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# Obesity Medicine

## Coffee and cardiovascular risk burden in women

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## Highlights

- PCOS is a known cardiovascular risk factor for women. It belongs to the categories of sex-specific cardiovascular risk factors
- Coffee consumption was associated with a decreased risk of developing asymptomatic PAD in a population of pre-menopausal women
- Coffee could be an excellent functional beverage, containing a range of polyphenolic compounds

## **Coffee and cardiovascular risk burden in women**

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Letter related to “Mousavi A, Saedisomeolia A, Yekaninejad M, Ildarabadi A, Meshkani M, Vahid-Dastjerdi M. Effect of green coffee supplementation on androgens level in women with polycystic ovary syndrome: A Randomized Clinical Trial. *Obesity Medicine*, 2020, vol 20. <https://doi.org/10.1016/j.obmed.2020.100298>”

No conflict of interest

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Dear Editor,

We have read with great interest the article “Effect of green coffee supplementation on androgens level in women with polycystic ovary syndrome: A Randomized Clinical Trial. by Mousavi A and coworkers [2020] and we found his manuscript of importance with a view to clinical prevention. This randomized study examined the effect of green coffee supplementation on androgens level in women with Poly-Cystic Ovary Syndrome (PCOS). Authors found that supplementation of 400 mg green coffee a day for six weeks significantly reduced free testosterone, triglyceride, and cholesterol levels so they concluded that green coffee might help to improve Poly-Cystic Ovary Syndrome (PCOS).

With reference to the findings reported in the paper, we would like to make the following contribution to the discussion.

PCOS is a known cardiovascular risk factor for women. It belongs to the categories of sex-specific cardiovascular risk factors. These conditions taking place during the fertile years and around menopause represent early markers of future CVD and provide a unique opportunity for healthcare professionals to attempt early identification of women who may be at risk of developing cardiovascular disease [Mattioli AV 2019]. Mousavi A et al. [2020] underlined the metabolic effects of green coffee on hormonal levels in PCOS and we strongly support the importance of their observation with a look to cardiovascular risk. Moreover, previously we found that coffee consumption was associated with a decreased risk of developing asymptomatic PAD in a population of pre-menopausal women [Mattioli AV 2018]. Women with high coffee consumption had a good adherence to Mediterranean Diet and high levels of physical activity suggesting a healthier lifestyle, a known factor of prevention of atherosclerosis. However the analysis adjusted for cardiovascular risk factors

support the idea of a direct action of coffee on vessels. This direct action is related to coffee antioxidants. [Mattioli, 2018]

Several in vivo studies suggested that polyphenols have antiatherosclerotic effects in the early stages of atherosclerosis development, improve endothelial function and increase nitric oxide release; modulate inflammation and, protect against platelet aggregation. [Mattioli AV 2020, Ochiai 2004]

Coffee could be an excellent functional beverage, containing a range of polyphenolic compounds that display high antioxidant activity. [de Almeida RF, 2019]

Mousavi A and coworkers evaluated the effect of coffee supplementation which probably has a lower antioxidant content than coffee drink, however their results are the prerequisite for a potential use of the drink in clinical practice to reduce cardiovascular risk in women with PCOS.

No conflict of interest

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