This type of effect is analogous with tumour chemotherapy in the sense that the greater the decrease in tumour burden the longer the remission expected. The more favourable responses obtained in Paget's disease in patients with more complete biochemical responses may reflect the ablation of an abnormal osteoclast population. This phenomenon, together with the associated clinical improvements, suggests that indications for medical treatment will continue to increase and that treatment strategies for the future should include more meticulous attention to maximal suppression of disease activity.

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The unacceptable face of tipping

SIR,—We would like to comment on the leading article by Dr Mark Woodhead and Professor Anne Tattersfield (11 April, p 921).

With regard to compliance, we agree that postural drainage is unlikely to produce appreciable benefit in patients expectorating a small volume of sputum and will rapidly be abandoned. Postural drainage is, however, beneficial at the time of the manoeuvre in patients producing larger (>30 ml daily) volumes of sputum (as carefully referenced in the article), and in these patients we think that, before poor compliance is attributed to a lack of symptomatic benefit, other factors should be considered. We certainly found that patients often reported that postural drainage was distasteful and disruptive to their daily schedule, but our questionnaire showed that many such patients throughout Britain had grasped neither the principles nor the correct practice of the treatment.¹ Thus when they performed postural drainage they practised it incorrectly, with suboptimal benefit and consequent poor compliance. We would therefore ask that doctors take an interest not only in the prescription of postural drainage but also in tailoring it to the needs of the patient's individual problems so as to encourage compliance in a practical sense rather than simply restating its necessity.

We believe strongly that a single set of instructions for all patients with chronic bronchial sepsis is a recipe for poor compliance and that best results are achieved by paying attention to the detail of the needs of the individual patient—both medical and socioeconomic. Once the problems are solved the benefits of expectorating sputum in privacy and at times convenient to the patient lead to more socially acceptable cough free periods in the day and less tiring cough free nights. This increases the benefit of, and confidence in, the treatment and ensures that postural drainage becomes an integral part of each patient's daily schedule. To this end, we have distilled the important points of the Brompton Hospital "training regimen" and presented them in a videotape with accompanying notes. There is a brief, simple introduction for doctors, and the remainder of the film is directed at patients. The purpose of this is, firstly, to acquaint doctors with what their patients should be taught so that they can reinforce it and answer queries about it and, secondly, to reinforce the physiotherapist's individual training for each patient.

Further research is required to answer many of the questions posed in the editorial, which are crucial to a better understanding of exactly what postural drainage may achieve. Dr Woodhead and Professor Tattersfield mentioned our "vicious circle" hypothesis for the pathogenesis of progressive bronchial damage in bronchiectasis but perhaps slightly misinterpreted it.² Purulent sputum is the result of an inflammatory host response^{3,4} to a colonising microbial load, and it is this response, together with microbial products,^{5,6} that damages the first line mucociliary clearance mechanism of the bronchial tree. Sputum retention is not proposed as the direct cause of the damage; it merely reflects the combination of the degree of damage to the mucociliary clearance system and the intensity of the host inflammatory response. Further research is required to clarify the role of mucus retention in determining microbial colonisation. In the mean time, however, postural drainage with special breathing methods, including the forced expiration technique,⁷ should be taught by a physiotherapist and individually prescribed to all patients expectorating more than 30 ml sputum daily—not simply to those who already have evidence of permanent lung damage, as judged by the presence of airways obstruction.

Finally, we agree with the sentiments expressed in the last sentence of the article by Dr Woodhead and Professor Tattersfield but would argue that in the end, as with treatment for many conditions, a combination of all current treatments will prove the most effective approach until the fundamental problem of how to prevent microbial colonisation of previously sterile biological surfaces is overcome.

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Hyposensitisation

SIR,—The leading article by Drs J O Warner and James W Kerr (9 May, p 1179) gives a reasonably balanced view of hyposensitisation. It also clarifies certain aspects of the Committee on Safety of Medicines (CSM) Update¹ and supports those who believe, as we do, that there is no need for patients to be observed for two hours after each injection. This recommendation alone has virtually put a stop to this treatment because even when full facilities for cardiopulmonary resuscitation are available few patients are willing to wait for two hours.

Drs Warner and Kerr do not mention that the incidence of reactions and deaths varies widely between manufacturers. For instance, Dome Hollister Stier vaccines caused no deaths and a much lower incidence of severe reactions in half a million injections,¹ and so it seems inequitable to class all of these preparations together.

