

Women and alcohol



Changing trends in women's drinking • The effects of alcohol on women •
Why are women drinking more?



In recent decades, **the gender gap between men and women's alcohol consumption has closed**; a 2016 analysis of 68 international studies showed that for those born in the late 1990s, **men were only 1.1 times more likely to drink alcohol than women, 1.2 times more likely to drink in a way that suggested problematic use and 1.3 times more likely to experience alcohol-related harms.**¹

80% of women in England reported drinking in the last twelve months (compared to 87% of men).² In Great Britain, between 2005 and 2014, **the majority of women surveyed drunk alcohol in the previous week; between 52% and 57%.**³ 16% of women in England⁴ drink more than the Chief Medical Officers' weekly low risk guideline amount (no more than 14 units a week).⁵ For women, prevalence of this practice is highest amongst those aged 55 to 64, at 24%.⁶

12% of women in England,⁷ and 13% in Great Britain⁸ drank at a level considered by the CMO guidelines as binge drinking (more than six units in a day) at least once in the week prior to surveying in 2014. 4% of women in Great Britain drank over the weekly guideline units of up to 14 on their heaviest drinking day of the week; this compares to 12% of men.

Women from managerial and professional socio-economic groups – aka 'high fliers' – have been found to drink more on average than female routine and manual workers. It has been found that women in employment are more likely to drink than women who were unemployed or economically inactive.⁹

The rate of alcohol-related hospital admissions made by women to NHS hospitals has **risen by over 30% since 2008/09 to 2014/15.** 2,851 women died of alcohol-related causes in the UK in 2013, a mortality rate of 9.1 per 100,000 population; this increased to 9.6 in 2014.¹⁰ Although the proportion of women referred for alcohol treatment programmes has remained relatively constant since records began in 2008 (34–36%), **the number of referrals of new female clients for treatment has risen from 23,484 in 2008/09, peaking at 28,530 in 2013/14.**

Evidence suggests that **many of alcohol's effects pose a greater risk to women's physical health at lower consumption levels than men,**¹¹ and some alcohol-related physical harms impact exclusively or nearly exclusively on women. These health impacts include:

- **Dependence:** Higher blood ethanol concentrations can affect the risk of dependence at an earlier stage for women¹²
- **Mental health:** Associations have been noted between heavy drinking in women and psychiatric disorders such as depression, posttraumatic stress disorder, suicidality and eating disorders¹³
- **Reproductive problems:** Heavy drinking is known to be a possible cause of infertility, but even small amounts of alcohol can affect a woman's fertility.¹⁴ Alcohol has been found to affect menstrual cycles¹⁵ and fertility treatments may also be affected¹⁶
- **Pregnancy:** The UK Department of Health advises against pregnant women or women trying to conceive drinking alcohol, and warn that “drinking during pregnancy can lead to long-term harm to the baby, with the more you drink, the greater the risk.”¹⁷ Heavy drinking during pregnancy can lead to spontaneous

abortion or a range of disabilities known as foetal alcohol spectrum disorders, of which Foetal Alcohol Syndrome [FAS] is the most severe¹⁸

- **Breast cancer:** Many studies have since identified beyond doubt that alcohol is a major risk factor for breast cancer

Many explanations have been offered for the rise in female drinking, including but not limited to: **Empty Nest Syndrome, 'Ladette' culture, women's changing role in the workplace and changing education levels, lifestyle shifts, and alcohol advertising targeting women.**

As the health and social problems from female alcohol misuse grow, there are increasing calls for alcohol policy to be more targeted towards women's drinking habits.

¹ Slade T, Chapman C, Swift W, Keyes K, Tonks Z, and Teesson M (2016), 'Birth cohort trends in the global epidemiology of alcohol use and alcohol-related harms in men and women: systematic review and meta-regression', *BMJ Open*, 6(10), e011827

² NHS Digital (formerly the Health & Social Care Information Centre) (December 2016), 'Health Survey for England', 2015 [NS]

³ Office for National Statistics (ONS) (March 2016), 'Adult drinking habits in Great Britain: 2014', in *Opinions and Lifestyle Survey*, Table 1

⁴ NHS Digital (December 2016), 'Health Survey for England 2015: Adult alcohol', in *Health Survey for England*, 2015 [NS], Table 3

⁵ Department of Health (January 2016), 'UK Chief Medical Officers' Alcohol Guidelines Review: Summary of the proposed new guidelines'

<https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/489795/summary.pdf>

⁶ NHS Digital (December 2016), 'Health Survey for England 2015: Adult alcohol', in *Health Survey for England*, 2015 [NS], Table 3

⁷ NHS Digital (December 2016), 'Health Survey for England 2015: Adult alcohol', in *Health Survey for England*, 2015 [NS], Table 7

⁸ ONS (March 2016), 'Adult drinking habits', in *Opinions and Lifestyle Survey*, Table 2a

⁹ ONS (March 2016), 'Adult drinking habits in Great Britain: 2014', in *Opinions and Lifestyle Survey*, Table 4

¹⁰ ONS, (February 2016), 'Alcohol Related Deaths in the United Kingdom: Registered in 2014'

¹¹ Edwards G et al (1994), 'Alcohol Policy and the Public Good', Oxford University Press: USA

¹² National Institute on Alcohol Abuse and Alcoholism, (June 2002), 'Alcohol consumption and problems in the general population: Findings from the 1992 National Longitudinal Alcohol Epidemiologic Survey'

¹³ Wilsnack SC, Wilsnack RW, and Kantor LW (2014), 'Focus on: women and the costs of alcohol use. Alcohol research: current reviews', 35(2), p. 219

