apparent fall in LAA concentration was simply due to the increasing proportion of granulocytes in the differential white blood cell count, and that a true fall in LAA concentration had not occurred. After the acute "stress" had subsided and the leucocytosis returned to normal, however, the LAA concentration and serum ascorbic acid concentration remained low, presumably because of tissue depletion of ascorbic acid. Both may remain low for up to 56 days.²

We also found that tissue damage is probably necessary to produce the long-term depletion of LAA and serum ascorbic acid concentrations since the acute changes in LAA only can be produced by tetracosactrin infusions in normal subjects.²

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¹ Irvin, T T, Chattopadhyay, D K, and Smythe, A, *Surgery, Gynecology and Obstetrics*, 1978, **147**, 49.

² Vallance, B D, Hume, R, and Weyers, E, *British Heart Journal*, 1978, **40**, 64.

³ Hume, R, *et al*, *British Heart Journal*, 1972, **34**, 238.

Back pain—what can we offer?

SIR,—It astonishes me to read the suggestion implicit in your leading article (17 March, p 706 that causes of "back-pain" sufficiently severe to warrant reference to a rheumatology clinic may safely be diagnosed without radiography of the relevant portion(s) of the spine, with no loss of accuracy and with a bonus saving to the NHS of "many thousands of pounds each week." This amounts, in my alarmed medicolegal view, to an advocacy of technical professional negligence on a massive scale.

May I, however, offer an observation (based in part on personal experience) on the significance of radiological changes and their relation to symptoms? The latter are commonly caused by pressure on nerves of radiolucent soft structures, such as, for example, a prolapsed nucleus. The development of convincing bony changes, which represent nature's attempt at a healing process, may take many years. Symptoms and radiological signs are usually asynchronous, the latter slowly progressive, the former variably intermittent.

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SIR,—Your leading article "Back pain—what can we offer" (17 March, p 706) rightly questions the routine use of radiographs. The radiologist with limited information about the patient has difficulty making a valid comment about degenerative change, and the general practitioner who does not see the x-rays cannot easily relate a report to the patient's symptoms.

Orthopaedic surgeons are increasingly aware that the size of the lumbar spinal canal can be an important factor in the aetiology of back pain. When canal measurements are available¹ radiographs can demonstrate additional compromising lesions that will compress the canal contents. This may be disc degeneration, posterior vertebral bar formation, shingling of two vertebrae with slight retro-

spondylolisthesis, facet-joint arthritis, spondylolysis, or spondylolisthesis. In themselves these radiological features may be insignificant, but in the presence of a narrow canal they can indicate a structural abnormality responsible for symptoms.

For a patient whose back pain is prolonged or recurrent a diagnosis of "non-specific back pain" is inadequate, and x-rays become an important investigation.

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¹ Porter, R W, Wicks, M, and Ottewill, D, *Journal of Bone and Joint Surgery*, 1978, **60-B**, 481.

Does adipocyte hypercellularity in obesity exist?

SIR,—We are glad that Drs P Björntörp and L Sjöström (20 January, p 197) agree that hyperplastic obesity is a rare condition. If hyperplastic obesity is likely only to be present in individuals with body weights of over 150 kg—that is, a weight range corresponding to that in our three individuals in whom such interest is expressed—then one is dealing with a very unusual and small group of patients. If Dr Björntörp and his colleagues¹ set the upper limit of normality for fat cell number only 1 SD above the mean then obviously one can begin to define a larger proportion of obese patients (and indeed of the normal-weight population) as hyperplastic. We are also glad to note that the Göteborg group now considers a value for total fat cell number as only an index of the true cell number—an index on which we consider one should place little reliance.

The other comments we found somewhat misleading. Our reference standards for obesity, the Metropolitan Life Tables, are those recommended by both United Kingdom and USA expert committees; they are widely used, readily obtained, and accepted by most investigators of obesity. Our three subjects whose body fat measurements worry the Swedish group had additional measurements, as indicated in the paper, with ⁴⁰K and ⁴²K; in two patients body fat had been marginally overestimated and in one underestimated. The number of controls (27) would need to be substantially increased if we wished to establish accurate normal limits for the index of fat cell number, but our values accord with those of other workers and our conclusions stand.

We agree that we did not have adipocyte measurements on omental tissue from grossly obese patients. When this has been done by other workers² the results have matched our predictions in that the internal cells have finally expanded to equal the size of the subcutaneous adipocytes—a development that will lead to a spurious increase in calculated fat cell number when the calculations are based on subcutaneous samples alone.

