

In his second paragraph Professor Oliver reacts strongly to a single brief paragraph in the text and one sentence of the summary that included speculation about the possible importance of the results. In each of the four sentences in question use of the subjunctive clearly implies caution, and the reader is referred back to our original paper, in which the speculations may be viewed in perspective. The paper contains no dietary recommendations, and, indeed, the only recommendations that I have espoused are those of the Committee on Medical Aspects of Food Policy panel on diet and heart disease<sup>1</sup> and the study group of the European Atherosclerosis Society,<sup>2</sup> of which Professor Oliver and I were both members.

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1 Advisory Panel of the Committee on Medical Aspects of Food Policy. *Diet and coronary disease*. London: HMSO, 1974. (Report on Health and Social Subjects No 7.)

2 Study Group of European Atherosclerosis Society. Strategies for the prevention of coronary heart disease: a policy statement of the European Atherosclerosis Society. *Eur Heart J* 1987;8:77-8.

### Effect of preoperative lactulose on posthaemorrhoidectomy pain

SIR,—May I support the findings of Mr N J M London and colleagues (8 August, p 363) that a laxative regimen designed to produce early and frequent bowel actions after haemorrhoidectomy is beneficial to the patients.

In our study we compared our standard regimen of sterculia (Normacol) 10 ml and liquid paraffin and magnesium hydroxide BPC 10 ml twice daily (n=13) with concentrated extract of wheat husk (Trifyba, Labaz) one sachet three times a day (n=17), starting immediately after surgery.<sup>1</sup> Treatment was continued until patients were discharged from hospital, when their bowels were open comfortably and control had returned. The pain was assessed on a 100 mm linear scale after the first bowel action and after defecation on the third day after operation and on the day of discharge. No preoperative laxative or bowel preparation was given. Median pain scores (with interquartile range) on the third day after operation were: Trifyba 40 (21-70), sterculia and magnesium 50 (40-55). On the day of discharge pain was significantly less with Trifyba (20 (6-25) v 40 (30-40), p<0.05). The pain scores for the third postoperative day were similar to those seen by Mr London and others.

We found no difference in the number of bowel actions on day 3 and on the day of discharge. Patients receiving Trifyba stayed in hospital for a shorter period (median stay in 4 (range 3-5) days compared with 5 (3-6) with sterculia and magnesium). Bleeding after defecation was equally common in both groups, but faecal leakage was seen more often in those taking sterculia and magnesium (10/13 patients compared with 5/17;  $\chi^2=4.89$ , p<0.05).

We believe that the superior results with wheat husk are related to the production of a more "normal" stool, although the supposition that laxatives ease postoperative pain after haemorrhoidectomy by the production of a soft bulky stool has not been subjected to scientific investigation and must remain speculative. The authors have shown that preoperative administration of a laxative which produces soft bulky stools is beneficial in the postoperative period, and possibly we could improve our results by starting the wheat fibre preoperatively. Faecal leakage

is a known complication of oil based laxatives, and the high incidence found in our study suggests that such oily agents should be avoided after haemorrhoidectomy.

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1 Johnson CD, Budd J, Ward A. Laxatives after haemorrhoidectomy. *Dis Colon Rectum* (in press).

### How to take a teaching ward round

SIR,—Dr John Rees (15 August, p 424) rightly emphasises the importance of the teaching ward round. In our medical school, however, achieving his optimum of three to five students and a willing patient is, regrettably, seldom possible. The chances of a nurse accompanying the teaching round have become remote indeed, as the nurses struggle to attend business rounds.

Over the past 10 years in our hospital the number of students has increased by almost half while the number of hospital beds from which to teach has fallen. The problem has become particularly critical in surgery over the past two years, when medical student training has unfortunately not been a consideration in the money saving exercises, which have resulted in ward closures, increased use of day surgery, and the more rapid turnover of surgical inpatients.

Unless government and hospital administrators begin to appreciate the serious effects their policies are having on medical training the time honoured teaching ward round is destined to disappear into medical folklore, and future generations of doctors will be deprived of a unique and valuable experience.

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### Safer surgery for all

SIR,—We were not surprised at the finding of Messrs K Lafferty and A P Wyatt (8 August, p 392) that "contamination incidents" occurred in up to half of all major general surgical operations. We have just completed a survey of 100 operations and general anaesthetics at the Royal Marsden Hospital, Fulham Road, during July. Operations were classified as major or minor, the minor group consisting mostly of breast biopsies and endoscopies. Anaesthetics were classified by the number of staff needed to give each anaesthetic (simple if three people or fewer; complex if more than three people). All staff at risk, including scrub nurses, assistants, and anaesthetic technicians, were included. The results are shown in the table.

Needlestick injuries occurred in 12 out of 42 major and 2 out of 58 minor operations. Less serious contamination incidents were common in major operations and complex anaesthetics needing more than three people. Our data suggest that the number of exposures might be reduced by anaesthetic staff regularly wearing gloves and by surgical and anaesthetic staff wearing eye protection—at least for major operations and complex anaesthetics.

Fortunately the risk of infection with human immunodeficiency virus is low, even after needlestick injuries.<sup>1</sup> Our results are more relevant to the question of protecting operating theatre staff from hepatitis B infection, which is readily transmitted both by needlestick injuries and by contact between infected blood and cuts, open wounds, and conjunctival membrane.<sup>2</sup> This is reflected in the rising incidence of acute hepatitis B infection among

Contamination incidents in 100 operations and anaesthetics at Royal Marsden Hospital (Fulham Road), July 1987

Classification	Operations		Anaesthetics	
	Major	Minor	Complex	Simple
No of cases	42	58	17	83
No of people "at risk"	186	159	71	197
No wearing gloves	186	159	16	13
Gloves changed because of cuts/tears	15	0	0	3
Blood on hands after removing gloves	21	2	4	1
Not wearing gloves but with blood on hands			20	32
Needlestick injuries	12	2	0	0
Blood on face	17	2	6	1

surgeons.<sup>3</sup> These results support the BMA's view that active immunisation with hepatitis B vaccine should be offered to all theatre staff.<sup>4</sup> We would encourage hospitals where this is not yet standard practice to reconsider their policy urgently.

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1 McCray E. Occupational risk of the acquired immunodeficiency syndrome among health care workers. *N Engl J Med* 1986;314:1127-32.

2 Anonymous. Update on hepatitis B prevention. Recommendations of the Immunization Practices Advisory Committee. *MMWR* 1987;36:353-66.

3 Polakoff S. Acute viral hepatitis B: laboratory reports 1980-4. *Br Med J* 1986;293:37-8.

4 British Medical Association. *Immunisation against hepatitis B*. London: BMA, 1987. (Report of the board of science and education.)

### Is screening for bacteriuria in pregnancy worth while?

SIR,—Just as medical rituals should not become sanctified by long usage, so hard won gains in preventive medicine should not lightly be discarded. Abandoning screening for bacteriuria in pregnancy has serious implications, not least medicolegal, for the antenatal care of women and their babies. It is therefore disconcerting that Mr I R McFadyen and Dr D V Seal (15 August, p 446) do not produce a detailed cost analysis. After all, this was the point of their thesis (20 June, p 1579). The number of unavoidable cases of pyelonephritis is not really relevant. The real issue rests with a breakdown of the costs<sup>1</sup>—of screening and of the expense that would have been incurred in treating the six (not four) cases of pyelonephritis which were prevented. The authors reported seven cases of pyelonephritis at Northwick Park, so the costs of treatment should be available.

The additional information that Mr McFadyen and Dr Seal did provide appears contradictory. Six of their seven cases of pyelonephritis were originally reported thus: 1/226 abacteriuric controls, 1/8 with untreated bacteriuria, and 4/80 with treated bacteriuria. Despite other methodological detail, it is curious that suprapubic aspiration was not mentioned as the means of establishing the diagnosis, especially since two patients had sterile midstream urine specimens. By referring to a study by Kincaid-Smith,<sup>2</sup> they implied that these two patients had "closed" renal infection. Kincaid-Smith, however, reported just one case (diagnosed by intravenous urography and nephrectomy) among 60 cases of pyelonephritis. The patients at Northwick Park, however, were not investigated radiologically. Presumably their diagnosis was based solely on a finding of low bacterial counts in bladder urine. Because only 0.005 ml of urine was cultured and growth of any organism was considered "signifi-

cant," this equates to a bacterial density of 200/ml. This "sensitive" diagnostic criterion was proposed by Stamm for patients with frequency of micturition, not pregnant women.<sup>3</sup> Moreover, criticisms<sup>4</sup> of Stamm's hypothesis have not been rebutted. The absurdity of regarding a single colony on the culture plate as "significant" is illustrated by the appearance of *Candida albicans* as a cause of bacteriuria at Northwick Park.

