LETTER

Interpretation of milk research results: response to comments by Michaelsson and Byberg

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Dear Editor,

We appreciate the arguments raised by Michaelsson and Byberg in their letter [1]. As the authors suggest, epidemiological evidence despite a larger sample size will remain inconclusive about the effect of milk intake on the risk of mortality and fractures. In the study by Michaelsson et al. [2], we remain concerned about the sex difference comparison as the smoking rates in women were higher, the results were varying for milk vs cheese/yogurt, and for men and women, different estimates were found. The highest relative risks were in the female cohort with high milk intake (9% of the population). These women were aged > 50 years when the study started and were followed for 20 years. In these older women, with increasing categories of milk intake, their risk factors such as smoking as well as comorbidities also increased. Therefore, towards the end of this study, these women (aged > 70 years) were more likely to die from multiple causes and not due to milk intake per se. Therefore, confounding remains an

important issue in this study. We are unaware of good biomarkers for milk intake validation. In the paper by Michaelsson et al., the reference for the validation of the food frequency questionnaire (FFQ) is listed as a paper by Larsson et al. [3], which is not a validation study. Larsson et al. referred to another validation study by A. Wolk 1992, an unpublished study, which was briefly described in the Larsson paper and only provided correlations for fermented dairy and not milk. Overall, our concerns remain whether the higher risk of fractures and mortality in women reflects the true association.

Compliance with ethical standards

Conflict of interest Dr. Sahni has received institutional grants from Dairy Management Inc., and she serves as a member of the National Dairy Council's Nutrition Research Scientific Advisory Committee.

Dr. Weaver is a scientific adviser to Pharmavite, Pfizer, and Yogurt In Nutrition, Danone Institute International. Dr. Soedamah-Muthu received funding from the Global Dairy Platform, Dairy Research Institute, and Dairy Australia for a meta-analysis on cheese and blood lipids (2012) and a meta-analysis of dairy and mortality (2015). She has received the Wiebe Visser International Dairy Nutrition Prize from the Dutch Dairy Association's (NZO) Utrecht Group.

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