# Paternalism versus evidence based public health messages - an important debate is aired

Some interesting letters to the Editor of the journal Internal and Emergency Medicine have recently been published. The letters give divergent opinions on moderate alcohol consumption and messages that can be given to consumers by the medical community. An initial letter to the Editor, from Dr Ponz de Leon (who is a colon cancer specialist) and responses by AIM Council and ISFAR member Professor Giovanni de Gaetano (specialist in Nutrition Metabolism, Cardiovascular Diseases and Vascular Medicine) and colleagues and also Ramon Estruch (of the department of internal medicine, Hospital Clinic, University of Barcelon, Spain) and colleague R M Lamuela-Raventos are detailed below.

The core of the debate is that Scientific evidence, not personal belief, should drive advice concerning the health benefits of moderate consumption particularly for certain segments of the population such as post menopausal women, men over forty and those at risk of heart disease. There is no doubt that alcohol, as it is broken down into acetaldehyde, is toxic before it is further broken down into carbon dioxide and water. The goal of medical research regarding alcohol is to ascertain the dose above which ethyl alcohol is toxic and indeed a carcinogen, and its danger at any dose for some specific subjects. The importance of dose, and how alcohol is consumed (whether with food, or over what time frame), also cannot be underestimated. We accept that many **good things**, such as vitamins and oligoelements when taken in excess are truly toxic, the same should be accepted for alcohol.

## What should we advise about alcohol consumption

Maurizio Ponz de Leon

I read with interest, and with some concerns, the paper by Castelnuovo et al.[1], and the related commentary [2]. The main message of the review is to present evidence for the protective effect of moderate alcohol intake against cardiovascular diseases. As a consequence, "low–moderate alcohol consumption may contribute to better health". I do not want to dispute the scientific background of this contention, which could also be well-grounded, though I remain unconvinced of such evidence. What I would like to argue is that the message seems to me hazardous and extremely dangerous to diffuse in the general population, at least for the following reasons:

1. Many people may be unable to distinguish between low–moderate and high consumption of wine, beer or spirits. Moreover, alcohol metabolism may differ remarkably from one subject to another. In current clinical practice, we observe, severe liver or gastric damage associated with relatively low volumes of alcohol (especially in women), whereas other subjects may tolerate without any apparent explanation large amounts of alcohol;

2. Alcohol remains a frequent cause of car crash, and governments (in almost all Western countries) try to convince or force people to abstain from drinking before driving. The message of the present review does not help these efforts, since it offers a "moral" justification for drinking, even if in small-moderate amounts;

3. To consider alcohol as a medication whose consumption may contribute to improved health is another source of concern; for instance, the authors state "people who are already regular light-moderate alcohol consumers should be encouraged to continue", but, by the same token, we should encourage the abstemious to drink low–moderate amounts of alcohol, in order to lower HDL, to inhibit platelet aggregation and so on. Are we truly at the point of prescribing alcohol consumption in order to reduce the risk of stroke and coronary damage?

In conclusion, I do believe that more studies are needed before we can give sensible recommendations on alcohol consumption to the general population. Prospective, longterm, cohort investigations are particularly needed. Moreover, even when further evidence of a beneficial effort may be obtained, I would suggest that we use prudence, and even more prudence in dispensing indications for common drinks such as wine, beer or spirits, which are part of our culture, usually make for some joy in our lives, but can also contribute to causing much disease and suffering.

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# What should we advise about alcohol consumption: reply letter

Augusto Di Castelnuovo • Simona Costanzo • Maria Benedetta Donati • Licia Iacoviello • Giovanni de Gaetano

The main message of the letter by Ponz de Leon[1] is that any advice at a population level in favour of drinking alcohol in moderation, despite scientific evidence and prudence, is dangerous and must be avoided.

We respect this opinion, but believe that progress in scientific knowledge should be to some extent independent of its potential application. The decision to implement a scientific upshot in guidelines and public health strategies is demanded from specific authorities and competencies, which have the appropriate capability to transfer specific scientific evidence into a global public health strategy. The assertion that at a population level, in any context, society and cultural environment and in respect to any specific subgroup of individuals, abstention is better than moderation is questionable and definitively not based on any scientific evidence[2]. There are particular subgroups of individuals who can maximally benefit from the healthy effects of alcohol in moderation (e.g. adult men at high risk for cardiovascular disease[3]), as well as persons for whom abstention should be considered the right choice (e.g. young women at familial risk for breast cancer). To ask for global abstention is throwing out the baby with the bath water. Standing current scientific evidence, to ask for abstention is also ethically questionable, as well as less efficacious than to encourage the reduction of alcohol consumption. In our review[4] dealing with alcohol in moderation, that is two glasses of wine a day (or equivalent drinks) for men and one for women, we did not invite abstainers to start drinking, and strongly insisted that binge or excess drinking be avoided. What should we advise an adult who regularly drinks a glass of wine during meals, to stop drinking? Why? What is the scientific evidence to support such negative advice?

(a) The author of the letter wrote that "Many people could be unable to distinguish between low-moderate and high doses of wine beer or spirits". While we are not convinced of this, and refute such a "paternalistic" approach (we know what you have to do), we cannot believe that this is a sufficient argument to disregard scientific evidence: besides alcohol, there are plenty of situations in which moderation is better that excess or abstention (e.g., the protective effect of low-dose aspirin in secondary cardiovascular risk prevention). The positive effect of many sleeping pills cannot be obscured by the fact that some use an excess of these pills and harm themselves.

(b) The message of our review article was not that of drinking before driving, in a small-moderate amount.

We reviewed the evidence about the role of moderate and regular alcohol intake in reducing the risk of cardiovascular disease and total mortality. It is obvious than in particular conditions drinking must be avoided at any dosage.