¹⁴ Jensen TK et al (August 1998), 'Does moderate alcohol consumption affect fertility?', *BMJ*, vol 317, pp. 505–510

¹⁵ Aluko EO, Olubobokun TH, Adekunbi DA, and Udo NV (2014), 'Sexual Functions, Sexual Organs and Sex Hormone Level in Chronic Alcohol Intake', *British Journal of Medicine and Medical Research*, 4(6), p. 1,279

¹⁶ Gormack AA, Peek JC, Derraik JG, Gluckman PD, Young NL, and Cutfield WS (2015), 'Many women undergoing fertility treatment make poor lifestyle choices that may affect treatment outcome.', *Human reproduction*, 30(7), pp. 1,617–1,624

¹⁷ Department of Health (2016), 'UK Chief Medical Officers' Alcohol Guidelines Review: Summary of the proposed new guidelines' <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/489795/summary.pdf>

¹⁸ World Health Organisation (WHO) (2011), 'Fetal alcohol syndrome: dashed hopes, damaged lives', *Bulletin of the World Health Organization* 2011, 89: pp. 398–399

<http://www.who.int/bulletin/volumes/89/6/11-020611/en/index.html#_blank>



Changing trends in women's drinking

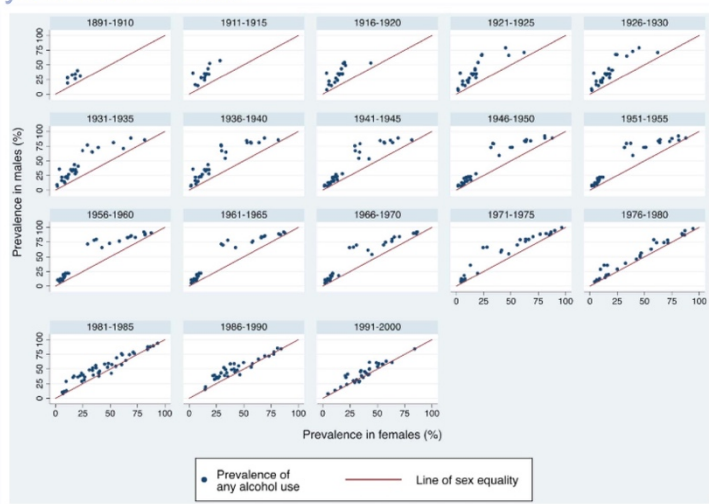
How many women drink?

Data from the 2014 Health Survey for England shows 80% of women in England reported drinking in the last twelve months (compared to 87% of men).¹

While alcohol use and related harm have historically been more prevalent in men than women, this gender gap has now closed. A 2016 analysis of 68 international studies, with a combined sample size of over 4 million people, found that the male-to-female ratios of alcohol use and related harm have shrunk dramatically across birth cohorts from 1891 to 2001. For those born in the early 1900s, men were 2.2 times more likely than women to drink alcohol, 3 times more likely to drink in a way that suggested problematic use, and 3.6 times more likely to experience alcohol-related harms. However, for those born in the late 1990s, men were only 1.1 times more likely to drink alcohol than women, 1.2 times more likely to drink in a way that suggested problematic use and 1.3 times more likely to experience alcohol-related harms.²

Overall, the male-to-female ratio of alcohol use decreased by 4.2% with each successive 5-year birth cohort; however, for birth cohorts from 1966 to 2000 the rate of change was much steeper, decreasing by 10.1% for each cohort.³

Figure 1: Prevalence of any alcohol use (%) in females (x-axis) and males (y-axis) by 5-year birth cohorti



Source: Slade T, Chapman C, Swift W, Keyes K, Tonks Z, and Teesson M, (2016), 'Birth cohort trends in the global epidemiology of alcohol use and alcohol-related harms in men and women: systematic review and metaregression.', *BMJ open*, 6(10), e011827
ⁱ Each dot represents a single prevalence estimate.

Similar findings relating to hazardous alcohol consumption have also been identified amongst Irish university undergraduates; 67.3% of women surveyed reported hazardous alcohol consumption, compared to 65.2% of men.⁴

How much and how often are they drinking?

The 2014 Opinions and Lifestyle Survey [OLS] depicts a recent history of women's drinking patterns and trends in Great Britain; between 2005 and 2014, the majority of women surveyed drank alcohol in the last week; between 52% and 57%.⁵ **(for a more in-depth analysis of drinking habits, please view our Consumption factsheets)**. The proportion of women consuming alcohol regularly has recently dipped from historically high levels. Between 1998 and 2010, at least 10% of women claimed to have had a drink on at least 5 days in the week prior to interview,⁶ with this figure shifting to 8–9% from 2011 to 2014.⁷ The proportion of women who are teetotal has remained relatively stable from 2005 to 2014, at between 23–26%.⁸

Data from the Health Survey for England shows that 16% of women in England⁹ drink more than the Chief Medical Officers' [CMO] weekly low risk guideline amount (no more than 14 units a week).¹⁰ For women, prevalence of this practice is highest amongst those aged 55 to 64, at 24%.¹¹

Public Health England reports that 12% of women in England,¹² and 13% in Great Britain¹³ drank at a level considered by the CMO guidelines as binge drinking (more than six units in a day) at least once in the week prior to surveying in 2014.

