

REVIEWER 2

Comments and Suggestions

This review discusses Zn's roles in cellular processes, the disruption caused by Cd, and the health impacts of Cd exposure, emphasizing the protective effects of Zn and the challenge of setting safe Cd intake levels. The article is a comprehensive review of zinc's essential roles and the impact of cadmium exposure, however, it suffers from several critical issues that require major revision to enhance clarity and coherence.

RESPONSE: Thank you for reviewing our work, your comments, and suggestions for improvement. Changes to the text are in blue. To better reflect its content, we have rewritten the aims (lines 75-83), as quoted below.

This review aims to provide insights into the roles of Zn and the impact of Cd exposure on health. Firstly, it summarizes the RDA for Zn together with current Cd exposure guidelines and its nephrotoxicity threshold level. It discusses the specific metal transporters which are responsible for Zn and Cd absorption, and cellular acquisition of these metals. Secondly, it discusses the correlation between Zn deficiency and Cd toxicity, and by interfering with Zn transporters, Cd perturbs Zn homeostasis. Thirdly, it summarizes the overall health threat linked with environmental non-workplace Cd exposure, evident from prospective cohort studies. The protective roles of Zn and its transport proteins against Cd-induced bone resorption are highlighted.

Point 1: Redundancy and transition

Some points are repeated unnecessarily, such as the role of Zn in cellular functions and the effects of Cd exposure.

Generally, the text contains redundant information and lacks sufficient context for some points.

In particular, it suffers from issues with clarity and coherence, as it presents an overwhelming amount of detail without clear transitions.

RESPONSE: We have edited the text and removed repetitive sentences. Additional text has been added where necessary.

Point 2: Grammar and syntax

Grammar and syntax need improvement, as some sentences are awkwardly constructed and affect readability or grammatically incorrect and confusing.

RESPONSE: Grammar and syntax corrections have been undertaken. Problematic sentences have been replaced with new sentences.

Point 3:

In general, the logical flow between argument is lacking, making it difficult to grasp the overall argument. In several sections the text lacks a clear central argument or focus, making it hard to discern the primary point being made.

The text would benefit from a clearer focus and more straightforward presentation of key points.

In conclusion, the review offers valuable insights into the roles of zinc and the impact of cadmium exposure on health. However, to enhance its effectiveness and readability, significant revisions are necessary to improve clarity, coherence, and the overall logical flow of the narrative.

RESPONSE: Our paper has been revised extensively, and we hope it has satisfactorily addressed all concerns.

Comments on the Quality of English Language

The text contains awkwardly constructed sentences that affect readability and comprehension. Some sentences are grammatically incorrect or confusing, detracting from the clarity of the message.

RESPONSE: The English has been revised, and errors have been corrected. Rewording of sentences and have been undertaken where required.