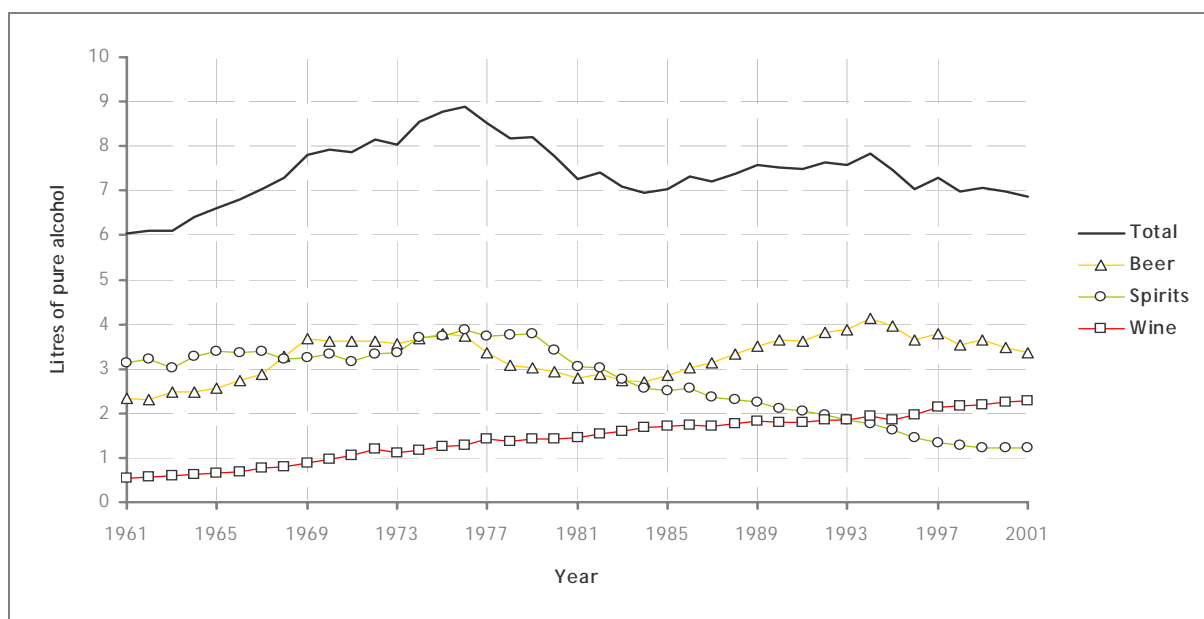


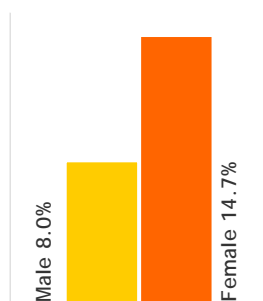
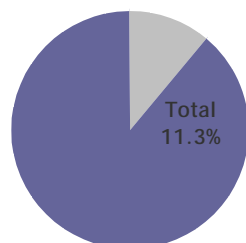
## SWEDEN

### Recorded adult per capita consumption (age 15+)



Sources: FAO (Food and Agriculture Organization of the United Nations), World Drink Trends 2003

### Last year abstainers



Data from the WHO GENACIS Study (2002 survey; total sample size  $n = 4223$ , males  $n = 2085$  and females  $n = 2138$ ; age range 20 to 64 years).<sup>1</sup>

A 2000 national survey of about 1000 respondents, aged 18 to 64 years conducted by the European Comparative Alcohol Study (ECAS) project found the rate of abstainers to be 7% among males and 13% among females (based on the most frequently consumed beverage for each respondent).<sup>2</sup>

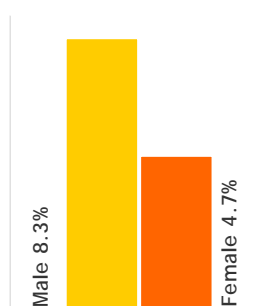
A 1996–1997 national survey of subjects aged between 16 and 84 years old (males  $n = 5570$  and females  $n = 5896$ ) found the rate of last year abstainers to be 15% (total), 10.9% (males) and 18.8% (females).<sup>3</sup>