Figure 2: Proportion of women aged 16 and over who drank the stated amounts of alcohol on their heaviest drinking day in the week before interview, by sex and age, Great Britain, 2005-2014^{1 2}



	Exceeded 4/3 units on heaviest drinking day in the last week ^{3 7}	Exceeded 8/6 units on heaviest drinking day in the last week ^{3 7}	Exceeded 12/9 units on heaviest drinking day in the last week ^{3 7}
2005 ^{4 5}	33	15	9
2006 ^{5 6}	33	15	9
2007 ⁶	34	15	10
2008 ⁶	32	14	9
2009 ⁶	29	13	7
2010 ⁶	28	13	7
2011 ⁶	28	12	6
2012	26	11	6
2013	26	12	6
2014	28	13	6

Source: Office for National Statistics [ONS], (March 2016), 'Adult drinking habits' in Opinions and Lifestyle Survey, Table 2a

1 Estimates in Table 2a will differ from the estimates in Table 2b. This is because Table 2a uses the entire population as the base, whereas Table 2b uses those who drank alcohol in the last week as the base.

2 Where a person drank equally heavily on two or more days, the heaviest day relates to the most recent of these days.

3 The stated number of units differs for men and women. For example 4/3 units means 4 units for men, and 3 units for women.

4 Estimates prior to 2006 cover a fiscal year rather than a calendar year.

5 Estimates for 2005 and 2006 both include the period 1 January 2006 to 31 March 2006 as a result of a change in survey year from a fiscal year to a calendar year.

6 Estimates for 2006 to 2011 include longitudinal data.

7 The Government's Alcohol Strategy defines binge drinkers as men who report exceeding eight units of alcohol on their heaviest drinking day in the week before interview, and women who report exceeding six units.

As shown in figure 3, in 2014, 4% of women in Great Britain drank over the weekly guideline units of up to 14 on their heaviest drinking day of the week; this compares to 12% of men.

Figure 3: Proportion of drinkers who drink within / above unit guidelines on their heaviest drinking day of the week, by sex and age, Great Britain



Source: Office for National Statistics, Opinions & Lifestyle Survey, *Drinking Habits Among Adults*

What do women drink?

The most popular type of drink for women is wine; according to Office for National Statistics (ONS) figures, in 2014, 70% of women ‘binge drinkers’* who reported drinking alcohol in the last week consumed wine on their heaviest drinking day, compared to 33% who consumed spirits or liqueurs and 22% who drunk normal strength beer, stout, lager or cider.¹⁴ For women non-binge drinkers** who reported drinking in the last week, 61% reported consuming wine on their heaviest drinking day last week. These findings align with reporting from the Financial Times, which states that around 7 of every 10 bottles of wine purchased in British supermarkets are bought by women.¹⁵

Professional women and alcohol

When defined by occupation type, General Lifestyle Survey (GLS) data highlight the discrepancy in drinking frequency between white and blue collar female workers. In 2011, female managerial and professional workers were found to be more likely than female routine and manual workers to have drunk in the last week, and to have drunk on five days or more in the last week (see figure 4). 34% of female managerial and professional workers reported consuming alcohol to hazardous levels at least once in the last week compared to 28% of UK women on average. In contrast, a lower-than-average proportion of routine and manual female employees consumed alcohol to hazardous levels at least once in the last week (22%).

* Binge drinkers; exceeded 8/6 units on heaviest drinking day (In line with the Government’s Alcohol Strategy, men are considered to have binged if they drank more than eight units of alcohol on their heaviest drinking day in the week before interview, and women if they drank more than six units. The stated number of units differs for men and women. For example, 8/6 units means 8 units for men, and 6 units for women. If someone drank equally heavily on more than one day, they were asked about the most recent of these days).

** Other drinkers; did not exceed 8/6 units on heaviest drinking day.

Figure 4: Proportion of women who drink in the last week, by job occupation, Great Britain, 2011



Women who...	Managerial and professional	Routine and manual	All UK women average
drank in last week	64%	43%	54%
drank on 5 or more days in last week	12%	6%	10%
drank more than 3 units on at least one day in last week	34%	22%	28%
drank more than 6 units on at least one day in last week	14%	9%	12%
average weekly consumption (units) [2010 figures]	9.2	6.2	7.6

Source: Office for National Statistics [ONS], 'General Lifestyle Survey'

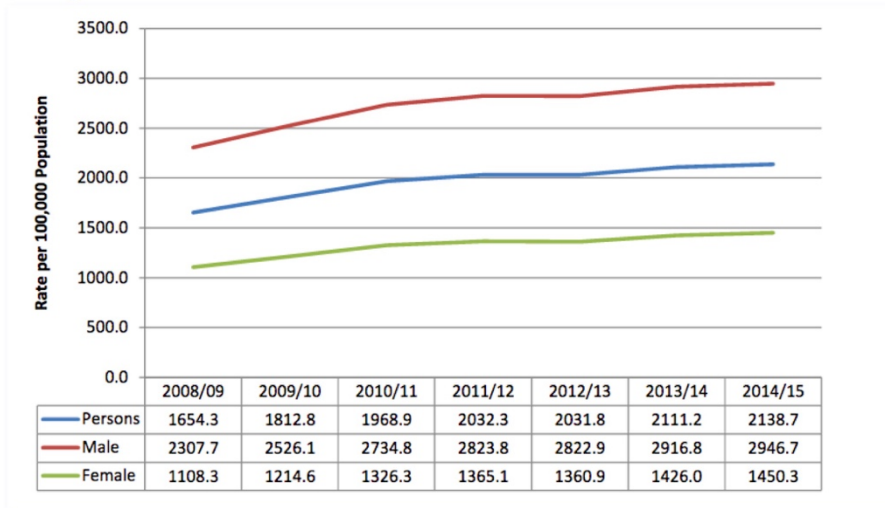
It is important to note that, as is observed in GLS reports, the estimated consumption data may be lower than the actual amount drunk, as people are likely to 'consciously or unconsciously underestimate how much alcohol they consume'.¹⁶

The OLS in 2014 found that a higher proportion of economically inactive and unemployed women were teetotal than those in employment (34% and 37% respectively vs 16%). Conversely, it found a higher proportion of women in employment drank in the week prior to the survey than women who were unemployed or economically inactive (60% vs 39% and 44% respectively).¹⁷

Female alcohol-related hospital admissions

The rate of alcohol-related admissions for women to NHS hospitals in England has continually risen over the last decade (figure 5).

