

No alcohol for under 18s

Working paper of the
German Centre for Addiction Issues

bvkgj.
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dkfz.
DEUTSCHES
KREBSFORSCHUNGSZENTRUM
IN DER HELMHOLTZ-GEMEINSCHAFT

50 Jahre – Forschen für
ein Leben ohne Krebs

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Preface

In Germany, the consumption of alcohol is widespread and is generally appreciated and encouraged. Even where adolescents are concerned, the German population only regards the consumption of alcohol as problematic if it leads to severe alcohol intoxication or violent crimes. Experts, on the other hand, have been very concerned for years about the very prevalent alcohol consumption among children and adolescents which on average begins at age 14 (Federal Centre for Health Education, Bundeszentrale für gesundheitliche Aufklärung, 2014).

Alcohol is a very harmful product. This is the result of its properties as a cytotoxin, an intoxicant, and addictive drug as well as its disinhibiting effects. Any alcoholic beverage and any type of alcohol consumption entails health risks. They apply to all consumers, i. e. irrespective of their sex, health status or age. During the entire development of adolescents, the risks posed by alcohol consumption are even greater.

Against this background, the German Centre for Addiction Issues, registered association, recommends that adolescents under the age of 18 refrain from alcohol consumption altogether during this decisive phase of life.

1 State of Scientific Knowledge

Alcohol is a cytotoxin. Once consumed, alcohol is distributed in the body via the bloodstream and the lymphatic vessels and causes harm to organs and nerve cells (German Centre for Addiction Issues, 2014). More than 200 illnesses associated with alcohol are known (Rehm et al., 2010a), including several types of cancer (German Cancer Research Centre, 2014), hypertension (Marmot et al., 1994), liver cirrhosis (Rehm et al., 2010b), permanent brain damage (Meinhardt et al., 2013) and diabetes (Baliunas et al., 2009). Acetaldehyde, the first metabolite of alcohol, is carcinogenic (Simanowski, et al., 2001). It attaches itself to the DNA of the cells and inhibits DNA repair. In addition, the breakdown of alcohol leads to the formation of so-called etheno DNA adducts which are also carcinogenic (Linhart, Bartsch, Seitz, 2014) and which increase the risk of developing cancer. Thus alcohol consumption during puberty in particular increases the risk of breast cancer (Lew et al., 2009; Seitz et al., 2011; Seitz et al., 2012).

Children and adults under 18 years have an increased risk of alcohol-induced damage (Laucht, Bloemeyer, Buchmann, 2011). Due to organ growth during childhood and puberty, adolescents are especially susceptible for the toxic effects of alcohol, especially as alcohol itself accelerates cell division in certain tissues (Simanowski et al., 2001). This cell proliferation plays a significant role in the development of cancer.

In adolescence, the structure of the brain undergoes constant development processes which continue into early adulthood (Giedd, Rapoport, 2010). In puberty, this applies to the prefrontal cortex in particular. This brain region is not only instrumental in the integration of memories and emotional processing but also for planning and control of actions in humans. One of the differences in the structure and activity of adolescent and adult brains is that adults assess the long-term consequences of their actions, whereas for young people, the long-term negative consequences of a given type of behaviour are less of a consideration. This also applies to the evaluation of alcohol consumption and its risks. For young people, the short-term pleasure derived from alcohol has precedence over any possible future damage. In case of heavy alcohol consumption, this can lead to serious consequences.

- Reduction in hippocampal volume
- Size reduction of the frontal cortex, especially in female adolescents
- Damage to, or reduction in, white brain matter (Welch, Carson, Lawrie, 2013)

Overall, national and international studies conclude that the adolescent brain is much more sensitive in its reaction to alcohol than the adult brain, meaning that alcohol can lead to permanent changes in the brain. In addition, adolescence is a phase of life which requires young adults to overcome a range of different developmental tasks and which confronts them with new challenges such as developing and identity and norms, becoming independent of one's parents, sexual maturation and the transition into professional life.

These great challenges require context-dependent coping strategies which, due to the structural development of the brain, can be very difficult or even impossible. This is especially true, if young adults do not have any or insufficient emotional resources and use alcohol to deal with their problems.

The risk of developing alcohol dependence too is higher under the age of 18. The general rule is: the earlier alcohol consumption begins, the greater the likelihood of becoming addicted (Laucht, Bloemeyer, Buchmann, 2011), the lower the likelihood of overcoming this addiction and the greater the health damage to be expected. In addition, consumption to the degree of acute alcohol poisoning is more common at a young age than later in life. Those aged between 12 and 17 on average have their first glass of alcohol at the age of 13.6. They experience inebriation for the first time at an average age of 14.9 years. 14.2 per cent of children and adolescents drink regularly (i.e. at least once a week), whereas 15.2 per cent occasionally drink until they are inebriated. Finally, 3.7 are frequently drunk (Federal Centre for Health Education, 2014). In addition, an increasing tendency has been observed in children and adolescents to drink until they pass out. In Germany, over 23,000 children and adolescents aged between ten and twenty had to be treated for alcohol intoxication in 2013 (Federal Statistical Office, 2015).