A 2000 study of 6623 women aged 50–59 living in the Lund area of southern Sweden found that 26% of the women were non-drinkers (do not consume any alcohol in an ordinary week), 57.4% were low drinkers (consumption of not more than 83 g of alcohol in an ordinary week i.e. less than 7 drinks), 12.5% were moderate drinkers (weekly consumption of 84–167 g of alcohol i.e. at least 7 but less than 14 drinks) and 4.2% were heavy drinkers (weekly consumption of 168 g alcohol or more i.e. at least 14 drinks).<sup>4</sup>

According to a national survey conducted in 2003 (total sample size  $n = 1000$ ; aged 15 years and over), the average number of drinks consumed per drinking day was 2.77.<sup>5</sup>

Estimates from key alcohol experts show that the proportion of adult males and females who had been abstaining (last year before the survey) was 7% (males) and 16% (females). Data is for after year 1995.<sup>6</sup>

## Heavy drinkers



2002 survey of subjects aged between 16 and 75 years old. Males  $n = 898$  and females  $n = 1050$ . Heavy drinking was defined for men as consuming more than 30 g of pure alcohol per day and for women more than 20 g of pure alcohol per day.<sup>7</sup>

According to the WHO GENACIS study (national survey conducted in 2002; total sample size  $n = 4223$ , males  $n = 2085$  and females  $n = 2138$ ; age group 20 to 64 years) the rate of heavy and hazardous drinking among drinkers was 4% (males) and 3.3% (females). Heavy and hazardous drinking was defined as average consumption of 40 g or more of pure alcohol a day for males and 20 g or more of pure alcohol a day for females.<sup>1</sup>

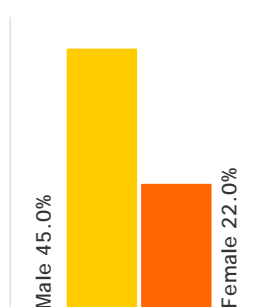
A 2000 survey of subjects aged between 16 and 75 years (1616 males and 2056 females) found the rate of heavy drinking to be 6.9% among males and 3.4% among females. Heavy drinking was defined for men as consuming more than 30 g of pure alcohol per day and for women more than 20 g of pure alcohol per day.<sup>7</sup>

A 1996–1997 national survey of subjects aged between 16 and 84 years old (males  $n = 5570$  and females  $n = 5896$ ) found the rate of heavy drinking to be 8.8% (total), 12.5% (males) and 5.4% (females). Heavy drinking was defined for men as consuming 30 g of pure alcohol or more per day and for women 20 g of pure alcohol or more per day.<sup>3</sup>

A survey of 997 persons randomly selected from the general Swedish population found that 18% of men and 5% of women had hazardous or harmful alcohol use according to the AUDIT definition (score of 8 or more). Women are more sensitive to alcohol than men and when the cut-off score was set to 6 or more, the female prevalence of hazardous or harmful alcohol use increased to nearly 11%.<sup>8</sup>

A recent study of a random sample of 1250 persons from the general Swedish population showed that the female prevalence of hazardous or harmful drinking (AUDIT definition) had increased from 11 to 15% between 1997 and 2001. Thus, women, particularly 28–38 years old, reported drinking more often and in greater amounts. Furthermore, the prevalence of female abstainers had decreased from 18 to 13%.<sup>9</sup>

## Binge drinkers (monthly)



Data from a national survey conducted between June 2001 and May 2003 (total sample size  $n = 36\ 000$ ). Binge drinking was defined as consumption of one bottle of wine or more on one occasion at least once a month.<sup>7</sup>

The same survey (as above) also found that 13% of males and 4% of females were weekly binge drinkers. The annual average frequency of binge drinking was 19 among males and 7 among females.<sup>7</sup>

According to the WHO GENACIS Study (2002 survey; total sample size  $n = 4223$ , males  $n = 2085$  and females  $n = 2138$ ; age range 20 to 64 years), the rate of heavy episodic drinking among drinkers was 19.4% for men and 4.1% for women. Heavy episodic drinking was defined as consumption of six or more drinks in one sitting at least once a month.<sup>1</sup>

A national survey of a sample representative of the adult population aged 18–64 years found that the percentage of binge drinking occasions of all drinking occasions in the last 12 months was 33% for males and 18% for

