World Health Organization

European Region

Alcohol-attributable injuries in the WHO European Region

Overview of key findings based on 2019 data

Abstract
Alcohol is a major preventable cause of injury worldwide and contributes substantially to mortality in the WHO European Region, which has the highest alcohol consumption levels globally. In 2019 alcohol caused almost 145 000 injury deaths, or 31.1% of all injury deaths in the Region. The greatest contributors were self-harm (about 43 650 deaths), road injuries (about 24 000 deaths) and falls (about 19 600 deaths). Heavy episodic drinking, which is widespread in the Region, sharply increases the risk of unintentional injuries such as traffic injuries, falls and drownings, as well as intentional injuries such self-harm and interpersonal violence. Men account for most alcohol-attributable injury deaths because they drink more frequently, consume larger quantities and are more likely to have alcohol use disorders. Harms to others, particularly to women and children, include intimate partner violence, neglect, and other forms of physical and emotional harm. Young people face elevated risks because of the way alcohol contributes to risky behaviours and injury burden. Country-specific injury data are presented in a separate web annex. Despite progress in reducing alcohol consumption since 2000, large east–west inequalities persist, reflecting differences in drinking patterns. Evidence-based measures such as raising excise taxes, reducing the availability of retailed alcohol, limiting marketing, strengthening drink–driving measures, and expanding screening and brief interventions can significantly reduce alcohol-attributable harm and prevent avoidable deaths.

Keywords: ALCOHOL DRINKING; INJURIES; PREVENTION AND CONTROL; PUBLIC HEALTH; VIOLENCE

Document number: WHO/EURO:2025-12985-52759-82010 (PDF)

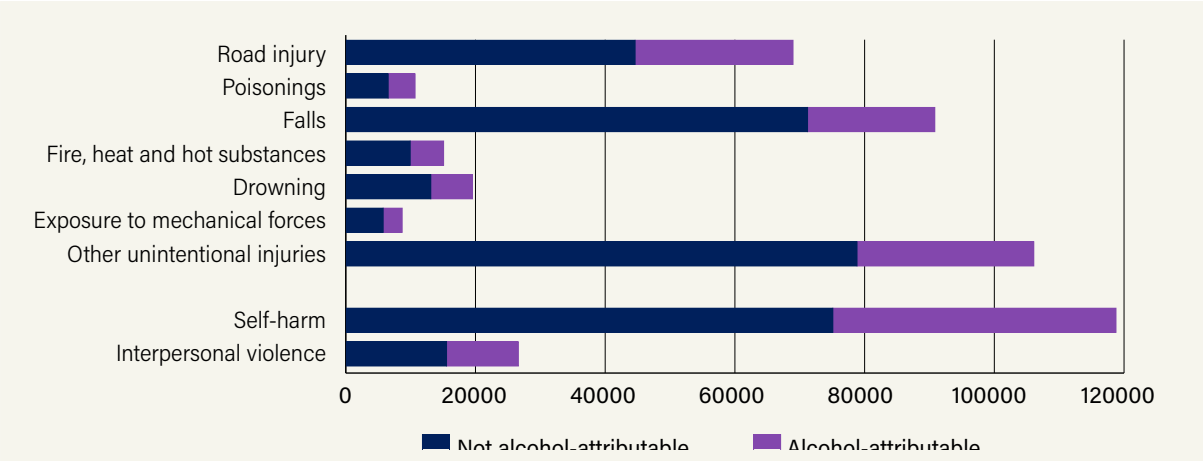
Alcohol responsible for one third of all injury deaths in Europe

Alcohol is one of the leading preventable causes of injury worldwide, with a particularly severe impact in the WHO European Region (*1*). Alcohol consumption increases the risk of injury by impairing judgement, lowering inhibitions, slowing reaction times and impairing coordination, all of which lead to riskier behaviour (*2*). These effects directly contribute to unintentional injuries such as road traffic injuries, falls, drownings and burns, as well as intentional injuries such as self-harm and interpersonal violence (*3*).

