, after heart disease, cancer, stroke and respiratory disease.<sup>32</sup> It is the only major cause of death still increasing year-on-year<sup>33</sup> (Figure 3). UK deaths from liver cirrhosis increased more than five-fold between 1970 and 2006.<sup>34</sup> In contrast, in France, Italy and Spain the number of deaths decreased by at least 50 per cent and are now lower than those in the UK.<sup>35</sup>

Moreover, as people are able to survive with 70 per cent liver damage, there is a substantial burden of morbidity, significantly and adversely affecting their quality of life. Recent research indicates that a combination of obesity and alcohol further increase the risk of liver disease.<sup>36</sup> In Wales, alcoholic liver disease results in around 1,600 hospital admissions per year.<sup>37</sup> Figures from Betsi Cadwaladr University Health Board show that between 2005-8 in north Wales there was a 25 per cent increase in the number of under-50s diagnosed with liver disease.<sup>38</sup>

**Figure 3: The rising tide of liver disease**

**Movements in mortality 1971-2008. Deaths per million of population.**



Source: British Liver Trust<sup>39</sup>

The liver has numerous functions, most of which are essential for living. These include:

- processing and removing toxins in the blood
- making proteins that are essential for the blood to clot
- regulating cholesterol levels in the blood
- helping to fight infection and disease.



When an individual consumes alcohol, it is absorbed into the bloodstream from the stomach and intestines. This blood first passes through the liver before circulating the rest of the body. Liver cells process the alcohol, breaking it down into other chemicals which are then in turn broken down into water and carbon dioxide, before being passed out in the urine and from the lungs. However, if the liver has to break down too much alcohol, its other functions are adversely affected and the organ can become damaged.

Drinking too much alcohol can lead to three stages of damage: fatty liver, alcoholic hepatitis and alcoholic cirrhosis.<sup>40</sup>

### **1. Fatty liver**

A build-up of fat occurs within liver cells of most heavy drinkers, but may also be found in those drinking just above recommended limits. *Fatty liver* may not progress to more severe damage and can be reversed by the cessation of drinking. However, it is an indicator that more permanent damage may occur in the future.

### **2. Alcoholic hepatitis (inflammation)**

About a third of people with fatty liver will develop *alcoholic hepatitis*.<sup>41</sup> Mild hepatitis may not cause any symptoms; more severe cases tend to cause symptoms such as loss of appetite, vomiting, abdominal pain and jaundice (yellowing of the skin). At its severest, alcoholic hepatitis can quickly lead to liver failure and death.

### **3. Alcoholic cirrhosis**

*Cirrhosis* is the result of continuous liver damage. Normally when the liver is damaged it can regenerate itself. In cirrhosis, the process of healing fails and scar tissue develops, preventing the liver from being able to carry out its normal functions.

Cirrhosis is found in about 20 per cent of heavy drinkers.<sup>42</sup> In some instances cirrhosis has no obvious symptoms, but where symptoms are visible, they usually include general ill health, flatulence, lack of appetite, sallow skin, jaundice, itching, anaemia, vomiting of blood, lower back pain and abdominal swelling.<sup>43</sup> There is no cure for cirrhosis, but sufferers who stop drinking completely have a much stronger chance of survival. Those who continue to drink will go on to develop complete liver failure and a further 10 per cent of sufferers develop liver cancer, fatal in about six months.<sup>44</sup>



## 2) The digestive system

The damaging effects of alcohol consumption are not limited to the liver; a high alcohol intake can also have negative effects on the rest of the digestive system.<sup>45</sup>

### 1. Stomach

*Gastritis* is the inflammation of the stomach lining. There are two forms of gastritis - acute and chronic - both of which are common amongst heavy drinkers. *Acute gastritis* may be characterised by nausea, cramps, fever and vomiting (which may include blood where there is also ulceration). *Chronic gastritis* persists over a prolonged period and may have no obvious symptoms. Where they occur, symptoms of chronic gastritis may include: abdominal pain, heartburn, loss of appetite, loss of weight, nausea and vomiting. Both forms of alcoholic gastritis can be cleared up quickly by avoiding alcohol. If it is left untreated, however, gastritis can be fatal.

The other major problem associated with the stomach is that of *stomach ulcers*. Alcohol can aggravate an existing ulcer and inhibit the healing process.

### 2. Oesophagus (food pipe)

Excessive alcohol consumption can cause *reflux*, a process whereby digestive juices from the stomach are forced up into the oesophagus. As the oesophagus lacks the protective lining of the stomach, reflux causes a burning sensation, often referred to as *heartburn*. Reflux can cause *oesophagitis* (an inflammation of the lining of the oesophagus) and lead to ulceration at the junction of the stomach and oesophagus.

### 3. Pancreas

The pancreas is responsible for the production of the enzymes required for digestion, and of insulin - which is needed to control blood sugar levels. *Pancreatitis* is the inflammation of the pancreas. Alcohol is responsible for approximately 80 per cent of acute pancreatitis cases, an extremely painful condition; and about half of chronic pancreatitis cases, which is very difficult to treat and can cause fatal complications.<sup>46</sup>

## 3) Cancer

There is a clear link between alcohol and many types of cancer. One in five of all alcohol-related deaths are due to cancer.<sup>47</sup> More than 200 deaths from cancer per year in Wales are attributable to alcohol.<sup>48</sup> Alcohol has consistently been linked to the risk of the following cancers:<sup>49</sup>

### 1. Mouth, larynx (voice box), pharynx (upper throat) and oesophagus cancer

Alcohol is a leading cause of mouth cancer, second only to tobacco. It is estimated that between 25 per cent and 50 per cent of cancers of the head and neck are a result of alcohol.<sup>50</sup> As smoking can also contribute to these cancers, people who smoke and drink are at much greater risk of developing cancer in any of these parts of the body. Studies have found that 80 per cent-90 per cent of such cancers could be avoided by abstaining from smoking and drinking.<sup>51</sup>