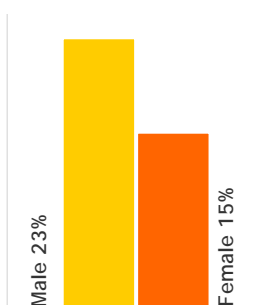
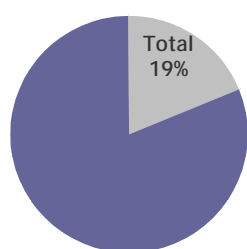
females. Binge drinking was defined as an occasion when the respondent had consumed at least one bottle of wine, 25 centilitres of spirits or four cans of beer.<sup>2</sup>

In a 1996/1997 survey of a representative sample of subjects 19–71 years old (total sample size  $n = 854$ ), the annual frequency of drinking approximately nine or more standard drinks in one drinking occasion (among all respondents) was 11.0 among males and 4.7 among females.<sup>10</sup>

In a nationally representative sample of subjects aged 18–64 years, the annual frequency of binge drinking in the past year was 20.5 among males and 5.7 among females. Binge drinking was defined as consuming at least a bottle of wine, 25 centilitres of spirits or 4 cans of beer.<sup>11</sup>

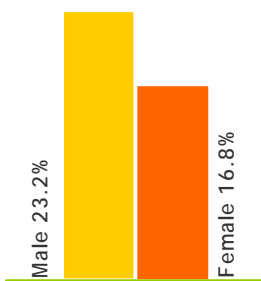
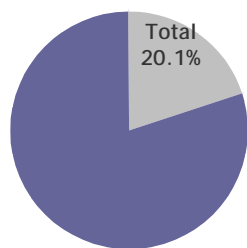
According to a national survey conducted in 2003 (total sample size  $n = 1000$ ; aged 15 years and over), the average number of times that respondents had consumed the equivalent of one bottle of wine, five pints/bottles of beer or five measures of spirits on one drinking occasion was 0.83.<sup>5</sup>

Youth drinking (alcohol consumers)



Data from the 1999 ESPAD survey. Total sample size  $n = 3445$ , males  $n = 1715$  and females  $n = 1730$ ; age group 15 to 16 years. Alcohol consumer was defined as lifetime use of 40 times or more.<sup>12</sup>

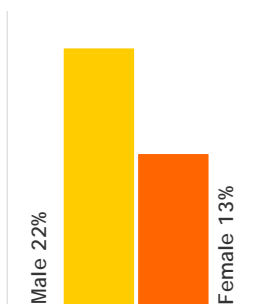
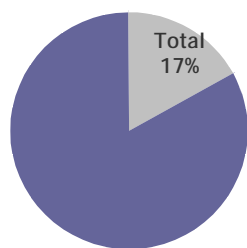
Youth drinking (drink at least weekly)



HBSC survey 2001/2002. Data shows proportion of 15-year-olds who report drinking beer, wine or spirits at least weekly. Total sample size  $n = 1226$ .<sup>13</sup>

According to the 1997/1998 HBSC survey (total sample size  $n = 1151$ ), 17% of 15-year-old boys and 11% of 15-year-old girls reported drinking beer, wine or spirits at least weekly.<sup>14</sup>

Youth drinking (binge drinkers)



Data from the 1999 ESPAD survey. Total sample size  $n = 3445$ , males  $n = 1715$  and females  $n = 1730$ ; age group 15 to 16 years. Binge drinking was defined as consuming five or more drinks in a row three times or more in the last 30 days.<sup>12</sup>

In a study looking at long-term trends in drinking habits among Swedish teenagers aged 15–16 years (data collected from 1971 to 1999, on average 6000 students per year), it was found that the highest proportion of alcohol consumers among both boys and girls, about 90%, was seen in the 1970s; this percentage decreased to about 80% in the 1980s and remained at that level through the 1990s. The proportion of students reporting frequent binge drinking (at least once a month) fell sharply from 1979 through 1981; among boys from 35% to 21% and among girls from 30% to 16%. From 1988 to 1991, frequent binge drinking increased to 29% among boys, and since then has remained largely stable at this level. Among girls, this behaviour was the least frequent in 1986 (14%), it peaked in 1994 (24%) and in 1999 it was 22%.<sup>15</sup>

