Letters to the Editor

Hormonal and biochemical responses to transcendental meditation

Sir,

The failure of Cooper *et al.* (1985) to demonstrate any hormonal evidence of reduced stress during the practice of transcendental meditation may be due to a number of possible shortcomings in the experimental design.

First, a relatively short time was allowed between cannula placement and the beginning of the experimental period. Whereas Jevning *et al.* (1978a, b) in their finding of reduced serum cortisol during transcendental meditation, allowed a minimum period of 2.5 h between cannulation and the start of the experiment, Cooper *et al.* allowed only 30 min. This may not have been enough time for any stress response arising from cannulation to subside.

Secondly, whereas Jevning *et al.* allowed their subjects to familiarize themselves with the laboratory setting on the day before the experiment, Cooper *et al.* do not seem to have taken this precaution, again possibly giving rise to an unwanted stress factor.

Lastly, whereas Jevning's findings were in long-term meditators with a minimum of three years experience of the practice of transcendental meditation, it may be that Cooper's 'experienced' subjects did not have the same length of experience, no exact details being given.

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References

- COOPER, R., JOFFE, B.I., LAMPREY, J.M., BOTHA, A., SHIRES, R., BAKER, S.G. & SEFTTEL, H.C. (1985). Hormonal and biochemical responses to transcendental meditation. *Postgraduate Medical Journal*, **61**, 301.
- JEVNING, R., WILSON, A.F. & DAVIDSON, J.M. (1978a). Adrenocortical activity during meditation. *Hormones and Behaviour*, **10**, 54.
- JEVNING, R., WILSON, A.F. & SMITH, W.R. (1978b). The transcendental meditation technique, adrenocortical activity and implications for stress. *Experientia*, **34**, 618.

This letter has been shown to the authors, who reply as follows:

Sir,

In reply to the letter by Dr Davis, we offer the following answers to his criticisms concerning the experimental design of the transcendental meditation (TM) study:

The relatively short time interval between cannula placement and initial venous sampling was not associated with any elevation of mean plasma cortisol, or catecholamine, concentrations outside the normal basal range in either meditators or controls. Yet even if there had been a mild stress reaction arising from cannulation, surely the acid test of meditation would be to suppress the accompanying hormonal responses – after successfully performing the technique for a period of 40 min. This did not emerge from our data. As indicated in the paper, one of the important indications for practising TM is to reduce environmental stress. The same answer could apply to the second point as well.

Regarding the experience of the TM group, the minimum duration of TM practice was five years.

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The management of acute severe asthma

Sir,

I read with interest the article on 'The management of acute severe asthma' by Drs Tatham and Gellert (1985). In response to the unreferenced statement that 'ipratropium . . . may produce dryness of the mouth, throat, airways and therefore reduce the expectoration of intrabronchial plugs and mucus', I should like to draw attention to the paper by Pavia *et al.* (1979) where the clearance of secretions from the human lung after inhalation of ipratropium bromide in standard dosage was found to be unimpaired. In a further study using high doses of ipratropium bromide (200 µg t.d.s.), the same group found no impairment of clearance in bronchitics or asthmatics (Taylor *et al.*, 1985).

This theoretical reservation about the use of ipratropium bromide has been raised previously (Crompton, 1982), to which there was a detailed response (Pavia *et al.*, 1982). To date, there is no evidence to support Tatham and Gellert's (1985)