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LETTER TO THE EDITOR

Copper Status After Sleeve Gastrectomy Bariatric Surgery

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Wawrzyniak and Krotki presented interesting data on nutrient intakes by people after sleeve gastrectomy bariatric surgery [1]. However, interpretation of the findings was overextended to characterize deficiency occurrence. I want to address this issue in regards to copper. The abstract states that deficiency occurred in 29% of the women and that men did not need copper supplementation. These contentions are based just on comparing intakes to the Estimated Average Requirement (EAR). These comparisons cannot be used to draw conclusions about the full extent of copper deficiency (severe or moderate). I base this on the following considerations:

1. The EAR for copper may not be enough to prevent moderate copper deficiency. Even the United States adult Recommended Dietary Allowance (RDA) for copper, which runs higher than the EAR, may run low. For example, intake of the adult copper RDA is not sufficient to maximize muscle activity of the copper enzyme cytochrome c oxidase nor exercise performance [2].
2. The dietary intake data does not account for the possibility that some copper sources can have low absorption. This can include the many supplements that contain copper oxide, about which many doubts exist [3]. Also, copper gluconate, another widely used supplement form, has not given positive results in a number of studies [i.e., 4, 5.
3. The copper intake data alone does not account for impaired absorption physiology that is thought to occur after bariatric surgery [6].

In further support of the last 2 points, our group [7] found that 6 weeks after Roux-en-Y gastric bypass, copper status, based on plasma ceruloplasmin, showed a difference in two groups that differed in copper intake (2 mg copper as gluconate vs 2.5 mg as glycinate).

In summary, in my opinion, the data in this paper, though valuable, should not be interpreted too broadly, particularly for copper.

Declarations

Ethics Approval Not applicable.

Conflict of Interest The author is president of Medinutra LLC which sells a bariatric meal replacement line that contains copper glycinate.

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