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Editorial

Transparency in research collaborations with the brewing industry

In this issue of the *British Journal of Nutrition*, Frans J Kok, Martin Zarnkow and Aafje Sierksma report recommendations from a group of academics and industry professionals in the European brewing industry on best practices for private–public research[1]. The FACT Principles: Freedom of research, Accessibility, Contextualisation, and Transparency have been designed to guide industry-funded research collaborations so that the outputs of that research are not subject to charges of bias by vested interests[1]. Confidence in research collaborations between the alcohol industry and academia has been shaken severely by the recent, and widely reported, scandal around a project funded by public–private partnership involving the NIH's National Institute on Alcoholism and Alcohol Abuse and a number of alcohol-producing companies[2]. This large (~US$100Million) human intervention project aimed to show that modest alcohol consumption is healthy. It was stopped by the NIH at an early stage when it became apparent that there were ethical concerns about the development of the project that undermined its credibility[2].

Brewing in the form of fermenting grain appears to be one of the earliest forms of food processing and may have stimulated the cultivation of crops > 10 000 years ago[3,4]. Consequently, beer has been in human diets since at least the agricultural revolution was probably a major source of energy for many ancient civilisations and remains a significant contributor to some diets today. However, excess consumption of alcoholic beverages, including beer, can lead to major social harms including violence and antisocial behaviour, unsafe sex, accidents and injury. In addition, excess alcohol consumption contributes to risk of multiple diseases including CVD and several cancers. Consequently, there is a need for research to understand, and to manage, these risks and such research may involve, or be funded by, the brewing industry.

Although it is clear that high alcohol consumption leads to multiple harms, weighing the balance between benefits and risks of modest consumption of alcohol has proved more difficult. Much epidemiological evidence has supported the contention that modest alcohol consumption lowers risk of CVD, and, indeed, modest consumption of wine with meals is an integral part of the Mediterranean dietary pattern that is widely accepted as 'protective' against many common non-communicable diseases. Recent analysis of individual-participant data for almost 600 000 current drinkers who were enrolled in eighty-three prospective studies showed that the threshold for lowest risk of all-cause mortality was about 100 g alcohol /week[5]. Associations with the amount of alcohol consumed differed between types of CVD. Risk of myocardial infarction fell with increased alcohol consumption, whereas risk for all other forms of CVD increased[5]. A more recent study of > 430 000 residents of Taiwan who were followed up for 14 years from 1994 found that 'modest drinkers' (consuming no more than one drink a day) had higher life expectancy and lower all-cause mortality than non-drinkers[6]. In contrast, modest drinkers had higher risk of some cancers, notably oral and oesophageal cancer[6]. The relationship between alcohol consumption and adiposity is complex. In a recent meta-analysis, alcohol use by men was associated with higher BMI in a dose-dependent manner[7]. However, in women, alcohol use was associated with lower BMI and meta-regression showed no relationship between amount of alcohol consumed and BMI[7]. Further, these relationships may be moderated by ethnicity and e.g. the negative association between alcohol consumption and BMI was more pronounced in Caucasian than in Asian women[7]. These complex associations may arise because individuals who drink moderate amounts of alcohol may enjoy healthier lifestyles that may protect them from weight gain[8]. In a recent analysis of data from UK Biobank (a large prospective cohort study), Inan-Eroglu and colleagues found that excess body weight may exacerbate the harmful effect of alcohol on cancer risk which strengthens the evidence for limiting consumption of alcohol and for maintaining a healthy weight to reduce cancer risk[9].

Given the complexity of associations between alcohol consumption and health and the differing philosophical, social and political perspectives on alcohol consumption, it is unsurprising that public health guidelines, and legislation, on alcohol use have changed over time. In recent years, reconsideration of the balance between benefits and harms of alcohol has led to a tightening of guidelines in several jurisdictions, including the USA and UK. For example, from 1980 until 2015, the US Dietary Guidelines for Americans recommendations for those who drink alcohol were for men to consume up to two drinks per day and women to drink one drink per day. Modest alcohol consumption was widely regarded as protective against CVD (the dominant non-communicable disease among Americans in the second half of the 20th century), with most adult drinkers considered to be at lower risk than alcohol abstainers. However, the 2020 US scientific advisory report indicates a change in this view, suggesting that new evidence supports a reduction in alcohol consumption to one drink per day based on the health risks of even modest alcohol use[10]. In contrast with the possible benefits for cardiovascular health from modest alcohol consumption, there appears to be no safe level of alcohol intake for cancer prevention with risk of several cancers (including breast,

bowel, liver, mouth and throat, oesophagus and stomach) increasing with alcohol consumption. The World Cancer Research Fund recommends not drinking alcohol at all and that those who choose to drink alcohol should follow national guidelines[11].

Such changes in public health recommendations have obvious implications for the alcoholic beverage industry, including the brewing industry, which may contest both the available evidence and its interpretation. Responses are likely to include more investment by industry in academic research around alcohol consumption[12]. For both the industry and the public, it is important that that research is as rigorous and transparent as possible. In addition, given the prevailing scepticism about findings from industry-funded research, this objective will be facilitated by clear and effective guidelines for research collaborations between the alcohol industries and academia. The proposal from Kok and colleagues is a welcome step in the right direction[1]. They propose a set of principles that include freedom to investigate, full disclosure and informed interpretation[1]. If implemented widely and completely, the FACT guidance will arm readers with relevant information to allow them to evaluate the outcomes of research involving the brewing industry.

Of course, direct sponsorship of research is only one way in which industry, including the alcoholic beverages industry, seeks to influence the research agenda, regulation and legislation and, ultimately, consumer perceptions and purchases of their products. In a system-level analysis, Aki and Khamis explored the different types of relationships between industry and the actors of health research and how these relationships enable industry to exert influence[13]. In addition to direct funding of research, these include building relationships with advocacy groups, funding agencies, experts, professional organisations, regulatory agencies and health practitioners and the influencing of research standards[13]. The proposed FACT Principles[1] should be seen in that wider systems context.

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