Figure 5: Rate of alcohol-related hospital admission (Broad definition) by gender, England



Source: Public Health England, (May 2016), 'Local Alcohol Profiles for England: May 2016'

The rate of alcohol-related hospital admissions made by women to NHS hospitals has risen by over 30% since 2008/09 to 2014/15 (see figure 6).

The impact of alcohol on women in recent years is also reflected in the significant take up of new clients on treatment programmes year on year. Although the proportion of women referred for alcohol treatment programmes has remained relatively constant since records began in 2008 (34–36%), the number of referrals of new female clients for treatment has risen from 23,484 in 2008/09, peaking at 28,530 in 2013/14 (figure 6). In 2016, there were 40,557 women in total in treatment programmes addressing alcohol.¹⁸

Figure 6: Number of 'new treatment journeys', by sex, 2008/09 – 2013/14

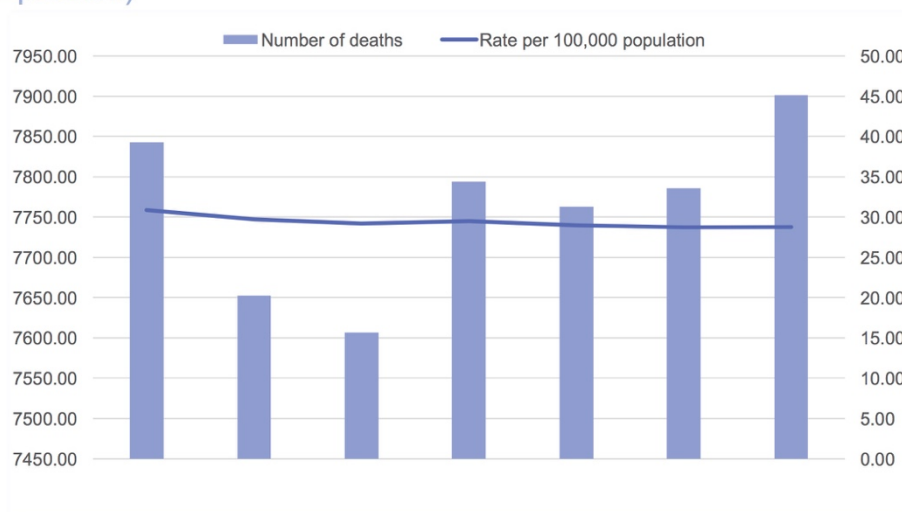


	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Men	44428	47852	48263	48006	49466	52399
Women	23484	24789	25442	26347	26307	28530

Source: National Treatment Agency for Substance Misuse, (November 2014), 'Alcohol Statistics from the National Drug Treatment Monitoring System (NDTMS), 1 April 2013 – 31 March 2014'

As well as this, the alcohol-related death rate for women has remained relatively static since 2008. As figure 7 demonstrates, 7,900 women died of alcohol-related causes in the UK in 2014, a mortality rate of 28.7 per 100,000 population.

Figure 7: Alcohol-related deaths and death rates in the UK, time series (1994–present)



Source: Public Health England, (July 2016), 'Local Alcohol Profiles for England'

A newspaper article published in February 2013 reported that statistics from a Freedom of Information Act request indicated a rise in the number of career women dying of alcohol-related causes in England and Wales over a similar period. It noted the following figures for women in various professions:¹⁹

1. For women in high-flying roles such as chief executives, doctors and lawyers, the number of deaths caused by drinking has risen by 23%. And at lower management level, those losing their lives to liver disease and other conditions caused by alcohol rose from 247 to 290 – a 17% hike
2. For women in 'higher professional' occupations, deaths rose from 42 to 52
3. In 'intermediate occupations', such as secretarial or other skilled office work, it rose from 142 to 209 – 47%
4. For 'semi routine' jobs such as shop assistants and hair dressers, it has risen 47 per cent, from 202 to 306

According to the newspaper, the rise in alcohol-related deaths among career women between 2001 and 2011 was significant because the figure was 'rising faster than among men'. The notable exception to the general increase came from the number of alcohol-related deaths for women in low-skilled and technical jobs (it has remained the same since 2001, the article says).

¹ NHS Digital (December 2016), 'Health Survey for England, 2015 [NS]'

² Slade T, Chapman C, Swift W, Keyes K, Tonks Z, and Teesson M (2016), 'Birth cohort trends in the global epidemiology of alcohol use and alcohol-related harms in men and women: systematic review and meta-regression', *BMJ Open*, 6(10), e011827

³ Ibid

⁴ Davoren MP, Shiely F, Byrne M, and Perry IJ (2015), 'Hazardous alcohol consumption among university students in Ireland: a cross-sectional study', *BMJ Open*, 5(1), e006045

⁵ Office for National Statistics (ONS) (March 2016), 'Adult drinking habits in Great Britain: 2014', in *Opinions and Lifestyle Survey*, Table 1

⁶ ONS (March 2010), 'General Lifestyle Survey, 2008', Table 2.3

⁷ ONS (March 2016), 'Adult drinking habits in Great Britain: 2014', in *Opinions and Lifestyle Survey*, Table 1

