





A discussion document on policy options



Alcohol labelling

A discussion document on policy options

ABSTRACT

This discussion document presents an analysis of the policy options available for introducing warning and product labelling on alcoholic beverage containers. It outlines the existing legal and policy frameworks and the current level of implementation in the WHO European Region. Some components that could be considered when developing effective health warning labels are described.

Address requests about publications of the WHO Regional Office for Europe to:

Publications

WHO Regional Office for Europe

UN City, Marmorvej 51

DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office website (http://www.euro.who.int/pubrequest).

Photos: Eurocare

© World Health Organization 2017

All rights reserved. The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full. Some rights reserved. This work is available under the CC BY-NC-SA 3.0 IGO licence.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. The views expressed by authors, editors, or expert groups do not necessarily represent the decisions or the stated policy of the World Health Organization.

CONTENTS

Acknowledgements	iv
Abbreviations	iv
Key messages	1
Background	2
Legal frameworks	
Knowledge and consumer support	4
Ingredients and nutritional information	5
Energy	5
Allergens	6
Health information	7
Overview of research findings	7
Alcohol labelling in the WHO European Region	8
Importance of good design	8
Promoting discussion, raising awareness, changing attitudes	8
Conclusions	10
References	11

ACKNOWLEDGEMENTS

This policy brief was prepared by Aleksandra Kaczmarek, Senior Policy Officer, Eurocare (European Alcohol Policy Alliance).

The WHO Regional Office for Europe would like to thank Mariann Skar of Eurocare for her help during the drafting process.

Technical editing was done by the following members of the WHO Regional Office for Europe: Julie Brummer, Consultant; Lisa Schölin, Consultant; Lars Møller, Programme Manager; and Gauden Galea, Director.

ABBREVIATIONS

ABV alcohol by volume EU European Union

FAO Food and Agriculture Organization

kcal kilocalorie

WTO World Trade Organization

KEY MESSAGES

It is the right of consumers to make informed choices about the products they purchase, and it is the obligation of public institutions to ensure consumers are able to do so. Labels could be considered as part of a comprehensive strategy to provide information and educate consumers to prevent and reduce alcohol-related harm. This policy option should be seen not as an initiative that will modify behaviour overnight, but as a way of bringing gradual change over time. Bringing alcohol packaging requirements into line with those that apply to non-alcoholic beverage packaging (as per EU Regulation No. 1169/2011) would involve listing ingredients and seven nutritional values per 100 ml. Similarly, nutritional values might be provided per portion, as they are for non-alcoholic beverages, provided that they represent actual serving sizes.

Listing the ingredients contained in a particular beverage alerts the consumer to the presence of any potentially harmful or problematic substances. No less important, providing nutritional information such as energy content allows consumers to monitor their diets better and makes it easier to maintain a healthy lifestyle. Suggestions for product labelling are outlined in Box 1.

Box 1. Options for product labelling

- Inclusion of a list of ingredients and nutritional information (such as energy content) on containers.
- Provision of information on labels explaining impact on health.
 - ▶ Label should be placed in a standard location on the container.
 - > Size of the label should be determined as a minimum percentage of the size of the container.
 - ▶ Rotating messages should be used, with sufficient vividness and strength to attract consumers.
 - Text should be clearly separated from other information on the label (for example, placed in boxes with thick borders).
 - ▶ Text should be printed in capital letters and bold type; its size should be the same as for all other information provided on the container.
 - > Text should appear on a contrasting background (for example, red type on white).
 - > Text should be written in the official language(s) of the country in which the product is sold.
 - > Images used should be informational in style and taken from ongoing educational campaigns.
 - Public health bodies can usefully advise on the content of messages.

BACKGROUND

In 2010, the Sixty-third World Health Assembly endorsed the *Global strategy to reduce the harmful use of alcohol,* supported by all 194 Member States. Within the 10 recommended target areas, labelling of alcoholic beverages as a tool to increase awareness and reduce alcohol-related harm was included in Area 8: "Reducing the negative consequences of drinking and alcohol intoxication" (1). Following the endorsement of the global strategy, the *European action plan to reduce the harmful use of alcohol 2012–2020*, outlining a portfolio of policy options specifically aimed at the Member States of the WHO European Region, was endorsed at the 61st session of the WHO Regional Committee for Europe. Within the action plan, the need for ingredients listing, including the calorie content, is outlined. Specifically, labels serve to provide this information, as they do for foodstuffs, in such a way as to ensure that consumers have access to complete information on the content and composition of the product, for the protection of their health and other interests (2).

