

Health and Social Benefits of Beer in Moderation - Seminar of the Nordic Brewing Industry

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Biographies and abstracts

**MD, Docent of Epidemiology Mikko Paunio
University of Helsinki, Finland**

Biography

Matriculation examination in 1980 (*Helsingin I normaalikoulu*). Licentiate of Medicine (MD), 28 March 1989 (University of Helsinki). Doctor of Medical Sciences (Ph.D.) 28 March 1989 (University of Helsinki). A four-month intensive course (1 February - 31 May 1991) (Free University of Brussels), "Statistical, Epidemiological, and Operational Methods applied in Medicine and Public Health". Master of Health Science (M.H.S.) in chronic disease epidemiology (two-year programme). Johns Hopkins School of Hygiene and Public Health. Graduation date 23 May 1993.

Fully-licensed as a physician 2 September 1993 by the National Board of Medicolegal affairs. Board certification in public health 2 November 1999 (six-year programme at the University of Helsinki). Docent in epidemiology 7 February 2000 (University of Helsinki). Part- or full-time researcher (along with MD studies) at the National Public Health Institute, Unit of Statistics, 1984 - 1988. Permanent researcher and teacher 1990 - 1993 at the University of Helsinki, Department of Public Health. Short-term employment as a primary health care physician in various ambulatory units, 1986-1988. Compulsory internship in surgery, paediatrics, and internal medicine, 1987 (four months) at the Central University Hospital of Helsinki. Positions as teaching assistant during the academic year 1992 - 1993 at the Johns Hopkins School of Hygiene and Public Health. Senior research assistant and teacher 1993-1999 (30 June) at the University of Helsinki, Department of Public Health.

Current position: From 1999 (July), Senior Medical Officer (Environmental Medicine) at the Ministry of Social Affairs and Health, Finland.

Abstract

A historical perspective is given through the thoughts and observations of Her Majesty's Registrar-General William Farr, and Professor Raymond Pearl of the Johns Hopkins School of Hygiene and Public Health. Both of these men were pioneers in the field of observational epidemiology with respect to alcohol and mortality. William Farr lived and worked during the 19th century, and is the father of public health services and the life insurance industry. Raymond Pearl belonged to the elite of the hygienic and "racial" studies of his time (early 20th century). He later distanced himself from the latter movement. Raymond Pearl is the father of the U- or J-shaped curve of alcohol and

mortality, and wrote his classic work in 1926 in the midst of prohibition - owing it, as he said, "to my friends of the Saturday night club". Both men, although fully aware of the detrimental effects of alcohol abuse on public health, were convinced that alcohol in moderation was good for health. An introduction is given to the complex nature of the reasoning and causal inferences with regard to moderate alcohol consumption and mortality, when relying on observational rather than experimental studies. In this context, the fact is highlighted that experimental studies – including the pioneering results of the ATBC (AT=alpha-tocopherol, BC= beta-carotene) study – have failed to show any health benefits (e.g. lowered risk of cancer or cardiovascular disease) as a result of interventional antioxidation. It is now the widely accepted, though not the universal, view of medical researchers that moderate alcohol consumption prevents certain cardiovascular diseases, and also prevents acute events through short-term effects, when the totality of evidence is taken into account. The U- or J-shaped published observational results of the ATBC study with regard to cardiovascular end points and daily alcohol consumption are commented on. The published results of the observed strong preventative effect of beer (and to a lesser extent alcohol per se) against kidney stones imply (but do not prove) causality due to ingredients other than the alcohol itself. The extended follow-up results are given with respect to coronary heart disease mortality and total mortality with regard to alcohol intake. Although a somewhat attenuated beneficial effect of moderate alcohol consumption emerges compared with the published results from the ATBC study, the analyses - once again – show that light and moderate drinkers have lower death rates than both non-drinkers and heavy drinkers. A fairly recent follow-up observational cohort study from rural Italy suggests beneficial effects on longevity in moderate (or even heavy) alcohol consumption and physical activity. This hypothesis could also be studied among the participants of the ATBC study.

Denise Baxter BSc, PhD
Brewing Research International, UK

Biography

Brewing Research International (BRI) represents many brewing and malting companies around the world. Denise Baxter joined BRI in 1972 from Edinburgh University. Her research at BRI has covered several aspects of malting biochemistry and physiology, in particular protein degradation during malting. She became Head of the Raw Materials Team in 1987 and continued in that position until 1990. She is currently Scientific Director at BRI and a member of its executive board.

Denise assumed responsibility for Food Safety matters in 1986. This post involves initiating and managing a programme of research relating to food safety for the brewing industry, as well as potential healthy ingredients in beer. This includes maintaining monitoring services for potential contaminants in beer and brewing raw materials, co-ordinating malting and brewing trials to evaluate both contaminants and micronutrients, and providing an information service on food safety and health for member companies. As Head of Food Safety, Denise is a member of several brewing industry committees. Where necessary, she liaises with the relevant government and food industry bodies.

Denise also lectures widely at seminars and conferences on food safety in brewing and the health benefits of moderate beer consumption.

