

Communicating Through Government Agencies

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A comparison of worldwide recommendations on alcohol consumption reveals wide disparity among countries. This could imply that many of the recommendations do not adequately accommodate the science, given that the science is equally valid worldwide. Such a view, however, would be an oversimplification of the problem that those who formulate such guidelines face. The objective of guidelines is to influence and change behavior among target populations. It follows, therefore, that several factors then become relevant: behavior that is thought to be in need of change, the culture and mindset of the target populations, and the kind of message that is likely to be effective. There are some tensions between advice intended only to reduce the prevalence of misuse and that which also seeks to reflect the evidence on the beneficial health effects of moderate consumption.

Ann Epidemiol 2007;17:S98–S102. © 2007 Elsevier Inc. All rights reserved.

KEY WORDS: Alcohol Drinking, Public Policy, Health Policy, Health Planning Guidelines.

INTRODUCTION

Do governments take into consideration scientific evidence when establishing recommended maximum levels of alcohol consumption? If so, to what extent? If the levels are not based on science, then what does influence them?

A review of guidelines produced by governments worldwide reveals widely differing views of what are regarded as appropriate, “safe,” or low-risk maximum levels of alcohol consumption and associated consumption patterns. “Safe” or low-risk consumption is considered to be the amount of alcohol that an individual can safely consume without significantly increasing the risk of negative health and social effects (1). This definition can be extended to include the amount of alcohol that an individual can safely consume to potentially experience or gain positive health effects in the longer term.

From a review of the literature, moderate alcohol consumption is generally defined as approximately 20 to 30 g alcohol per day (2–4), a level at which the moderate consumption of alcohol can reduce the risk of cardiovascular disease by 20% to 50% (5). The recommended maximum levels of alcohol consumption for men and women are listed in Table 1 (daily levels) and Table 2 (weekly levels). Of the reports, reviews, and analyses that preceded the setting of these recommended levels of intake, only those undertaken

by Australia, Canada, the United States and the United Kingdom (UK) took into account the potential beneficial health effects of alcohol consumption.

It is not difficult to identify inconsistencies among these recommendations. In some countries, and even within different regions of the same country, recommended levels vary, sometimes up to 2- or 3-fold. Some governments make recommendations for daily intakes, some weekly, and some both daily and weekly. For example, as shown in Tables 1 and 2, safe consumption for men lies between 27 and 50 g of alcohol per day, and between 47 and 280 g per week. Most, but not all, governments make different recommendations for men and women, where a safe level of consumption for women is generally approximately one-half that considered to be safe for men. Only some governments, however, also take an individual’s age and body weight into account, specify levels for individuals with certain medical conditions, or provide special recommendations for pregnant women. In addition, there is no consistency on the sizes of standard drinks across countries, which generally reflects differences in cultures and customs.

Based on scientific evidence, a consistent message could be expected worldwide. However, such differences are less surprising when one also considers other factors.

DIFFERENCES IN GOVERNMENT RECOMMENDATIONS

There are a number of possible reasons why government recommendations for safe alcohol consumption differ, and the lack of a single international recommendation that is satisfactory for all.

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TABLE 1. Summary of recommended maximum daily levels of intake of alcohol (Reprinted from 38)

Country	Men, g/d	Women, g/d	Comment
Australia	40	20	Four standard drinks a day (two for women) with two alcohol-free days per week regarded as low risk
Austria	24	16	
Canada	27.2	27.2	
Czech Republic	24	16	
France	29	20	
Italy	24-36	12-24	
Japan	39.5		
Netherlands	29.7	19.8	Advise not to drink at least 2 days within a week
New Zealand	30	20	Should not exceed 60 g/d on special one-time drinking occasion
Poland	20	10	Up to 5 days a week
Portugal	28-42	14-28	Based only on wine consumption
Romania	20.7-32.5	20.7-32.5	Up to 32.5 g as beer or 20.7 g as wine
Slovenia	20	10	Not to exceed 50 g per drinking occasion (30 g for women)
Spain	30	30	Wine officially considered an integral part of Mediterranean diet
Basque country	70	28	1 g/kg body weight (0.5 g/kg body weight for women)
Catalonia	32-50	32-50	
Sweden	20	20	Recognize that moderate alcohol intake may have certain positive medical benefits
Switzerland	24	24	
United Kingdom	24-32	16-24	Recognize that moderate drinking for men over 40 and postmenopausal women confers health benefits
USA	28	14	Recognize that moderate drinking may lower risk of coronary heart disease among men over 45 and women over 55