## 2. Breast cancer

Recent research evidence indicates that even moderate alcohol consumption can cause female breast cancer. One study indicates that the consumption of 10g of pure alcohol (one unit = 8g) per day increases the risk of breast cancer by 9 per cent, and consumption of 30g-60g (3.75 – 7.5 units) per day is associated with an increased risk of 41 per cent.<sup>52</sup> An ongoing study involving 1.3 million women across the UK suggests that breast cancer risk increases by 12 per cent with each daily drink. This would translate into 11 extra breast cancers per 1,000 women up to the age of 75.<sup>53</sup> It is estimated that up to 20 per cent of breast cancer cases in the UK can be attributed to alcohol.<sup>54</sup>

## 3. Other cancers

Excessive consumption is associated with cancer of the liver (discussed above) and bowel cancer: an ongoing study of 500,000 people in ten European countries has found that for every two units of alcohol consumed a day, the risk of bowel cancer increases by 8 per cent.<sup>55</sup>

*“People are more likely to develop cancer if they drink a lot of alcohol, no matter whether they save it up and drink it in one go, or drink it steadily over a week.”*

Cancer Research UK<sup>56</sup>

## 4) The heart and circulatory system

Recent research suggests that those drinking about one unit a day have a lower risk of heart attack, chronic heart trouble and sudden coronary death than those heavier drinkers or who do not drink at all. This, however, only applies to those already at risk of heart disease, i.e. men over 40 and women past the menopause. Drinking more than one to two units a day does not offer extra protection – on the contrary, this may raise blood pressure and cause extra health problems.<sup>57</sup>

*“While drinking in moderation has been shown to offer some protection against heart disease, this should not be seen as a green light to start drinking. There are better ways to protect yourself from heart disease. The evidence is clear: regularly drinking above the recommended daily limits harms the heart...”*

Dr. Mike Knapton, British Heart Foundation<sup>58</sup>

In addition, binge-drinking has been linked significantly to raised blood pressure (hypertension),<sup>59</sup> which is the single biggest risk factor for stroke.



## 5) The bones, muscles and skin

Heavy drinking can contribute to *osteoporosis*, a disease of the bones which makes the bones thin, soft and liable to collapse, especially in the lower spine, pelvis and thigh. It affects both women, and increasingly, middle-aged and young men.<sup>60</sup> Further, *gout* (swelling of joints) can be exacerbated by heavy drinking, and it has been reported that the condition is becoming increasingly common in Wales amongst men in their early twenties as a consequence of alcohol misuse.<sup>61</sup>

Alcohol-induced muscle disease is the most prevalent skeletal muscle disorder in the western hemisphere.<sup>62</sup> It can take two forms: *muscle degeneration* and *alcoholic myopathy*, an acute form of muscle weakness with pain that can occur after a heavy bout of drinking.

Studies have shown that alcohol can also have a particularly damaging effect on the skin. Drinking alcohol can often result in a 'rosy glow', a result of dilation of blood vessels in the skin. Usually only a temporary flush, this redness can lead to a permanent red hue to the skin, especially around the nose. Heavy drinking can lead to *psoriasis* - an accumulation of skin cells on the surface of the skin, in the form of a psoriatic plaque - especially in men.<sup>63</sup> Alcohol also inhibits the body's absorption of vitamin C making it more susceptible to bruising and can cause dark circles to appear under the eyes. It also dehydrates the skin which can lead to premature ageing and wrinkles.

## 6) The brain and nervous system

Alcohol is a central nervous system depressant. The immediate effects of alcohol consumption can include slurred speech, loss of self-control and blackouts. Over a long period of time, however, problem drinkers and heavy social drinkers may develop various types of brain damage. Recent studies have shown that there can be reversible brain shrinkage due to drinking, with drinkers showing intellectual impairments compared to a control group. Indications would appear to show that the level of impairment is proportional to the amount of alcohol consumed, with those drinking more suffering more impairment.<sup>64</sup>

*Wernicke's encephalopathy* is a brain disorder caused by a lack of thiamine (vitamin B1). Lack of thiamine is a common condition amongst heavy drinkers due to poor diet and/or frequent vomiting, both of which deplete vitamin stores. If *Wernicke's encephalopathy* is left untreated, *Korsakoff's psychosis* can develop (although *Korsakoff's psychosis* can also develop without *Wernicke's encephalopathy*). It is signified by profound memory loss, affecting both the ability to recall events and to form new memories. Those affected tend to be men between the ages of 45 and 65 with a long history of alcohol misuse, though it is possible to have the syndrome at an older or a younger age. Women can also be affected.<sup>65</sup>

## 7) Mental health problems

Extensive research has shown that people who drink heavily are particularly vulnerable to developing mental health problems.<sup>66</sup> Alcohol has a role in a number of conditions:



### 1. Anxiety and depression

Alcohol is a depressant drug and prolonged drinking can lead to profound and long-lasting mood swings. In many cases anxiety is a consequence of heavy drinking rather than a cause. Whilst low doses of alcohol appear to cheer people up, higher doses may increase psychological distress.

### 2. Mental illness, including psychosis

Alcohol misuse may accelerate or uncover a predisposition to psychiatric disorder. In addition, some patterns of alcohol misuse can give rise to alcohol-induced *psychosis* (where a person's ability to distinguish between imagination and reality is affected).<sup>67</sup>

### 3. Suicide

There is a clear link between suicide and excessive drinking. The WHO has estimated the risk of suicide when a person is abusing alcohol is eight times greater than if they were not.<sup>68</sup> A report from the Mental Health Foundation<sup>69</sup> states that as many as 65 per cent of suicides could be related to excessive drinking and identifies alcohol as one of the highest risk factors for suicide.