For the same reason it becomes difficult to discern how many women with asymptomatic "bacteriuria" were genuinely infected. It was wrong, however, to suggest that previous workers examined only one urine and therefore treated uninfected women, giving artificially high success rates. At least two<sup>5</sup> or three<sup>6</sup> specimens were cultured. It is Dr M E Foley and coworkers (25 July, p 270) who could be criticised on this account, so their reported incidence of pyelonephritis in women with untreated bacteriuria may well be spuriously low. Moreover, the "low" (12.5%) incidence of pyelonephritis in such women at Northwick Park was extrapolated from just one case out of eight. The 95% confidence interval for the real incidence in such a small sample is 0 to 35%. In other words, there is no significant difference between the incidence of pyelonephritis at Northwick Park and that reported previously.<sup>2,5,6</sup>

Finally, the four cases of pyelonephritis which occurred after treatment were in women who were recognised either to have relapsed or to have become reinfected. If no further treatment was given it is hardly surprising that they developed complications.

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- 1 Asscher AW. *The challenge of urinary tract infections*. London: Academic Press, 1980.
- 2 Kincaid-Smith P, Bullen M. Bacteriuria in pregnancy. *Lancet* 1965;ii:395-9.
- 3 Stamm WE, Counts GW, Running KR, et al. Diagnosis of coliform infection in acutely dysuric women. *N Engl J Med* 1982;307:463-8.
- 4 Smith GW, Brumfitt W, Hamilton-Miller J. Diagnosis of coliform infection in acutely dysuric women. *N Engl J Med* 1983;309:1393-4.
- 5 Gruneberg RN, Leigh DA, Brumfitt W. Relationship of bacteriuria in pregnancy to acute pyelonephritis, prematurity, and fetal mortality. *Lancet* 1969;ii:1-8.
- 6 Whalley PJ, Cunningham FG. Short term versus continuous antimicrobial therapy for asymptomatic bacteriuria in pregnancy. *Obstet Gynecol* 1977;49:262-5.

### Hospital developments in Scotland

SIR,—My colleague Mr David March, general manager of the Shetland Health Board, understandably wishes to defend his board, the minister, and his own management team (29 August, p 555). However, it is hard to defend the indefensible.

Mr March suggests some curious advantage from the fact that the new development was planned in 1974. The Scottish Affairs Committee of the House of Commons recently reported on hospital developments in Scotland and one of its major criticisms was that it took on average 10 years between starting planning and starting construction and another 10 years before completing construction. Although I have been in Shetland rather longer than Mr March implies, it was perhaps an advantage to bring to the problem my experience of hospital developments in other parts of the United Kingdom and of Europe. It was quite obvious that the plans made many years ago no longer met the requirements of Shetland.

In the mid-1970s there was a brief but large expansion in Shetland's population associated with the construction phase of the Sullom Voe oil terminal. This placed immense strains on the medical services and in particular on the Sullom Voe general practitioner and the consultant surgeon. These two doctors did an immense amount of work under difficult circumstances, and the develop-

ment was planned largely to meet the needs identified at that time. It is therefore hardly surprising that these two doctors, now retired, were influenced by the problems they faced then. No doctor currently working in Shetland feels that this development is appropriate to the 1980s, let alone the 1990s.

Mr March quotes selectively from the advice of the area medical committee given in February 1986. At that time the area medical committee was informed that it had to accept the whole proposal as it stood or have no development at all. Despite this pressure the committee expressed serious reservations and agreed to the proposal only on the casting vote of the chairman with the proviso that a radical reappraisal of geriatric facilities was required. Mr March also claims unanimous support from the senior management team, although he admits that the chief administrative medical officer had reservations. This is an understatement: she had such severe reservations that she insisted on making a personal statement to the board dissociating herself from the recommendations of the senior management team and urging the board to delay a decision for consultation with the consultant staff. She also insisted that her reservations be minuted.

