

INTERNATIONAL DRINKING GUIDELINES

An understanding of the risks and benefits potentially associated with alcohol consumption is an important tool for preventing harm. Meaningful information on alcohol, based on a thorough and balanced review of the scientific evidence—biomedical as well as psychosocial—can provide individuals with a basis for making decisions about their own drinking. It equips them with knowledge about the consequences of different drinking patterns and the ability to change their lifestyles accordingly, where necessary or appropriate.

In an effort to provide such information, governments and quasi-governmental organizations in a number of countries around the world offer their adult citizens (those above the mandated legal drinking age) guidelines about alcohol consumption. This issue of *ICAP Reports* examines the rationale behind making such recommendations on drinking and offers a comparison of existing drinking guidelines in a number of countries.

PROVIDING DRINKING GUIDELINES

Official guidelines on alcohol consumption are generally produced by governments—by a Ministry of Health or other governmental department or by a government entity that is responsible for alcohol issues. However, other guidelines exist which, although not produced by governmental bodies, also enjoy official status. These include recommendations on drinking given by medical associations or other professional NGOs with an authoritative position on alcohol issues.

The end-user for these recommendations is the adult consumer of beverage alcohol for whom such information has direct relevance within his or her everyday life, but also the physician and healthcare worker whose advice is sought by patients on a number of health and behavioral issues.

Recommendations about alcohol consumption may be found within the scope of broader guidelines, such as dietary guidelines, as part of a national drug strategy, or as stand-alone guidelines on drinking. In general, such guidelines exist primarily in industrialized countries in response to public demand. As Table 1 shows, drinking guidelines have been issued in countries in Europe and North America, parts of the Asia-Pacific region, and isolated countries in other geographic regions, namely Latin America and Africa. Some countries, such as those where Islam is the prevailing religion, may include recommendations specifically discouraging alcohol consumption. Those included in the Indonesian National Dietary Guidelines are one such example.

Information on drinking and its effects on health is derived primarily from biomedical research and relies on a dose-response relationship between drinking levels and particular outcomes. This relationship is given in terms of units of absolute alcohol, expressed in “grams of ethanol,” and the same convention also applies to recommendations that are provided to the public. Drinking guidelines are thus presented in one of two ways: in terms of grams of ethanol or as a number of “standard” drinks or units consumed over a day or week. Where the latter convention is followed, the information is generally accompanied by a definition of “standard” drink or unit. Expressed in terms of “grams of ethanol,” this definition allows easy conversion into levels of absolute alcohol.

In some cases, recommendations are given both in terms of daily limits and weekly limits in an effort to make the information more easily accessible to the consumer. Knowing how many drinks per week may be “safe” does not answer the question of how many drinks an individual can safely consume in a given day.

DEFINING THE THRESHOLD

Risks associated with alcohol consumption exist on a continuum. While for most people drinking below a certain level is associated with little harm, this level varies among individuals. The threshold, above which risks might increase,¹ is referred to interchangeably as the “safe,” “low risk,” or even “moderate” drinking limit. The point at which a transition occurs is determined by weighing risks and benefits of alcohol consumption. Calculations of risk, conducted at a range of alcohol concentrations, take into consideration evidence about the impact of alcohol consumption on overall health and on a number of specific conditions, derived from mortality and morbidity data.² While for some individuals no “safe” level of drinking may exist,³ for most people the threshold ideally offers a baseline below which risks are few, or at which, as in the case of the cardio-protective effects of alcohol consumption, there may be distinct benefits associated with drinking.⁴

Derived from the results of large study samples, these “optimal” drinking levels represent an average recommendation that can be applied to most populations. Yet even within such averages, there are variations across entire groups. For example, the differences in physiology and ability to metabolize alcohol between men and women mean that separate recommendations may be required for each group. Consuming even the same amounts of alcohol may lead to quite different outcomes in women than in men.⁵ As a result, lower thresholds may be given for “safe” drinking levels for women.

As Table 1 shows, different recommendations are given for men and women in the United Kingdom, the Czech Republic, France, New Zealand, Australia, the United States, Finland, and Austria. Other countries, including Italy, the Netherlands, Spain, Switzerland and Romania, make no distinction by gender. It is interesting to note that, in general, the countries that do not differentiate between the genders also set the threshold for “safe” drinking limits at a higher level of ethanol content.

“SPECIAL POPULATIONS” AND SPECIAL ADVICE

In addition to acknowledging the differences between men and women that may be required in crafting recommendations, some drinking guidelines refine their advice even further, offering specific information for so-called “special populations”. In general, “special populations” include those for whom the advice given to the general population is not appropriate for one reason or another. These individuals may be in need of particular attention and may require additional protection. Included in this group are, for example, pregnant women, young people, the elderly, or individuals who are alcohol dependent or particularly susceptible to alcohol’s effects.⁶ Many official guidelines include specific information for these populations. For example, advice to pregnant women generally is not to drink,⁷ although some countries may only recommend caution and a decreased level of consumption.

Nor is special advice given only in the form of discouraging drinking. In the light of evidence on the relationship between moderate drinking and coronary heart disease (CHD), the U.K. *Sensible Drinking* guidelines, for example, recommend that individuals who do not drink, drink very little, or are in an age group at high risk for CHD, might “consider the possibility that light drinking might benefit their health.”⁸ Recommendations by the Swedish Research Council (Vetenskapsradet) also include recognition that “a moderate alcohol intake may have certain positive medical effects.”⁹

Other recommendations included in a number of guidelines are situational. Among those on Table 1 are

suggestions that “workers (in working time and in work places) should never drink alcohol” (Italy), individuals should refrain from drinking and driving (Luxembourg, Norway, United States), drinking while operating machinery (The Netherlands, Switzerland) or while engaging in sports (Switzerland). Other suggestions include “situational abstinence”, such as “in the company of children and young people” (Norway).

Yet a further level of refinement is provided in the design of some guidelines. Rather than restricting recommendations to a certain threshold for alcohol consumption, drinking levels may also be divided according to the level of risk associated with them – low, medium and high. The rationale behind these breakdowns is a perceived need to offer individuals information that will be relevant to their particular drinking patterns and answer the question of how much risk they may be exposed to at different levels of drinking and frequencies with which they consume alcohol.

One such set of guidelines is included by the World Health Organization (WHO) in its Guide to Mental Health in Primary Care,¹⁰ where recommendations are based on three levels of risk: “responsible,” “hazardous” and “harmful”. The “responsible,” or “low”, level of risk for men is “3 units per day, with a maximum of 21 units per week spread throughout the week (including 2 alcohol free days per week),” while for women the limits are lowered to 2 units per day and 14 per week. (A unit is defined as the equivalent of 8g of ethanol.) The “hazardous” level of consumption is defined by an increasing risk of problems, such as raised blood pressure, stroke, and liver cirrhosis, and is set at 3-7 units per day and 22-49 per week for men, and 2-5 units per day and 15-35 per week for women. The “harmful” level, where “sustained drinking at this level is likely to cause physical, mental, and social problems,” is 7 or more units per day, or over 50 units per week for men, and over 5 units per day and over 35 units per week for women.

Similarly, Australia’s Alcohol Guidelines¹¹ also provide differential recommendations with respect to levels of risk. At “low risk” levels risk is minimal and benefits may exist for some individuals; at “risky” levels risk for harm is significantly increased beyond any possible benefits; at “high risk” levels there is substantial risk for serious harm and a rapid increase in risk at levels above those.

CONFOUNDING FACTORS

The rationale behind providing recommendations for the consumption of alcohol and alerting the population to possible risks and benefits is a consistent one – how to offer the best possible advice to individuals. However, while there is agreement in principle with regard to the kind of information that is provided, as Table 1 shows, there is considerable inconsistency in the actual levels of alcohol that are considered “safe” or “low-risk” in different countries. Several possible reasons underlie this discrepancy.

For example, the evidence base used in the crafting of recommendations may not be the same in each case. There is variation in the outcomes of research studies and the parameters that are used in carrying them out, and these differences may be reflected in the provision of health information. In addition, there is a difference in the outcomes of alcohol consumption depending on whether one is considering chronic or acute consequences. Chronic outcomes address the long-term health effects of drinking, such as liver cirrhosis in heavy drinkers or the cardio-protective effects of moderate alcohol consumption for some groups of individuals. Acute harm is most often associated with short-term outcomes of drinking, such as injuries and accidents, for example, those associated with drinking and driving. It is important to acknowledge these two sets of outcomes when considering the effects of alcohol at different levels of consumption, as they may be significantly different.