## 8) Sexual problems / sexually transmitted diseases

Temporary impotence - or 'brewers' droop' - after a bout of drinking is a common problem experienced by men. Long-term heavy drinking in men may lead to loss of libido and potency, shrinking of the testes, reduction in the size of the penis, reduced sperm formation, loss of pubic and body hair, and, as a complication of cirrhosis, enlargement of the breasts.<sup>70</sup> Long-term heavy alcohol-misuse in women may result in the failure to ovulate and general menstrual problems, the shrinking of the breasts and sexual organs, and body fat being redistributed into a male pattern.<sup>71</sup>

Studies have shown that the consumption of alcohol is a contributory factor in risk-taking behaviour. Alcohol lowers inhibitions, meaning people often take greater risks, including having unprotected sex when they otherwise may not. Such behaviour can lead to the contraction of sexually transmitted infections, such as *HIV*, *gonorrhoea* and *syphilis*. Rates of sexually transmitted diseases among young women in particular are increasing: for example, during 1998 to 2007, at genito-urinary clinics across the UK, new diagnoses of girls under 16 showed an increase of 31 per cent in gonorrhoea and 162 per cent in *chlamydia*; the age range between 16 and 19 showed an increase of 37 per cent in gonorrhoea and 141 per cent in chlamydia.<sup>72</sup>

## 9) Development of the foetus in pregnant women

The UK's Chief Medical Officers advise that pregnant women or women trying to conceive should avoid drinking alcohol (or if they choose to drink, to minimise the risk to the baby they should drink no more than one or two units a week). This is because, during pregnancy, alcohol from the mother's bloodstream crosses the placenta and is taken up by the baby. This can then affect the baby's development in the womb, which may lead to problems, for example with the heart, at birth.

*Foetal alcohol syndrome disorder (FASD)* represents a spectrum of disorders including birth defects, brain damage, delays in growth and development, social and behavioural problems. *Foetal alcohol syndrome (FAS)* is directly a consequence of heavy drinking. Symptoms include growth deficiencies, central nervous system defects, lowered IQ and facial malformations.<sup>73</sup> 6,000 babies are born with FAS in the UK each year.<sup>74</sup> Early diagnosis and referral to specialist help for FAS is essential.

# The negative health consequences of alcohol misuse – a survey of knowledge and attitudes in Wales

As outlined in the sections above, the link between regularly drinking above recommended guidelines and increased risk to health is firmly established. Indeed, there is no such thing as guaranteed safe levels of drinking, and the more alcohol consumed, the greater the risk of alcohol-related disease or damage.

Alcohol Concern was therefore keen to investigate the awareness and understanding amongst the general public in Wales of the potential health risks associated with alcohol misuse. We commissioned a telephone survey of 1,000 drinkers in Wales in February 2010, asking questions about recommended units, calorie content of drinks and the health implications of excessive consumption.

The sample was designed to represent the demographic profile of the adult population resident in Wales. Those respondents who stated that they did not drink alcohol have not been included in the survey findings.

## Summary of survey findings

### A summary of the overall findings:

- Of those who drank, around 20 per cent drank alcohol three to four times a week on average.
- Around half stated that they did not know the recommended daily maximum number of units for a man and a woman.
- Over half of the respondents were unable to correctly recall the number of units in either a standard pint of beer/lager and standard glass of wine; and over half agreed or strongly agreed that unit content information on alcohol packaging would help them regulate their drinking.
- Over 80 per cent were unable to correctly identify the number of calories in a standard pint of beer/lager and standard glass of wine; and 48 per cent either agreed or strongly agreed that calorie content information on alcohol packaging would help them regulate their drinking.
- Three quarters of respondents stated that they were rarely or never concerned about the amount of alcohol they consumed, yet 80 per cent stated that either health concerns or weight gain issues would be likely to make them drink less.
- 21 per cent believed that a visit to the gym / exercise aids recovery from a heavy bout of drinking; 12 per cent said drinking coffee aids recovery. 84 per cent were able to list liver disease as serious disease directly linked to alcohol; conversely 78 per cent failed to list cancer.
- 3 per cent of respondents stated that drinking whilst pregnant will not increase the risk of harm to the unborn baby, with a further 9 per cent unsure.



## Survey findings - units

The first part of the survey asked questions around awareness of unit information. Units of alcohol were first introduced in 1987 in a Health Education Council booklet called 'That's the Limit' and they remain the primary way that health professionals talk about alcohol consumption.

### What is a unit of alcohol?

One unit of alcohol is 10 millilitres (1 centilitres) by volume, or 8g by weight, of pure alcohol. It is recommended that men drink no more than three to four units per day, with at least one or two alcohol-free days per week. Women should drink no more than two to three units per day, again with at least one or two alcohol-free days per week.

The number of units in an alcoholic drink can be calculated by applying the formula *Volume (ml) x ABV divided by 1000*. As a rough guide:

|                                  |   |   |
|----------------------------------|---|---|
| 175ml glass of 12 per cent wine  | = |  |
| 750ml bottle of 12 per cent wine | = |  |
| 330ml can of beer/lager          | = |  |
| 25ml measure of spirits          | = |  |

There have been many awareness campaigns in recent years aimed at improving public knowledge of units. Research suggests that most people in England and Wales have at least heard of the term: in 2007, for example, 92 per cent of men and 89 per cent of women in England reported that they had heard of measuring alcohol in units,<sup>75</sup> whilst a survey in Wales in 2009 showed the majority of respondents (85 per cent) were aware of the concept.<sup>76</sup>

Until recently a unit was defined as being equal to a half pint of normal strength beer/lager, standard glass of wine or single measure of spirits. However, a number of developments have meant that this definition is now often inaccurate. In particular, the size of glasses in the on-trade (pubs, bars and restaurants) has generally increased, as has the overall strength of alcohol products. Moreover, increasing numbers of people are drinking at home - our survey found that 50 per cent of respondents admitted to drinking alcohol exclusively at home, with a further 21 per cent stating they drink equally at home or at the pub. At home, the estimation of units consumed is typically more difficult to calculate or keep track of. One glass of wine drunk at home may actually contain more than three units, meaning that people may be consuming much more alcohol than they are aware of or intend to drink, consequently increasing the potential risks to their health.



The participants in our survey were asked whether they knew the recommended daily maximum number of units for a man, and if so, to state in their own words the correct answer. 52 per cent of respondents stated that they did not know the recommended number. Only 23 per cent provided the correct response (three to four units, or three units, or four units), including those who named instead the weekly guidelines of no more than 21 units a week. Incorrect answers were varied, ranging from one to two units to 175 units.