⁸ ONS (March 2016), 'Adult drinking habits in Great Britain: 2014', in *Opinions and Lifestyle Survey*, Table 3

⁹ NHS Digital (December 2016), 'Health Survey for England 2015: Adult alcohol', in *Health Survey for England 2015 [NS]*, Table 3

¹⁰ Department of Health (January 2016), 'UK Chief Medical Officers' Alcohol Guidelines Review: Summary of the proposed new guidelines',

<https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/489795/summary.pdf>

¹¹ NHS Digital (December 2016), 'Health Survey for England 2015: Adult alcohol', in *Health Survey for England 2015 [NS]*, Table 3

¹² NHS Digital (December 2016), 'Health Survey for England 2015: Adult alcohol', in *Health Survey for England 2015 [NS]*, Table 7

¹³ ONS (March 2016), 'Adult drinking habits', in *Opinions and Lifestyle Survey*, Table 2a

¹⁴ ONS (March 2016), 'Adult drinking habits in Great Britain: 2014', in *Opinions and Lifestyle Survey*

¹⁵ The Financial Times (2014), 'The other glass ceiling: women winemakers', <<http://on.ft.com/2mWWCXe>>

¹⁶ Dunstan S, 'Chapter 2: Drinking', in *General Lifestyle Survey Overview: A report on the 2010 General Lifestyle Survey*, ONS, p. 16

¹⁷ ONS (March 2016), 'Adult drinking habits in Great Britain: 2014', in *Opinions and Lifestyle Survey*, Table 4

¹⁸ National Treatment Agency for Substance Misuse (November 2016), 'Alcohol Statistics from the National Drug Treatment Monitoring System (NDTMS), 1 April 2015 – 31 March 2016'

¹⁹ Daily Mail (January 2013), 'Soaring number of career women 'killed by alcohol' and figure is rising faster than men', <<http://dailymail.com/2me40zs>>



The effects of alcohol on women

The adverse effects of alcohol are common to both sexes. However, evidence suggests that many of these effects pose a greater risk to women's physical health at lower consumption levels than men.¹ The Royal Medical Colleges reported that studies conducted into alcohol-related harm in women were consistent in suggesting that the consumption level at which relative risk of mortality starts to rise is around 16 grammes of alcohol per day, or approximately 2 units. A woman will attain consistently higher blood ethanol concentrations than men following a standard oral dose of ethanol, regardless of body weight. This occurs primarily because their body water, and hence the compartment in which the ethanol distributes, is significantly smaller than in men.²

Research has suggested rates of alcohol-related deaths may vary independently for men and women: researchers found greater increases in alcohol-related mortality amongst women born between 1970 and 1979 in Glasgow, Manchester and Liverpool from 1980 to 2011.³ It has also been found that women who drink excessively develop more medical problems than men.⁴

Some alcohol-related physical harms impact exclusively or nearly exclusively on women. Notable examples include disorders directly caused by the disruption of the reproductive system by alcohol, and breast cancer **(for more information on the physical impacts of alcohol on women, please read our Health impacts factsheet)**.

Dependence

Higher blood ethanol concentrations can affect the risk of dependence at an earlier stage for women. Dependence jumps dramatically for men who exceed 7/8 drinks per occasion, but it can affect women sooner, i.e. those who drink 5/6 drinks per occasion (binge drinking levels).⁵ Heavy steady chronic drinking at sufficiently high levels can also lead to the physiological changes that result in alcohol dependence – including liver disease such as cirrhosis and hepatitis – after a comparatively shorter period of heavy consumption than men.

Mental health

Associations have been noted between heavy drinking in women and psychiatric disorders such as depression, posttraumatic stress disorder, suicidality and eating disorders.⁶

Reproductive problems

In the first instance, heavy drinking is already known to be a possible cause of infertility, but a Danish study found that even small amounts of alcohol can affect a woman's fertility.⁷ Furthermore, some women find that they are more affected by alcohol while ovulating or when they are premenstrual. This is because it takes alcohol longer to be metabolised, leading to a higher blood alcohol concentration. Alcohol has been found to affect menstrual cycles, which may lead to amenorrhoea (absence of a menstrual period) and anovulation (a menstrual cycle without ovulation).⁸ There is also evidence to suggest that women using oral contraceptives absorb and metabolise alcohol more slowly and evenly than those who do not use them.⁹ Fertility treatments may also be affected; it was found that women who

reduce their drinking or do not drink at all during fertility treatments were twice as likely to conceive as those who did not alter their drinking patterns before treatment.¹⁰

Women, pregnancy and postnatal care

The UK Department of Health advises against pregnant women or women trying to conceive drinking alcohol, and warn that “drinking during pregnancy can lead to long-term harm to the baby, with the more you drink, the greater the risk.”¹¹ The Scottish Chief Medical Officer also advises against pregnant women drinking alcohol during pregnancy, as “there is no 'safe' time for drinking alcohol during pregnancy and there is no 'safe' amount”. In 2009, Australian child health researchers came out in support of new official national guidelines advising against alcohol in pregnancy and urged community support to help women avoid alcohol when in pregnancy.¹²

In 2012, UK media outlets wrongly reported that it was safe to binge drink during pregnancy with no harm to the unborn child's development, on the basis of a study of 1,268 women recruited from the Danish National Birth cohort between 1997 and 2003.¹³ The researchers found no significant association between low-to-moderate average weekly alcohol consumption and any binge drinking during early-to-mid pregnancy and the neurodevelopment of children at 5 years old. However, they did not say that alcohol consumption or binge drinking in pregnancy were “safe” for women or their unborn children.¹⁴ For heavy and dependent female drinkers, the health risks of alcohol consumption to foetal development are well documented and recognised by the World Health Organisation (WHO), the global body on health issues.