Another reason for the variation is inherent in the definitions that are used for setting limits. Many recom

recommendations rely on the concept of a “standard” drink or unit to define the amount of alcohol consumed. For a variety of reasons, both historical and cultural, standard drink sizes cover a broad range.¹² Initially used primarily to standardize serving sizes in bars, pubs, restaurants and other commercial venues, these units often reflect traditional serving sizes of different beverages. The result is a “standard” size that is anything but standard – ranging from 8g to 19.75g of ethanol (see Table 1).

Culture plays a prominent and defining role when it comes to views on alcohol consumption within a given society. Drinking recommendations reflect these differences in a number of ways. For example, it is interesting to consider that while some countries offer different recommendations for men and women, others do not. One might speculate that these differences could reflect not only views about alcohol, but possibly also prevailing views about gender roles. Another manifestation of drinking culture can also be seen in the beverage-specific recommendations given in some countries. The Portuguese National Council on Food and Nutrition, for example, bases its recommendations and definition of “standard” units on wine consumption, reflecting that country’s tradition as a wine-drinking society. In Romania, the Ministry of Health offers distinct guidelines for levels of alcohol consumption based on whether the beverage happens to be beer or wine.

Finally, the threshold for drinking recommendations may also reflect the general view of a particular government on how information on health and risk should be shared with the public. Guidelines that include recommendations for low levels of consumption may relate to a government’s decision to err on the side of caution when it comes to the wellbeing of its citizens.

SUMMARY

The public health implications of drinking guidelines are significant. Guidelines offer information that is accessible and potentially useful not only to those who specialize in the health and alcohol fields, but also the average consumer of beverage alcohol. The basic question that most people would like answered in relation to their drinking is not the shape of a risk curve or a review of the most current biomedical literature, but how their physical and mental wellbeing will be affected by the drinks they consume. “How much can I safely drink and if I drink more, how will it affect me?”

As greater attention is paid to individual drinking patterns and the outcomes of alcohol consumption for particular populations whose susceptibility to risk may vary, the information that is provided in drinking guidelines becomes more meaningful and practical. However, it is important to note one final caveat. Namely, that for all the variations among populations that are considered in the best crafted of guidelines, it is still potentially dangerous to extrapolate from group averages to individuals. While drinking guidelines provide just that, guidelines for drinking behavior, specific recommendations for individuals are still best sought from healthcare providers and those familiar with an individual’s health history.

TABLE 1: INTERNATIONAL DRINKING GUIDELINES

Country	Source	Recommendations			
		Men	Women	Standard Drink	Suggested/Other
Australia	National Health & Medical Research Council	not to exceed 4 units/day (40g/day), not to exceed 28 units/week (280g/week)	not to exceed 2 units/day (20g/day), not to exceed 14 units/week (140g/week)	10g	Guidelines recommend not drinking more than 1-2 drinks/hour and 1-2 alcohol-free days/week. Lists special populations that should not drink, including pregnant women and youth.
Austria	Federal Ministry for Labour, Health & Social Affairs	24g/day	16g/day	10g	Hazardous limit (unacceptable risk for health consequences) defined as 60g/40g alcohol per day. Based on British "Sensible Drinking Guidelines."
Canada	Centre for Addiction & Mental Health and Addictions Research Foundation	not to exceed 2 units/day (27.2g/day), not to exceed 14 units/week (190g/week)	not to exceed 2 units/day (27.2g/day), not to exceed 9 units/week (122g/week)	13.6g	
	Health Canada - Sante Canada				Moderate drinking means no more than 1 drink a day, and no more than 7 drinks a week. More than 4 drinks on one occasion, or more than 14 drinks a week is a risk to health and safety. If you are pregnant or breast-feeding, avoid alcohol.
Czech Republic	National Institute of Public Health	24g/day	16g/day		
Denmark	National Board of Health	21 units/week (252g/week)	not to exceed 14 units/week (168g/week)	12g	Recommend that children under the age of 15 should not drink.
Finland	Oy Alko AB	not to exceed 15 units/week (165g/week)	not to exceed 10 units/week (110g/week)	11g	
France	Ministry of Health, Family & Persons with Disability	not to exceed 20g/day	not to exceed 20g/day	12g/beer, 8g/wine	National Program for Health & Nutrition (PNNS): <i>La sante vient en mangeant</i> . Those who drink should reduce their consumption. Pregnant women should not drink. Do not drink and drive.
	National Academy of Medicine	not to exceed 5 units/day (60g/day)	not to exceed 3 units/day (36g/day)	12g	
Hong Kong	Department of Health & Social Security	not to exceed 3-4 units/day, not to exceed 21units/week	not to exceed 2-3 units/day, not to exceed 14 units/week	1 unit = glass/wine or pint/beer	