The WHO European Region consistently shows the highest alcohol per capita consumption worldwide, at 9.1 L of pure alcohol per adult aged 15 years and older in 2022,[1] compared to a global average of 5.0 L (*4*). The Region also has the highest rates of both alcohol consumption and heavy episodic drinking (HED) in the population.[2] In 2019, 62.4% of all adults (70.7% of men and 54.9% of women) were alcohol consumers.[3] In the same year, 23.0% of all adults (34.0% of men and 12.8% of women) engaged in HED, a particularly hazardous drinking pattern and one of the most important indicators of acute alcohol-attributable harm, including injuries and poisonings (*1*).

Alcohol makes a substantial contribution to deaths across multiple injury categories in the WHO European Region, with particularly high proportions in self-harm and interpersonal violence. In absolute terms, the largest numbers of alcohol-attributable injury deaths occur in self-harm (over 43 600 deaths), followed by other unintentional injuries (more than 27 000), road injuries (around 24 300) and falls (approximately 19 600). By contrast, interpersonal violence results in fewer overall deaths (about 11 000), but alcohol accounts for the highest proportion of deaths in this category. In proportionate terms, alcohol accounts for 41.8% of deaths from interpersonal violence, 36.8% of deaths from self-harm and 35.4% of road injury deaths. Together, these patterns show both the scale and the depth of alcohol's contribution to injury mortality.

Fig. 1. Injury deaths in the WHO European Region in 2019, by cause



Source: Global Information System on Alcohol and Health (*4*).

1 Alcohol total per capita consumption (aged 15 years and older) in litres (L) of pure alcohol (Sustainable Development Goal indicator 3.5.2).

2 HED is defined as an intake of 60 g or more of pure alcohol on at least one occasion over the previous 30 days. When expressed in volumes of typical alcoholic beverages, 60 g of pure alcohol is roughly equivalent to 1.5 L of beer, 600 ml of wine or 200 ml of spirits.

3 "Alcohol consumers in the past 12 months" is defined as the proportion of adults (15+ years) in a given population who have consumed any alcohol during the past 12 months, assessed at a given point in time.

Sex-specific burdens of injury and violence and the link to aggression

The alcohol-attributable injury burden exhibits clear sex-specific patterns. Men consume substantially more alcohol, than women have higher prevalence of alcohol use disorders (AUDs) and heavy episodic drinking (HED), and account for far more alcohol-attributable injury deaths. In 2019, men consumed an average of 14.9 litres of pure alcohol per capita, nearly 3.7 times the level among women (4.0 litres). The prevalence of AUDs in men was 13.4%, compared with 8.3% in women, while HED was about 2.7 times more common among men. Reflecting these differences in consumption and risk behaviours, men experienced more than four times as many alcohol-attributable injury deaths overall, largely due to self-harm, road injuries and falls (Table 1). At the same time, the downstream harms linked to men's drinking, including alcohol-related aggression and interpersonal violence, disproportionately affect women and children.

Table 1. Alcohol-attributable deaths in the WHO European Region in 2019, by sex and cause

	Total numbers of deaths attributable to alcohol (n)		Share of deaths attributable to alcohol (%)	
	Men	Women	Men	Women
Injuries	**116 171**	**28 439**	**36.5**	**19.4**
Unintentional injuries	**71 228**	**18 646**	**34.5**	**16.6**
Road injury	18 845	5 502	36.7	31.3
Poisonings	3 334	807	43.1	28.2
Falls	15 277	4 342	29.9	10.9
Fire, heat and hot substances	3 868	1 280	39.6	24.5
Drowning	5 659	774	36.3	20
Exposure to mechanical forces	2 613	315	36.4	22
Other unintentional injuries	21 631	5 626	33.7	13.4
Intentional injuries	**44 943**	**9 793**	**40.2**	**28.6**
Self-harm	36 624	7 034	39.9	26.2
Interpersonal violence	8 318	2 759	42.9	38.7

Source: Global Information System on Alcohol and Health (*4*).

