**Gestational 25(OH)-vitamin D and offspring bone mass**

Nicholas C Harvey1,2, Rebecca Moon1,3, Hazel M Inskip1, Keith M Godfrey1,2, Cyrus Cooper1,2,4 for the MAVIDOS Trial Group

1MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK

2NIHR Southampton Nutrition Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton, UK

3Paediatric Endocrinology, University Hospital Southampton NHS Foundation Trust, Southampton, UK

4NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, Oxford, UK

**Corresponding Author:**

Professor Cyrus Cooper, MRC Lifecourse Epidemiology Unit, University of Southampton,

Southampton General Hospital, Southampton. SO16 6YD

Tel: 023 8077 7624; Fax: 023 8070 4021; Email: [cc@mrc.soton.ac.uk](mailto:cc@mrc.soton.ac.uk)

The recent paper by Garcia et al1, exploring potential associations between gestational 25-hydroxyvitamin D [25(OH)D] and offspring bone development, raises a number of questions when read the context of the existing literature. Indeed, comparisons with other studies are problematic: Firstly, the authors adjusted all DXA bone-indices for height. While this might be appropriate in the clinical context of paediatric growth retardation2, it generates a fundamentally different construct to unadjusted measures presented in several previous studies. The non-height-adjusted analyses are detailed only online, not in the main paper, but the inclusion of birthweight, birth-length and 6-year fat-plus-lean mass in the regression models means that these analyses are effectively over-adjusted for body size in any case. Secondly, many covariates are included in the models without clear justification. For example, all models include season and ambient sunshine. Since these variables yield very similar information, are likely to act through the exposure [25(OH)D], and are not expected to be related to the outcome, their incorporation seems superfluous. In the “mediator” model, maternal BMI, offspring birth-length, birthweight, 6-year height and fat-plus-lean mass are all included; whilst the authors demonstrate acceptable variance inflation factors, this approach obscures individual covariate contributions, and blurs the distinction between confounding and causal pathway. Finally, when stratified by ethnicity, the only continuous (inverse) 25(OH)D association is with bone mineral content (BMC) in blacks. In whites, the only significant association was for bone area with 25(OH)D<25nmol/l, with no associations in Asians. Given the strong ethnicity-25(OH)D interaction, results from the whole multi-ethnic cohort are hard to interpret. The one intervention study cited, the MAVIDOS trial, suggested, in a pre-specified secondary analysis, that maternal gestational cholecalciferol supplementation might increase offspring BMC amongst winter births3; assessment of these children at 6-8 years, and replication of the birth finding in a second trial (SPRING)4 is ongoing.

**Author contributions**

NCH, RM, HMI, KMG and CC all contributed to the preparation of the initial draft, and to further development and approval of the final manuscript.

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**Disclosures**

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