Alcohol product labelling could be considered as a component of a comprehensive public health strategy to reduce alcohol-related harm. Adding health labels to alcohol containers is an important first step in raising awareness and has a longer-term utility in helping to establish a social understanding of the harmful use of alcohol. Labelling requirements worldwide for alcoholic beverages are currently quite diverse and somewhat limited compared to labelling on food products and tobacco. Alcohol labelling regulation is applied, nationally and internationally, through one or a combination of means including food standards laws and codes and voluntary agreements reached between industry and government. Some countries have introduced mandatory health labels on alcoholic beverages (3).

For consumers, the food label is the principal source of information at the point of sale. For example, a 2007 survey revealed that 84% of Australians and 81% of New Zealanders cited food labels as their main source of information about the nutritional content of foods (4).

In the European Union (EU), Regulation 1169/2011 on the provision of food information to consumers has made considerable changes to food-labelling legislation (5). The regulation was the culmination of some very heated debates over a number of contentious issues. In the end, alcoholic beverages containing more than 1.2% alcohol by volume (ABV) were exempted from the obligation to provide information to consumers – they do not have to list their ingredients or provide nutritional information. As a compromise, the European Parliament requested that the European Commission produce a report concerning the application of Regulation 1169/2011 and address the question whether alcoholic beverages should in the future be covered. The report (March 2017) clearly states that objective grounds have not been identified that would justify the absence of information on ingredients and nutritional information on alcoholic beverages or a differentiated treatment for some alcoholic beverages. The European Commission notes in its report that the alcohol sector is increasingly willing to provide such information, and therefore it is giving the alcohol producers a year to deliver a self-regulatory proposal that would cover the entire sector of alcoholic beverages. The European Commission will assess the industry's proposal, and if it is unsatisfactory, it will launch an Impact Assessment (6).

As an option for action, WHO, in line with the European action plan, proposes that measures could be taken to introduce a series of warning or information labels on all alcoholic beverage containers (1, 2), providing information both on ingredients and on the risks associated with alcohol consumption: damage to health (cirrhosis of the liver, cancers), risk of dependence, and dangers associated with drinking alcohol when pregnant, driving a vehicle, operating machinery and taking

certain medications. Health messages on labels can increase knowledge and encourage a change in perception of the risks associated with alcohol consumption. As public health professionals search for effective policies to address alcohol-related harm, labels stand out as an underutilized way of empowering consumers to make healthy decisions about alcohol intake (7). Labelling provides a unique opportunity for governments to disseminate health messages at the point of sale and point of consumption. Placing health information on alcoholic drinks and containers targets the appropriate audience (the drinker) at the appropriate time (when purchasing and using the product).

Legal frameworks

National food-labelling laws exist within a network of international conventions and agreements that impose obligations on the countries that have signed up to them. Table 1 provides an overview of international conventions and agreements relevant to labelling of alcoholic beverages.

Table 1. International conventions and agreements

The Codex Alimentarius (the Codex) is supervised by the Codex Commission, which is responsible to WHO and the Food and Agriculture Organization (FAO). The Codex Commission's primary purposes are to protect the health of consumers, ensure fair trading practices in the food trade and promote the coordination of international food standards. The Codex has become a highly significant influence on global food law and is also important in settlement of World Trade Organization (WTO) disputes (domestic standards which comply with the Codex are more likely to comply with WTO expectations). Any new regulatory provisions under WTO and EU rules have to be justifiable and proportionate to the compliance burden they impose (8).

Article 16 (4) of **Regulation (EU) No. 1169/2011 on the provision of food information to consumers** exempts alcoholic beverages containing more than 1.2% ABV from mandatory listing of ingredients and the nutrition declaration. Although there is no requirement for alcoholic beverages to list their ingredients, food business operators may voluntarily provide this information to consumers. In accordance with Article 36 of the Regulation, such information must comply with the provisions governing the mandatory listing of ingredients (5).

Under the terms of **Regulation (EC) No. 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods**, alcoholic beverages are prohibited from bearing health claims; the only nutritional claims that are permitted are ones referring to low alcohol levels and reduction of alcohol or energy content *(9)*.

KNOWLEDGE AND CONSUMER SUPPORT

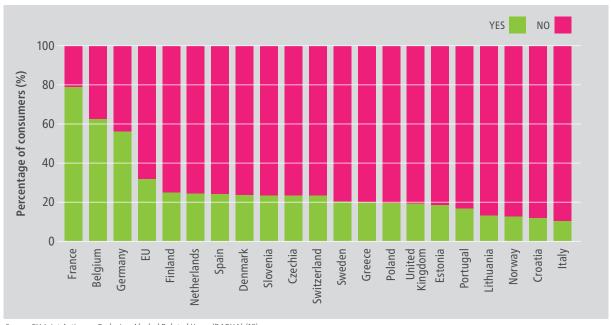
Knowledge of the nutritional value and ingredient information of alcoholic beverages is very limited; there is a demand among consumers to receive this kind of information. Studies in Europe have shown that consumers lack knowledge of the carbohydrate, calorie and fat content of different types of alcoholic beverage and of the different ingredients that can be used in their production (10). Among Italian consumers, only 22% were aware of the kilocalorie (kcal) content of a glass of wine, while most individuals (51%) tended to underestimate the kcal content or even thought that wine had no kcal content at all (12%) (11).