Alcohol acutely impairs judgement, slows reaction time, lowers inhibitions and alters emotional processing, sharply increasing the likelihood of aggression, violence or risky behaviour during intoxication. These effects operate within broader social and environmental contexts, including social norms that shape masculinities, targeted alcohol marketing, nightlife and public drinking environments, peer expectations and pressure to drink heavily, and group dynamics that can amplify risks (*5*).These contextual factors overlap with well-established risk factors for violence against women and girls, including men's use of alcohol and the accessibility of alcohol and dugs within communities. The interaction between intoxication and context helps explain alcohol's prominent role in injury statistics, while recognising that individuals respond to alcohol differently and many do not become aggressive when drinking (*6*).

The category of interpersonal violence is broad and includes any violence between individuals, including in families, relationships and communities. Alcohol is a major risk factor for intimate partner violence, increasing both its occurrence and severity. Yet official data capture only a fraction of the true burden, especially for gender-based and other forms of violence that are stigmatized and underreported. Administrative sources such as police, hospital, and judicial records tend to underrepresent these experiences. By grouping diverse forms of violence into a single category, estimates such as those shown in Table 1 almost certainly underestimate the scale of interpersonal violence and alcohol's role in it. More research is needed on how alcohol contributes to both the experience and the perpetration of interpersonal violence, with particular attention paid to gender-based violence.

Studies consistently show higher risks of perpetration of intimate partner violence related to men's use of alcohol. Some systematic reviews identify alcohol as a major modifiable risk factor for domestic and sexual violence (*7,8*). The consequences for women are wide-ranging and long-lasting, including physical injury, mental health impacts, sexual and reproductive harms, loss of safety and autonomy, economic deprivation and violations of human rights. Children and other household members are also affected: population studies report higher risks of physical harm, neglect and adverse childhood experiences in households with parental alcohol problems, and caregiver surveys indicate that nondrinking family members frequently experience physical or emotional harm from someone else's drinking (*9*).

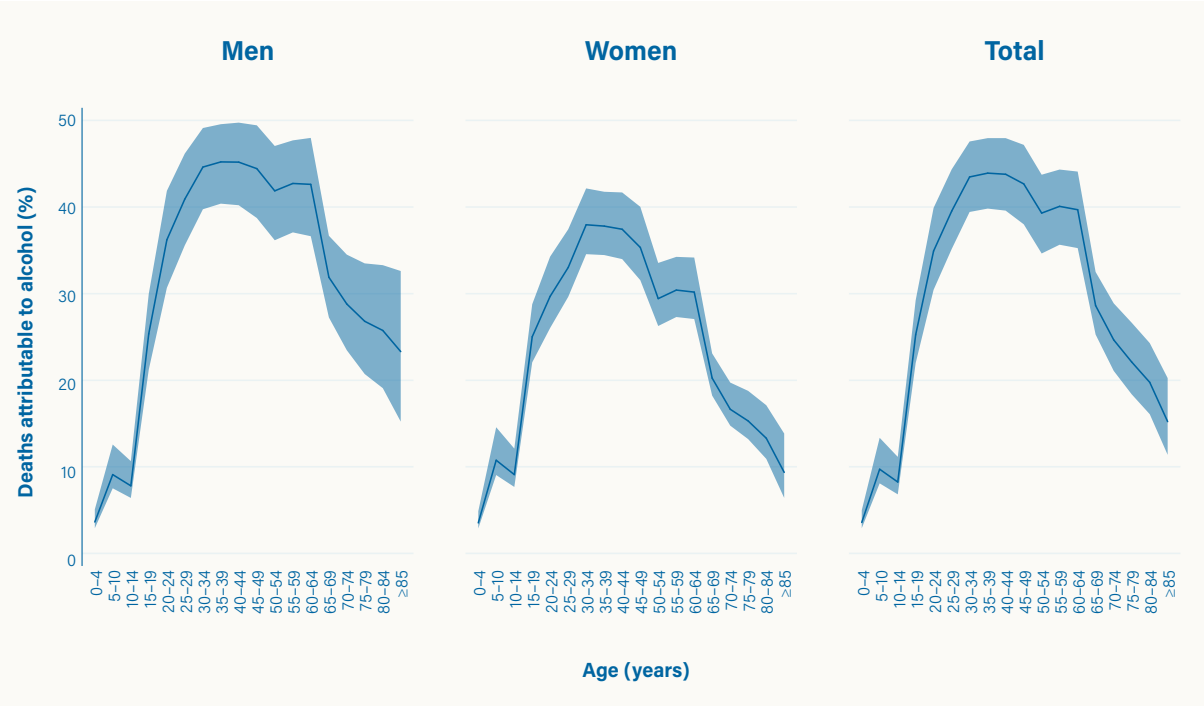
Alcohol – the leading risk factor for injuries among young people