### Youth drinking (drunkenness)

According to the 2001/2002 HBSC survey (total sample size  $n = 1226$ ), the proportion of 15-year-olds who reported ever having been drunk two or more times was 39.8% for boys and 38.1% for girls.<sup>13</sup>

In the 1999 ESPAD study of subjects 15 to 16 years old (total sample size  $n = 3445$ ; males  $n = 1715$  and females  $n = 1730$ ) the proportion of subjects who reported being drunk three times or more in the last 30 days was 14% (total), 15% (males) and 11% (females).<sup>12</sup>

### Unrecorded alcohol consumption

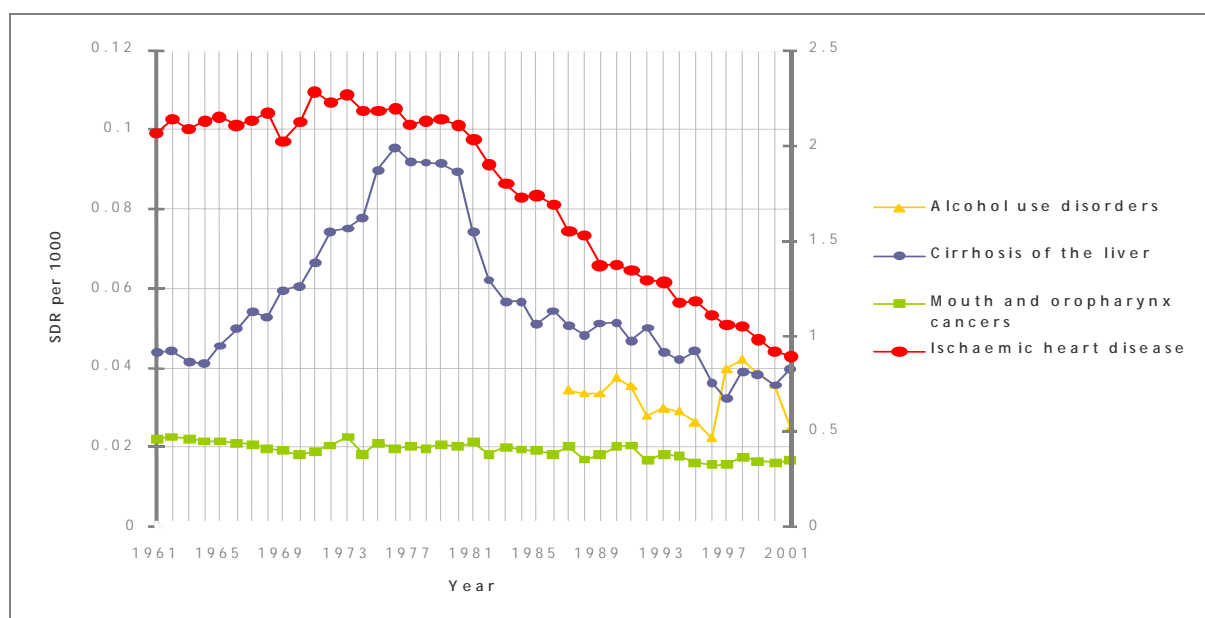
The unrecorded alcohol consumption in Sweden is estimated to be 2.0 litres pure alcohol per capita for population older than 15 for the years after 1995 (estimated by a group of key alcohol experts).<sup>6</sup>

It was estimated that in 2002, the amount of unrecorded alcohol (in litres of pure alcohol per adult (15+) capita) included 1.9 litres of traveller imports, 0.6 litres of smuggled alcohol and 0.5 litres of home production.<sup>16</sup>