(c) Dr. Ponz de Leon states that "more studies are needed before we can give sensible recommendations on alcohol consumption to the general population. Prospective, long-term, cohort investigations are particularly needed". Probably the author was alluding to "intervention clinical trials". In fact, the evidences of a positive role of alcohol in moderation derives from a very large number of "prospective, long-term, cohort investigations". In our review of the literature, we identified, e.g., more than 30 large, prospective cohorts on alcohol and total or cardiovascular mortality, involving more than 1 million subjects[4].

Randomized controlled intervention trials on alcohol might offer in the future a more solid answer than observational studies, but at the present moment, one has to rely upon the available observational studies, which clearly indicate a benefit at low doses that cannot be hidden by the scientific community.

In conclusion, we agree on the fact the great caution has to be taken when speaking about alcohol and health, but strongly believe that a scientific approach should always prevail over any ideological prejudice.

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## What should we advise about alcohol consumption

Ramon Estruch and RM Lamuela-Ravento

We agree with the letter by Dr. Ponz de Leon[1] on concerns related to "alcohol use/misuse" in that high alcohol intake may be a cause of several chronic diseases, as well as social and labor problems. Thus, we must be cautious when recommending low-to-moderate alcohol consumption to the overall population. However, we cannot forget the scientific evidence supporting the beneficial effects of moderate alcohol/wine intake on cardiovascular disease[2], some type of cancer[3] and other degenerative diseases[4].

Cardiovascular disease continues to be the main cause of death in developed and developing countries[5], and we have to fight against it with all the weapons available. Diet and exercise are the first step in the treatment of such disease. There is increasing evidence for a beneficial effect of Mediterranean diet on the prevention of cardiovascular disease, and wine is one of the traditional components of this food pattern. In our experience, most people are able to distinguish between low-to-moderate wine consumption (up to 2 glasses of wine a day for men and 1 glass of wine for women) and a high amount of alcohol intake. In his letter Dr. Ponz de Leon indicates that, in some cases, one may suspect liver disease related to alcohol intake in women who consume low doses of ethanol. However, it is well known that in some women it is often difficult to substantiate the veracity of a "low ethanol consumption" [6], and some liver disease such as "non-alcohol fatty liver disease" may be erroneously attributed to "low alcohol intake". In these cases, determination of serum and urine biomarkers of ethanol consumption may be a very useful tool to distinguish if ethanol is the main agent responsible for the disease.

On the other hand, we agree that people must abstain from drinking before driving or using heavy machinery at work. Nonetheless, the same subjects may consume a glass of wine together with a meal with family and friends.

Fortunately, thanks to governmental campaigns against drinking and driving, most people who consume alcohol, now abstain from driving their cars. Similarly, pregnant women must always abstain from having any alcoholic drink.

Currently, new prospective long-term investigations are ongoing to support the results from several ecological and cohort studies supporting the beneficial effect of moderate alcohol consumption on health. Ongoing studies also are investigating the possible effects of the different types of alcoholic beverages and the biochemical mechanisms to explain such beneficial effects.

However, in the era of evidence-based medicine, nutritional recommendations should be based on large-scale randomized intervention studies in which clinically relevant ("hard") end-points are evaluated. Up to now, no randomized controlled trial has ever been conducted to assess to what extent moderate alcohol consumption offers greater benefits than complete alcohol abstinence in the primary or secondary prevention of cardiovascular events. Without this level of evidence, we are not allowed to recommend moderate alcohol consumption to "teetotalers", and, as Dr. Ponz de Leon suggests, we have to be very cautious with our recommendations to the overall population.

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**Comment from Francesco Orlandi, MD, Dept. of Gastroenterology, Università degli Studi di Ancona, Italy**

To trust the patient is a crucial point of the medical care and medical knowledge, and it becomes a pre-requisite for a sustainable medical progress. Look at my next patient, an adult man at high risk for cardiovascular disease and no risk of addiction: the suggestion of moderate drinking is my ethical duty, otherwise I should adopt bad "defensive medicine."

**Comment from R. Curtis Ellison, MD, Section of Preventive Medicine & Epidemiology, Boston University School of Medicine, Boston, MA, USA**

Scientific data from epidemiologic studies, basic science, and limited clinical trials support a role for moderate alcohol consumption in the prevention of cardiovascular diseases. At the same time, we realize that this substance can be a "double-edged sword."[1] We have long known that excesses (in habits, foods, or alcohol) have problems that are inherent not in the activities or substances themselves, but in their inappropriate use. For example, in an address to a temperance society in 1842, Abraham Lincoln, later the 16th President of the United States, stated: "It has long been recognized that the problems with alcohol in this country relate not to the use of a bad thing, but to the abuse of a good thing."[2] There are no data showing than encouragement of moderate consumption increases abuse, but nevertheless it is clear that advice about alcohol should vary according to the characteristics of the individual patient.

As described by Cole,[3] the finest moral rationale for prevention-oriented public health activity should be informing people, and it should not be based on "paternalism" ("we know what is best and will tell you only what you need to know"). It should be emphasized that there are certain people who should not drink at all (including former abusers of drugs or alcohol, people with certain medical conditions, children and adolescents, and people with religious or moral proscriptions against alcohol), and there can never be a general recommendation for everybody to consume alcohol. On the other hand, we should not withhold from our patients and the public scientifically sound and balanced data on alcohol and health. Whereas our current understanding suggests that moderate, sensible drinking can be potentially helpful for prevention of coronary heart disease in most adults (those without contraindications to alcohol use) as one component of a healthy lifestyle, any recommendations for its use in an individual should be based on consultation with the health care provider.[5]

References

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