Reviewer's report

Title: Prevalence and correlates of vitamin D status in African American men

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Reviewer: LAURE ESTERLE

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Comments to the Authors

The authors present data from an observational study in African-American men, and report vitamin D status and shown a positive association with season, supplemental vitamin D intake, milk consumption and physical activity. As such, the study adds data to factors influences vitamin D status of literature on this topic, contributing to confirm the preponderance of evidence indicating a positive relationship between consumption of vitamin D supplement, fortified vitamin D foods like milk, sun exposure and vitamin D status.

The results are potentially interesting but some aspects need clarification.

Major comments

1. A principal problem with this paper, is that the authors did not specify whether they had used continuous external quality assessment of the 25-(OH)D assays (DEQAS) for assay vitamin D status. The external control permit to test the validity of results and comparisons of the results obtained in the different laboratories.

2. Discussion: It is really the impact of physical activity on vitamin D status that is highlighted? Why the authors did not consider the sun exposure as the factor that contributing to the positive effect of physical activity? There is no direct link between a physical activity practices indoors, and 25-(OH)D levels. The authors should not conclude by recommending increased physical activity without specifying whether it is an activity inside or outside.

3. Abstract and discussion: There is a discrepancy between the conclusion. In the abstract the authors talk about a bias of recruitment as regard to the BMI of the subjects (season of collecting sample) whereas in the discussion, the conclusion is more focused on the lack of association between BMI and vitamin D status. The discussion is too focused on the role of adiposity on vitamin D status.

Minor essential comments

1. Statistical analysis: What software was used for statistical analysis?
2. Tables: Table 1: 25-(OH)D mean± SD or SE, must be indicated on the table. Significant differences are calculated compared to whitch group?; Table 2: R2 regression coefficient should be indicated in the table.
3. The discussion is too long and should be reduced by at least 33%-50%.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.