The manufacturers have produced potent purified standardised allergenic vaccines and testing extracts in response to constant pressure from clinical allergists and researchers. Clinicians accustomed to using the weaker standardised vaccines formerly available may not realise the potency of these new vaccines and that more care with dosage is necessary. At the same time, the increase in effectiveness of drug treatment has made the control of patients with asthma much easier, and dependence on oral steroids, once a major indication for desensitisation, has become uncommon. As a result, hyposensitisation may now be considered for only the most sensitive and difficult patients, but such patients are also most liable to react adversely to hyposensitisation. It seems relevant to discuss anaphylactic reactions in a broader context. For example, the CSM Update for April 1986 reported reactions to anaesthetics for 1964-85, including 561 reactions to local anaesthetics, 19 fatal. In September 1986 the CSM annual review of yellow cards for 1985 reported 189 anaphylactic reactions, of which only 21 were due to desensitising injections. In November 1986 the CSM Update on adverse effects from anti-infective drugs for 1964-86 listed 155 reported cases of anaphylaxis.

A seven year survey of reactions to diphtheria/tetanus/pertussis vaccines reported 33 cases of anaphylaxis or collapse.² Recently, three cases of severe anaphylaxis were reported among only 200 American service staff who received skin tests with tetanus toxoid to detect hypersensitivity before immunisation.³

These reports illustrate how any injected drug may also cause lethal anaphylaxis, including local anaesthetics in dentistry or minor surgery. Thus hyposensitising injections are not a common cause of anaphylaxis, and a broader approach to this problem would be more appropriate. For example, sudden collapse can occur in the surgery, and immediate resuscitation can save life. Hence it is logical to suggest that all health centres should have cardiopulmonary resuscitation facilities on site, especially in rural areas, but very few are thus equipped and staff are not all trained in the use of such equipment.

Ewan and Ackroyd agree with the CSM but seem to take a negative view of the efficacy of desensitisation⁴ while others now consider it to have a useful place. This is surprising in view of the fact that for the past five years Dr Ewan has been in charge of the very department where the method

was first introduced by Noon and Freeman in 1911, and it is still used world wide. In support they quote out of date trials using fairly impure and unstandardised materials with no reference to recent controlled trials.⁶ Dr Ewan recently conducted a successful double blind trial of desensitisation with purified dust mite extract for allergic rhinitis, but when reporting on this trial at the November meeting of the British Society for Allergy and Clinical Immunology she stated that the incidence of severe, even anaphylactic, reactions was 20%. This would be quite unacceptable to any experienced allergist, especially when given for a fairly trivial complaint. It is clear from her letter that Dr Ewan regards desensitisation as unproved and dangerous for asthma, yet many of the patients in her rhinitis trial also had asthma and were shown by objective tests to have derived considerable benefit. We and many others regard asthma as a clear indication for desensitisation against dust mites, particularly when control with drugs alone is difficult.

One of the most serious effects of the CSM Update will be to increase reliance on suppressive drugs alone for the control of asthma, yet management is often inadequate, as shown by the increasing death rate. Practitioners, and many patients as well, may now think that investigations to identify the causative allergens are not worth while because hyposensitisation is no longer available. Unfortunately, it is much easier to prescribe drugs than to look for the causative factors. It is most important to know what to avoid or remove from the environment, especially in children who are repeatedly admitted to paediatric units. Unfortunately, allergy is a neglected branch of medicine in Britain, allergy and clinical immunology has been recognised as a subspecialty only belatedly, and expert advice is unobtainable within the National Health Service in large areas of Britain.

The effect of the CSM recommendations will be to deprive many patients of useful treatment, which is available in all other countries in Europe and America, and to inhibit research and the development of the specialty in Britain.

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AUTHORS' REPLY.—We thank Drs Morrow Brown and Frankland for pointing out that there is a discrepancy in the incidence of reactions and deaths between various standard hyposensitising vaccines and agree that it is somewhat inequitable to class all the preparations together. We emphasised in our article that the CSM did not look at either the individual vaccines or the separate conditions for which the vaccines were used. It is clear that both the extracts and the patient's disease must be assessed in judging the value and safety of hyposensitisation.