Moreover, alcohol poses social risks for children and adolescents. Since alcohol lowers the inhibition threshold for violence and boosts aggressiveness, the consumption of alcohol is associated with higher levels of social and criminological problems. Alcohol consumption increases the probability of becoming the perpetrator or victim of criminal acts as well as the perpetrator or victim of traffic accidents. Last but not least, intoxicated persons tend to engage in risky sexual behaviour thereby increasing their risk of contracting sexually transmitted diseases and unwanted pregnancies (German Centre for Addiction Issues, 2010).

Against this background and having assessed all relevant studies, the Scientific Advisory Board of the German Centre for Addiction (DHS) published its "Recommendations on the limit values for the consumption of alcoholic beverages" in 2007. The publication states that the "low-risk threshold alcohol dose for healthy people without any additional genetic or acquired risk [...] amounts to 24g alcohol per day for men and 12g of alcohol per day for women" (see Graph 1 in the appendix). If this quantity is exceeded more than five times per week, the probability of a wide range of alcohol-related damage clearly and demonstrably increases. As is the case with all toxic substances, it is not possible to engage in risk-free alcohol consumption, no matter how low the dose.

The recommendations of the Scientific Advisory Board of the DHS emphasise that the mentioned limit values from which alcohol consumption is demonstrably associated with high health risks exclusively apply to health adults: "Adolescents should largely refrain from drinking alcohol" (Seitz, Bühringer, Mann, 2007).

2 National Situation in International Context

No alcohol before 18: this is the principle followed by the majority of European youth protection regulations. Of 36 European countries, 22 have a consistent rule: no alcohol before 18. In deviation of this general rule, Luxemburg has a universal age limit of 16, Malta and Cyprus of 17, whereas Iceland sets 20 as the general minimum age.

Only Belgium, Denmark, Austria, Portugal, Switzerland and Spain have similarly inconsistent youth protection regulations on alcohol as Germany. Finland, Norway and Sweden too make a distinction between different types of alcohol, although the age limits are 18/20 as opposed to 16/18 (cf. Overview 1 in the appendix). The different categorisation of wine into a lower and higher age threshold illustrates the arbitrariness of these distinctions for which there is indeed no scientific basis. A comparable regulation of tobacco products would prescribe different legal ages for cigarettes, cigars and pipe tobacco – and there are good reasons why this is not done anywhere in the world.

Against this background and owing to the fact that in Europe almost 30 per cent of all deaths in the male population aged between 15 and 25 years are alcohol-related (Anderson, Baumberg, 2006), efforts are now being made at the European level to improve the protection of adolescents from alcohol-associated risks. Thus the EU Parliament Committee on the Environment, Public Health and Food Safety (ENVI) recommends the following EU alcohol policy for the future: “to protect young people from alcohol related harm, namely by increasing the existing age limits to the minimum of 18 years old” (European Parliament, 2015, p. 9).

In its “European action plan to reduce the harmful use of alcohol (2012–2020)”, the World Health Organisation WHO too criticises that in some of its member states, adolescents are legally permitted to buy alcohol under the age of 18 (World Health Organisation, 2011, p.3).

3 Recommendations

The 25 associations for substance abuse prevention, substance abuse help and self-help are aware of the fact that for the large majority of alcohol consumers in Germany, consumption begins before age 18. With a rate of 89 per cent of current alcohol consumption among adolescents under the age of 18, Germany takes third place within the European nations (cf. Overview 2 in the appendix).

Especially in view of this problem, the DHS has already stated in its recommendations on limit values for adults that “adolescents should largely refrain from drinking alcohol” (Seitz, Bühringer, Mann, 2007). This means: no alcohol should be consumed before age 18. If adolescents under 18 drink nevertheless, they should start as late in life as possible, as infrequently as possible, and they should keep the quantities consumed as low as possible.

Any other recommendation on alcohol consumption before reaching the age of majority would contradict the unequivocal current state of medical and epidemiological research.

The “National Strategy on Drug and Addiction Policy” of the Federal Government (Drug Commissioner of the Federal Government, 2012) states three objectives in relation to the problem of alcohol consumption of children and adolescents: “Reducing the frequency of intoxication”, “consistent implementation of the existing youth protection regulations” and the intention of “protecting children and adolescents from alcohol advertising”.