Surprisingly few studies have analysed consumer interest in nutritional labels on alcoholic beverages. However, the findings bring to light a clear information gap (limited knowledge of the nutritional content of alcoholic drinks) and a strong interest expressed by consumers for nutritional information to be included on labels (12–17).

In European surveys, most consumers agree that the same nutritional and ingredient information should be provided for all food and drink products, regardless of whether they contain alcohol or not (10). As part of the European Commission-mandated study of the impact of food information on consumers' decision-making, almost half (49%) of the participants wanted information on the energy value of alcoholic drinks (18).

In the context of the EU Joint Action on Reducing Alcohol Related Harm (RARHA) project, a snapshot was taken of consumers' perceptions and understanding of communication about alcohol-related risks. Consumers' responses stressed the need for further information on potential health risks and suitable sources of information (Fig. 1). Consumers appear to be keen to receive more information on the topic: 50.4% would like to have more information on ingredient listing; 43.2% on calorie content; and 37.9% on nutritional value. Pictograms and short informative texts appear to be favoured by the survey sample as the means of providing information (19).

Fig. 1. Perceptions among consumers in 20 European countries of whether alcoholic beverage labels provide sufficient health-related information



Source: EU Joint Action on Reducing Alcohol Related Harm (RARHA) (19)

Despite widespread usage of new technologies, use of online sources to search for information on the composition of alcoholic beverages is limited. A European survey found that half the respondents never or rarely use off-label information sources (10). These results are similar to the RARHA project survey responses, which indicate that only 24.7% of the respondents search online for information on ingredients or additives in their alcoholic beverages (19). Websites have a major disadvantage as a source of consumer information in that they are dissociated from the immediate points of sale and consumption.

Labels are a key source of information for wine consumers in particular, providing details on both intrinsic and extrinsic quality cues (20, 21). A bottle of wine and its label are observed and potentially discussed before, during and after consumption (11).

INGREDIENTS AND NUTRITIONAL INFORMATION

Energy

Apart from fat, ethanol is the macronutrient with the highest energy density. Total energy consumption per day increases with the level of alcohol consumption; this energy increase is mainly due to the calories provided by alcohol. Though alcohol can serve as an energy source, how the body processes and utilizes the energy from alcohol is complex (22). Alcohol intake may be associated with altered patterns of food intake, resulting in the replacement of other nutrients with alcohol.

Being high in sugar means alcohol contains a considerable number of calories (Fig. 2), with an energy content of 7.1 kcal/g – only fat has a higher energy value per gram (9 kcal/g). Research suggests that alcohol consumption may represent a sizeable risk factor for weight gain (23–28). For instance, alcohol has been found to account for approximately 10% of adult drinkers' total energy intake on average in the United Kingdom and 16% in the United States (29), with men consuming about three times as much as women. Furthermore, surveys show that the populations of the United Kingdom and the United States generally have poor knowledge of alcohol calories, with four out of 10 unaware of alcohol calories and their food equivalents (30).

Fig. 2. Calorie content in beer, red wine and whisky



Source: Drinkaware (www.drinkaware.co.uk)

Drinking alcohol also reduces the amount of fat the body burns for energy. While nutrients – proteins, carbohydrates and fats – can be stored in the body, alcohol cannot. As a result, the body prioritizes getting rid of alcohol from its system, and other processes that should be taking place are interrupted.

Some evidence highlights an association between alcohol consumption and weight gain or obesity risk among young people, especially young females (31–34). Not only can alcohol represent a potentially significant source of calories with limited or no nutritional value, but it tends to be an additional source of calorie intake (35). Alcohol intake can also act as an indirect risk factor for obesity through modified diet; for instance, alcohol consumption may result in increased food intake and may be associated with disordered eating such as binge-eating. In one Canadian study, 27.2% of students sampled binge-drank once a month, with the result that they consumed between 6000 and 13 200 additional calories in a year (equivalent to 0.78–1.71 kg of fat). For the 4.9% of students who binge-drank twice a week, the total additional calories in one year would range from 52 000 to 114 400 (equivalent to 6.74–14.83 kg of fat) (36). The high prevalence of frequent alcohol consumption and binge-drinking among young people and the substantial number of calories contained in alcoholic beverages suggest that alcohol use may warrant consideration in relation to youth obesity prevention.

