

## Letter to Editor

# Breakfast: Biochemical perspectives

Sir,

The editorial published in Volume 1, 2016, of IJCEP entitled, "A good breakfast is good for health" was a well-timed and much-needed article highly appropriate to the scope of the journal. It reminded me of a popular saying "A stitch in time saves nine." Metabolic syndrome can be considered as the juncture of diabetes mellitus, heart disease, hypertension, and obesity. The only solution to delay or prevent its onset is to interrupt each of these diseases at the time of their inception time. Although many newspaper articles are released advocating similar opinion, what makes this article unique is its scientific appeal.

Sufficient explanation has been provided with physiological and biochemical evidence to elucidate the importance of quantity as well as the quality of breakfast. The author has gone at length and highlighted the reasons how the altered lifestyle has forced us to compromise with the time spent in preparation of a quality breakfast.

In this article, it was rightly pointed out that the morning breakfast when synchronizes with morning cortisol peak kicks start metabolism. Therefore, skipping morning breakfast as part of dieting is less successful than skipping any other meals of the day. Here, I would like to add that the net energy calculation takes into consideration of physical activity thermogenesis. Morning breakfast intake increases the physical activity thermogenesis and an individual expends more energy aiding in better weight loss. On the other hand, if morning breakfast is skipped or prolonged too much, then despite reduction in total energy intake, expected weight loss is not obtained. This is because the body performs compensatory adjustments in the physical activity thermogenesis. Hence, net energy loss gets reduced.<sup>[1]</sup>

Similarly, I would like to add another point highlighting the association of chronic stress with diet quality indicators. In a recent study done in a group of women volunteers, it was found that females with the habit of skipping breakfast were consuming more added sugars and saturated fat compared to females consuming equal amount of energy per day with regular breakfast eating habit. The reported stress level was also positively associated with the evening intake of added sugars and empty calorie in the breakfast skipper group.<sup>[2]</sup> Therefore, the habit of skipping breakfast can also be a subclinical indicator of chronic stress leading

to poor choice of evening meal further exacerbating the metabolic profile of the individual.

In another study, leptin level >50% was found to be associated with the habit of skipping breakfast.<sup>[3]</sup> Leptin is a known regulator of food intake and energy storage. Therefore, despite many known benefits, there are many areas still not explored regarding the integrated response to our diet pattern and ingestive behavior, for which systematic studies are further warranted.

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### Conflicts of interest

There are no conflicts of interest.

**Nivedita Nanda**

*Department of Biochemistry, JIPMER, Puducherry, India*

### Address for correspondence:

Dr. Nivedita Nanda,

Department of Biochemistry, JIPMER, Puducherry, India.

E-mail: [drnnivedita@gmail.com](mailto:drnnivedita@gmail.com)

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