### Mortality rates from selected death causes where alcohol is one of the underlying risk factors

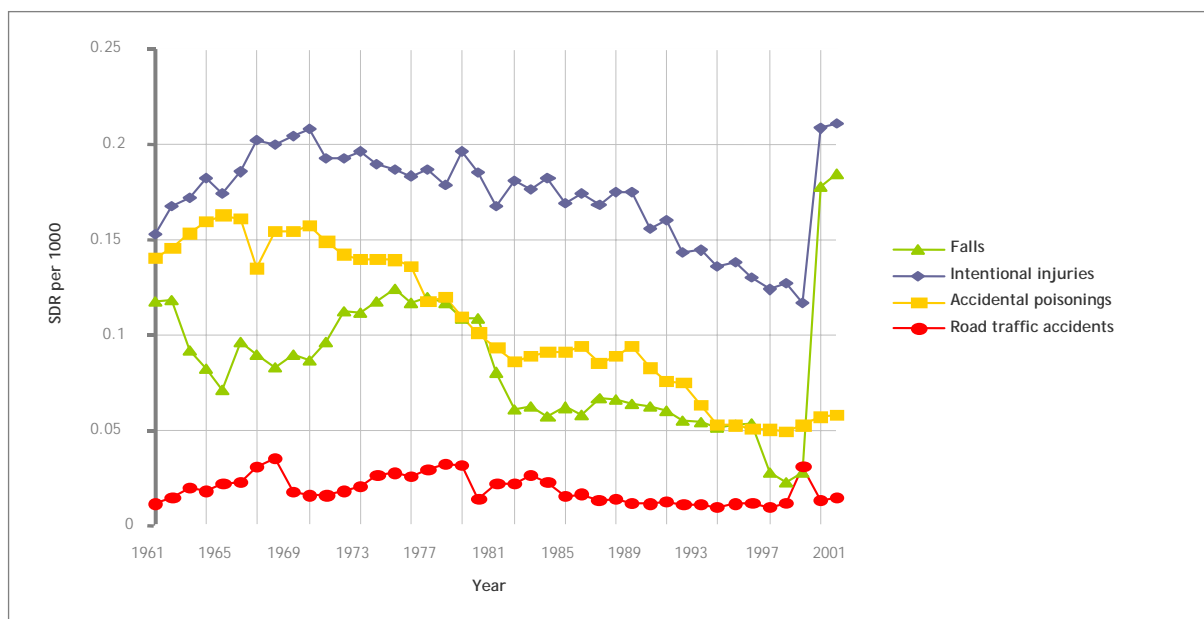
The data represent all the deaths occurring in a country irrespective of whether alcohol was a direct or indirect contributor.

### Chronic mortality



Note: Chronic mortality time-series measured on two axes, ischaemic heart disease on right axis and the other causes on the left.

## Acute mortality



Source: WHO Mortality Database

## Morbidity, health and social problems from alcohol use

A study found that excessive drinkers as a group had 13 to 27 more sick days per year compared with other patients in the sample.<sup>17</sup>

Using autopsy and police reports, a study analysed gender differences among traffic fatalities. Blood alcohol was detected in 10% of the women versus 32% of the men, with a mean blood alcohol concentration of 1.1 g/kg (men 1.9 g/kg). The study also found that 86% of the female inebriated drivers initiated the crash (compared to 98% of men).<sup>18</sup>

During October 1973 through May 1998, 157 snowmobile fatalities were autopsied in Northern Sweden. A total of 64% were inebriated by alcohol, with a mean blood alcohol concentration of 1.7 g/l., more inebriated victims were found during weekends/holidays than on weekdays (75 versus 51%).<sup>19</sup>

In a study that investigated autopsied pedestrian fatalities (286 victims) in northern Sweden from 1977 to 1995, blood alcohol was detected in 19% of the fatalities, with a median concentration of 1.6 g/l. Males more often tested positive for alcohol than females (24 versus 11%).<sup>20</sup>

In a study that looked at 207 adult cyclists injured three years earlier in road traffic accidents, it was found that 46% (95) of the 207 had been registered as under the influence of alcohol. Compared with the sober group, the intoxicated cyclists more often sustained their injuries at night, at the weekend, on their way to or from a party or a pub/restaurant and in single accidents with a greater risk of injury to the head or face.<sup>21</sup>

Only 3.3% of drivers involved in fatal crashes were suspected by police of alcohol consumption (official statistics) but 18% of fatally injured drivers autopsied had alcohol in the blood.<sup>22</sup>

The results of a recent study showed a significantly increased risk of hospitalization and mortality in both the drunk driving and risky drinking groups.<sup>23</sup>