Alcohol consumption is a major public health concern, especially among young people, for whom it is a leading risk factor for disability and premature death due to injuries (*10*). Young people are particularly vulnerable because, although they may drink less frequently than older adults, they often have lower tolerance and less experience judging their limits, which amplifies risks especially for heavy drinking episodes. This sharply increases the risk of poisonings, accidents, falls, violence and self-harm. In young people, alcohol can affect brain development and decision-making, leading to problems with memory and learning, lower school performance, mental health issues such as depression and anxiety, and risky sexual behaviors that can result in unwanted pregnancies or sexually transmitted infections (*11*). These factors result in substantial losses of productive life years and can contribute to long-term consequences, including the development of AUDs.

The risk of alcohol-attributable injury varies by age. In 2019 it was highest in middle adulthood, with people aged 35–39 years showing the largest proportion of injury deaths caused by alcohol. Nevertheless, the risk of alcohol-attributable death begins to rise steeply from a much earlier age

(around 15 years), and a substantial share of alcohol-attributable harm occurs early in life (Fig. 2). In the WHO European Region, roughly one in three deaths in men and one in five deaths in women between the ages of 30 and 40 years are attributable to alcohol. Among people aged 20 to 24 years, alcohol accounts for 35% of all injury deaths. (*1*). Overall, alcohol disproportionately contributes to premature mortality, with the greatest impact observed in early adulthood, particularly among men. As shown in Fig. 2, the proportion of alcohol-attributable injuries rises sharply in early adulthood, peaks in middle age and declines gradually in older age groups. The peak is more pronounced in men, reflecting a higher relative burden, while uncertainty in estimates increases at older ages as a result of smaller populations and more variable mortality patterns.

Fig. 2. Proportion of deaths caused by alcohol use among all injury deaths in the WHO European Region in 2019, by age and sex



Note: The grey area along each line represents confidence intervals.
Source: Global Information System on Alcohol and Health (*4*).