In some countries, alcoholic drinks are one of the main contributors to sugar in the adult diet (37). There is a positive correlation between calories derived from alcohol and obesity (38, 39).

Providing consumers with information about the calorie content of alcoholic beverages is a potentially important way of helping them reduce their calorie intake if they so wish. It also seems reasonable that consumers are given this information just as they are for foodstuffs. This could potentially contribute to measures to address the problem of adult obesity.

Allergens

For at-risk consumers of allergenic material, food labelling remains an important means by which they are able to identify and avoid allergens of concern. In order to better inform consumers who suffer from food allergies, EU directives have established guidelines for compulsory labelling of a variety of potentially allergenic substances in foodstuffs (Fig. 3) (40).

In 2012, Regulation (EU) No. 579/2012 required listing of: (i) eggs and egg-based products; (ii) sulfites; and (iii) milk and milk-based products in wine. In order to improve the readability of the

Fig. 3. Required allergen pictogram for wine



information provided to consumers, the listing may be accompanied by pictograms (40). However, the EU regulations only require listing of the most common allergens. Some people might be allergic to substances that are not considered common. Unlike for food products, ingredients listings for alcohol products are not obligatory. Hence, consumers cannot easily track whether or not ingredients they are allergic to are contained in alcoholic beverages. Requiring alcoholic beverages to list ingredients would substantially improve provision of information to consumers and allow them to track potentially problematic products.

HEALTH INFORMATION

Labelling provides a unique opportunity for governments to disseminate health promotion messages at the points of sale and consumption. Health information labels are an inexpensive tool that provides direct information on the risks associated with alcohol consumption.

In the EU, France was the first member state to require that consumers be informed about the dangers associated with drinking alcohol. Since 2007, it has been mandatory for alcoholic beverages either to include the following message: "consumption of alcoholic drinks during pregnancy, even in small amounts, may have serious consequences on the child's health"; or to use a pictogram (Fig. 4).

Health information labels can deliver clear messages about the harm to the individual and others of consuming alcoholic drinks. Such harm includes damage to physical health (cirrhosis of the liver, cancers, etc.), mental health issues, physical injuries, violence and the risk of dependence. In addition, specific messages could warn of the dangers of consuming alcohol during pregnancy and when driving a vehicle, underage, operating machinery or taking certain medications. As on tobacco products, warning labels could have a standard format and design, irrespective of the particular brand of the alcoholic beverage, thereby ensuring better visibility. Health information messages could be accompanied by a recommendation for action; for example: "If you are concerned about your alcohol consumption, call [appropriate help line and phone number] or visit [appropriate website]." This message could be in a smaller font than the health information message (41).

If pictograms are used, it is preferable that they **Fig. 4. Pregnancy pictogram in France** are accompanied by a corresponding health information message. Furthermore, as on tobacco products, the specific size of the health information could be determined as a minimum percentage of the size of the container. The images used can be informational in style and taken from other ongoing education campaigns to enhance their effectiveness. Noticeability would be increased by placing the image on a contrasting background, with warnings printed in red rather than black (41).



OVERVIEW OF RESEARCH FINDINGS

When discussing the effectiveness of labels on alcohol, it should be noted that the most studied experience of health-related alcohol labels originates in the United States. However, the United States health label is fixed rather than rotating, and has not changed since its introduction in 1989. The message it carries is relatively lengthy and is usually set in small and hard-to-read print (42):

GOVERNMENT WARNING: (1) According to the Surgeon General, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects. (2) Consumption of alcoholic beverages impairs your ability to drive a car or operate machinery, and may cause health problems.

With regard to alcohol health labels, there is broad consensus in the literature that this information may improve knowledge, raise awareness and prompt discussion of the harmful health consequences of alcohol. Furthermore, no negative effects have been demonstrated. Nevertheless, evidence concerning the impact on drinking behaviour is controversial. The relatively low effectiveness reported by researchers seems to be mainly due to certain features of the way the information is currently presented, such as weak textual content, poor visibility and lack of pictorial content to illustrate the consequences of alcohol misuse (43).

Alcohol labelling in the WHO European Region

The 2016 WHO global survey on alcohol and health (not yet published) included several questions on the provision of consumer information about, and labelling of, alcoholic beverages to indicate the harm related to alcohol. Thirteen of the 53 Member States of the WHO European Region reported that health warning labels are legally required on the containers/bottles of alcoholic beverages at the national level (one Member State did not respond). Ten Member States reported that there is a national legal requirement stipulating the size of the health warning labels on the containers/bottles of alcoholic beverages or on alcohol advertisements (one Member State did not respond). In countries with such warning labels, examples of the wording used include: "Drinking can harm your unborn baby"; "Drinking alcohol damages the young developing brain"; "Alcohol abuse can cause over 60 diseases and health conditions"; "Warning: contains alcohol – it is recommended to avoid excess consumption"; and "Warning: excess consumption of alcohol endangers life and is harmful to health".