While evidence on the effect of alcohol consumption while breastfeeding on infants is mixed and limited,^{15,16,17,18} NHS guidance on alcohol consumption during breastfeeding recommends that breastfeeding mothers have no more than one or two units of alcohol once or twice a week. They also highlight that parents should not share a bed or sofa with their babies if they have drunk any alcohol, as this has a strong association with sudden infant death syndrome (SIDS).¹⁹

Foetal Alcohol Syndrome

Heavy drinking during pregnancy can lead to spontaneous abortion or a range of disabilities known as foetal alcohol spectrum disorders, of which Foetal Alcohol Syndrome (FAS) is the most severe.²⁰

By crossing the placental barrier, alcohol can affect a foetus by stunting its growth or weight, creating distinctive facial stigmata, and damaging the structure of the central nervous system in development. This can result in physical symptoms such as an abnormally small head, defective development of mid facial tissues, minor outer ear abnormalities, abnormally small eyes, and heart and genital defects. Those with Foetal Alcohol Spectrum Disorders have also been found to experience high rates of mental health problems, schooling disruption and trouble with the law²¹ and are at high risk for sleep problems.²²

Research conducted by the Canadian Centre on Substance Abuse has found that while it is clear that children who meet the criteria for FAS are only born to those mothers who consume alcohol during pregnancy, it is also evident that these mothers are subject to other adverse conditions which are major factors in many cases, including poverty, poor nutrition, illicit drug use, smoking, violence and a history of obstetric problems.²³

Alcohol use in later life

Later life poses unique issues surrounding alcohol for women. Older women have less lean muscle mass and continue to lose this with age, which makes them more susceptible to effects of alcohol. Similarly, the liver enzymes which process alcohol and medication lose effectiveness with age, and the central nervous system becomes more sensitive; this poses a greater problem for older women who drink, as older women tend to take more medication. It has also been found that older women are less likely than older men to seek specialised addiction treatment.²⁴ One such article also reviewed research indicating potential beneficial effects of moderate alcohol use on conditions such as coronary heart disease. However, concerns have been raised with the design of such studies used to investigate this, including misclassification of drinking level of participants, sampling errors, and influence of confounding factors acting on participants such as access to health care services, education level and income. A recent meta-analysis exploring these concerns found no evidence of alcohol's protective effects against death or morbidity from coronary heart disease.²⁵

This is in line with the new guidelines from the UK Chief Medical Officers', which highlight that recent evidence suggests "net benefits from small amounts of alcohol are less than previously thought and are significant in only a limited part of the population". They note this benefit only applies to women over 55 years, "for whom the maximum benefit is gained when drinking around 5 units a week, with some beneficial effect up to around 14 units a week".²⁶

Breast Cancer

Studies began to indicate a correlation between alcohol use and breast cancer in the mid 1990s. An article in the New England Journal of Medicine suggested that the balance of risks and benefits for women was complicated by a light-to-moderate alcohol intake.²⁷

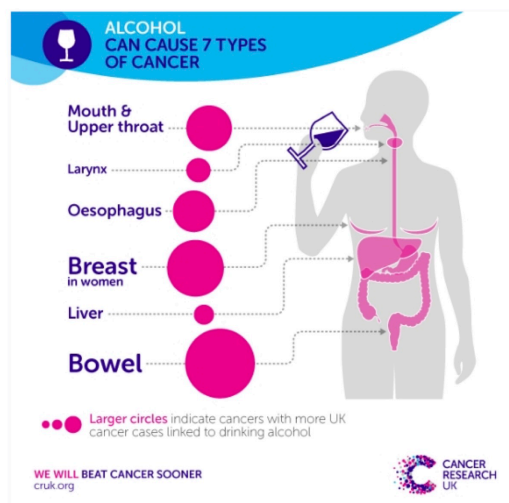
Many studies have since identified beyond doubt that alcohol is a major risk factor for breast cancer. In 2004, the WHO published a comprehensive review of the evidence-based literature which stated that:

... not only hazardous or harmful drinking but also even moderate alcohol consumption can cause female breast cancer (Single et al. 1999a). A meta-analysis by Smith-Warner et al. (1998) found a clear linear relationship over the whole continuum of consumption... Recent studies have focused on plausible biological mechanisms, including alcohol's effect on hormones and tissue, its contribution to the initiation, progression and promotion of breast cancer, and its interaction with nutritional factors (for an overview see Singletary and Gapstur 2001; Soler et al. 1998; U.S. Department of Health and Human Services 2000).²⁸

Although the causality of the relationship is open to debate – there are several theories that attempt to explain how alcohol causes cancer – there is some knowledge of the ways in which alcohol triggers changes in women's bodies that could potentially lead to cancer. Alcohol is converted in the body to acetaldehyde, a toxic chemical which can cause cancer by damaging DNA and preventing repairs to this damage. Alcohol can also affect levels of oestrogen, and unusually high levels of this hormone increase the risk of breast cancer. Alcohol may also cause cancers by causing damage to DNA in our cells through the production of Reactive Oxygen Species here.²⁹ Therefore, standard medical advice

commonly dictates that in order to limit the likelihood of getting breast cancer, women ought to avoid or limit the consumption of alcohol.³⁰

Figure 8: Which cancers are affected? Cancer Research UK



Source: Cancer Research UK, (September 2016), 'Which cancers are affected?'

