



## Highlights about the association of health and skipping breakfast in adolescents and adults

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Dear Editor,

I read with extreme interest the paper by Souza *et al.*<sup>(1)</sup> and I compliment the authors for their capability of running such a comprehensive and difficult study. I fully agree with the arguments raised in the Discussion that breakfast omission appears to be associated with an excess body weight and central obesity the same way as adverse results in lipid and glycidic profiles. In the same time in the last years, we saw the scientific dissemination of the concept of intermittent fasting including with well-controlled clinical trials showing the safety or even possible benefits of skipping breakfast<sup>(2)</sup> and here was a good opportunity to link these subjects and highlight some points.

First, the nutritional needs of adults and children or adolescents are different, for a proper growth and development during childhood and youth, nutrients are essentials and special attention should be paid to meal timing and frequency meals among children and teenagers<sup>(3)</sup>. As discussed by Souza *et al.*<sup>(1)</sup>, frequent breakfast skippers were more likely to be overweight/obese and centrally obese. On the contrary, for adults a recent meta-analysis of randomised clinical trials showed that patients assigned to breakfast *v.* no breakfast had a greater daily energy intake and possibly, greater weight gain<sup>(4)</sup>.

Skipping breakfast and some forms of intermittent fasting are related, as skipping breakfast is a strategy for implementing intermittent fasting<sup>(5)</sup>. In these cases, it is important to note that studies are done in specific populations, mostly with adults, and the results found in these studies cannot be transferred to children and adolescents. Moreover, it has already been investigated in the literature that the habit of having breakfast correlates with a positive impact on overall diet quality<sup>(6)</sup>. About this, the data from Souza's article<sup>(1)</sup> fail for not bring this analysis that would be essential to further reinforce the importance of breakfast.

Lastly, the main limitation in the study of Souza *et al.*<sup>(1)</sup> that must be considered is the cross-sectional design, and in this kind of study commonly the risk of obesity in children and adolescents who skipped breakfast was greater than those who ate breakfast regularly; however, no significant link was found in cohort studies<sup>(7)</sup>.

In conclusion, clinical investigation until now seems to support encourage to eat breakfast daily mainly for children and adolescents. For adults, caution should be exercised in interpreting the findings as many unmeasured confounders may have contributed for some beneficial results of breakfast skipping. Besides that a decrease in the total of energies consumed in a day in an isoenergetic diet containing breakfast would likely remove any purported benefit.

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