Odd conclusions can indeed be drawn by mixing our data on fat cell sizes (0.73 µg

triglyceride for subcutaneous and 0.29 µg for omental sites) with an erroneous estimate of 50 kg for body fat rather than the actual 30.5 kg quoted in table II of our paper. At 50 kg of body fat the mean subcutaneous cell size, estimated from Björntörp's own data,³ would be about 0.9 µg triglyceride and that of omental cells, estimated from the work of Salans *et al*,² would be 0.70 µg. If we retained the 2:1 ratio for subcutaneous and visceral fat then the "true" fat cell number would remain unchanged and therefore similar to that found in other groups of patients with body fat corresponding to 30.5 kg and 16 kg (see table).

We accept the need for improved methods for measuring subcutaneous and deep body fat. Our choice of the best estimates yet available for the proportions of body fat in the subcutaneous tissue indicates the potential magnitude of the errors associated with measuring the total number of fat cells in the body.

We do not agree with the explanation proposed for validating hyperplastic obesity: true hypercellularity of the adipose mass must exist because the limits of normality are defined to exclude the top 3% of the Gaussian range. The question is then whether hypercellularity specifically relates to the problem of obesity, and if so how often and to what effect.

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² Salans, L B, Cushman, S W, and Wersmann, R E, *Journal of Clinical Investigation*, 1973, **52**, 929.

³ Sjöström, L, and Björntörp, P, *Acta Medica Scandinavica*, 1974, **195**, 201.

Health and safety at work

SIR,—I read with interest Dr B J Boucher's thoughtful article "Guidance on preparing local rules to help implement the Health and Safety at Work, etc, Act, 1974" (3 March, p 599). Dr Boucher stated that "we have found that direct guidance from the DHSS or NHS sources or from professional bodies on what is now required from NHS staff for safety at work has been slow to appear and inadequate in its coverage of the diversity of NHS activities; codes of practice are not yet available for much of our work."

Some parts of hospitals have been subject to the Factories Act and to the Offices, Shops and Railway Premises Act. Areas such as wards, operating theatres, and laboratories became subject to health and safety legislation in 1975, together with many other aspects of activity associated with hospitals. I was informed by the Health and Safety Executive some while ago that an area director has been nominated by the Executive to identify health and safety problems in the hospital service and to

Calculated total body fat cell number with increasing body fat

Total body fat (kg)	Fat cell sizes (µg of triglyceride)		Fat masses on a 2:1 ratio (kg)		Fat cell number (× 10 ¹⁰)		Total number (× 10 ¹⁰)
	SC	Omental	SC	Omental	SC	Omental	
16	0.43	0.16	10.6	5.4	2.5	3.4	5.9
30.5	0.73	0.29	20.4	10	2.8	3.4	6.2
50	0.9	0.70	33.3	16.7	3.7	2.4	6.1

SC = subcutaneous.

develop ways in which health and safety performance can be improved.

The HMSO's sectional list 18 (Health and Safety Executive forms and publications) lists many publications, parts of which are now applicable to hospitals and associated areas. Sectional list 18 (Department of Health and Social Security) enumerates many codes, etc. Publications listed under "Health Technical Memoranda" relate to antistatic precautions (rubber, plastics, flooring in anaesthetic areas), electrical services, piped gases, and other items, while under "Hospital Technical Memoranda" is the safety code for electro-medical apparatus. The electrical safety code for hospital laboratory equipment comes under "Hospitals, Building and Equipment." Other codes and handbooks cover ionising radiations, radioactive isotopes, and radiological protection. All are available from HMSO.

A publication which I have found most helpful is the *Safety Manual* of the University of Manchester Institute of Science and Technology.¹ This excellent work was compiled on behalf of the Safety and Environmental Health Committee, and 78 subjects are covered. These include laboratories—pathological, chemical, and animal; chemical hazards and gases; gas cylinders; explosions; electrical safety; glassware; hand tools; lasers; lifts and lifting; fire prevention and first aid; wastes, water supplies, and welfare; autoclaves; car parks; and other areas. There is a wealth of reference material available at the end of each chapter, and codes of practice, British Standards recommendations, DHSS handbooks, Department of Employment circulars, HMSO publications, and statutory instruments and regulations relating to the subject are listed. Such a work is a fine example of how health authorities could compile a similar manual for use in our hospitals.

I would also recommend to health authorities and safety committees the magazine which was first published in September 1978: *Health and Safety at Work*, edited by David Farmer. It has become one of the leading journals in this subject. Also useful are the TUC's handbook² and *A Worker's Educational Manual: Accident Prevention*.³

Gone are the days when any health authority could "sit comfortably" in the face of the many hazards possible in our hospitals. I hope I have managed to identify much of the literature available. The National Health Service employs one million workers of all grades in all sorts of working areas. Dr Boucher's article has identified in detail many risk areas. I await with interest the reports of the inspections now legally possible by recognised trade union safety representatives.