Health warning labels regarding pregnancy are mandatory in 13 Member States; underage drinking in 12; and drink—driving in 11. It is mandatory to display consumer information about calories, additives, vitamins and microelements on the labels of beer containers in 15 Member States; on wine containers in 15 Member States; and on spirits containers in 13 Member States (two Member States did not respond). There is a national legal requirement to display the number of standard alcoholic drinks on the labels of alcohol containers in three Member States, and there is a requirement to display alcohol content on the labels of alcohol containers in 48 Member States (two Member States did not respond).

Importance of good design

There are four message components that may be considered when developing an effective health label, each serving a different purpose: (i) signal word to attract attention; (ii) identification of the problem; (iii) explanation of the consequences if exposed to the problem; and (iv) instructions for avoiding the problem. The visual impact of the label can be enhanced by using large, bold print; high contrast; colour; borders; and pictorial symbols (Fig. 5).

Previous research has shown that consumers prefer short front-label claims to lengthy back-label explanations, or a combination of both (44). Furthermore, studies have reported greater effectiveness for labels using graphics and symbols, adjective labels, and labels with minimal numerical content (45).

Promoting discussion, raising awareness, changing attitudes

It has been noted that the United States health labels have prompted discussions of the dangers of drinking, steadily raising awareness of the risks, and there is evidence of increased public support for alcohol labelling

by the United States public following its introduction. Similarly, pregnant women who saw the labels were more likely to discuss the issue; in addition, a "dose–response" effect was found such that the more types of information the respondents had seen (on adverts at point of sale, in magazines and on containers), the more likely they were to have discussed the issue (43). In France, comparable results were found in relation to the introduction of the pictogram in 2007 (Fig. 4). A study of public awareness regarding the dangers of drinking alcohol during pregnancy indicated a positive evolution in terms of changing the social norm towards "no alcohol during pregnancy" (46). Furthermore, information label messages may serve to legitimate a socially challenging intervention, such as increasing activities that aim to reduce the likelihood of an inebriated person driving a vehicle.

Fig. 5. Examples of warning text and pictograms for alcoholic beverages



CONCLUSIONS

Alcoholic beverages have benefited from special treatment. At present, they are exempted from international conventions that govern all other psychoactive substances and from key food legislation that requires labelling of ingredients and nutritional information. Among the various tools and policy options that could be implemented to raise awareness of the risks of alcohol misuse, several consumer

organizations (such as the European Consumer Organization) and public health organizations (such as WHO) have long been calling for consideration of mandatory content and nutritional labelling and health messages. As a general principle of good governance, citizens should feel confident that the food regulatory system, which is designed to protect their health and safety, operates effectively (3).

In addition, there is a growing acceptance of the key role that governments play in positively influencing consumers' dietary choices; to do so, they may use a range of preventative health approaches, including food labels where appropriate (3). Unfortunately, studies from the United Kingdom have found that a voluntary pledge by industry to provide information on the calorie content of alcohol did not lead to any significant provision of such information to consumers (47). Fig. 6 shows one of the few examples of a label produced in accordance with the pledge. Product-labelling regulation is an important instrument in promoting healthier habits and public institutions are ideally positioned to utilize it.