Abstract

It is now well recognised that fruit and vegetables are important for a healthy diet. Beer is largely an aqueous extract of sprouted cereals (malt) and hops in which yeast has been used to convert sugar to alcohol. All of these raw materials, but in particular the malt and the hops, provide ingredients which can contribute to a healthy diet when beer is consumed in moderation. Indeed, throughout its long history, beer has been associated with bread as a staple food. Beer provides moderate amounts of protein and complex carbohydrates, and is also recognised to be a good source of most of the B vitamins, as well as several essential minerals, such as potassium, calcium, magnesium and silicon.

More recently, it has become evident from clinical trials that moderate consumption of alcoholic drinks can protect the user against some widespread diseases, particularly cardiovascular disease. Much of this is due to the alcohol itself, which in moderate amounts can offer protection against coronary heart disease. However, there is also an increasing body of evidence suggesting that specific micronutrients, particularly antioxidants, can have additional protective effects. Beer contains a wide range of antioxidants, including antioxidant vitamins such as folate, and complex polyphenols similar to those found in red wine. Importantly, beer also contains smaller compounds such as phenolic acids derived from malt and hops, which are more easily absorbed by the body than the larger polyphenols. In addition, beers contain melanoidins, which are also derived from malt, and which also exhibit antioxidant properties. This paper will review the presence of these compounds in beer and will discuss what is known of their bioavailability.

Professor Dr. med. Arne Astrup
The Royal Veterinary and Agricultural University, Denmark

Biography

Professor Arne Astrup was born in Frederiksberg, Denmark in 1955. He graduated in medicine from the University of Copenhagen in 1981, and went on to become a Doctor of Medical Science in 1986. In 1988, he became an associate professor at the Research Department of Human Nutrition at the Royal Veterinary and Agricultural University of Denmark, and was appointed Professor and Director of the Department in 1990. In 1992 he was appointed President of the Danish Nutrition Council, and in 1998 Professor of Nutrition at the University of Copenhagen's Faculty of Health.

His major research interests include the physiology and pathophysiology of energy and substrate metabolism, with particular emphasis on the aetiology and treatment of obesity. He received the Servier Award for Outstanding Obesity Research in 1990, and the André Mayer Award of the International Association for the Study of Obesity in 1994.

Professor Astrup is a member of several international committees on research and education in nutrition, obesity and metabolism. He is executive committee member and secretary of the International Association for the Study of Obesity, and chairman of its membership committee. He has been member of several of the scientific committees for the European Congresses on Obesity.

Arne Astrup is Editor-in-Chief for *Obesity Reviews*, the official journal of the International Association for the Study of Obesity. He is also a member of the editorial boards of the *International Journal of Obesity* and the *Scandinavian Journal of Nutrition*, and he is guest editor of the *Journal of the Danish Medical Association*.

Abstract

Evidence is accumulating that suggests that beer and wine do not differ substantially in their ability to reduce the incidence of cardiovascular events. However, a large proportion of the female population avoids beer because they consider beer to be more fattening than, for example, dry wine. The results of studies addressing the effect of alcohol on food intake and energy balance are ambiguous, while studies comparing different types of alcohol sources are lacking. However, if alcohol in smaller quantities is added as a supplement, the compensation for its energy content seems to be incomplete. Epidemiological studies do not provide any evidence for a fattening effect of alcohol, although some studies suggest an association between beer/wine intake and a "beer belly", but tobacco smoking, physical inactivity and mental stress seem to be more important determinants.

We have undertaken experimental studies to address the issue of whether there are differences between the ability of sweet soft drinks, beer, and wine to increase caloric consumption during a meal. Ad libitum energy intakes of a supper meal were measured on three different occasions, where the same quantity of alcohol was administered as either red wine, (13 vol.-% alc, 3.00 kJ/ml) or lager beer, (Carlsberg Hof, 4.6 vol.-% alc. 1.66 kJ/ml). On the third occasion, Sprite Regular (1.73 kJ/ml) was given isoenergetically to the beer as a non-alcoholic control. The test meal consisted of three different courses: cold pasta salad, goulash with bread, and a firm cake. In this experiment, both alcoholic beverages tended to increase food intake compared to the soft drink. Another experiment was performed with the same ad libitum meal, but with the beverages now also being provided ad libitum. In that experiment, total energy was higher when wine was given ad libitum compared to beer and soft drink. This was due to a higher energy intake from both the foods and the beverages.

The results imply that alcoholic beverages may stimulate energy intake at a meal relative to soft drinks, when given in isocaloric quantities with the meal. However, wine with a meal may increase total energy compared to beer, possibly due to its higher energy density.

Pol. Mag. Bengt Ekdahl
ValueMerge Consulting, Sweden

Biography

Bengt Ekdahl was born in 1947 in Sweden. He graduated as Master of Political Science from the University of Lund in 1972.

In his professional career, Bengt Ekdahl has held the following positions: 1972-1975, consultant at the AC Nielsen Company AB. 1976-1979, product manager at Åkerlund og Rausing AB. 1980-1982, Assistant Marketing Manager at ARJO Hospital Equipment AB.

1982-85, Marketing Manager at Eco-Tapeter AB. 1986-90 CEO at SIFO Konsument AB.
1991-2000 Senior Consultant at SIFO/SMG AB.