The same question was asked about the recommended daily maximum number of units for a woman, and similar results were found. 48 per cent stated that they did not know the recommended number. Only 29 per cent were able to provide the correct answer (answering two to three units, two units, three units, or 2.5 units), including those who instead provided the weekly guidelines of no more than 14 units a week. Incorrect answers ranged from one to two units to 125 units.

Our survey next asked respondents to choose, from a range of possible answers, the approximate number of units contained in a standard pint of beer/lager. The correct answer is between 1.5 and 2.5 units.<sup>77</sup> A total of 54 per cent of the answers provided were incorrect, with 25 per cent of these stating that they did not know the correct answer. The same question was asked about a standard (175ml) glass of wine. The correct answer is between 1.5 and 2.5 units. 64 per cent of responses were incorrect, which includes 23.5 per cent stating that they did not know the correct answer.

Over half of the respondents tended to agree, or strongly agreed, that clear information about the unit content of an alcoholic product listed on its packaging would help them to regulate their drinking levels.

## Survey findings - calories

The second part of our survey asked questions around the calorific content of alcohol. Weight gain is obviously a concern for many individuals in Wales, both for health and cosmetic reasons, and 57 per cent of adults in Wales are now overweight or obese.<sup>78</sup> Amongst adults who drink, alcohol accounts for nearly 10 per cent of their calorie intake.<sup>79</sup> One gram of alcohol provides seven calories (7kcal), compared with 9kcal per gram for fat and 4kcal per gram for carbohydrate and protein. One unit of alcohol contains eight grams or 10ml of alcohol, which provides 56kcal. However, other ingredients in alcoholic drinks, such as sugar, cream and fruit juice, can add more calories.<sup>80</sup>

Alcohol Concern was keen to find out the level of people's knowledge about calories contained in alcoholic drinks. Respondents were asked to choose, from a range of answers, the correct number of calories in a standard pint of beer/lager. Only 18 per cent chose the correct answer of between 150 and 200 calories.<sup>81</sup> 31 per cent stated that they did not know the correct answer. The same question was asked about the number of calories contained in a standard glass (175ml) of wine. Just 14 per cent of respondents chose the correct answer of between 100 and 149 calories.

48 per cent of respondents tended to agree, or strongly agreed, that clear information about the calorie content of an alcoholic product listed on its packaging would help them to regulate their drinking levels.



## Survey findings - health

As noted earlier in the report, there are more than 60 conditions linked to alcohol. Respondents were asked, in their own words, to list as many serious diseases as they could that they understood to be directly linked to alcohol misuse.

84 per cent of respondents named liver disease as a serious condition, whilst 40 per cent were able to name heart disease. However, only 21 per cent were able to name cancer as a condition linked to alcohol, whilst only one respondent from a total of 1,000 specifically named breast cancer. The survey also asked respondents how often they were concerned about the amount of alcohol that they consumed. 76 per cent stated that they were rarely or never concerned. Yet 80 per cent of respondents also stated that health concerns or weight gain issues were likely to make them drink less.

21 per cent of respondents stated that a visit to the gym/exercise aids recovery after a heavy bout of drinking, and 12 per cent stated drinking coffee. Both of these are, of course, a common myth. Regular exercise is vital to staying healthy. However, regularly drinking above recommended guidelines will mean associated health risks cannot be simply 'sweated out' through exercise. In the morning following a heavy drinking session drinkers are dehydrated which may be worsened through exercising. They are also likely to have low blood sugar levels, meaning the capacity to actually exercise will be reduced. Likewise, coffee can worsen dehydration and research suggests that drinking coffee also makes it harder for a person to realise that they are under the influence of alcohol.<sup>82</sup>

Finally, 3 per cent of respondents stated that drinking whilst pregnant does not increase the risk of harm to the unborn child, with a further 9 per cent unsure.

# Discussion and recommendations



Alcohol consumption in the UK rose 19 per cent between 1980 and 2007. In comparison, in the United States consumption fell by 17 per cent, 24 per cent in Canada, 30 per cent in Germany and 33 per cent in France.<sup>83</sup> The average adult in the UK is reported to drink the equivalent of 120 bottles of wine every year.<sup>84</sup> A recent analysis by Liverpool John Moores University for Alcohol Concern has shown that routine survey measures of alcohol consumption grossly underestimate actual consumption, and therefore this figure may be even higher.<sup>85</sup> Drinking alcohol regularly at guideline levels carries a 1 per cent risk of dying from an alcohol-related cause, and drinking regularly at more than double these levels increases the lifetime risk to 10 per cent.<sup>86</sup> Over a quarter of adults in Wales admit to drinking double the daily recommended guidelines on at least one day during the past week, and alcohol now accounts for 1,000 deaths per year in Wales. Rates of liver disease are escalating at an alarming rate, and there are numerous other medical conditions which require hospitalisation as a consequence of alcohol misuse.

Yet our survey reveals that many people in Wales remain unaware of the dangers of alcohol misuse or even the unit or calorific content of individual drinks. Over half of the respondents, were unable to correctly recall the number of units in either a standard pint of beer/lager and standard glass of wine for example, whilst around 79 per cent failed to identify the link between alcohol and cancer.

Drinking alcohol can be a pleasurable and social activity; however the potential consequences of drinking too much goes far beyond the following morning's hangover. Over three quarters of respondents to our survey stated that they were rarely or never concerned about the amount of alcohol they consumed. Instead, alcohol is often regarded as a reward, as part of a routine to help

provide relief from the stresses of modern living, or as a means to enhance social experiences, and long-term negative health consequences tend to be ignored. This presents obvious challenges.

There are a number of current campaigns that seek to raise awareness of the potential harms of regularly drinking above guidelines. The NHS in England, for example, has launched a campaign highlighting the hidden health dangers of alcohol<sup>87</sup> and Alcohol Concern has launched a bilingual website [www.drinkwisewales.org.uk](http://www.drinkwisewales.org.uk) which provides information on sensible drinking. Similarly, there have been a number of 'know your units' campaigns in recent years aimed at improving unit literacy amongst the public and, as highlighted earlier in the report, research suggests that the majority of consumers are now at least familiar with the concept. Education clearly has a role to play in improving awareness of alcohol issues, but this should be as part of a comprehensive package of measures.

