Traditionally, these contain silver or gold, or both, but, as the table shows, substitution of base metals—including lead—may not be uncommon. Reputed aphrodisiacs are widely advertised in the Urdu language newspapers in Britain. The compounds taken by our patient were purchased in Bangladesh, but lead poisoning from aphrodisiacs may be an unrecognised health hazard in some immigrants in Britain.

We thank the Laboratories of the Health and Safety Executive for lead and coproporphyrin levels, the Laboratory of the Government Chemist for analysis of the powders, Dr D Barltrop for erythrocyte protoporphyrin levels, and Professor P Lawther for his guidance.

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St Bartholomew's Hospital, London EC1
R L BREARLEY, MB, MRCP, senior registrar in haematology
A M FORSYTHE, MB, CHB, senior registrar in haematology

Comparison of transcendental meditation and progressive relaxation in reducing anxiety

Although diverse claims have been made for the effectiveness of transcendental meditation[1] (TM), there are deficiencies in the reports. Firstly, many rely on solicited testimonials without the use of controls. Secondly, those studies that have incorporated non-meditators as a control do not ensure that the two groups are comparable in their desire to change. By their decision to learn meditation meditators not only indicate a desire for self-improvement not shown by non-meditators but also they may be ripe for growth and may improve regardless of what they choose to do. Thirdly, there may be a placebo effect from, for example, the very act of going to a class or paying for instruction which may serve to make the case for TM more attractive. Fourthly, studies that attribute to meditators better psychological health as a result of practising TM tend to rely on a retrospective index of ill-health. Unless the problem of initial group differences is overcome extrapolations from experimental data of the specific efficacy of TM are invalid. We report a study in which we compared the efficacy of TM with that of progressive relaxation[2] (PR) in reducing anxiety.

Subjects, methods, and results

The subjects were people about to learn TM or PR whose anxiety levels were considered, from their check list responses, to be sufficiently high. The two groups were very similar in age, sex, occupation, and initial anxiety levels. Anxiety was measured by means of (1) the Middlesex Hospital Questionnaire,[3] a 48-question inventory designed to measure free-floating anxiety and obsessions, phobias, somatic anxiety, depression, and hysteria, and (2) the Spielburger State-Trait Anxiety Inventory.[4] Only form X2, which measures trait anxiety, was used. It takes the form of a series of statements (for example, "I am content") to which subjects indicate their assent or disagreement by marking the choices "almost always," "sometimes," "often," or "almost never."

The mean anxiety scores measured by the two methods before and after TM and PR are shown in the table. As measured by the Middlesex Hospital Questionnaire both TM and PR significantly reduced levels of anxiety (Wilcoxon tests: P = 0·01 (PR) and 0·05 (TM). Neither the initial nor the final levels of anxiety differed between the groups (P = 0·002 initial comparison; 0·002 final comparison). Thus the pattern for both groups was almost identical. The Spielberger Inventory also showed that both TM and PR significantly reduced levels of anxiety. Again there were no differences in initial or final anxiety levels between the groups, so that both groups, in effect, changed to the same extent (Mann-Whitney U: P = 0.002 initial comparison; 0·002 final comparison).

Mean anxiety scores before and after TM and PR

Method of measurement	TM		PR	
	Before	After	Before	After
Middlesex Questionnaire	39·2	33·8	39·8	34·8
Spielburger Inventory	49·4	44·0	47·2	43·8

Comment

On paper and pencil tests as used in this study TM and PR are equally effective in reducing anxiety. We think that the only way to evaluate claims made by TM practitioners is to subject them piecemeal to controlled studies of the kind described here. The alleged reduction in smoking, for example, could be investigated by comparing TM with hypnosis or, as in our study, PR. We believe that a control group of subjects is essential but in itself insufficient. An alternative "treatment" or coping mechanism must also be compared and the measurement criteria strictly defined.

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Springfield Hospital, Upper Tooting, London SW17
D THOMAS, clinical psychologist

Darenth Park Hospital, Dartford, Kent DA2 6LZ
K A ABBAS, principal psychologist

Silver poisoning associated with an antismoking lozenge

Argyria, permanent discoloration of the skin caused by excessive absorption of silver, has been associated throughout the centuries with therapeutic use of silver compounds. We report a case associated with Respaton, an antismoking lozenge containing silver acetate and ammonium chloride, said to act by precipitation of insoluble silver chloride on the buccal mucosa producing an objectionable taste with tobacco smoke.

Case report

A previously healthy 47-year-old nurse presented with a two-year history of blue-grey discoloration limited to her face and neck. Hair, nails, buccal mucosa, and conjunctivae were unaffected. She described mild fatigue and poor concentration but was otherwise well. Physical findings were unremarkable except for the discoloration. Arterial oxygen tension was normal. No methaemoglobinaemia, sulphaemoglobinaemia, or proteinuria were detected. She had used Respaton for six months before noticing the pigmentation, taking one lozenge before each cigarette while smoking up to 40 cigarettes daily. Light microscopy of a skin biopsy sample showed a slight increase in melanin deposition. Dark field examination illuminated multiple particles throughout the dermis, consistent with argyria. Electron microscopy of the dermis showed irregular, electron-dense intracellular and extracellular deposits in which silver was demonstrated by electron microprobe *x*-ray analysis. No such deposits were convincingly demonstrated in the epidermis. Neutron activation analysis of a skin sample showed a silver concentration of 72 μg/g wet weight, far exceeding the normal 0·009 μg/g due to natural accumulation. Total body content of silver was estimated at 6·4$\pm$2 g by in-vivo neutron activation analysis.[1] With her informed consent the patient was given by mouth a dose of silver acetate labelled with the radioactive silver tracer ^{110m}Ag and ammonium chloride in the same proportions as the Respaton formulation. Retention of silver, measured by whole body counting, was 21 %, 20 %, 19 %, and 18·7 % of the given dose after 1, 2, 8, and 30 weeks respectively.