In common with all others who seek to defend the present proposals Mr March produces no justification for them. In particular he does not seek to defend the overprovision of maternity beds, the construction of a geriatric ward on the third floor of a building surrounded by car parks, or the failure to provide a laboratory meeting nationally agreed safety standards. The present proposals are opposed by the whole medical profession in Shetland, the area paramedical committee, the health service unions COHSE and ASTMS, the chief administrative medical officer, and all the board members whose work brings them into contact with patients. These board members, however, have been consistently outnumbered and outvoted by other board members.

In deciding to support the board's recommendation, the Minister of Health for Scotland stated that he had carefully considered our alternative proposals but had rejected them. This is curious since his predecessor, Lord Glenarthur, justified his support for the board's proposals on the grounds that no alternative proposals had been submitted. Of these two statements that of Lord Glenarthur seems to be correct since the board refused to consider alternative proposals in spite of Mr March (to his considerable credit) urging them to do so.

The present dispute between, on the one hand, the medical and allied professions and, on the other hand, the board and administrators concerns policy and consultation and, in particular, the role, if any, of lay administrators in policy planning. Mr March as the general manager and I as the chairman of the area medical committee will, inevitably, be seen as the protagonists. The disagreement is, however, entirely over policy and not over personalities.

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### Exercise and coronary heart disease

SIR,—Dr Iain N Findlay and coworkers (29 August, p 521) conclude, "The possible long term advantages of these short term improvements [in coronary risk factors and cardiac function]... support the encouragement of regular exercise as part of the general coronary preventive message." British<sup>1</sup> and, a fortiori, American studies<sup>2</sup> indicate a substantial reduction in the incidence of coronary

heart disease among men in association with considerably less exercise—which is much more realistic as a public health message—than that used in the Glasgow study.

The training in the Glasgow study was designed "to ensure a high degree of cardiovascular fitness" and entailed running three times a week for around 60 minutes in all increasing to six spells of running amounting to 360 minutes in the week at an average pace of 8.5 mph. Preliminary results from a later British survey of 1976-85 corroborate the findings of lower coronary incidence rates in office workers of middle and early old age with rather modest habits of vigorous aerobic exercise—swimming, jogging, badminton, rowing, and the like—twice a week or oftener and corresponding walking and cycling.<sup>3</sup>

The report in the article of the cardiac functional changes induced by the exercise is welcome. Changes in the standard risk factors—these may be quite minor<sup>3</sup>—cannot explain the reductions in the incidence of coronary heart disease with exercise found in free living populations. We need to think of other possible mechanisms of the benefit, including changes in the heart itself as one approach.

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- 1 Morris JN, Everitt MG, Pollard R, Chave SPW, Semmence AM. Vigorous exercise in leisure-time: protection against coronary heart disease. *Lancet* 1980;ii:1207-10.
- 2 Paffenbarger RS, Wing AL, Hyde RT. Physical activity as an index of heart attack risk in college alumni. *Am J Epidemiol* 1978;108:161-75.
- 3 Morris JN, Everitt MG, Semmence AM. Coronary heart disease and exercise. *Health Trends* 1987;19:13-6.

SIR,—Having a family history of coronary artery disease and knowing that I take less exercise than I used to, I read the report by Dr Iain N Findlay and colleagues (29 August, p 521) with some personal interest. Their data are, to my inexperienced eye, impressive, and I was beginning to think that I would have to mend my ways when I started to think a little more about certain aspects, especially the information in the paragraph headed "Training schedule." The subjects built up to a schedule of running for 60 minutes each day. A rough calculation showed that if I committed myself to this for 25 years I would spend a cumulative period of one year just running. To justify their conclusion that the results support such regular exercise as part of the general coronary prevention message Dr Findlay and coworkers need to reassure me that this effort will be rewarded by an increase in life expectancy of more than one year. Can they do this? It is also interesting to speculate that even if I do live longer as a result of such exercise I might simply end up a disgruntled old man, regretting all that wasted time. I am not surprised that a tenth of their subjects withdrew because of occupational commitments.

The other aspect that requires more consideration is the harmful effects of this activity. Over the 30 weeks another tenth of the subjects withdrew because of musculoskeletal injury. This potentially implies a great deal of pain, disability, loss of earnings, and costs in medical treatment over 25 years. We are all being encouraged to look at the whole patient these days, and if we do this with regard to the effects of exercise the verdict must be that uniquely Scots one of "not proven." Me, I'm walking.

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