Fig. 6. Wine label in the United Kingdom from a supermarket's own brand



REFERENCES

- 1. Global strategy to reduce the harmful use of alcohol. Geneva: World Health Organization; 2010 (http://www.who. int/substance_abuse/msbalcstragegy.pdf, accessed 3 July 2017).
- 2. European action plan to reduce the harmful use of alcohol 2012–2020. Copenhagen: WHO Regional Office for Europe; 2012 (http://www.euro.who.int/__data/assets/pdf_file/0008/178163/E96726.pdf, accessed 3 July 2017).
- 3. Battaglene T. An analysis of ingredient and nutritional labeling for wine. BIO Web of Conferences 3 (03006); 2014 (https://www.bio-conferences.org/articles/bioconf/pdf/2014/02/bioconf_oiv2014_03006.pdf, accessed 3 July 2017).
- 4. Consumer attitudes survey 2007: a benchmark survey of consumers' attitudes to food issues. Canberra: Food Standards Australia New Zealand; 2008 (https://www.foodstandards.gov.au/publications/documents/Consumer%20Attitudes%20 Survey.pdf, accessed 5 July 2017).
- 5. Regulation (EU) No. 1169/2011 on the provision of food information to consumers (http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32011R1169, accessed 3 July 2017).
- 6. Report from the Commission to the European Parliament and the Council: regarding the mandatory labelling of the list of ingredients and the nutrition declaration of alcoholic beverages. Brussels: European Commission; 2017 (https://ec.europa.eu/food/sites/food/files/safety/docs/fs_labelling-nutrition_legis_alcohol-report_en.pdf, accessed 3 July 2017).
- 7. Martin-Moreno JM, Harris ME, Breda J, Møller L, Alfonso-Sanchez JL, Gorgojo L. Enhanced labelling on alcoholic drinks: reviewing the evidence to guide alcohol policy. Eur J Public Health. 2013;23(6):1082–7 (https://www.ncbi.nlm.nih.gov/pubmed/23657783, accessed 3 July 2017).
- 8. Codex Alimentarius. Rome: Food and Agricultural Organization of the United Nations (http://www.fao.org/fao-who-codexalimentarius/about-codex/en, accessed 5 July 2017).
- 9. Regulation (EC) No. 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods. Official Journal of the European Union. 2006;L404/9 (http://eur-lex.europa.eu/LexUriServ/LexUriServ/do?uri=OJ:L:2006:404:0009:0025:EN:PDF, accessed 5 July 2017).
- 10. Consumer insights: knowledge of ingredient and nutrition information of alcoholic beverages off-label information and its use. Leuven: GfK Belgium; 2014 (http://brewersofeurope.eu/uploads/mycms-files/documents/publications/2015/GfK%20report%20-%20CONSUMER%20INSIGHTS%20-%20FINAL.pdf, accessed 3 July 2017).
- 11. Annunziata A, Pomarici E, Vecchio R, Marani A. Do consumers want more nutritional and health information on wine labels? Insights from the EU and USA. Nutrients. 2016;8(7):416 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4963892, accessed 3 July 2017).
- 12. Kypri K, McManus A, Howat PM, Maycock BR, Hallett JD, Chikritzhs TN. Ingredient and nutrition information labelling of alcoholic beverages: do consumers want it? Med J Aust. 2007;187(11–12):669 (https://www.ncbi.nlm.nih.gov/pubmed/18072914, accessed 3 July 2017).
- 13. Bui M, Burton S, Howlett E, Kozup J. What am I drinking? The effects of serving facts information on alcohol beverage containers. J Consum Aff. 2008;42:81–99 (http://onlinelibrary.wiley.com/doi/10.1111/j.1745-6606.2007.00095.x/abstract, accessed 3 July 2017).
- 14. Wright CA, Bruhn CM, Heymann H, Bamforth CW. Beer and wine consumers' perceptions of the nutritional value of alcoholic and nonalcoholic beverages. J Food Sci. 2008;73(1):H8–H11 (https://www.ncbi.nlm.nih.gov/pubmed/18211354, accessed 3 July 2017).
- 15. Thomson LM, Vandenberg B, Fitzgerald JL. An exploratory study of drinkers views of health information and warning labels on alcohol containers. Drug Alcohol Rev. 2012;31(2):240–7 (https://www.ncbi.nlm.nih.gov/pubmed/21824209, accessed 3 July 2017).
- 16. Annunziata A, Pomarici E, Vecchio R, Mariani A. European consumers' interest toward nutritional information on wine labeling: a cross-country analysis. BIO Web of Conferences 5 (04003); 2015 (https://www.bio-conferences.org/articles/bioconf/pdf/2015/02/bioconf_oiv2015_04003.pdf, accessed 3 July 2017).
- 17. Annunziata A, Pomarici E, Vecchio R, Mariani A. Nutritional information and health warnings on wine labels: exploring consumer interest and preferences. Appetite. 2016;106:58–69 (https://www.ncbi.nlm.nih.gov/pubmed/26939529, accessed 3 July 2017).
- 18. Himmelsbach E, Allen A, Francas M. Study on the impact of food information on consumers' decision making. Brussels: TNS European Behaviour Studies Consortium; 2014 (https://ec.europa.eu/food/sites/food/files/safety/docs/labelling_legislation_study_food-info-vs-cons-decision_2014.pdf, accessed 3 July 2017).

