

Reviewer's report

Title: The effect of long term combined yoga practice on the basal metabolic rate of healthy Adults

Version: 1 **Date:** 16 May 2006

Reviewer: Ramesh L Bijlani

Reviewer's report:

General

The paper reports on the long term effects of yogic practices on the basal metabolic rate. It is a valuable piece of research because it is a controlled study, has a fairly large number of subjects, and looks at yoga as a holistic discipline.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Nil

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The paper lists two major aims: the acute effect of yogic practices on oxygen consumption, and the long term effect of yogic practices on BMR. Out of these only the second issue has been addressed in the study. Therefore the first aim may be deleted.

The paper also lists validation of WHO predictive equations for the Indian population as a minor aim of the study. This is a major project in itself, and cannot be decided one way or the other by a small study like this on a restricted population. This aim may also be deleted.

In Tables 2 and 3, the units of BMR adjusted for weight (kcal/kg/d) may be inserted.

In Results, p. 8, "significant decrease in BMR of yoga group" is misleading -- it should read "significantly lower BMR in the yoga group"

Discretionary Revisions (which the author can choose to ignore)

Tables 2 and 3 may be merged.

The first para of Discussion reviews literature not very relevant to the present study. It could be deleted. Instead the authors should elaborate on discussion of the findings of this study, and suggest plausible mechanisms for the lower BMR observed in the Yoga Group.

The RQ in the yoga group is slightly but significantly different from that in the non-yoga group, but the direction of the difference is opposite in men and women. This suggests that the difference has no biological significance. It seems to be an instance of statistical significance without biological significance.

To infer that there is no change in physical fitness as a result of yoga just because the heart rate of the two groups is similar (Discussion, p. 11, bottom) is inappropriate. Heart rate alone is hardly an index of physical fitness.

To speculate that lowering of BMR by long term practice of yogic techniques might lead to obesity (Discussion, p. 12) is far-fetched. The body weight is the result of the balance between the total energy intake and expenditure. BMR might consume less energy, but many of the yogic practices increase energy expenditure. This has to be taken into account while computing the overall energy expenditure of the yoga practitioner. Further, the energy intake of the yoga practitioner might be better matched with energy expenditure because of eating sensibly. These assumptions are consistent with the study reported in the

paper wherein the body weight of the subjects in the two groups is not significantly different.

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests