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THE AUTHORS REPLY

We thank Dr. Wang for his observations (1). Dr. Wang argues that a successful intervention to increase birth weight would have little impact on blood pressures, whereas interventions focused on later-life weight have a much greater potential for population blood pressure reduction (1). However, Dr. Wang may be confusing issues of etiology, effect size, and the public health implications of the relationship between birth weight, current weight, and blood pressure.

In our study, we addressed an etiologic question about the effect of birth weight on blood pressure, by showing that the negative association between birth weight and blood pressure upon adjustment for current weight was not easily explained by collider-stratification bias (2). As mentioned by Dr. Wang and in line with other studies (3), our results also indicated that the effect size of birth weight on blood pressure is quite small compared with the effect of current weight. Nevertheless—and this is where we disagree with Dr. Wang—that does not necessarily imply that the public health implications of the association between birth weight and blood pressure are negligible compared with the implications of later-life body weight.

Indeed, the public health implication is constrained by the existence of implementable interventions to modify either birth weight or later-life weight (4). On the one hand, several interventions (such as encouraging maternal smoking cessation or preventing insufficient weight gain during pregnancy) could increase offspring birth weight and, eventually, reduce blood pressure. On the other hand, besides gastric bypass surgery, there is no easily implementable and efficient intervention for obtaining long-term, substantial body-weight reduction in later life and, hence, for having any “tangible” effect on blood pressure. Indirectly, Dr. Wang also points to a major issue in the assessment of the effect of birth weight or later-life weight on blood pressure—that is, a potential violation of the causal consistency assumption (4), as different interventions changing birth weight or later-life body weight can have very different effects on blood pressure.

Nevertheless, we agree that, if successful, prevention of excess body-weight gain throughout the life course could have a large impact on the prevention of elevated blood pressure (5).

ACKNOWLEDGMENTS

Conflict of interest: none declared.

REFERENCES


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DOI: 10.1093/aje/kwu043; Advance Access publication: March 19, 2014