In recent years, researchers have identified a relationship between moderate alcohol intake and cancer incidence in women.

A 2009 evaluation of data produced by the Million Women Study between 1996 and 2001 estimated that:^{***}

... the excess cancer incidence up to age 75 for women in developed countries for every additional 10 g of alcohol (i.e. for every additional drink) regularly consumed per day was typically of the order of 11 per 1,000 for breast cancer...³¹

This means that the risk of breast cancer rises by 11 cases per 1,000 for every alcoholic drink consumed daily. This finding was consistent even at low consumption levels; for instance, a group of 1,000 women who have just 1 drink a day will have 11 more cases of breast cancer compared to non-drinkers. It was also estimated that about 11% of all breast cancer in women in the United Kingdom, that is, 5,000 (cases) annually, is attributable to alcohol.³² Along with this, a 2012 meta-analysis found a significant increase in the risk of breast cancer of around 4% for intakes of up to one alcoholic drink per day, while heavy consumption (three or more drinks per day) was associated with an increased risk of 40-50%.³³

In 2016, the UK Chief Medical Officers (CMO) published updated Low Risk Drinking Guidelines, based on an analysis from an expert group of the available evidence on alcohol's

^{***} The Million Women Study was a national study of women's health, involving more than one million UK women aged 50 and over, who were invited to participate between 1996 and 2001. It was the largest study of its kind in the world. For more information, visit <www.millionwomenstudy.org>.

health effects. The CMO note that evidence produced since the previous drinking guidelines were published in 1995 suggests that drinking alcohol increases women's breast cancer risk, that this risk starts from any level of alcohol consumption, and that this risk rises with alcohol consumption. The official guidelines now state: "The risk of developing a range of health problems (including cancers of the mouth, throat and breast) increases the more you drink on a regular basis."³⁴

Domestic violence

The World Health Organisation (WHO) states that alcohol consumption, especially at harmful and hazardous levels is a major contributor to the occurrence of intimate partner violence and links between the two are manifold.³⁵ In the UK, it has been estimated that 89% of victims of ongoing domestic or sexual abuse are female.³⁶

The 2015 Crime Survey for England and Wales reported that 27.1% of women had experienced domestic abuse since the age of 16.³⁷ 18% of female victims of partner abuse stated that they believed the offender was under the influence of alcohol at the time of the most recent incident.³⁸ Victims may use alcohol as a coping mechanism and, in some cases, this may be used by violent partners as an excuse for continued abuse.³⁹ **(For more information on domestic violence and alcohol, please read our Crime and Social Impacts factsheet).**

Sexual assault

Alcohol is a major factor in sexual assaults. The 2013/14 Violent Crime and Sexual Offences statistics for England & Wales found that 35% of female victims surveyed believed their assailant to be under the influence of alcohol during a serious sexual assault, and a third of the victims themselves had also been under the influence of alcohol (29%).⁴⁰

In a report on alcohol and sexual health, the Royal College Physicians said:

Use of alcohol by both victim and perpetrator is commonly implicated in sexual assault, although the state of intoxication of the victim is more significant. The proportion of reported rapes in which alcohol use is reported or can be detected biochemically in the alleged victim varies from 35 to 46%... Intake of alcohol by an individual increases the risk of both stranger rape and date rape occurring... Alcohol consumption alters risk perceptions as well as lowering inhibitions. At the same time, perpetrators may actually seek out intoxicated women.⁴¹

(For more information on sexual assault and alcohol, please read our Crime and social impacts factsheet).

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Why are women drinking more?

Alcohol misuse among women in modern life has been a major public health and social issue in recent decades.

A 1981 government report on women and drinking observed that:

'... in 1971, for every admission of a woman to a mental illness hospital for alcohol-induced illness, there were three admissions for men, but by 1981, the ratio was one female admission to two male admissions'... In the early 70s, for each woman convicted of drunkenness there were 14 or 15 men: by 1981 the ratio was one woman to twelve men. The ratios fell most notably among women under 29'.¹

At that time, it was noted that while nearly all women (92%) drank sometimes, 'just over 70% of women drank less than 5 units a week... (fewer) than 1% had over 35 units', which is commonly regarded as a hazardous level of consumption by today's standards.²

Subsequent governments focused their attentions on encouraging sensible drinking among the population. But the rise of alcohol misuse among women gathered apace, mainly attributed to cultural and socioeconomic changes, the increased availability of alcohol in the off-trade, and advertising campaigns run by the alcohol industry targeting women whose lifestyles were influenced by such factors.

As a result, survey data showed that in 2010, a greater proportion of women (3%) now consume alcohol to the same hazardous levels than was the case in the 1970s and 80s.³

Empty Nest Syndrome

In the 1970s and 80s, public anxiety appeared to focus on alcohol's relationship with the psychological condition 'empty nest syndrome'. The idea was that the rise in women drinking to excess was driven by feelings of sadness and loss affecting parents, especially mothers, when their children leave home.

This implied that the most serious female alcohol problems were located among the middle aged and middle classes. However, over time, fears began to surface over a younger cohort of female drinkers – from both the middle and working classes – who were increasingly appearing to adopt the mainly male habits of drinking and drunkenness, leading to increasing counts of aggressive and anti-social behaviour.

