

## HEALTHY DIET AND LIFESTYLE AND RISK OF STROKE IN A PROSPECTIVE COHORT OF WOMEN

**Alain Braillon, Amiens, France:** The conclusion by Larsson et al.<sup>1</sup> that “a low-risk diet and lifestyle can substantially reduce the risk of stroke” deserves comment. Arbitrary cutoff points and binary categorizations of the variables are not appropriate for the statistical analysis. The 5 lifestyle factors—based on a single assessment—have multiple dimensions (amount, duration, and timing) and a continuous distribution without obvious modal values.

In addition, “modest alcohol consumption (5–15 g/day)” is not a healthy lifestyle. Alcohol causes a dose-related increase in prevalence of oral, pharyngeal, esophageal, and breast cancers, beginning at the 1–2 drink/day level.<sup>2,3</sup> No trial has shown evidence that modest alcohol consumption has health benefits. The French paradox publicized by the alcohol lobby is not observed when avoiding selection bias.<sup>4,5</sup>

From the data provided, 390 persons/y without any healthy lifestyle factors should adopt all 5 to avoid one stroke. This would be a big Catch-22. Finally, insisting on a low-risk diet in the conclusion is misleading as smoking is the lifestyle factor most strongly associated with total stroke and cerebral infarction.<sup>1</sup> Population attributable fraction should be provided to substantiate the contribution of each lifestyle factor to stroke.

**Author Response: Susanna C. Larsson, Agneta Åkesson, Stockholm, Sweden:** By dichotomizing the low-risk lifestyle factors using predefined cutoff points, our findings are easily communicated to the public and can also be used for the evaluation of contemporary guidelines and treatments.<sup>1</sup>

We are aware that daily consumption of 1–2 drinks or more of alcohol is associated with increased risk of certain cancers and that high consumption can be related to serious adverse health and social consequences.<sup>6</sup> We defined low risk as 1/3–1 drink per day, consistent with established guidelines.<sup>6,7</sup> Removing alcohol consumption

from the low-risk lifestyle revealed a 48% lower risk of cerebral infarction for women achieving 4 low-risk lifestyle factors (i.e., healthy diet, never smoking, physically active, and normal weight) compared with 61% with alcohol included (data supplement<sup>1</sup>). Our results remain after excluding alcohol consumption.

We estimated the proportion of myocardial infarction cases that could potentially be prevented if women adhered to the lifestyle factors.<sup>8</sup> Considering that, the population-attributable risk of cerebral infarction for each lifestyle factor was 7.7% for diet, 6.5% for smoking, 6.4% for body mass index, 6.2% for physical activity, and 9.7% for alcohol consumption. None of the issues raised will change the conclusion of our article.

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*Author disclosures are available upon request (journal@neurology.org).*