Consumers have a right to clear and accurate information that highlights the health risks they face from heavy drinking and enables them to make healthy choices about their consumption. Better labelling of alcoholic products, clearly showing the unit content, calorific content and safe drinking guidelines will help to achieve this. Whilst there is little evidence that labelling will reduce consumption per se, there is a strong argument that consumers should be given sufficient details to make informed decisions about their drinking. Our survey indicates clear gaps in knowledge amongst the Welsh public about the unit content of individual drinks and the health risks of regularly drinking above guidelines. The survey also indicated that there was a strong appetite from consumers to be given more information about unit and calorie content of alcohol.



In 2007, the Department of Health reached a UK wide voluntary agreement with the alcohol industry to include unit and health information on labels. However, in a recent consultation it has conceded that progress has been disappointing.<sup>88</sup> Independent monitoring undertaken in April 2009 found that only 15 per cent of labels had an acceptable content and future plans would mean that only 19 per cent would meet this standard by 2010. Given that the majority of the alcohol industry has failed to respond to voluntary agreements, labelling of all alcohol products must now be made a mandatory requirement, with tough sanctions for non-compliance. This view is shared by other health organisations, including the Royal College for Nursing,<sup>89</sup> whilst WAG has stated:

“... voluntary, industry led initiatives are not an alternative to firm Government action in tackling alcohol related harms. Further, we have noted the very disappointing levels of compliance with the voluntary agreement. On that basis, the Welsh Assembly Government has very significant doubts about the credibility and viability of pursuing a renewed voluntary agreement.”<sup>90</sup>

As part of the current voluntary agreement, there are five defined elements intended to be included on labels, namely:

- clear information about the unit content of the product;
- drinking guidelines as recommended by the UK's Chief Medical Officers;
- the message to avoid drinking if pregnant or trying to conceive;
- the Drinkaware web address;
- and a 'know your limits', 'enjoy responsibly' or 'drink responsibly' message.

Concerns have previously been raised regarding the industry defined message of consuming alcohol 'responsibly'.<sup>91</sup> This is a subjective term and will mean different things to different people. More appropriate would be the inclusion in its place of specific and clear health warning, to be determined by either the Department of Health and devolved administrations or an independent health promotion body, for example: 'Drinking above recommended guidelines can cause mouth, bowel and breast cancer'. A UK-wide consultation closed in May 2010 considering options for improving unit and health information on labels.

There is a growing evidence base that health warnings on products promote greater awareness of the associated risks. For example, since 2007 a health warning has been placed on alcoholic drinks packaging in France to promote abstinence during pregnancy, supported by a media campaign, and has been found improve awareness.<sup>92</sup> Similar findings have been observed for warning labels on tobacco packaging. A recent study examining the impact of such warnings in four countries found them to positively influence intentions to stop smoking.<sup>93</sup> Moreover, the study concluded that the stronger the warnings, the greater the increase in cessation. Studies in Canada indicated warnings on cigarette packaging made 58 per cent of smokers think more about the health effects of smoking;<sup>94</sup> and rotating messages and pictorial labels achieve the greatest impact.<sup>95,96</sup>



A stipulation of any mandatory agreement must be to ensure high visibility of all elements included on alcohol labels. They must be legible and meet UK requirements for symbol and font size and be mandated by the Food Standards Agency, as the current voluntary agreement between the drinks industry and the UK government has been ineffective. The number of units of each individual drink should be prominently displayed, ideally on the front of the packaging, which will enable potential consumers to immediately and more easily identify the unit content contained within.

Consideration also needs to be given to effective ways of providing calorific information about alcoholic drinks to consumers. 48 per cent of respondents to our survey either agreed or strongly agreed that calories information on alcohol packaging would help them regulate their drinking. WAG has supported moves within the European Union for consumers to have the same energy information on labels as found on labels on other foods and drinks.<sup>97</sup> This issue should be further pursued at a European level and the current five year nutritional labelling exemption for wines, spirits and beers removed.

Any promotion of alcohol must be accompanied by proportionate information about the adverse health consequences of excessive consumption. All retailers of alcohol have a responsibility to provide clear and accessible information to their customers. Prominent information about the units, recommended guidelines and risks to health should therefore be displayed wherever alcohol is sold.

The price of alcohol may also be used as a lever to encourage responsible drinking and lower consumption levels. Research shows that alcohol sales respond to price increases like most consumer goods on the market: when other factors remain constant, an increase in the price of alcohol generally leads to a decrease in

consumption and vice versa.<sup>98</sup> In 2007, alcohol was 69 per cent more affordable than in 1980, taking into account changes in average income.<sup>99</sup> Setting a minimum price of 50p per unit of alcohol, in line with the recommendations of the UK's Chief Medical Officers, is the most effective means of achieving a reduction in consumption and making significant improvements to public health.

Alcohol Concern makes the following specific recommendations:

### **Recommendation 1**

Current voluntary labelling requirements are ineffective and fail to protect public health. It must be made a mandatory requirement that unit information and safe drinking guidelines appear on the labels of all alcoholic drinks, with tough sanctions for non-compliance. The number of units of each individual drink should be prominently displayed, ideally on the front of the packaging. Labels should also include a cigarette style health warning, determined by either the Department of Health and devolved administrations or an independent health promotion body, for example 'Drinking above recommended guidelines can cause mouth, bowel and breast cancer'. Such warnings should be rotated on a regular basis to ensure maximum impact.

### **Recommendation 2**

The introduction of mandatory labelling should be supported by ongoing campaigns that seek to highlight the potential harms of excessive consumption and increase understanding of units and recommended guideline amounts. The impact on behaviour of such campaigns should be independently evaluated.