Ladette culture

A 2003 newspaper article based on a study by Datamonitor revealed that the binge drinking culture was 'on the rise' among young women. The number of litres per capita of alcohol consumed by 18 to 24-year-old females rose by 31 litres from 172l in 1999 to 203l in 2003, nearly twice the UK average for women at the time (108l).⁴

This growing trend was exacerbated by legislation from the 2003 Licensing Act, which granted businesses 24-hour licences to sell alcohol. The emergence of young women who regularly binge drank to levels comparable with their male counterparts became so ingrained

in the British public's consciousness that the term 'ladette' was invented to describe those young women who “behave in a boisterously assertive or crude manner and engage in heavy drinking sessions”.⁵

In line with this, a recent study of UK print and online news coverage found that young women's 'binge' drinking is covered more frequently than the same behaviour in men. The study also found that such articles tended to characterise women as “out of control, putting themselves in danger, harming their physical appearance and burdening men,” while more moralistic descriptions were used about women's appearances⁶. It is possible such a focus on young women's public drinking may cause women of other age groups to assume their drinking is unproblematic.

Women in the workplace

The culture of drinking to excess also made its way into the workplace, where marked changes in attitudes and behaviour towards alcohol saw women in various professions taking advantage of the increased number of opportunities to drink than open to previous generations. The ubiquity of drinking in some workplaces and professional settings has been noted.⁷ Furthermore, with the number of women in work at historically high levels, and the gender pay gap narrowing over recent decades, the notion of women sharing a drink with colleagues after work has become more socially acceptable.⁸

It is for reasons such as these that the workplace has had an important influence on female drinking habits; GLS statistics show that in 2011, women in managerial and professional positions in particular not only consumed more units of alcohol than the average female, but also drank more frequently during the week (see figure 9).

The OLS in 2014 noted a higher proportion of women in employment drank in the week prior to the survey than women who were unemployed or economically inactive (60% vs 39% and 44% respectively).⁹

Figure 9: Drank in the last week, by sex, and socio-economic classification based on the current or last job of the household reference person, 2011



Socio-economic classification of household reference person	Women	
	Percentage who drank last week	
Managerial and professional		
Large employer and higher managerial	70	64
Higher professional	69	
Lower managerial and professional	60	
Intermediate		
Intermediate	52	54
Small employers/own account workers	57	
Routine and manual		
Lower supervisory and technical	49	43
Semi-routine	43	
Routine	41	
Total²		54
	Percentage who drank on 5 or more days last week	
Managerial and professional		
Large employer and higher managerial	13	12
Higher professional	14	
Lower managerial and professional	11	
Intermediate		
Intermediate	8	11
Small employers/own account workers	13	
Routine and manual		
Lower supervisory and technical	8	6
Semi-routine	7	
Routine	5	
Total²		10

Source: ONS (March 2013) 'Drinking Tables', Table 2.6

1 Results include longitudinal data (see Appendix B - Sample design and Response).
 2 Full-time students, members of the Armed Forces, the long term unemployed and those who have never worked are not shown as separate categories but are included in the totals.

Women and education

The link between status and consumption appears to go further than the drinking habits of female high-fliers. There is evidence to suggest an association between education and consumption levels. A 2010 study based on the drinking habits of individuals born in 1970 found that the more educated women are, the more likely they are to drink alcohol on most days and to report having problems due to their drinking patterns. The relationship is stronger for females than males.¹⁰

The authors offer a set of explanations for the positive association between education and drinking behaviours:¹¹

- a more intensive social life that encourages alcohol intake;
- a greater engagement into traditionally male spheres of life, a greater social acceptability of alcohol use and abuse;
- more exposure to alcohol use during formative years;
- greater postponement of childbearing and its responsibilities among the better educated, and smaller underreporting

Lifestyles

A 2015 study found that female drinkers in early midlife may use alcohol as a route to assert their identity away from traditionally female responsibilities such as caring for others, and to “return temporarily to a younger, carefree version of themselves”.¹²

Women and alcohol advertising

The proliferation of the drinks market with alcoholic beverages designed and advertised specifically towards women has also contributed to increased consumption levels over the years. A 2008 report by the European Centre for Monitoring Alcohol Marketing [EUCAM] noted the changes in the drinks industry, observing that executives of several companies saw the increasing affluence of women as an opportunity to develop a marketing strategy aimed at attracting more women to spend their disposable income on alcoholic beverages.¹³

Typically “female” drinks are produced to taste sweeter and have a lower alcohol content (Alcohol By Volume) than male ones; examples include fruit beers, wines, and liqueurs. Features of the product are highlighted that may be expected to appeal to a female audience, such as being “bloat resistant”.¹⁴ Female role models – often celebrities – and attractive males are hired to advertise them, portraying the products as fashionable, glamorous and desirable for independent and fun-loving women. Some products are supported by partnerships with other female-focused brands such as hair care brands¹⁵, and in some cases, alcoholic drinks are advertised alongside items such as handbags, make-up, and heeled shoes, in an attempt to associate the brand more closely with the lifestyle of an aspiring young female **(for more information on advertising of alcohol products, please read our Marketing factsheet)**.¹⁶

What can be done to help protect women from alcohol harm?

Women are drinking more alcohol than ever before, and the long-term upward trend shows little sign of abating. It has also been observed that gender may also impact alcohol addiction treatment experiences.^{17, 18} The negative health and social consequences have drawn the attention of the medical profession, the criminal and justice system, and politicians in recent years. Non Governmental Organisations working in the field of alcohol policy have stressed the importance of all parties working together to develop a coherent strategy to combat harmful drinking among women. Alcohol Concern in particular advocate the following measures:¹⁹

- A high profile health promotion campaign that both informs women about guidelines for sensible drinking and focuses on the benefits of moderation
- Media campaigns designed to reduce the stigma surrounding women's drinking
- Evidence based data on women’s drinking habits particularly in relation to risk taking behaviour
- Prevention and screening programmes to intervene before the onset of severe alcohol problems
- Women focused alcohol services

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