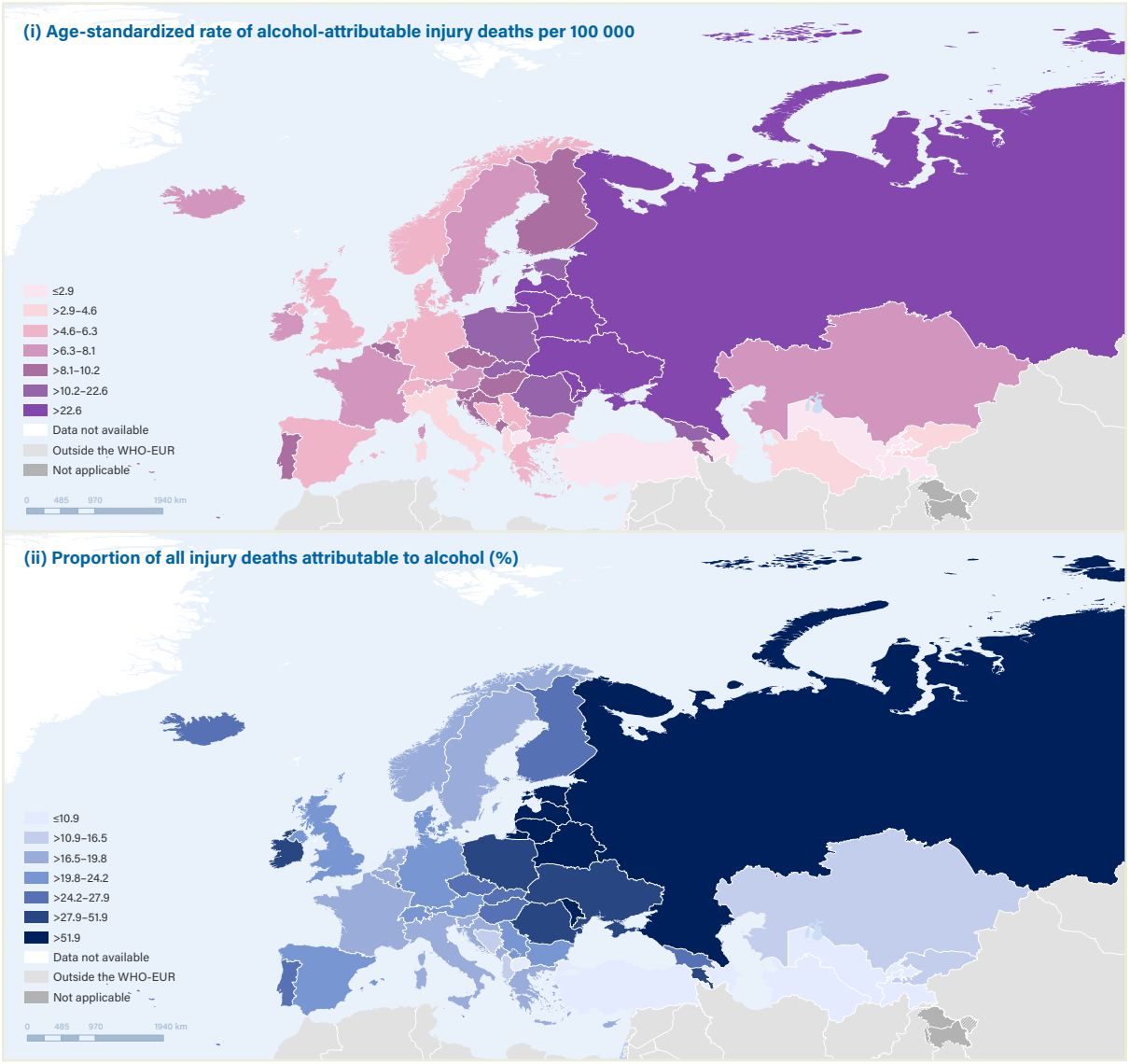
A persistent east–west divide in alcohol injury deaths despite progress

In 2019 a total of 144 610 injury deaths in the WHO European Region were attributable to alcohol, equivalent to 31.1% of all injury deaths in the Region. In the same year alcohol accounted for the loss of 9.0 million injury-related disability-adjusted life years (DALYs), representing nearly one third of all such DALYs lost in the Region (*4*).[4] The largest contributors to the alcohol-attributable injury burden were self-harm and road injuries.

As shown in Fig. 3, the burden of alcohol-attributable injuries in 2019 displayed striking regional disparities across the WHO European Region.

4 A DALY is a measure that captures the overall burden of disease by combining the years of life lost due to premature death with the years lived with disability. Essentially, one DALY represents one year of healthy life lost, either from dying too early or living with illness or disability.

Fig. 3. Alcohol-attributable injury deaths in the WHO European Region in 2019, by country: (i) age-standardized rate of injury deaths and (ii) proportion of all injury deaths



Source: Global Information System on Alcohol and Health (*4*).

Age-standardized death rates were highest in eastern Europe, particularly in Latvia, Lithuania and the Russian Federation, where alcohol-attributable injury mortality exceeded 22.6 per 100 000 population, while countries such as Azerbaijan, Tajikistan and Türkiye reported some of the lowest rates, often below 2.9 per 100 000. An east–west divide was evident in the proportion of all injury deaths attributable to alcohol, with many eastern European countries exceeding 60%, compared with under 20% in much of western and southern Europe. These patterns are likely to reflect differences in drinking prevalence, levels and patterns of consumption (particularly the frequency and intensity of HED), gender-specific norms, and the strength of broader policy frameworks, including alcohol regulations, road safety measures and emergency response systems.

Between 2000 and 2022 the WHO European Region made substantial progress towards meeting global alcohol reduction targets. Average alcohol consumption per adult declined from 11.1 to 9.1 L, a reduction of approximately 18%, accompanied by notable decreases in HED among both men and women. However, the decrease was more modest in the European Union, which has the

highest drinking level globally, where consumption declined from 12.5 to 10.8 L (a reduction of 13.6%) in the same time period.