### **Recommendation 3**

Awareness amongst consumers about the adverse health consequences of drinking above guidelines is generally poor. All retailers of alcohol have a responsibility to provide clear and accessible information to their customers. Information about units, recommended guideline amounts, and risks to health should therefore be prominently displayed wherever alcohol is sold.

### **Recommendation 4**

Consideration should be given to effective ways of providing calorific information about alcoholic drinks to all consumers. The Welsh Assembly Government has supported moves within the European Union for consumers to have the same energy information on alcoholic drinks labels as found on labels on other foods and drinks. This issue should be further pursued at a European level and the current five year nutritional labelling exemption for wines, spirits and beers removed.

### **Recommendation 5**

A minimum price per unit of alcohol should be implemented, in line with the recommendations of the UK's Chief Medical Officers. Setting a minimum price of 50p per unit will achieve a reduction in consumption and significant improvements to public health. Ideally this should be implemented at an England and Wales level; however, if progress cannot be made in this regard, Alcohol Concern supports moves to devolve the necessary powers to the National Assembly for Wales.

# References

- 1 Chief Medical Officer for Wales (2010) *New report shows disappointing industry provision of alcohol health warnings*, online, available from: <http://wales.gov.uk/newsroom/healthandsocialcare/2010/100217alcohol/?lang=en&ts=4> [accessed 14/05/10].
- 2 Alcohol Concern (2009) *The price is right: Protecting communities through action on alcohol sales*, London, Alcohol Concern.
- 3 Scottish Health Action on Alcohol Problems (2008) *Alcohol: price, policy and public health*, Edinburgh, SHAAP.
- 4 Welsh Assembly Government (2009) *Welsh health survey 2008: Initial headline results*, Cardiff, Welsh Assembly Government.
- 5 Alcohol Concern (2009) *Off Measure: How we underestimate the amount we drink*, London, Alcohol Concern.
- 6 Welsh Assembly Government (2008) *Chief Medical Officer for Wales – annual report 2007*, Cardiff, Welsh Assembly Government.
- 7 Verkaik, R. (2009) *Binge-drinking culture faces crackdown*, The Independent, online, available from: <http://www.independent.co.uk/news/uk/home-news/bingedrinking-culture-faces-crackdown-1684036.html> [accessed 22/02/10].
- 8 Department of Health and Home Office (2007) *Safe. Sensible. Social. The next steps in the National Alcohol Strategy*, London, Department of Health and Home Office.
- 9 Plant, M. (2009) *Drinking patterns*, Alcohol Concern factsheet. Hard copies available from Alcohol Concern Cymru.
- 10 National Public Health Service for Wales (2009) *Alcohol intervention study: Research report March-April 2009*, Cardiff, Beaufort Research Ltd.
- 11 *ibid.*
- 12 Cancer Research UK (2008) *Alcohol and cancer*, online, available from: <http://www.cancerresearch.org.uk> [accessed 23/02/10].
- 13 World Health Organisation (2004) *Global status report on alcohol 2004*, Geneva, WHO, p67.
- 14 The NHS Confederation (2010) *Too much of the hard stuff: What alcohol costs the NHS*, The NHS Confederation Briefing, Issue 193, online, available from: [http://www.nhsconfed.org/Publications/Documents/Briefing\\_193\\_Alcohol\\_costs\\_the\\_NHS.pdf](http://www.nhsconfed.org/Publications/Documents/Briefing_193_Alcohol_costs_the_NHS.pdf) [accessed 24/02/10].
- 15 Department of Health (2010) *Health profile of England 2009*, London, Department of Health.
- 16 Coles, E. And Pates, R. for Welsh Assembly Government (unpublished) *The economic and social costs of class A drug and alcohol abuse in Wales*, Cardiff, Welsh Assembly Government.
- 17 Prime Minister's Strategy Unit (2003) *Interim analytical report*, London, The Stationary Office.
- 18 Welsh Assembly Government (2008) *Working together to reduce harm: The substance misuse strategy for Wales 2008-18*, Cardiff, Welsh Assembly Government.
- 19 *ibid*, p22.
- 20 *op. cit.* Welsh Assembly Government (2009).
- 21 Wales Centre for Health and National Public Health Service for Wales (2009) *A profile of alcohol and health in Wales*, Cardiff, Wales Centre for Health.
- 22 Welsh Assembly Government (2008) *Working together to reduce harm: The substance misuse strategy for Wales 2008-2018*, Cardiff, Welsh Assembly Government.
- 23 *op. cit.* Wales Centre for Health and National Public Health Service for Wales (2009).
- 24 *op. cit.* Coles, E. And Pates, R. for Welsh Assembly Government (unpublished).
- 25 *op. cit.* Wales Centre for Health and National Public Health Service for Wales (2009).
- 26 Prime Minister's Strategy Unit (2003) *Alcohol misuse: how much does it cost?* London, The Stationary Office.
- 27 *ibid.*