Since 2000, Bengt Ekdahl has been a founding partner of ValueMerge Consulting AB.

Abstract

This presentation takes its starting point in the question "Why does Jeppe drink?". This question was first asked 250 years ago when the Danish writer Ludvig Holberg made an alcohol policy statement in his famous play "Jeppe on the Mountain". But this question has not yet been answered. Why is this?

In this presentation, Bengt Ekdahl points out that there is an alternative way, an alternative alcohol policy aim, which can help Jeppe out of his terrible dilemma. The alternative way is based upon the importance of drinking – not the beverage itself - to *different* people. This knowledge will then be passed on to the enormous unused resource that exists in our society: Jeppe's friends and Jeppe's relatives. They are often aware of Jeppe's problem long before he himself realises it. But they are not quite certain what they should do, and in that situation they choose the route recommended by the official alcohol policy: They take the liquor away from Jeppe. But this does not help Jeppe, he will get the liquor in some other way, while at the same time risking losing those who could really help him, namely his friends and relatives.

The presentation argues that the solution lies in providing the friends and relatives with a perspective on their own and other people's drinking, in order to allow them to understand Jeppe's individual problem. In this way, they may arrive at an understanding of the fact that Jeppe's real problem is neither the beverages nor the volume of alcohol: He does not drink because it tastes good, he drinks because the alternative is even worse. Once Jeppe's friends and relatives have understood this, they will be in a better position to help him.

The alcohol typology is a tool that may help people to gain a perspective on the role that drinking plays in their own lives, and the role that it plays in the lives of others. Bengt Ekdahl presents four dimensions in attitudes to drinking.

The first dimension deals with the fundamental value of drinking: Is it used to add a positive aspect, or to remove something negative? The second dimension reflects the role of the food and wine culture for one's identity. Are food and wine just food and drink, or is the wine and food culture a means of strengthening one's personal identity? The third dimension concerns the individual's opinion of alcohol policy restrictions, and the fourth dimension concerns the importance of alcohol to the experience of a festive mood.

Professor David J. Hanson
State University of New York Potsdam, USA

Biography

David J. Hanson Ph.D., is Professor and Acting Chair of the Department of Sociology at the State University of New York at Potsdam, New York. He is the author of over 300

publications, including two recent books on alcohol, a dozen chapters in books, and five encyclopaedia articles. Textbooks in over a dozen fields of study report his research. His web site, "Alcohol: Problems and Solutions" (www2.potsdam.edu/alcohol-info) receives an average of over 125,000 visits per month.

Professor Hanson has testified to the United States Congress and has served as consultant to the Canadian government. His work is regularly reported in major newspapers and news magazines, and he periodically appears on national radio and television

Abstract

This presentation will describe the social and psychological factors associated with low rates of alcohol abuse in a society.

In many societies, most people drink alcohol beverages regularly, but few of them ever experience alcohol-related negative consequences. This presentation will describe the keys to their success and the implications for public policy. In so doing, it will contrast practices which have been successfully demonstrated with those advocated by the "control of consumption" approach, which create more problems than they solve.

The presentation will also reflect on the role of drinking style, drinking occasion, and drinking expectations on the outcome of consumption. Research suggests that these factors are much more important than has been generally recognised. The implications of scientific findings for policy and practice will be identified.

Research also suggests that some widely-used educational and legal approaches to reducing alcohol abuse are not only ineffective but actually counter-productive. This presentation will describe which other, more effective, approaches can be taken, both by the society and by parents, to reduce alcohol abuse.

Director-General Hubert Sacy
Educ'alcool, Quebec, Canada

Biography

Hubert Sacy has been Director-General of Éduc'alcool - a Quebec-based non-profit organisation devoted to alcohol education - since its foundation eleven years ago. As Director-General, he supervises all the organisation's preventative, informative, educational and communications campaigns, programmes and operations, both with regard to the general public and specific target groups.

He holds degrees in law, political science and French literature, as well as a diploma in social marketing from the École des hautes études commerciales de Montréal. He is also a member of the board of the International Council on Alcohol and Addictions and chair of its Alcohol Education Section. In addition, he is chairman of the Social Responsibility Committee of the Canadian Association of Liquor Jurisdictions.

He is a guest lecturer on communication, public relations and social marketing at École nationale d'administration publique (the Quebec School of Public Administration), the University of Montreal, the University of Sherbrooke, the University of Laval, and the University of Quebec at Montreal (UQAM).

Abstract

Quebec is the province of Canada where alcohol is more available than anywhere else in the country, but where there are fewer alcohol-related problems than anywhere else. In this presentation, Hubert Sacy will emphasise the fact that people's relationships with alcohol are mostly a matter of culture. He will show how Educ'alcool has for the last eleven years been promoting the culture of taste against the culture of drunkenness in Quebec. He will also elaborate on the concepts of Moderate Drinking and Healthy Drinking.

The presentation will focus on the message of Alcohol and Health, and how to communicate this to consumers. It will be illustrated with many examples of how to promote moderate drinking: radio spots, TV spots, as well as print advertising.