Between 2000 and 2019 age-standardized alcohol-attributable injury deaths in the WHO European Region fell by nearly 60%, outpacing the overall decline in injury mortality (*4*). The disability burden linked to alcohol-attributable injuries also decreased by more than half, underscoring the potential for well-designed interventions to produce measurable public health gains. Despite these improvements, however, stark disparities between the eastern and western parts of the Region persist, highlighting the need for continued and targeted measures to address harmful drinking patterns and reduce preventable deaths from injuries.

Policy implications

Despite improvements, alcohol remains the leading driver of injury deaths in the WHO European Region, and its broader social impact, including harm to others, is greater than that of any other psychoactive substance (*12*). Comprehensive alcohol policies can save lives and reduce social and economic costs (*13,14*).

Effective measures include reducing alcohol availability and affordability through higher excise taxes, pricing policies, and restrictions on hours, days and locations of sale. Limiting exposure to alcohol marketing, including in digital media, protects children, adolescents and abstainers, shifts social norms and reduces harms. Preventing drink–driving through blood alcohol concentration limits via sobriety checkpoints directly lowers traffic injuries and fatalities while promoting safer driving.

Legislating blood alcohol concentration limits (≤0.02 g/dL for novice and probationary drivers and ≤0.05 g/dL for the general population) and enforcing them stringently deters driving under the influence of alcohol and directly reduces the risk of fatalities and serious injuries (*15*).

Early identification and intervention via screening and brief interventions, in primary care as well as in emergency, trauma and other specialized settings, provide additional opportunities to reduce harm. Even a single structured conversation with patients exhibiting hazardous drinking patterns can lower future alcohol use, prevent repeat injuries and reduce health-care costs. Brief interventions are most effective when integrated into routine clinical practice, supported by specialist staff and linked to primary care and treatment services. When combined with strong alcohol control policies and community-based prevention strategies, they represent a practical, ethical and cost-effective approach to reducing alcohol-attributable injuries.

The scale and nature of alcohol-attributable injury also highlight the need for gender-sensitive policy. Reducing alcohol consumption, especially heavy drinking occasions in men, combined with strengthened violence prevention, survivor support and services addressing harms to others, can reduce both direct injury and the cascade of downstream social consequences.

The WHO SAFER initiative provides a practical framework for implementing these evidence-based strategies, focusing on five key areas: restricting alcohol availability; enforcing drink–driving measures; facilitating access to screening, brief interventions and treatment; restricting alcohol marketing; and raising prices through excise taxes (*16*). Prioritizing these actions can prevent tens of thousands of premature deaths annually, reduce alcohol-attributable injuries, and improve life expectancy, productivity and quality of life. Sustained implementation is essential for achieving health and development goals, including the Sustainable Development Goals, and for building healthier, more resilient societies across the WHO European Region.

Data sources and methods

The data sources and methods used in this overview for presenting data on estimations of alcohol-attributable injury, including national estimates, are presented in the web annex (*17*).

References[5]

