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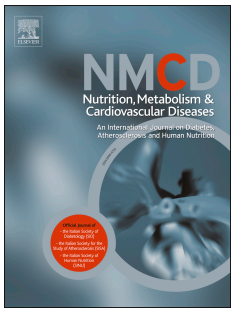

Pre-clinical atherosclerosis is associated with low coffee consumption and low adherence to Mediterranean Diet in pre-menopausal women

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Dear Editor,

We have read with great interest the paper "Association of dietary patterns with five-year degree and progression of coronary artery calcification in the Heinz Nixdorf Recall study" by Frölich and coworkers [1] and we found their conclusion of importance with a view to clinical prevention. The aim of their study was to explore associations of comprehensive dietary patterns derived by cluster analysis with degree and progression of coronary artery calcification (CAC) over five years of follow-up. Authors concluded that the study results support the hypothesis that a "Mediterranean-like" diet is associated with a lower CAC-progression and lower degree of CAC in men and women.

With reference to the findings reported in the paper, we would like to make the following contribution to the discussion. In a recent analysis performed on 650 healthy women in pre-menopausal age we evaluated preclinical atherosclerosis by using the ankle brachial index (ABI) and we correlates with level of adherence to Mediterranean Diet and coffee consumption [2]. We found that ABI was correlated with Mediterranean Diet Score (rho = 0. 41, $P < 0.05$), indicating that lower adherence to the Mediterranean Diet was associated with reduced ABI values suggesting asymptomatic peripheral arterial disease. [2]

Analysing coffee consumption, women who were high coffee consumers (>5 cups/day) showed higher ABI index compared to women who were abstainer or low coffee consumers (1 cup a day) (1.0 ± 0.5 versus 0.8 ± 0.1). Specifically, a ABI<0.9 was reported in 16% of patients high coffee consumers compared to 21% of patients abstainer or low consumer. In addition, we also found that women high coffee consumers were thinner, and had a healthy lifestyle with moderate daily

physical activity. All these factors can influence the development of pre-clinical atherosclerosis. These data suggests potential protective effects of coffee. It is well known that Mediterranean lifestyle is characterized by high intake of antioxidants. [3,4]. Moreover, our Mediterranean population drinks espresso coffee that has a low concentration of caffeine compared with regular American coffee. In our population of pre-menopausal women coffee contributes to total antioxidant intake together with fruit and vegetables. [4,5]. We can conclude that the small quantity of caffeine included in espresso coffee and the high level of antioxidants components in this beverage could positively influence prevention of preclinical atherosclerosis.

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