

# Diet and Women: A Complex Relationship That We Need to Know Better [Letter]

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## Dear editor

We read with great interest the manuscript "Dietary, Psychological and Lifestyle Factors Associated with Premenstrual Symptoms" by AlQuaiz A and coworkers<sup>1</sup> and found it extremely important from the point of view of the impact of lifestyle on premenstrual symptoms.

The authors explored the associations of dietary habits, mental distress and lifestyle factors with premenstrual symptoms and its prevalence among women, aged 18 to 50 years, in Riyadh, Saudi Arabia.

They found that several potentially modifiable factors, such as diet, quality of food and stress, were positively associated with symptoms and suggested that increasing women's awareness of healthy lifestyles may help reduce the occurrence of premenstrual symptoms.

We would like to contribute to the discussion on this topic.

The hormonal changes that occur throughout the life of women profoundly influence their relationship with food, leading to changes in diet. Specifically, some stressful situations induce a change in food quality and food search. An important example is the menopausal transition in which there is an increase in anxiety and depression due to the activation of the hypothalamic-pituitary axis and women tend to gain weight and to cope with stress through food.<sup>2,3</sup>

The recent pandemic has shown that men and women react to stress differently. Women, who have been hardest hit by the pandemic-induced stress, have reacted by eating to cope, increasing their intake of foods high in sugar and fat.

These foods act on dopamine receptors in the brain, promoting relief from anxiety and a perception of well-being. This phenomenon has been well described in the premenstrual phases. To date, women have more health skills and know the right nutrients to stay healthy. However, an information gap should be noted. Most scientific evidence does not explore the different effects of micro and macro nutrients in the two sexes. With the exception of Vitamin D which is much studied in women, the other components are indicated, in a healthy diet, without knowing if the action is influenced by sex hormones. We have reported this gap in older women; however, it could also be translated in younger women.<sup>4</sup> An interesting result of the manuscript by AlQuaiz et al is that the majority (87%) of participants reported drinking Arabic coffee frequently, and most of them drank three to five cups per sitting. A dose-response association was observed between the symptoms and increasing number of cups of coffee consumed. The literature data are highly controversial. The mechanism by which caffeine intake could affect premenstrual symptoms could be determined by the depressant action of adenosine on central neurons.<sup>5</sup>

However, coffee needs to be evaluated in relation to women's overall diet. It is also necessary to verify the intake of sugar with coffee, the intake of sweet foods while drinking coffee and smoking, the latter being frequently linked to drinking coffee.

In conclusion, we believe that the manuscript by AlQuaiz A and coworkers provides interesting insights into the role lifestyle plays on premenstrual symptoms. It is necessary to acquire more information on the differences in the action of different foods in the two sexes to identify a personalized and holistic approach to women's health.

## Disclosure

The authors report no conflicts of interest in this communication.

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