- The consumption of alcohol among children and adolescents must be reduced; this also applies to the frequency of intoxication
- The consistent implementation of uniform youths protection regulations would be more effective than implementing the rules currently in force in Germany
- Adolescents can be protected against alcohol advertising if, as is already the case in 13 European nations, alcohol advertising is limited (Norway, Sweden, Iceland, Switzerland, Turkey, France, Belarus, Croatia; with regard to spirits also in: Austria, Spain, Finland, Poland and Slovenia). (Cf: German Centre for Addiction Issues, 2008.)

In order to protect children and adolescents from the enormous medical and social consequences of alcohol consumption and also in the face of the results of international research results, the German Centre for Addiction Issues recommends that children and adolescents under 18 do not drink alcohol as a matter of principle.

In line with the youth protection regulations of the large majority of European states, the German Centre for Addiction Issues recommends that German youth protection regulations are extended to include all adolescents until they have reached age 18.

§ 9, Para. 1 of the Youth Protection Act should be worded as follows: “In restaurants, sales outlets and other public places, alcoholic beverages must be neither sold to adolescents nor must they be allowed to consume alcohol.”

Hamm, 2 July 2015

Overview 1: Minimum age purchase restrictions in Europe

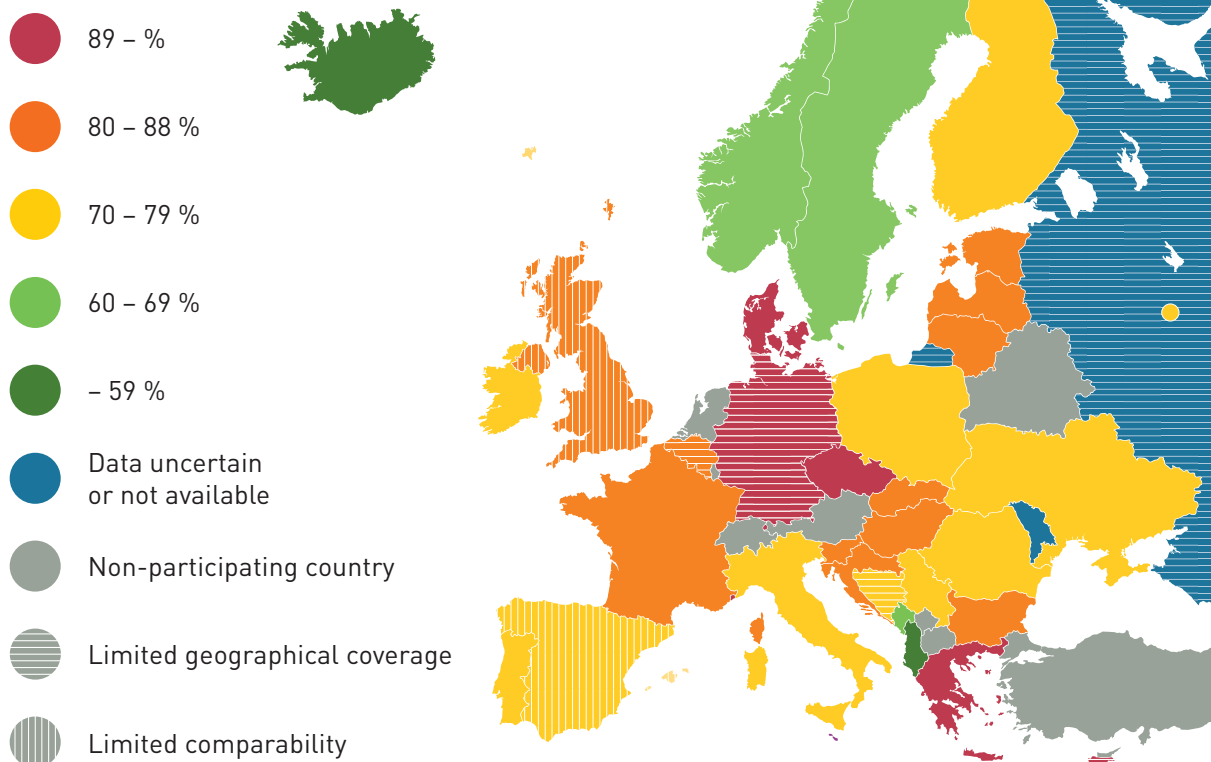
Country	Minimum purchase age (Years)		Additional info
	On-premises sales (serving)	On-premises sales (selling)	
Austria	16 (beer and wine), 16/18 (spirits)	16 (beer and wine), 16/18 (spirits)	6 of the 9 states in Austria have 18 years of age for spirits and spirits-based mixed drinks
Belgium	16 (beer and wine), 18 (spirits)	16 (beer and wine), 18 (spirits)	Illegal since 2010 to sell, serve or offer distilled alcohol beverages to anyone under the age of 18
Bulgaria	18	18	The 2005 Health Act prohibits the sale of alcohol to persons under 18 years of age, but not their consumption
Croatia	18	18	
Cyprus	17	17	
Czech Republic	18	18	
Denmark	18	16 (beer and wine), 18 (spirits)	Off-premises sales of spirits below 16.5% ABV allowed to those at least 16 years of age
Estonia	18	18	
Finland	18	18 (beer and wine), 20 (spirits)	
France	18	18	No explicit consumption age, but selling alcohol to a minor (under 18) is illegal. This age was raised from 16 to 18 in July 2009
Germany	16 (beer and wine), 18 (spirits)	16 (beer and wine), 18 (spirits)	Exception: If the individual is 14 and accompanied by a Custodial Person which permits the minor to consume or buy fermented alcoholic drinks (e.g.: beer, wine or cider)
Greece	18	18	In 2008, the consumption of alcoholic beverages was prohibited for minors in public. However, the law does not apply to private events or private premises
Hungary	18	18	
Ireland	18	18	
Italy	18	18	The minimum age for selling alcohol was raised to 18 years of age in November 2012 (Resolution No. 18512 of 4 February 2013)
Latvia	18	18	
Lithuania	18	18	
Luxembourg	16	16	
Malta	17	17	Must provide identification upon request