Science

The scientific evidence relating to both abusive and moderate alcohol consumption is itself not sufficiently consistent to produce precise recommendations for safe drinking. There is no clear scientific evidence that uniformly applies to all population groups. Indeed, the many factors influencing the definition of safe alcohol consumption for a specific population group include age, body mass index, ethnicity, family history, mental and physical health, and the use of medications. Consequently, definitions are likely to vary among population groups, as well as across countries and within them individually. Thus most governments use simple messages and recommendations that apply to the majority of the general population rather than complex ones that include recommendations for a number of specific population groups. However, the recommendations of the Australian and UK governments have evolved to also include definitions of safe alcohol consumption for specific population groups in addition to a basic generalized recommendation.

Culture

The science base for the health consequences of both alcohol abuse and moderate consumption is not the only criterion or factor that is considered by governments when producing guidelines. Indeed, the purpose of recommendations is not to facilitate debate and discourse about the

science but to facilitate a change in behavior. Thus it is important to take into account the prevailing drinking culture of a population, because only in that way is it possible to produce a public health message that is likely to be respected and regarded.

Interestingly, as evidenced by Tables 1 and 2, those countries with a Mediterranean-style diet, lifestyle, and consumption patterns, such as drinking wine with daily meals, appear to have higher recommended maximum levels for

TABLE 2. Summary of recommended maximum weekly levels of intake of alcohol (Reprinted from 38)

Country	Men, g/wk	Women, g/wk	Comment
Australia	280	140	
Canada	190	122	
Denmark	252	168	
Finland	165	110	
Ireland	210	140	
New Zealand	210	140	
Poland	100	50	
South Africa	252	168	
United Kingdom	168	112	Recognize that moderate drinking for men over 40 and postmenopausal women confers health benefits
USA	196	98	Recognize that moderating drinking may lower risk of coronary heart disease among men over 45 and women over 55

alcohol consumption than do other countries, especially those with a culture of binge beer and spirits drinking (6). Distinctions among countries' consumption patterns are disappearing, however, as beverage preferences have begun to converge globally (6). This can be seen in a trend toward binge drinking and intoxication among young adults irrespective of country (7).

Economics and Terms of Reference

Although the specific population groups being targeted by recommendations may differ, generally most governments are principally concerned with reducing the economic, health, and social consequences of alcohol misuse per se. Their recommendations are aimed at the population groups that are misusing alcohol or drinking cultures that are likely to lead to misuse. This is also the approach advocated by the World Health Organization (8, 9). Indeed, of the 2 billion people that consume alcoholic beverages worldwide, approximately 76.3 million or 3.8 % have alcohol-related problems due to alcohol abuse, and 1.8 million (0.09%) are estimated to be likely to die from alcohol-related harms (10). Alcohol is the fifth highest cause of the global burden of disease behind childhood and maternal underweight, unsafe sex, hypertension, and tobacco use and is estimated to cause 20% to 30% of esophageal and liver cancers, cirrhosis of the liver, and epileptic seizures worldwide (11).

In this context, the positive consequences of moderate consumption appear much less relevant, and it is not surprising that they are not usually taken into account in government recommendations. Indeed, while only four governments have publicly recognized the potential health benefits of moderate alcohol consumption in the preamble to their recommendations, only the Australian and UK governments have incorporated them into guidelines, such as the *Australian Drinking Guidelines: Health Risks and Health Benefits* (12) and the UK's *Sensible Drinking Guidelines* (13), respectively.

