**DOI:** 10.4274/gulhane.galenos.2023.56987 Gulhane Med J 2023;65:65



# Reply to: Comment on "Caffeine intake and bone mineral density in postmenopausal women"

## Kübra Tel Adıgüzel<sup>1</sup>, ÖÖzlem Köroğlu<sup>2</sup>

<sup>1</sup>University of Health Sciences Türkiye, Gülhane Faculty of Health Sciences, Department of Nutrition and Dietetics, Ankara, Türkiye

<sup>2</sup>University of Health Sciences Türkiye, Gülhane Faculty of Medicine, Gaziler Physical Medicine and Rehabilitation Training and Research Hospital, Ankara, Türkiye

Date submitted: 03.01.2023

Date accepted: 17.01.2023 Online publication date: 15.03.2023

## **Corresponding Author:**

Kübra Tel Adıgüzel, PhD., University of Health Sciences Türkiye, Gülhane Faculty of Health Sciences, Department of Nutrition and Dietetics, Ankara, Türkiye dyt.kubra@gmail.com

ORCID:

orcid.org/0000-0003-1010-4316

**Keywords:** Osteopenia, osteoporosis, caffeine, bone mineral densitometry, dual-energy X-ray absorptiometry, DXA

#### Dear Editor,

We would like to thank the author for the comments on our article entitled titled "Caffeine intake and bone mineral density in postmenopausal women" (1).

As the author has also addressed and we have emphasized in our article that high caffeine-containing energy drinks are increasingly consumed, and caffeine intake gets higher over the world (2). In contrast to prescription drugs, other medicines, and harmful chemicals, there is no safe limit for daily caffeine intake. However, over 200 mg single dose or 400 mg of daily caffeine may cause undesired effects as reported in the European Food Safety Authority Scientific Opinion document (3).

In our article, we did not aim to report the biological effects of caffeine via receptors on bony tissues or other body structures. On the other hand, adenosine receptors and vitamin D metabolism are the potential pathways to be affected (4). Considering the high percentage of adults that consume at least one caffeine-containing beverage daily, the total impact of caffeine on human health should be emphasized (5).

As the author stated, the undesired effects of caffeine can be minimized if its daily amount is carefully controlled. Nevertheless, factors like biased patient reports and differences in metabolism and absorption make the correct assessment of caffeine intake difficult.

### Ethics

Peer-review: Internally peer-reviewed.

Financial Disclosure: The authors declared that this study received no financial support.

## References

- 1. Tel Adiguzel K, Köroğlu Ö. Caffeine intake and bone mineral density in postmenopausal women. Gulhane Med J. 2022;64:262-267.
- O'Callaghan F, Muurlink O, Reid N. Effects of caffeine on sleep quality and daytime functioning. Risk Manag Healthc Policy. 2018;11:263-271.
- 3. Scientific Opinion on the safety of caffeine. EFSA J. 2015;13:4102.
- 4. Berman NK, Honig S, Cronstein BN, Pillinger MH. The effects of caffeine on bone mineral density and fracture risk. Osteoporos Int. 2022;33:1235-1241.
- Ogawa N, Ueki H. Clinical importance of caffeine dependence and abuse. Psychiatry Clin Neurosci. 2007;61:263-268.