- 19. Tricas-Sauras S, Kaczmarek A, San Martin L. Consumer survey on communication of alcohol associated risks. Reducing Alcohol Related Harm (RARHA)/European Alcohol Policy Alliance; 2015 (http://www.rarha.eu/Resources/Deliverables/Lists/Work%20Package%205/Attachments/27/WP5%20Consumer%20survey%20on%20communication%20of%20 alcohol%20associated%20risks%20FINAL.pdf, accessed 3 July 2017).
- 20. Sáenz-Navajas M-P, Ballester J, Peyron D, Valentin D. Extrinsic attributes responsible for red wine quality perception: a cross-cultural study between France and Spain. Food Qual Prefer. 2014;35:70–85 (http://www.sciencedirect.com/science/article/pii/S0950329314000238, accessed 3 July 2017).
- 21. Mueller S, Lockshin L, Saltman Y, Blanford J. Message on a bottle: the relative influence of wine back label information on wine choice. Food Qual Prefer. 2010;21(1):22–32 (http://www.sciencedirect.com/science/article/pii/S0950329309001128, accessed 3 July 2017).
- 22. Liangpunsakul S. Relationship between alcohol intake and dietary pattern: findings from NHANES III. World J Gastroenterol. 2010;16(32):4055–60 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2928459, accessed 3 July 2017).
- 23. Tolstrup JS, Heitmann BL, Tjønneland AM, Overvad OK, Sørensen TI, Grønbaek MN. The relation between drinking pattern and body mass index and waist and hip circumference. Int J Obes (Lond). 2005;29(5):490–7 (https://www.ncbi.nlm.nih.gov/pubmed/15672114, accessed 3 July 2017).
- 24. Schröder H, Morales-Molina JA, Bermejo S, Barral D, Mándoli ES, Guxens M et al. Relationship of abdominal obesity with alcohol consumption at population scale. Eur J Nutr. 2007;46(7):369–76 (https://www.ncbi.nlm.nih.gov/pubmed/17885722, accessed 3 July 2017).
- 25. Wannamethee SG, Shaper AG, Whincup PH. Alcohol and adiposity: effects of quantity and type of drink and time relation with meals. Int J Obes (Lond). 2005;29(12):1436–44 (https://www.ncbi.nlm.nih.gov/pubmed/16077718, accessed 3 July 2017).
- 26. Arif AA, Rohrer JE. Patterns of alcohol drinking and its association with obesity: data from the Third National Health and Nutrition Examination Survey, 1988–1994. BMC Public Health. 2005;5(5):126 (https://www.ncbi.nlm.nih.gov/pubmed/16329757, accessed 3 July 2017).
- 27. Lukasiewicz E, Mennen LI, Bertrais S, Arnault N, Preziosi P, Galan P et al. Alcohol intake in relation to body mass index and waist-to-hip ratio: the importance of type of alcoholic beverage. Public Health Nutr. 2005;8(3):315–20 (https://www.ncbi.nlm.nih.gov/pubmed/15918929, accessed 3 July 2017).
- 28. Wang L, Lee I-M, Manson JE, Buring JE, Sesso HD. Alcohol consumption, weight gain, and risk of becoming overweight in middle-aged and older women. Arch Intern Med. 2010;170(5):453–61 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2837522, accessed 3 July 2017).
- 29. Nielsen SJ, Kit BK, Fakhouri T, Ogden CL. Calories consumed from alcoholic beverages by US adults, 2007–2010. NCHS Data Brief. 2012;110:1–8 (https://www.ncbi.nlm.nih.gov/pubmed/23384768, accessed 3 July 2017).
- 30. Calories in alcohol [website]. London: Drinkaware; 2017 (https://www.drinkaware.co.uk/alcohol-facts/health-effects-of-alcohol/calories/in-alcohol, accessed 3 July 2017).
- 31. Berkey CS, Rockett HR, Colditz GA. Weight gain in older adolescent females: the internet, sleep, coffee, and alcohol. J Pediatr. 2008;153(5):635-9.e1 (https://www.ncbi.nlm.nih.gov/pubmed/18614178, accessed 3 July 2017).
- 32. Croezen S, Visscher T, ter Bogt NC, Veling ML, Haveman-Nies A. Skipping breakfast, alcohol consumption and physical inactivity as risk factors for overweight and obesity in adolescents: results of the E-MOVO project. Eur J Clin Nutr. 2009;63:405–12 (https://www.ncbi.nlm.nih.gov/pubmed/18043703, accessed 3 July 2017).
- 33. Farhat T, Iannotti RJ, Simons-Morton BG. Overweight, obesity, youth, and health-risk behaviors. Am J Prev Med. 2010;38(3):258–67 (https://www.ncbi.nlm.nih.gov/pubmed/20171527, accessed 3 July 2017).
- 34. Vågstrand K, Barkeling B, Forslund HB, Elfhag K, Linné Y, Rössner S et al. Eating habits in relation to body fatness and gender in adolescents: results from the "SWEDES" study. Eur J Clin Nutr. 2007;61(4):517–25 (https://www.ncbi.nlm.nih. gov/pubmed/17006444, accessed 3 July 2017).
- 35. Yeomans MR. Alcohol, appetite and energy balance: is alcohol intake a risk factor for obesity? Physiol Behav. 2010;100(1):82–9 (https://www.ncbi.nlm.nih.gov/pubmed/20096714, accessed 3 July 2017).
- 36. Battista K, Leatherdale ST. Estimating how extra calories from alcohol consumption are likely an overlooked contributor to youth obesity. Health Promot Chronic Dis Prev Can. 2017;37(6):194–200 (https://www.ncbi.nlm.nih.gov/pubmed/28614047, accessed 3 July 2017).
- 37. Sugar reduction: the evidence for action. London: Public Health England; 2015 (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/470179/Sugar_reduction_The_evidence_for_action.pdf, accessed 3 July 2017).

