

# Coffee Consumption and Risk of Osteoporosis

Editorial

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Coffee may be the most widely consumed beverage in the world. Coffee contains many complex chemicals, including carbohydrates, nitrogenous compounds, vitamins, minerals, and phenolic compounds.<sup>1)</sup> Recently, several investigators have reported that the consumption of coffee is associated with many health conditions. The results of epidemiological research suggest that coffee consumption may help prevent several chronic diseases, including type 2 diabetes mellitus, Parkinson's disease and liver cirrhosis. However some studies have suggested that coffee consumption is significantly associated with increased risk of osteoporosis and osteoporotic fracture.<sup>2)</sup>

In the present issue, Park et al.<sup>3)</sup> evaluated the effects of coffee consumption on bone mineral density in Korean premenopausal women. The authors obtained the data from the fourth Korea National Health and Nutrition Examination Survey 2008–2009, which consisted of 1,761 Korean premenopausal women. The authors found that coffee consumption showed no significant association with the bone mineral density of either the femoral neck or lumbar spine.

These results are similar to findings from previous research, which reported that the amount of coffee consumption was not associated with bone mineral density in premenopausal woman.<sup>4)</sup>

However, these results should be interpreted cautiously. The subject population in the study<sup>3)</sup> was limited to premenopausal woman. Thus, the results of the study cannot be extended to male or postmenopausal woman. To date, it is well known that consumption of coffee may increase urinary excretion of calcium which may induce osteoporosis especially in people with inadequate calcium intake such as the elderly.<sup>5)</sup> Recently, a large and long-term epidemiological study published in Sweden suggested that high coffee consumption was associated with a small reduction

in bone density.<sup>6)</sup> Therefore, to reduce risk of osteoporosis, adequate calcium and vitamin D intake, as well as moderate coffee consumption (up to 3 cups/d) is advised particularly in older adults.

## CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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