1. Global status report on alcohol and health and treatment of substance use disorders. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/377960). Licence: CC BY-NC-SA 3.0 IGO.
2. Alcohol and injuries: emergency department studies in an international perspective. Geneva: World Health Organization; 2009 (https://iris.who.int/handle/10665/44166).
3. Rehm J, Gmel GE Sr, Gmel G, Hasan OSM, Imtiaz S, Popova S et al. The relationship between different dimensions of alcohol use and the burden of disease: an update. Addiction. 2017;112(6):968–1001 (https://doi.org/10.1111/add.13757).
4. Global information system on alcohol and health [online database]. Geneva: World Health Organization; 2025 (https://www.who.int/data/gho/data/themes/global-information-system-on-alcohol-and-health).
5. Wilson IM, Willoughby B, Tanyos A, Graham K, Walker M, Laslett AM et al. A global review of the impact on women from men's alcohol drinking: the need for responding with a gendered lens. Glob Health Action. 2024;17(1):2341522 (https://doi.org/10.1080/16549716.2024.2341522).
6. Chikritzhs T, Livingston M. Alcohol and the risk of injury. Nutrients. 2021;13(8):2777 (https://doi.org/10.3390/nu13082777).
7. Devries KM, Child JC, Bacchus LJ, Mak J, Falder G, Graham K et al. Intimate partner violence victimization and alcohol consumption in women: a systematic review and meta-analysis. Addiction. 2014;109(3):379–91 (https://doi.org/10.1111/add.12393).
8. Kilian C, Klinger S, Manthey J, Rehm J, Huckle T, Probst C. National and regional prevalence of interpersonal violence from others' alcohol use: a systematic review and modelling study. Lancet Reg Health Eur. 2024;40:100905 (https://doi.org/10.1016/j.lanepe.2024.100905).
9. Laslett AM, Rankin G, Waleewong O, Callinan S, Hoang HT, Florenzano R et al. A multi-country study of harms to children because of others' drinking. J Stud Alcohol Drugs. 2017;78(2):195–202 (https://doi.org/10.15288/jsad.2017.78.195).
10. GBD compare: vizhub [online database]. Seattle (WA); Institute for Health Metrics and Evaluation; 2025 (https://vizhub.healthdata.org/gbd-compare/).
11. How alcohol harms young people and what you can do about it. Manila: WHO Regional Office for the Western Pacific; 2015 (https://iris.who.int/handle/10665/208205).
12. Nutt DJ, King LA, Phillips LD; Independent Scientific Committee on Drugs. Drug harms in the UK: a multicriteria decision analysis. Lancet. 2010;376(9752):1558–65 (https://doi.org/10.1016/S0140-6736(10)61462-6).
13. Kilian C, Lemp JM, Llamosas-Falcón L, Carr T, Ye Y, Kerr WC et al. Reducing alcohol use through alcohol control policies in the general population and population subgroups: a systematic review and meta-analysis. EClinicalMedicine. 2023;59:101996 (https://doi.org/10.1016/j.eclinm.2023.101996).
14. Tackling NCDs: best buys and other recommended interventions for the prevention and control of noncommunicable diseases, 2nd edition. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/376624). Licence: CC BY-NC-SA 3.0 IGO.
15. Global status report on road safety. Geneva: World Health Organization; 2023. (https://iris.who.int/handle/10665/375016). Licence:CC BY-NC-SA 3.0 IGO.
16. The SAFER technical package: five areas of intervention at national and subnational levels. Geneva: World Health Organization; 2019 (https://iris.who.int/handle/10665/330053). Licence: CC BY-NC-SA 3.0 IGO.
17. Alcohol-attributable injuries in the Alcohol-attributable injuries in the WHO European Region: Web annex – data sources and methods underlying the 2019 estimates. Copenhagen: WHO Regional Office for Europe; 2025 (https://iris.who.int/handle/10665/383869).

5 All references were accessed on 25 September 2025.

Acknowledgements

This overview document is based on a data review prepared by Jürgen Rehm (Centre for Addiction and Mental Health, Canada) and Kevin D Shield (Centre for Addiction and Mental Health, Canada), with significant contributions from Bethany Crystoja (University of Calgary, Canada), Ivneet Sohi (Centre for Addiction and Mental Health, Canada) and Ashley Wetlaufer (Centre for Addiction and Mental Health, Canada). It was conceptualized by Jonathon Passmore (WHO Regional Office for Europe, Denmark), compiled by Maria Neufeld (WHO Regional Office for Europe, Denmark), and reviewed by Daniela Correia (WHO Regional Office for Europe, Denmark), Carina Ferreira-Borges (WHO Regional Office for Europe, Denmark), Melanie Hyde (WHO European Office for Investment for Health and Development, Italy), Maristela Monteiro (WHO Regional Office for Europe, Denmark), Catherine Paradis (WHO Regional Office for Europe, Denmark) and Francisca Pulido Valente (WHO Regional Office for Europe, Denmark).

This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of the WHO Regional Office for Europe and do not necessarily reflect the views of the European Union.

Co-funded by
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WHO/EURO:2025-12985-52759-82010 (PDF)