- 38. Shelton NJ, Knott CS. Association between alcohol calorie intake and overweight and obesity in English adults. Am J Public Health. 2014;104(4):629–31 (https://www.ncbi.nlm.nih.gov/pubmed/24524529, accessed 3 July 2017).
- 39. Schröder H, Morales-Molina JA, Bermejo S, Barral D, Mándoli E, Grau M et al. Relationship of abdominal obesity with alcohol consumption at population scale. Eur J Nutr. 2007;46(7):369–76 (https://www.ncbi.nlm.nih.gov/pubmed/17885722, accessed 3 July 2017).
- 40. Commission implementing regulation (EU) No. 579/2012 of 29 June 2012 amending Regulation (EC) No. 607/2009 laying down certain detailed rules for the implementation of Council Regulation (EC) No. 479/2008 as regards protected designations of origin and geographical indications, traditional terms, labelling and presentation of certain wine sector products Article 51. Official Journal of the European Union, as retrieved from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:171:0004:0007:EN:PDF, accessed 5 July 2017).
- 41. Alcohol health information labels: report of qualitative research into health information labels on alcoholic beverages. Carlton South: Victorian Health Promotion Foundation; 2009 (http://trove.nla.gov.au/work/166673560?selectedversion=NBD49150794, accessed 5 July 2017).
- 42. Department of the Treasury. Alcohol beverage health warning statement (99R–507P). Federal Register. 2001;66(99):28135–6 (https://www.gpo.gov/fdsys/pkg/FR-2001-05-22/pdf/01-12802.pdf, accessed 5 July 2017).
- 43. Babor TF, Caetano R, Casswell S, Edwards G, Giesbrecht N, Graham K. Alcohol: no ordinary commodity. Research and public policy. 2nd ed. Oxford: Oxford University Press; 2010.
- 44. Grunert KG, Wills JM. A review of European research on consumer response to nutrition information on food labels. J Public Health 2007;15:385–99 (https://link.springer.com/article/10.1007/s10389-007-0101-9, access 3 July 2017).
- 45. Hersey JC, Wohlgenant KC, Arsenault JE, Kosa KM, Muth MK. Effects of front-of-package and shelf nutrition labeling systems on consumers. Nutr Rev. 2013;71:1–14 (https://www.ncbi.nlm.nih.gov/pubmed/23282247, accessed 3 July 2017).
- 46. Guillemont J, Léon C. Alcool et grossesse: connaissances du grand public en 2007 et évolutions en trois ans [Alcohol and pregnancy: knowledge of the general public in 2007 and developments over three years]. Paris: National Institute of Prevention and Education for Health; 2008 (in French) (http://inpes.santepubliquefrance.fr/CFESBases/catalogue/pdf/1117.pdf, accessed 5 July 2017).
- 47. Petticrew M, Douglas N, Knai C, Maani Hessari N, Durand MA, Eastmure E et al. Provision of information to consumers about the calorie content of alcoholic drinks: did the Responsibility Deal pledge by alcohol retailers and producers increase the availability of calorie information? Public Health. 2017 (in press) (http://www.publichealthjrnl.com/article/S0033-3506(17)30167-1/fulltext, accessed 3 July 2017).



The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

Member States

Albania

Andorra

Armenia

Austria

Azerbaijan

Belarus

Belgium

Bosnia and Herzegovina

Bulgaria

Croatia

Cyprus

Czechia

Denmark

Estonia

Finland

France

Georgia

Germany

Greece

Hungary

Iceland

Ireland

Israel

Italy

Kazakhstan

Kyrgyzstan

Latvia

Lithuania

Luxembourg

Malta

Monaco

Montenegro

Netherlands

Norway

Poland

Portugal

Republic of Moldova

Romania

Russian Federation

San Marino

Serbia

Slovakia

Slovenia

Spain Sweden

Switzerland

Tajikistan

The former Yugoslav Republic of Macedonia

Turkey

Turkmenistan

Ukraine

United Kingdom

Uzbekistan

World Health Organization Regional Office for Europe

UN City, Marmorvej 51,

DK-2100 Copenhagen Ø, Denmark

Tel.: +45 33 70 00 Fax: +45 33 70 01

Email: euwhocontact@who.int Website: www.euro.who.int