A study found that alcohol accounted for about 3.5% of deaths in all ages, and 25% of deaths in those aged below 50 years, and about 10% of person years of life lost in Sweden.<sup>24</sup>

A study found that 5% of all deaths among 30–79-year-olds were alcohol-related. For both sexes, manual workers, lower nonmanuals, entrepreneurs and unclassifiable groups had significantly higher alcohol-related mortality than did upper nonmanuals. Male farmers had significantly lower such mortality.<sup>25</sup>

In a study investigating alcohol involvement in all types of unnatural deaths in Sweden (1992–1996), 39% of blood-tested cases were positive for alcohol. Almost 40% of the unnatural deaths were associated with alcohol. Alcohol involvement was most common in the intoxication group (84%), followed by the “undetermined” (65%), homicide (55%), falls (48%), fires (44%), asphyxia (41%), suicides (35%) and traffic accidents (22%) groups.<sup>26</sup>

A study that looked at 85 suicide cases aged 65 years and above (46 men and 39 women) found that a history of alcohol dependence or misuse (according to DSM-IV) was observed in 35% of the elderly men who died by suicide and in 18% of women. This disorder was uncommon among persons in the control group (2% of men and 1% of women; sample size 84 men and 69 women).<sup>27</sup>

From 1949 through 1969, 1312 patients with alcohol dependence were admitted to the Department of Psychiatry in Lund. By 1997, a total of 102 (99 men) alcoholic patients had taken their own life. There was a suicide peak on the first two days after the weekends and holidays in patients with alcohol dependence. The study proposed that alcohol withdrawal was a contributor to the suicide peak.<sup>28</sup>

The findings of a study (using data from 1930 to 1987) imply that a 1-litre increase in per capita consumption of alcohol entails a 10% increase in the suicide rate.<sup>29</sup>

A study found that positive blood alcohol concentrations in autopsies occurred at an equal rate in the 'undetermined suicide' group (where the forensic pathologist has not been able to establish whether the fatality was accident or a suicide) and in definite suicides, i.e. about 45%.<sup>30</sup>

In a study of 106 Swedish males in young middle age, born in a Swedish metropolitan area, it was found that 41% had experienced a substantial drinking problem during their lifetime, to an extent that might warrant labels such as 'alcoholism' or 'hazardous drinking'. 75% reported having had at least one alcohol-related symptom or problem at some time during their life. Taking various life events into account, including sociomedical circumstances and heavy consumption at 18 and 25 years, 22% of those surveyed were classified as having a lifetime prevalence of alcohol abuse/dependence according to DSM-III criteria.<sup>31</sup>

A time series analysis study conducted for the period 1950–1995 found that total alcohol sales was positively and statistically significantly associated with the homicide rate in Sweden.<sup>32</sup>

A study followed 182 667 patients with a hospital discharge diagnosis of alcoholism during 1965–1994, for an average of 10.2 years and found that 25 years after first hospitalization for alcoholism, the cumulative probability of developing a lung cancer was in the order of 5%, for oral and pharyngeal cancer it was 2.5%, and for oesophageal or laryngeal cancer 1% each. The study showed that the risk of head and neck cancer among heavy drinkers is highest for sites in direct contact with alcohol.<sup>33</sup>

The SDR per 100 000 population for chronic liver disease and cirrhosis was 5.15 in 2000 and 5.35 in 2001.<sup>34</sup>

The number of alcohol-related road traffic accidents per 100 000 population was 9.60 in 2000 and 10.90 in 2001.<sup>34</sup>

### Economic and social costs

The economic cost of alcohol and drug dependence and abuse amounts to between 30 billion and 120 billion Swedish Kronor annually.<sup>35</sup>

### Country background information

<b>Total population 2003</b>	8 876 000	<b>Life expectancy at birth (2002)</b>	Male	78.0
Adult (15+)	7 278 320		Female	82.6
% under 15	18	<b>Probability of dying under age 5 per 1000 (2002)</b>	Male	4
<b>Population distribution 2001 (%)</b>			Female	3
Urban	83	<b>Gross National Income per capita 2002</b>	US\$	24 820
Rural	17			

Sources: Population and Statistics Division of the United Nations Secretariat, World Bank World Development Indicators database, The World Health Report 2004

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