Our knowledge about alcohol consumption levels and drinking patterns in Russia is steadily increasing and the paper by Nilssen and colleagues in this issue of the IJE makes a valuable addition to the developing store of literature. As discussed in the paper, a better understanding of the patterns and the trends of alcohol consumption is important for understanding the determinants of trends in cardiovascular disease (CVD); but the significance extends beyond this. Our best gauge of the effects of alcohol on the health of Russians in general is what happened in 1985–1988, during the period of a major anti-alcohol campaign in the former Soviet Union. During that period, the Soviet Union was still intact, and there was little of the massive and complex social and economic changes that make it so difficult to sort out causes of the rise in death rates since 1990. According to the best estimates, consumption in 1987 was 25% lower than it had been in 1984, before the anti-alcohol campaign was instituted, even when estimated illicit alcohol supplies were included. There was no alcohol campaign in the former Soviet Union. During that period, the Soviet Union was still intact, and there was little of the massive and complex social and economic changes that make it so difficult to sort out causes of the rise in death rates since 1990. According to the best estimates, consumption in 1987 was 25% lower than it had been in 1984, before the anti-alcohol campaign was instituted, even when estimated illicit alcohol supplies were included. There was no alcohol campaign in the former Soviet Union. During that period, the Soviet Union was still intact, and there was little of the massive and complex social and economic changes that make it so difficult to sort out causes of the rise in death rates since 1990. According to the best estimates, consumption in 1987 was 25% lower than it had been in 1984, before the anti-alcohol campaign was instituted, even when estimated illicit alcohol supplies were included. There was no alcohol campaign in the former Soviet Union. During that period, the Soviet Union was still intact, and there was little of the massive and complex social and economic changes that make it so difficult to sort out causes of the rise in death rates since 1990. According to the best estimates, consumption in 1987 was 25% lower than it had been in 1984, before the anti-alcohol campaign was instituted, even when estimated illicit alcohol supplies were included.
was a strong effect on ‘circulatory disease’ deaths, which is where CVD would have been classified: in 1987 these deaths were recorded as being 9% lower in men than in 1984, and 6% lower in women. The effect was even stronger in other mortality categories: for accidents and violence, a drop of 36% for males and 24% for females; for pneumonia and other respiratory disease, 17% lower for males and 24% lower for females; overall, for mortality from all causes, there was a reduction of 12% for males and 7% for females.

As a result of increased focus on alcohol as a factor in the epidemiology of many diseases, and particularly with reference to disease and death in Russia, there have been a number of recent survey studies of alcohol consumption in Russia, usually focusing on particular cities or regions. The results have shown considerable variation. In part, this is undoubtedly due to genuine variation between the different regions of Russia that have been studied. Arkhangelsk seems to be a hard-drinking far-north town. The dramatic results in some measures in this study show that ~60% of the males and 35% of the females qualify for the category ‘hazardous drinking’ on the first three items of the Alcohol Use Disorder Identification Test (AUDIT)—results which can be compared with some far-north towns elsewhere, for instance in Alaska. A study comparing drinking patterns in different countries of the former Soviet Union found big differences, and there is undoubtedly also substantial variation within the Russian Federation. reports wide variations in regional alcohol poisoning rates, which he takes as a proxy for aggregate alcohol consumption, for the 89 regions of the Russian Federation.

The other potential source of difference in the amount and patterns of drinking is variation in measurement. offer us some further evidence on this. Asking Arkhangelsk respondents about an ‘average week’s intake’ seems to be quite an unsuccessful way of getting an accurate estimate of alcohol consumption. This may be, as the authors note, one of the most commonly used methods in epidemiology, but it is not one which the general reviews of measurement methods in alcohol studies would recommend. The authors speculate about the influence of the study context in driving reporting down, but it is not clear why this seems to have made less influence on reporting with other questions on drinking habits such as the first three AUDIT items.

With some modes of questioning, in fact, Arkhangelsk respondents seem ready to report relatively heavy drinking. Repercentaging Table 5, we learn that 40% of the male drinkers and 11% of the females drink 7 or more drinks on a typical drinking day, and that 33% of the male drinkers and 8% of the females drink 6 or more drinks in one session at least once a week. On the other hand, only 16% of the male drinkers and 7% of the females drink twice a week or more often. These figures suggest that a pattern of weekly heavy drinking is widespread among males, but considerably less common among females, and that for most of the heavy drinkers there is little or no drinking between these heavy drinking occasions. With different questions and cut-off points, somewhat fewer of the respondents in a study in Novosibirsk (particularly fewer of the women) seem to report weekly heavy drinking, but the frequency of drinking seems to be in the same range. Much the same conclusions can be drawn from a comparison with a Russia-wide sample, and with a sample from Moscow.

Indeed, what seems to be special about Arkhangelsk is that heavy drinking may be more common among the women examined in the study than elsewhere in Russia, even if the female rates remain well below the male.

It seems to me that there are three lessons for epidemiology from studies of Russian drinking, and of its relation to heart disease.

The first is the importance of the pattern of drinking in heart disease, as well as potentially in other health conditions. The level of consumption matters, but so does the pattern in which it is consumed. Russian drinking patterns in general seem to maximize the harm in terms of casualties and heart disease from a given level of alcohol consumption. Accordingly, was assigned the highest score on a summary hazardous drinking pattern score used in the Comparative Risk Analysis of Alcohol’s Contribution to the Global Burden of Disease.

The second lesson is that conventional epidemiological ways of measuring alcohol consumption are not adequate for measuring the impact of patterns of drinking. Asking about frequency of drinking more than a particular level is a step forward, but there is still a need to go beyond this to distinguish between different levels of heavy drinking or intoxication. In the absence of agreement on measurement, we are reduced to rough and ready comparisons between studies of the kind I have made above.

The third is that the current textbook wisdom on the protective effect of alcohol on the heart needs to be re-evaluated, particularly when we are thinking in terms of its public health significance, i.e. of effects on the population as a whole. The Russian experience of 1984–1987 offered direct evidence that, at the population level, reduced drinking did not bring increased heart disease—in fact the opposite, in this case. Evidence from separate analyses in 14 western European countries suggests that the same is true at the levels of drinking found in these countries—there was no significant relationship in 13 of the countries, and a protective effect from decreasing consumption was shown in Spain. In the meantime, in prospective and case-control studies at the individual level, findings of a protective effect from moderate drinking have been supplemented lately by findings of an adverse effect from sporadic heavy drinking, although a study in Russia found an adverse effect only for frequent heavy drinkers. These findings help explain why the population-level results differ from those in prospective studies. Drinking patterns and levels in a population tend to move up and down together, and in the case of a reduction in consumption any loss of protection against heart disease at the bottom of the drinking distribution may tend to be balanced by gains at the top of the distribution (more than balanced, in Russia in 1985). Heart epidemiologists tend to have been proud of the findings on the protective effects of alcohol for heart disease, perhaps in part because it showed that the profession was not opposed to enjoyment, but these findings at the individual level turn out to be a poor guide to public health policy.

References