

Addressing the global drink problem

Barely a day goes by in the UK without the emergence of another grim alcohol-related health statistic. It is perhaps fitting, therefore, that a detailed exposé of the global health burden of alcohol consumption was recently published in a British medical journal. Over the course of several research papers and commentaries, the 27 June 2009 issue of *The Lancet* profiled the enormous contribution of alcohol to chronic disease and death throughout the world.

With approximately 2 billion users worldwide, the prevalence of alcohol consumption dwarfs that of the other major noninfectious threats to global health, including smoking (around 1 billion), hypertension (~600 million), obesity (~300 million) and diabetes (~150 million). Of these 2 billion people, approximately 76 million suffer from alcohol-related disorders. At the center of *The Lancet's* special issue, a collaborative report estimates that 4% of all deaths worldwide and 4–5% of disability-adjusted life-years can be attributed to alcohol (Rehm, J. *et al. Lancet* 373, 2223–2233 [2009]).

The history of alcohol use is almost as long as that of human civilization. We have been drinking the stuff for thousands of years, for all sorts of reasons—nutritional, social, medicinal, and religious—not to mention simply because we like it. However, as the modern phenomena of binge drinking and underage drinking testify, patterns of alcohol consumption have changed dramatically and for the worse in past decades.

Alcohol has a variety of deleterious effects on the kidney, ranging from subtle electrolyte disturbances to hepatorenal syndrome, a grave complication of advanced cirrhosis, in which renal vasoconstriction leads to acute kidney injury. However, the long-term renal consequences of chronic alcohol exposure have been subject to surprisingly little study, leaving nephrologists and patients to navigate their way through a tangled web of limited and conflicting observational data.

US researchers who followed up 1,658 nurses for 11 years failed to detect any adverse effect of moderate alcohol intake on renal function (Knight, E. L. *et al. Nephrol. Dial. Transplant.* 18, 1549–1554 [2003]). A 2009 analysis of 6,259 participants in the population-based AusDiab study linked moderate or heavy alcohol use to an increased risk of developing albuminuria but to a reduced likelihood of experiencing a decline in glomerular

filtration rate over a 5-year period (White, S. L. *et al. Nephrol. Dial. Transplant.* [doi:10.1093/ndt/gfp114]). In an earlier study of 11,023 apparently healthy men who were followed up for 14 years, the risk of developing a raised serum creatinine level or a reduced glomerular filtration rate actually seemed to diminish as the level of alcohol consumption increased (Schaeffner, E. S. *et al. Arch. Intern. Med.* 165, 1048–1053 [2005]).

Some investigators have even gone so far as to suggest that moderate alcohol consumption might have a beneficial effect on established kidney disease. By contrast, however, heavy drinking was associated with almost a doubling in the risk of developing chronic kidney disease over a 5-year period in a cohort of 3,392 US adults (Shankar, A. *et al. Am. J. Epidemiol.* 164, 263–271 [2006]).

Underlying this mass of contraindications is an array of confounding influences. Individuals who abstain from alcohol, people who drink in moderation and those who drink heavily are so different from one another that nonrandomized comparisons are essentially meaningless. These same confounding factors apply to the much publicized observational association between moderate alcohol consumption and reduced risk of atherosclerotic cardiovascular disease, which has been mistakenly seized on by some as evidence that moderate drinking makes people healthy, rather than just being something that healthy people tend to do.

Such mixed messages might account for the absence of a coherent global effort to reduce the deaths and disease associated with excessive alcohol consumption, analogous to the WHO Framework Convention on Tobacco Control. However, the first tentative steps towards such a framework are at least underway. The WHO plans to submit a draft global strategy to reduce the harmful use of alcohol to the World Health Assembly in 2010. Inspired by the success of 'World No Tobacco Day', India is campaigning on behalf of 11 Southeast Asian nations for 2 October to be declared 'World No Alcohol Day'. Nephrologists and nephrology societies must add their voices to the clarion call. Without the support of health professionals to counter powerful industry lobbying, the news about alcohol and health will continue to be bad.

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Competing interests
The author declares no competing interests.