



# Clarifications and Concerns Regarding the Therapeutic Fasting in Type 2 Diabetes Mellitus Patients

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J Health Allied Sci<sup>NU</sup>

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We read the article by Nair et al with great interest.<sup>1</sup> In this observational study, authors reported significant improvements observed in vitamin D and B12 levels, fasting blood sugar, blood pressure, anthropometric measures, and overall quality of life among the 26 type 2 diabetes mellitus patients undergoing a 10-day medically supervised fasting. However, the methodological section needs more clarity on the operational definition used for the intervention “Therapeutic fasting,” as the operational definition of the same is not explained anywhere in the article. “Calorie-restricted diet” would have been a more appropriate terminology to use, rather than calling the intervention as therapeutic “fasting.” Fasting, by definition, is “abstinence from food or caloric intake” for a specific period of time.<sup>2</sup> However, the participants in the study were on a low calorie diet (1000–1200 kcal/day) for 6 days or on a very low calorie diet (400–600 kcal/day) for 4 days.<sup>3</sup> Though there are a few citations in the article on intermittent fasting, there is no mention of whether intermittent fasting was even prescribed to the participants alongside calorie-restricted diet.

Second, the authors have mentioned that the study was conducted at a residential complementary and alternative medicine setting. Fasting is a therapeutic modality used in the Yoga and Naturopathy system of medicine; however, it also includes various other treatment modalities such as hydrotherapy, mud therapy, massage, acupuncture, yoga, etc.<sup>4</sup> Did the participants engage in any other kinds of treatment modalities during their residential period? If no other treatments are given, we are interested to know on what types of activity the participants engaged in throughout their entire day apart from the meal times, in a residential set up.

Third, India has an estimated 74 million adults with diabetes, with China having over 140 million adults with diabetes.<sup>5</sup> Even while considering the prevalence percentage, Pakistan has the highest prevalence of 30.8% and India is not even in the top 10 countries.<sup>5</sup> Mentioning a nation (India) as the “diabetic capital of the world” without proper citation is highly unacceptable.

In conclusion, we appreciate the valuable insights provided by the authors<sup>1</sup> but recommend addressing these concerns to enhance the clarity and precision of the methodology section.

## Conflict of Interest

None declared.

## References

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DOI <https://doi.org/10.1055/s-0044-1787714>.  
ISSN 2582-4287.

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# Response: Clarifications and Concerns Regarding the Therapeutic Fasting in Type 2 Diabetes Mellitus Patients

Thank you for the interest in our manuscript. The authors have pointed out that the use of the term “therapeutic fasting” is inappropriate and suggested the use of “caloric restriction.”<sup>1</sup> However, we disagree with authors, as “therapeutic fasting” is indeed a more fitting term, as it has been employed for health and disease management since ancient times, often under various names such as fasting cure, healing fasting, and medically supervised fasting.<sup>2,3</sup> Furthermore, fasting does not necessarily entail complete abstinence from food or water. In naturopathic settings, methods like the Buchinger fasting method,<sup>3</sup> pioneered by Otto Buchinger, are prevalent. This method allows participants to consume vegetable broth, fruit or vegetable juices, herbal teas, buttermilk, and water for a specified duration. In addition to this, Buchinger fasting recommends use of eliminative therapies that can upregulate the functions of major eliminative systems like the intestine, kidneys, lungs, and skin.<sup>3,4</sup>

The study reported by us<sup>5</sup> adopted the Buchinger method and a detailed overview of the 10-day therapeutic fasting regimen was provided in Fig. 1, that depicted three phases of fasting: preparation (days 1–3), fasting (days 4–7), and refeeding (days 8–10). Caloric intake was gradually reduced until day 3, followed by a 4-day fast involving juice, soups, and lemon honey water. Caloric intake was subsequently increased gradually from day 8 to 10 in a similar manner. We have provided relevant citation for the use of similar therapeutic fasting regimens in references 11 to 13 in the present manuscript under discussion.<sup>5</sup>

As mentioned earlier, Buchinger fasting method recommends the participants in undergoing eliminative therapies, the participants in the present study also underwent other naturopathy modalities like hydrotherapy, mud therapy, and yoga. This could have also potentially influenced the outcomes which may be considered as a limitation. Further-

more, we mentioned India as the diabetic capital of world based on numerous publications<sup>6–9</sup>; however, as mentioned by the authors on their letter, there could be other data from other sources which contradict our statement.

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