

Correspondence on tea consumption and attenuation of biological aging: a longitudinal analysis from two cohort studies

Yolanda Yong-Yan Tsai^a and James Cheng-Chung Wei^{a,b,c,*}

^aInstitute of Medicine, Chung Shan Medical University, Taichung, Taiwan

^bDepartment of Allergy, Immunology & Rheumatology, Chung Shan Medical University Hospital, Taichung, Taiwan

^cGraduate Institute of Integrated Medicine, China Medical University, Taichung, Taiwan

Dear Editor,

We read with interest the article titled “Tea consumption and attenuation of biological aging: a longitudinal analysis from two cohort studies”.¹ The methodological approach undertaken within the China Multi-Ethnic Cohort and UK Biobank independent datasets is commendable. These datasets provide a rich and diverse comparative foundation that enhances the study’s generality and credibility. Moreover, the cross-cultural and regional research design offers a more nuanced understanding of the potential relationship between tea consumption and the slowing growth of biological aging.²⁻⁵

However, the study presents opportunities for further depth, particularly concerning the self-reported data on tea consumption, which could introduce information bias due to recall on memory and subjective reporting. To strengthen the objectivity and precision of future research, we suggest the incorporation of more objective consumption measurement methods, such as dietary diaries. The research also did not address the variable impacts of different tea types on biological aging, a significant area for future inquiry given the distinct bioactive components in various tea varieties.

The exploration of possible mechanisms between tea’s bioactive components and the aging process was somewhat limited in the article. Future research should investigate in greater detail how particular components like polyphenols and caffeine influence aging through specific biochemical pathways. Considering that the acceleration of biological aging is a complex, multifactorial process, future studies should comprehensively examine the cumulative effects of genetics, lifestyle, and environmental factors on aging. Further examination of the association between tea consumption and aging characteristics in specific sub-populations is also crucial to more accurately position tea within global anti-aging strategies.

Lastly, we advocate for future research designs to include long-term follow-ups and extensive biomarker collections, along with a multidimensional evaluation of tea consumption and aging. Such research would aid in deepening our understanding of how tea impacts the human biological aging process and provide more precise guidance for public health policies and personal lifestyle choices. Despite the study’s finding of a nonlinear relationship between tea consumption and reduced biological age acceleration, it did not establish a definitive dose–response relationship. Future research should focus on the precise quantification of tea consumption to determine optimal dosages and frequencies. Considering the diversity in tea preferences across different cultures and regions, establishing a universal dosage guideline that applies to all populations will be challenging, necessitating broader research and analysis within various demographic and cultural contexts.

In summary, this research offers valuable insights into the link between tea consumption and biological aging and points to further investigative directions. We anticipate future research that will provide more in-depth discoveries and practical applications, especially in developing tea drinking guidelines and healthy aging strategies for diverse populations.

Declaration of interests

The authors declare no conflicts of interest.

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*Corresponding author. No. 110, Sec. 1, Jianguo N. Rd., South District, Taichung City, 40201. Taiwan.

E-mail address: jcwei@csmu.edu.tw (J. Cheng-Chung Wei).

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