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¹ *Safety Manual*, UMIST (PO Box 88, Manchester M60 1QD).

² *Safety and Health at Work*. London, Trades Union Congress (Great Russell Street, London WC1B 3LS), 1976.

³ *A Worker's Education Manual: Accident Prevention*. Geneva, International Labour Organisation, 1978.

Service commitment and the training of surgeons

SIR,—There has been a misleading and arbitrary separation of parts of the training of young consultants in so far as a major part of their work is described disparagingly as "service commitment."

In the training of surgeons it is absolutely essential that the trainee actually operates, preferably under supervision for most of the time, and carries out not only a large variety of operations—operations in fact that he has to deal with when consultant level is reached—but also such a number as will cover the various permutations and combinations that can arise and the difficult problems involved in operating for the third or fourth time in such conditions as Crohn's disease, etc.

Far and away the most suitable place for such training is in a busy, thinly staffed district general hospital. Regional consultants attending selection committees may make a point of looking for evidence of such experience among the candidates. There is no point whatsoever in appointing a young surgeon who has had no practical experience as it virtually means that one or more of the acting surgical staff are compelled to do his possible share of the difficult surgery. There is no room in a busy district hospital for a young man who has spent most of his time joining in the training of undergraduates and carrying out theoretical research with the exclusion of practical work. It should be clearly laid down as part of the college advice that doctors seeking surgical consultancy should be obliged to carry out under supervision a large comprehensive list of operations and to be employed by a hospital where this work can be carried out. From the pragmatic point of view the sequestration of young doctors in the undergraduate hospitals where they are described as "senior registrars" is a loss of valuable time—unless, of course, the would-be consultant hopes to stay on at a teaching hospital to carry out research work and teaching.

Let us hope that the criticism of "service commitment" is dropped, and let us insist that practical training is regarded as the sine qua non for the maturation of would-be surgeons. It is far better for young doctors to be apprenticed to busy surgeons for a few years than to chase around from specialty to specialty obtaining fragments of information, mostly of a theoretical nature, by watching and not performing. Surely if effective, practical surgeons are needed practical training is mandatory.

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College of Anaesthetists?

SIR,—Dr R S Atkinson and others question the need for an independent college of anaesthetists and express their satisfaction with the present arrangement (3 March, p 624). There are, however, many who do not share their complacency.

They state that "the Faculty acts as an independent body in all important respects." We would question this view. Its board has, as ex-officio members, the president and both vice-presidents of the college, who are eligible to vote on all matters including the election of the dean and vice-dean. The board—and hence the Faculty—is represented on the 30-strong college council by three members. There is no financial independence and subscriptions and examination fees are kept in line with those of the surgical and dental fellows. The fellowship examination is held in the examination halls, which are partly owned by the college, and the

examination therefore incurs the high costs of supporting that building. Can this be said to be independence? It is abundantly clear that the academic body for anaesthesia can never have true independence until it is separated from the Royal College of Surgeons.

Dr Atkinson goes on to make a number of points about accommodation and subscriptions which illustrate the comfortable view that anaesthetists are better off firmly tucked under the surgeons' wing, hitching their wagon to a surgical star and basking in the prestigiousness of their splendid building—the Royal College of Surgeons. But is such an arrangement really in the interests of the future development of anaesthesia? We submit that it is not.

Anaesthesia is the largest single specialty in the United Kingdom. It is also the only major medical specialty not to be led by its own college. To allow this state of affairs to continue is to accept a subordinate status in both national and international affairs. We believe that an independent college of anaesthetists is an important evolutionary step in the development of the specialty and urge the Association of Anaesthetists and the Board of Faculty of Anaesthetists to unite in working for its establishment.

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Clinical medical officers in a child health service

SIR,—I crave the hospitality of your columns in order to refute a serious error of fact in Professor Donald Court's letter (3 March, p 611).

In this letter Professor Court refers to "the rapid demise of the Society of Community Medicine." May I please inform him that the Society of Community Medicine is very much alive and kicking. In fact, last week (on 23 March) I chaired a meeting of its council which began at 11 am and did not finish until 5 pm—most of the items discussed relating to the projected future of the society. Furthermore, the society has a large current membership, is financially soundly based, and continues to publish its journal *Public Health*, which has a world-wide distribution.

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Pay-beds and the NHS

SIR,—In the face of continuing erosion of private practice in NHS hospitals, we should like to raise some points which we feel have not received sufficient public discussion.

Three of us are in clinical academic work, and the fourth is a full-time NHS consultant. As such, we receive no personal financial reward from work done for private patients in our teaching hospital. Fees charged for investigations on such patients are paid into research funds. In our own department there are technical staff paid or about to be paid from these funds, and some of the diagnostic work for