We would also agree with their assertion that there are a vast number of therapeutic substances that cause severe, acute, and life threatening

allergic reactions. Hyposensitising vaccines are a fairly minor cause of anaphylaxis. It is clear that the medical profession in general is poorly equipped to handle acute, severe reactions, and much greater emphasis should be placed on training in allergy for both undergraduates and post-graduates.

We do not believe that a particularly large number of patients other than those with insect venom hypersensitivity will be deprived of important treatment. Indeed, we hope that the absence of hyposensitisation might galvanise physicians into action in prescribing more effective and safer pharmacotherapies, particularly for those with asthma. It is important, however, to emphasise the need to search for underlying precipitants of disease, and this will include a careful assessment of allergic state. No therapeutic regimen has yet been established to have any important influence on the clinical course of allergic conditions, and this includes hyposensitisation. Furthermore, it has been established that hyposensitisation, in common with all other antiallergy treatments, must be continued for long periods to maintain efficacy and works most effectively in patients with moderate disease who are likely to be controlled with conventional prophylactic pharmacotherapies. In mild allergic disease immunotherapy is unnecessary and in very severe disease it is ineffective.¹

We hope that the issues raised in our leading article and the correspondence that has ensued will stimulate further research while at the same time discouraging indiscriminate use of this treatment.

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Standards for blood pressure measuring devices

SIR.—The initiatives of the British Hypertension Society in the standardisation of blood pressure measurement techniques¹ and of automated manometers, as discussed by Dr Eoin O'Brien and others (16 May, p 1246), are long overdue. The main difficulty will be to persuade both practitioners and manufacturers to abide by the guidelines.

An example of standardisation problems is the anarchy over the most appropriate size for cuffs. The "standard" cuffs usually supplied often have reference lines marked on them, which suggest that they are suitable for arms of up to 34-35 cm in circumference. In an occupational screening sur-

Percentages of patients attending Dudley Road Hospital blood pressure clinic with arm circumferences exceeding 34 cm and 28 cm

	Circumference >34 cm	Circumference >28 cm
White:		
Men (n=69)	3	51
Women (n=52)	14	58
Black:		
Men (n=28)	7	79
Women (n=32)	34	84
Asian:		
Men (n=18)	6	56
Women (n=10)	0	90
Total (n=209)	11	64

vey of 210 people we found such cuffs to be too small in 10% of women and 5% of men. Among 388 younger, healthy examinees 3.1% of arms exceeded 34 cm in circumference, and in our blood pressure clinic 11% of 209 consecutive attenders had arm circumferences of more than 34 cm, indicating that larger cuffs should be used (table).

If the British Hypertension Society's guideline that the cuff bladder should encircle at least 80% of the upper arm¹ were adopted the present standard cuffs would be inadequate if arm circumference exceeded 28 cm. Larger cuffs would thus be needed in 35.1% of our healthy subjects and 64% of the hypertensive group. These cuffs are not as yet widely available, and many doctors and hospital clinics would have to buy new cuffs. In a postal survey of 94 general practitioners in Birmingham only 32 reported that they "had access" to larger than standard size (13×22 cm or 13×23 cm) cuffs. The data reported by Maxwell *et al*, however, suggest that the error with conventional cuffs is acceptable with arm circumferences up to about 34 cm,² which represents all but 11% of our hypertensive patients. We must question, therefore, whether some aspects of the society's recommendations are feasible or even desirable.

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Bicycle accidents in childhood

SIR.—I would like to support the call for training of cyclists made by Mr James Nixon and coworkers (16 May, p 1267). Two recent studies performed in this department agree with their findings. A study of accidents among children showed that only 30% had taken the cycling proficiency test and that 50% of accidents were caused by poor riding techniques (if stunts are included the total rises to 69%). Only 18% of accidents were due to collisions with other vehicles, bikes, and pedestrians.¹ A study concentrating on head injuries showed that 58% were caused by an inability to control the bike and 38% were due to collision.² This study also confirmed the finding that many of these accidents (44%) happen on a straight road away from a junction.

Southampton is now providing specific cycling training tracks for children, cycleways are being created in various places throughout the country, helmets are available, and a British standard is due out shortly, but until parents know the risks (70% of cyclists who die do so from head injury alone) and accept their share of responsibility these accidents will continue unabated.

In some Australian states, where children commuting to school must wear helmets, injuries have fallen sharply. How about starting gently here by not allowing children to commute alone until they have passed an adequate cycling proficiency test?

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