- 28 National Public Health Service for Wales (2006) *Alcohol and health in Wales: A major public health issue*, NPHS for Wales, online, available from: [www2.nphs.wales.nhs.uk:8080/...nsf/Public/.../\\$File/ATT6QLZ1.doc](http://www2.nphs.wales.nhs.uk:8080/...nsf/Public/.../$File/ATT6QLZ1.doc) [accessed 25/02/10].
- 29 House of Commons Health Select Committee (2010) *Alcohol: First report of session 2009-10*, Volume 1, London, The Stationary Office.
- 30 Gutjahr, E., Gmel, G. And Rehm, J. (2001) *Relation between average alcohol consumption and disease: An overview*, European Addiction Research, 7(3), p117-127.
- 31 Ridolfo, B. and Stevenson, C.E. (2001) *The quantification of drug-caused mortality and morbidity in Australia 1998*, Canberra, Australian Institute of Health and Welfare.
- 32 Office for National Statistics (2008) *Health service quarterly*, Winter 2008, No.40, p59-60, Newport, ONS.
- 33 *ibid.*
- 34 *op. cit.* House of Commons Health Select Committee (2010).
- 35 *ibid.*
- 36 Alleyne, R. (2010) *Reduce safe drinking limits for overweight people, research suggests*, Telegraph online, available from: [www.telegraph.co.uk/health/healthnews/7421524/Reduce-safe-drinking-limits-for-overweight-people-research-suggests.html](http://www.telegraph.co.uk/health/healthnews/7421524/Reduce-safe-drinking-limits-for-overweight-people-research-suggests.html) [accessed 16/03/10].
- 37 *op. cit.* Welsh Assembly Government (2008).
- 38 Hughes, O. R. (2010) *Drinking fuels alarming rise in liver disease in North Wales under-50s*, North Wales Post, online, available from: <http://www.dailypost.co.uk/news/north-wales-news/2010/04/03/drinking-fuels-alarming-rise-in-liver-disease-in-north-wales-under-50s-55578-26166323/> [accessed 12/04/10].
- 39 British Liver Trust (2009) *The rising tide of liver disease deaths*, online, available from: <http://www.britishlivertrust.org.uk/home/media-centre/facts-about-liver-disease.aspx> [accessed 22/02/10].
- 40 Alcohol Concern (2006) *Factsheet: Health impacts of alcohol*.
- 41 *ibid.*
- 42 Heather, N., Peters, T. J. and Stockwell, T, (eds) (2001) *International handbook of alcohol dependence and problems*, Chichester, Wiley.
- 43 *op. cit.* Alcohol Concern (2006).
- 44 *ibid.*
- 45 *ibid.*
- 46 Office for National Statistics (2000) *Mortality statistics: cause, England and Wales, 1999*, London, The Stationary Office.
- 47 Rehm, J. et al, in Ezzati, M., Lopez, A. D., Rodgers, A. and Murray, C. J. L. (2004) *Comparative quantification of health risks: Global and regional burden of disease due to selected major risk factors*, Geneva, WHO.
- 48 *op. cit.* Prime Minister's Strategy Unit (2003) *Interim analytical report*.
- 49 *op. cit.* World Health Organisation (2004).
- 50 *op. cit.* Alcohol Concern (2006).
- 51 *op. cit.* Heather, N., Peters, T. J. and Stockwell, T, (eds) (2001).
- 52 Smith-Warner, S. A., Spiegelman, D., Yaun, S.S., van den Brandt, P. A., Folsom, A. R., Goldbohm, R. A., Graham, S., Holmberg, L., Howe, G. R., Marshall, J. R., Miller, A. B., Potter, J. D., Speizer, F. E., Willett, W. C., Wolk, A. and Hunter, D. J. (1998) *Alcohol and breast cancer in women: A pooled analysis of cohort studies*, Department of Nutrition, Havard School of Public Health, Boston, USA.
- 53 See [www.millionwomenstudy.org.uk](http://www.millionwomenstudy.org.uk)
- 54 World Cancer Research Fund press release (2010) *UK as bad as the US for lifestyle-related cancers*, online, available from: [http://www.wcrf-uk.org/audience/media/press\\_release.php?recid=106](http://www.wcrf-uk.org/audience/media/press_release.php?recid=106) [accessed 12/04/10].



- 55 Ferrari et al (1999) *Lifetime and baseline alcohol intake and risk of colon and rectal cancers in the European prospective investigation into cancer and nutrition* (EPIC), *International Journal of Cancer*, vol. 82 (5), p657-664.
- 56 Cancer Research UK, online, available from: <http://info.cancerresearchuk.org/healthyliving/alcohol/> [accessed 05/03/10].
- 57 Corrao, G., Rubbiati, L. and Bagnardi, V. (2000) *Alcohol and coronary heart disease: a meta analysis*, *Addiction*, 95, p1505-1523.
- 58 Dr. Mike Knapton, Associate Medical Director at the British Heart Foundation, online, available from: [www.bhf.org.uk/default.aspx?page=11248](http://www.bhf.org.uk/default.aspx?page=11248) [accessed 05/03/10].
- 59 op. cit. Alcohol Concern (2006).
- 60 *ibid.*
- 61 Brindley, M. (2009) *Wales' alcohol culture leads to more gout in young men*, Wales Online, online, available from: <http://www.walesonline.co.uk/news/health-news/2009/12/31/wales-alcohol-culture-leads-to-more-gout-in-young-men-91466-25498807/> [accessed 23/03/10].
- 62 op. cit. Heather, N., Peters, T. J. and Stockwell, T, (eds) (2001).
- 63 op. cit. Alcohol Concern (2006).
- 64 op. cit. Heather, N., Peters, T. J. and Stockwell, T, (eds) (2001).
- 65 Alzheimer's Society (2009) *Factsheet 438*, online, available from: <http://alzheimers.org.uk/factsheet/438> (Accessed 03/03/10).
- 66 Mental Health Foundation (2008) *Alcohol and mental health*, online, available from: [www.mentalhealth.org.uk/campaigns/alcohol](http://www.mentalhealth.org.uk/campaigns/alcohol) (Accessed 04/03/10).
- 67 Alcohol Concern (2009) *Factsheet: Alcohol and mental health*. Hard copies available from Alcohol Concern Cymru.
- 68 op. cit. World Health Organisation (2004).
- 69 Mental Health Foundation (2006) *Cheers? Understanding the relationship between alcohol and mental health*, online, available from: [www.mentalhealth.org.uk/publications/?EntryId5=38566](http://www.mentalhealth.org.uk/publications/?EntryId5=38566) [accessed 04/03/10].
- 70 op. cit. Alcohol Concern (2006).
- 71 *ibid.*
- 72 Health Protection Agency (2008) *Selected STI diagnoses made at GUM clinics in the UK: 1998-2007*, online, available from: [www.hpa.org.uk/web/HPAwebFile/HPAweb\\_C/1215589014053](http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1215589014053) [accessed 04/03/10].
- 73 op. cit. Alcohol Concern (2006).
- 74 Evidence presented by The Royal College of Midwives to the House of Commons Health Select Committee (2010).
- 75 The NHS Information Centre (2009) *Statistics on alcohol: England, 2009*, The Health and Social Care Information Centre, online, available from: <http://www.ic.nhs.uk/pubs/alcohol09> [accessed 12/04/10].
- 76 op. cit. National Public Health Service (Wales) (2009).
- 77 see *Alcofacts: A guide to sensible drinking*, online available from: <http://wales.gov.uk/hcwswebsite/healthchallenge/publications/alcofacts/?skip=1&lang=en> [accessed 12/04/10].
- 78 Statistics for Wales (2009) *Welsh health survey 2008: Initial headline results*, online, available from: <http://wales.gov.uk/docs/statistics/2009/090521sdr712009en.pdf> [accessed 23/03/10].
- 79 Bates, B., Lennox, A and Swan, G. (eds) *National diet and nutrition survey: Headline results from year 1 of the rolling programme 2008-9*, online, available from: [www.food.gov.uk/multimedia/pdfs/publication/ndnsreport0809year1results.pdf](http://www.food.gov.uk/multimedia/pdfs/publication/ndnsreport0809year1results.pdf) [accessed 23/03/10].
- 80 Information from the British Dietetic Association.