Country	Minimum purchase age (Years)		Additional info
	On-premises sales (serving)	On-premises sales (selling)	
Netherlands	18	18	The legal age for purchasing low-alcoholic beverages was raised on 1 January 2014, from 16 to 18 for all alcoholic beverages. Minors can legally drink alcohol as long as it is provided to free of charge, such as minors sharing a beer with their parents or friends
Norway	18 (beer and wine), 20 (spirits)	18 (beer and wine), 20 (spirits)	
Poland	18	18	Must be supported with identification upon request
Portugal	16 (beer and wine), 18 (spirits)	16 (beer and wine), 18 (spirits)	Minimum purchase age for spirits increased to 18 in February 2013
Romania	18	18	
Slovak Republic	18	18	
Slovenia	18	18	
Spain	16/18	16/18	Although the Governing Council gave the green light to a new law banning alcohol consumption below 18, the new legislation is still pending in period, open to amendments of the parliamentary groups.
Sweden	18	18 (beer), 20 (wine and spirits)	Beer with alcohol content below 3.5% may be sold off-premise to those aged 18 years and older.
United Kingdom	18	18	In the UK (Scotland), beer, cider, wine and perry can be served to 16-17-year-olds who are consuming a meal. In England, 16-17-year-olds can drink beer, cider or wine with a meal at a table in a bar or restaurant if they are accompanied by a person aged 18 years or older.
Albania	18	18	
Bosnia & Herzegovina	18	18	
Iceland	20	20	
Monaco	18	18	
Montenegro	18	18	
Norway	18 (beer and wine), 20 (spirits)	18 (beer and wine), 20 (spirits)	
Russian Federation	18	18	
Serbia	18	18	
Switzerland	16 (beer and wine), 18 (spirits)	16 (beer and wine), 18 (spirits)	

Source: Eurocare, 2014

EU Member States in bold

Overview 2: Frequency of use of any alcoholic beverage during the last 12 months (ESPAD) (15–16-year-old European students)

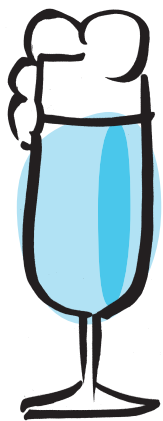


Country	%	Country	%	Country	%
Czech Republic	93	France	85	Finland	75
Denmark	92	Lithuania	85	Portugal	74
Germany	89	United Kingdom	85	Ireland	73
Greece	89	Belgium (Flanders)	83	Spain	73
Monaco	89	Bulgaria	83	Romania	72
Hungary	87	Cyprus	82	Russian Federation	71
Latvia	87	-----		Sweden	65
Slovak Republic	87	Italy	79	Montenegro	61
Slovenia	87	Ukraine	79	Norway	60
Liechtenstein	86	Poland	78	Albania	52
Malta	86	Serbia	77	Iceland	43
Croatia	85	Faroe Islands	76	Moldova, Republic of	N/A
Estonia	85	Bosnia & Herzegovina	75		

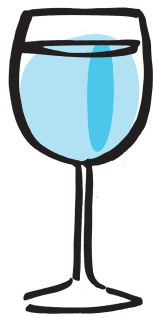
Source: Eurocare, 2014

Participating EU Member States in **bold** – – – ESPAD survey average

Graph 1: Various alcoholic beverages
and their alcohol content in grams



Beer
0,3l
13g



Wine
0,2l
16g



Sherry
0,1l
16g



Liqueur
0,02l
5g



Whisky
0,02l
7g

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