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		Men	Women	Standard Drink	Suggested/Other
Iceland	Alcohol and Drug Abuse Prevention Council				Advice that pregnant women abstain from alcohol during pregnancy and breast feeding since no safe consumption level exists.
Indonesia	Ministry of Health				National Dietary Guidelines state: avoid drinking alcoholic beverages.
Ireland	Department of Health	21 units/week (168g/week)	14 units/week (89g/week)	8g	
Israel	Ministry of Education, Psychological & Counselling Services				Recommended: pregnant women not drink; students not drink more than one unit at a time; avoid alcohol if taking medication.
Italy	Ministry for Agriculture & Forestry and National Institute for Food & Nutrition	not to exceed 2-3 units/day (24-36g/day)	not to exceed 1-2 units/day (12-24g/day)	12g	Nutritional Guidelines: <i>Linee guida per una sana alimentazione italiana</i>
Japan	Ministry of Health, Labor & Welfare	1-2 units/day (19.75-39.5g/day)		19.75g	
Luxembourg	Ministry of Health				No limits specified, refrain from drinking and driving.
The Netherlands	Stichting Verantwoord Alcoholgebruik	not to exceed 3 units/day (39g/day)	not to exceed 2 units/day (39g/day)	9.9g	Advise at least two alcohol free days per week. Avoid alcohol when pregnant, driving or operating machinery and if an adolescent. Women with a low body weight are advised to drink less than the recommended daily limit.
New Zealand	Alcohol Liquor Advisory Council (ALAC)	not to exceed 3 units/day (30g/day), not to exceed 21 units/week (210g/week)	not to exceed 2 units/day (20g/day), not to exceed 14 units/week (140g/week)	10g	Should not exceed 6 units/day (60g/day) for men, 4 units/day (40g/day) for women on special one time drinking occasion.
Norway	Directorate for Health & Social Welfare				Recommend situational abstinence, such as when driving, during pregnancy, at work or in the company of children and young people.
	AlcoKutt				AlcoKutt suggests: Never to drink on an empty stomach or an empty head. Give a message when someone has got enough. Show respect to people who do not drink alcohol. Remember that women do hold less alcohol than men. Listen to experienced professionals. Be on guard against drinking-pressure, even among your best friends. Remember time and place where you should not drink alcohol. Never drink alone. Quit in good time, it's never a shame to say no. Don't drink as an adolescent.
Philippines	Department of Health				National Dietary Guidelines state: for a healthy lifestyle and good nutrition, exercise regularly, do not smoke and avoid drinking alcoholic beverages.