- 81 See [www.drinkwisewales.org.uk](http://www.drinkwisewales.org.uk)
- 82 See NHS Choices website for common alcohol myths <http://www.drinking.nhs.uk/questions/alcohol-myths/> [accessed 12/04/10].
- 83 Figures from Organisation for Economic Co-operation and Development, quoted in Whalen, J. (2010) *U.K. drinking problem gets political*, The Wall Street Journal Online, online, available from: <http://online.wsj.com/article/SB10001424052748704588404575123691166554882.html?mod=e2tw> [accessed 12/04/10].
- 84 Department of Health (2009) *150 years of the annual report of the Chief Medical Officer*, London, Department of Health.
- 85 op. cit. Alcohol Concern (2009).
- 86 Department of Health (2010) *Consultation on options for improving information on the labels of alcoholic drinks to support consumers to make healthier choices in the UK*, online in electronic PDF format only, available from: [www.dh.gov.uk/publications](http://www.dh.gov.uk/publications) [accessed 12/04/10].
- 87 See [www.drinking.nhs.uk/index.html](http://www.drinking.nhs.uk/index.html)
- 88 op. cit. Department of Health (2010), p14.
- 89 Royal College of Nursing press release, online, available from: [www.rcn.org.uk/newsevents/news/article/wales/rcn\\_calls\\_for\\_mandatory\\_code\\_on\\_alcohol\\_labelling](http://www.rcn.org.uk/newsevents/news/article/wales/rcn_calls_for_mandatory_code_on_alcohol_labelling) [accessed 25/03/10].
- 90 op. cit. Department of Health (2010), p15.
- 91 Alcohol Concern (2010) *Counting the cost: Irresponsible promotions in the night-time economy in Wales*, London, Alcohol Concern. Copies available from Alcohol Concern Cymru.
- 92 Guillemont, J. and Leon, C. (2008) *Alcool et grossesse: Connaissances du grand public en 2007 et évolutions en trois ans*, Évolutions, 15, online, available from [www.inpes.sante.fr/](http://www.inpes.sante.fr/) [accessed 12/04/10].
- 93 Borland, R., Yong, H., Wilson, N., Fong, G. T., Hammond, D., Cummings, K. M., Hosking, W. and McNeil, A. (2009) *How reactions to cigarette packet health warnings influence quitting: Findings from the ITC four-Country survey*, *Addiction*, 104 (4), pp669-675.
- 94 Focus Canada (2001) *Evaluation of new warnings on cigarette packets*, Focus Canada, online, available from: [www.cancer.ca/Canada-wide/~media/CCS/Canada per cent20wide/Files per cent20List/English per cent20files per cent20heading/pdf per cent20not per cent20in per cent20publications per cent20section/Evaluation per cent20of per cent20new per cent20warnings per cent20on per cent20cigarette per cent20packages per cent20- per cent20Complete per cent20study\\_41720738.ashx](http://www.cancer.ca/Canada-wide/~media/CCS/Canada_per_cent20wide/Files_per_cent20List/English_per_cent20files_per_cent20heading/pdf_per_cent20not_per_cent20in_per_cent20publications_per_cent20section/Evaluation_per_cent20of_per_cent20new_per_cent20warnings_per_cent20on_per_cent20cigarette_per_cent20packages_per_cent20-_per_cent20Complete_per_cent20study_41720738.ashx) [accessed 26/03/10].
- 95 Hammond, D., Fong, G. T., Borland, R., Cummings, K. M., McNeil, A. and Driezen, P. (2007) *Communicating risk to smokers: The impact of health warnings on cigarette packets*, *American Journal of Preventative Medicine*, 32(3), pp202-209.
- 96 Hammond, D., Fong, G.T., McDonald, P. W., Brown, S. and Cameron, R. (2004) *Graphic Canadian cigarette warning labels and adverse outcomes: Evidence from Canadian smokers*, *American Journal of Public Health*, 94 (8), pp1442-1445.
- 97 op. cit. Department of Health (2010), p13.
- 98 World Health Organisation (2007) *Second report of the expert committee on problems related to alcohol consumption*, WHO, Technical Report Series 944, online, available from: <http://www.ncbi.nlm.nih.gov/pubmed/17970166> [accessed 12/04/10].
- 99 Institute of Alcohol Studies Factsheet, *Affordability of alcohol in the UK*, online, available from: <http://www.ias.org.uk/> [accessed 12/04/10].

# What's the damage?

Negative health consequences  
of alcohol misuse in Wales

Alcohol Concern, 64 Leman Street,  
London, E1 8EU

Tel: 020 7264 0510

Fax: 020 7488 9213

Email: [contact@alcoholconcern.org.uk](mailto:contact@alcoholconcern.org.uk)

Website: [www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk)

Alcohol Concern Cymru, Sophia House,  
28 Cathedral Road, Cardiff, CF11 9LJ

Tel: 029 2066 0248

Fax: 029 2066 0249

Email: [acwales@alcoholconcern.org.uk](mailto:acwales@alcoholconcern.org.uk)

Website: [www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk)



Alcohol Concern  
Making Sense of Alcohol