The public health consequences of moderate drinking are much more likely to be taken into account where recommendations are aimed at the whole population and are set in the context of the diet as a whole, as is the case with the US *Dietary Guidelines for Americans* (14). Although such guidelines may acknowledge that there may be benefits to health, these benefits are primarily conferred on middle-aged and older individuals and need to be adequately weighed against other risks to health (15-18).

Target Audience

An additional layer of complexity is the intended audience for particular guidelines. For example, in Australia, recommendations are written for the general population, as well as for the use of health professionals and policymakers.

The Canadian guidelines, on the other hand, were written primarily for health promotion within the general population and are specifically intended to assist physicians in providing appropriate advice to patients. Furthermore, the UK guidelines have offered a review of medical evidence on alcohol consumption that has helped to develop policies fostering responsible, nonabusive drinking. In contrast, the US guidelines serve as authoritative advice for the general population about how good dietary habits can promote health and reduce risk for major chronic diseases and also serve as the basis for federal food and nutrition education programs.

Ministerial Approval

Finally, in many countries, any government guidelines may have to be approved or endorsed by government ministers before they can be implemented. This step adds a further source of variability as, inevitably, political judgment is involved. In light of these factors, therefore, it is likely, if not inevitable, that governments produce recommendations that differ markedly from one another.

POTENTIAL PROBLEMS WITH RECOMMENDATIONS

It may be argued that in some instances recommendations intended to change the behavior of those misusing alcohol or who are at risk of doing so may conflict with those intended to maximize the potential beneficial effects in a population. For example, advice to abstain from drinking on some days of the week is at odds with the potential beneficial effects of regular, daily moderate drinking on the cardiovascular system. This consumption pattern has been observed to prolong any acute and short-term beneficial effects of alcohol and phenolic components on hemostasis (19, 20) and it also maintains or promotes some long-term beneficial effects, including that on blood pressure (21, 22). The importance of this observation may be eroded, however, by the observation that in many cultures, people who drink regularly tend to drink too much, and light drinkers tend to not drink regularly (23).

In addition, advice on the beneficial effects of moderate consumption is not useful to populations at high risk for alcohol abuse. For example, although moderate consumption may confer some cardioprotection in the young (24, 25), this benefit is generally not considered relevant for young adults, for whom the risk of mortality and morbidity from accidents is far greater (26). This is succinctly stated in the US *Dietary Guidelines for Americans* (14) and in the Canadian *Low-Risk Drinking Guidelines* (27).

Conversely, recommendations that seek to reduce overall alcohol consumption in a population may also reduce

that of moderate consumers. This effect may eventually be reflected in an increased incidence of cardiovascular disease within a population and is likely to have an economic impact and an effect on general health. Indeed, in the developed world, cardiovascular disease is the leading cause of mortality, accounting for 25% to 50% of all deaths. Its incidence is increasing in developing countries.

It is important, therefore, when formulating recommendations on maximum levels of alcohol consumption to recognize these potential problems and to seek ways of resolving them.

FUTURE TRENDS

It is likely that nutrition research will generate findings that will continue to change alcohol's role as part of a healthy diet and lifestyle. It is already established that the extent of the beneficial health effects of moderate alcohol consumption is related to the background diet (20, 28), with the largest effects of drinking found when alcohol is consumed as part of a diet that is high in saturated fat (29-32). Another important finding is that beneficial health effects of moderate drinking are enhanced in diets that are already high in plant-derived phenolic compounds, such as a Mediterranean-style diet. The more recent findings on the potential beneficial effects of moderate alcohol consumption on diabetes mellitus and obesity (33-37) are especially important in light of present trends in body weight of individuals worldwide. Similar future findings would make a strong case for the importance of taking the positive outcomes of moderate consumption of alcohol into account when formulating both recommended maximum levels of drinking and population dietary guidelines.

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