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		Men	Women	Standard Drink	Suggested/Other
Poland	State Agency for Prevention of Alcohol Related Problems	2 units/day (20g/day) up to 5 times/week (not to exceed 100g/week)	1 unit/day (10g/day) up to 5 times/week (not to exceed 50g/week)	10g	Not official guidelines, based on WHO recommendations. Suggest two alcohol free days/week.
Portugal	National Council on Food and Nutrition	2-3 units/day (28-42g/day)	1-2 units/day (14-28g/day)	14g (unofficial)	Based only on wine consumption.
Romania	Ministry of Health	not to exceed 32.5g beer/day or 20.7g wine/day	not to exceed 32.5g beer/day or 20.7g wine/day		
Singapore	Ministry of Health				National Dietary Guidelines state: Limit alcohol intake to not more than 2 standard drinks a day (about 30g alcohol).
Slovenia	Institute of Public Health of Slovenia	not to exceed 20g/day and not to exceed 50g/drinking occasion	not to exceed 10g/day and not to exceed 30g/drinking occasion		
South Africa	South African National Council on Alcoholism & Drug Dependence	not to exceed 21 units/week (252g/week)	not to exceed 14 units/week (168g/week)	12g	
Spain	Ministry of Health and Spanish Institute for the Investigation of Beverage Alcohol	not to exceed 3 units/day (30g/day)	not to exceed 3 units/day (30g/day)	10g	Wine officially considered as an integral part of a Mediterranean diet.
	Basque Country: Department of Health & Social Security	not to exceed 70g/day	not to exceed 70g/day		
	Catalonia: Central Authority	not to exceed 4-5 units/day (32-50g/day)	not to exceed 4-5 units/day (32-50g/day)	8-10g	
Sweden	Swedish Research Council	not to exceed 20g/day	not to exceed 20g/day		Recognised that a moderate alcohol intake may have certain positive medical effects.
Switzerland	Swiss Federal Commission for Alcohol Problems and Swiss Institute for the Prevention of Alcohol & Drugs Problems	not to exceed 2 units/day (not to exceed 24g/day)	not to exceed 2 units/day (not to exceed 24g/day)	10-12g	Lists exceptional drinking guidelines: not to exceed 4 units/event, not to exceed 1 unit/hour. No alcohol for youngsters; no alcohol during sports; no alcohol whilst operating machinery or before driving. Females have to be particularly cautious.

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Country	Source	Recommendations			
		Men	Women	Standard Drink	Suggested/Other
Thailand	Ministry of Public Health				National Dietary Guidelines state: avoid or reduce the consumption of alcoholic beverages.
United Arab Emirates	Ministry of Health				No official guidelines. Alcohol available in hotels to guests and visitors. Expatriate residents must possess a liquor permit, available to non-Muslims. Retail outlets sell only to permit holders for personal consumption. Providing alcohol to others is forbidden.
United Kingdom	Department of Health	3-4 units/day (24-32g/day), not to exceed 21 units/week (168g/week)	2-3 units/day (16-24g/day), not to exceed 14 units/week (112g/week)	8g	Advises women who are pregnant or who are trying to get pregnant to drink no more than 1 - 2 units of alcohol per week. Recognize that moderate drinking for men over 40 and postmenopausal women confer health benefits including, lower risk of coronary heart disease, ischemic stroke and gallstones.
	Scottish Executive	3-4 units/day (not to exceed 32g/day)	2-3 units/day (not to exceed 24g/day)	8g	Uses "Sensible Drinking Guidelines" as part of national alcohol strategy.
United States	Department of Agriculture and Department of Health & Human Services	1-2 units/day (14-28g/day), not to exceed 14 units/week (196g/week)	1 unit/day (14g/day), not to exceed 7 units/week (98g/week)	14g	<i>Nutrition and your health: Dietary guidelines for Americans (5th ed.)</i> Recognize that moderate drinking may lower the risk of coronary heart disease, among men over 45 and women over 55; Exceeding moderate consumption can raise the risk for accidents, high blood pressure, stroke, violence, suicide, birth defects and certain cancers; A safe level of alcohol intake has not been established for women at any time during pregnancy; Avoid drinking before, or when driving; Consume alcohol with food, to slow absorption.
	National Institute of Alcohol Abuse and Alcoholism (NIAAA)	not to exceed 4 units/day (56g/day), not to exceed 14 units/week (196g/week)	not to exceed 3 units/day (42g/day), not to exceed 7 units/week (98g/week)	14g	<i>Physicians' Guide to Helping Patients with Alcohol Problems</i>
	American Heart Association	not to exceed 2 units/day (28g/day)	not to exceed 1 unit/day (14g/day)	14g	AHA Dietary Guidelines

*Chart compiled with assistance of the Centre for Information on Beverage Alcohol, CBA, London, UK.

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