This is often improved if the patient can be persuaded to exercise the sphincters and pelvic muscles persistently and repeatedly.

I have no claim to specialised knowledge in this field. But I have been consulted informally by embarrassed women and in many countries—and often with apparently good results—so that I feel the reference to the possibility of exercise should not be neglected.

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SIR,—In your leading article on this subject (2 July, p 2) you rightly point out that urge incontinence may wrongly be interpreted as stress incontinence, with poor results from surgery. In this connection I would like to draw attention to the role of oestrogens in the control of urinary disorders in postmenopausal women and their beneficial effect in the treatment and prevention of these disorders.

The distal part of the urethra is of the same embryological origin as the vagina, is lined with a similar epithelium, and is under the same hormone control. Oestrogen deficiency during the menopause leads to atrophic changes in both organs; there is a decrease in elastic tissues and muscular tone. Oestrogen replacement, especially in the form of implants, improves menopausal symptoms, including urinary disorders.¹

Among 300 menopausal women specially studied, 160 complained of urinary troubles, chiefly of dysuria and incontinence. Of these, 90 underwent various repair operations with a 20% failure rate, and the majority of these women had been previously treated with antibiotics for recurrent attacks of cystitis. Oestrogen replacement alone, or with dilatation of the sphincter, achieved a definite improvement in urinary disorders in 70% of the patients.

The remaining 30% had to have surgical repair of the vaginal prolapse with elevation and support of the urethrovesical angle. The relatively high failure rate (20-30%) of repair operations is partly due to the fact that no distinction was made postoperatively between urge and stress incontinence. Oestrogen implants may also be helpful if given before the operation. They improve the condition of the vagina, make dissection easier, and promote healing.

Similar observations have been made by other workers in this field.²⁻⁴

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¹ Schleyer-Saunders, E, *Journal of the American Geriatric Society*, 1976, **24**, 337.

² Smith, P, *British Medical Journal*, 1976, **2**, 941.

³ Greenblatt, R B, *Geriatrics*, 1955, **10**, 165.

⁴ Greenhill, J P, *Clinical Obstetrics and Gynecology*, 1972, **15**, 1083.

Dysarthria with tricyclic antidepressants

SIR,—I was interested to read the report by Dr S E Quader relating to dysarthria as an unusual side effect of tricyclic antidepressants, (9 July, p 97).

Although it is unusual for dysarthria to develop on the small doses of antidepressants described in his two case reports, this side effect is not uncommon in patients on much larger doses and I have seen it associated with most of the tricyclic antidepressants, including

imipramine, desipramine, and clomipramine. The doses I refer to are in the range of 300-450 mg a day, and although this may be higher than the therapeutic range of some psychiatrists, such doses are justified in unresponsive patients with endogenous depression.

I agree that the nature of the dysarthria described is very similar to a stutter, but I do not think it has the characteristic pattern of a cerebellar dysarthria and would personally regard it as an involuntary movement which interrupts the normal process of speech and is most likely of basal ganglion origin. Indeed, I would most liken it to a very localised form of chorea.

In conclusion, I think it would be incorrect to say that this was a hitherto undescribed side effect, although it has certainly not been my experience to see it associated with the small doses used by Dr Quader.

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SIR,—I read with interest the case reports from Dr S E Quader (9 July, p 97) of dysarthria in two patients taking therapeutic doses of tertiary amine tricyclics. At the Regional Poisoning Treatment Centre, Edinburgh, in 1967, during clinical studies of tricyclic poisoning, scanning speech was noted in a high proportion of patients after consciousness was regained following moderate or severe poisoning. The pace and rhythm of syntax were altered so that speech came in bursts or "runs." This persisted for up to 48 hours. Speech changes following tricyclic overdose were commented on by Lewis and Oswald in 1968.¹

The overdosed patients had high plasma levels of tricyclics and derivatives but more recent work has shown that plasma levels of these drugs may differ widely among individuals following a fixed dose.² The tricyclics resemble chlorpromazine in chemical structure and share some pharmacological properties. High plasma levels of phenothiazines have been associated with adverse reactions, including speech disturbance ranging from aphonia to mutism.³

It is suggested that dysarthria associated with tricyclics is related to high plasma levels and it would be of interest to measure these in future patients showing this unwanted effect.

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¹ Lewis, S A, and Oswald, I, *British Journal of Psychiatry*, 1969, **115**, 1403.

² Kragh-Sørensen, P, Asberg, M, and Eggert-Hansen, C, *Lancet*, 1973, **1**, 113.

³ *British Medical Journal*, 1973, **1**, 755.

SIR,—Dr S E Quader's brief report (9 July, p 97) of two cases of dysarthria in patients receiving tricyclic antidepressants is interesting, but has he produced enough evidence to describe this as a "hitherto unrecognised side effect"?

It is almost invariable for patients receiving these drugs to complain of a dry mouth and throat and most psychiatrists have seen cases in which salivary secretion is so impaired as to make speech almost impossible. We should

be wary of attributing such symptoms to central action in the absence of more definite evidence of cerebellar involvement.

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Safety and danger of piped gases

SIR,—Piped oxygen in large hospitals is sensible for economical and practical reasons. The safety of patients cannot be decreased but (because oxygen cylinders can empty) is increased.

The argument that because oxygen is piped it is sensible to pipe nitrous oxide as well needs further thought. The saving in cost with nitrous oxide is much less than with oxygen and is relatively unimportant. The danger of piping any lethal gas is not, however, unimportant. Tragedies have occurred and will occur again; it does not matter what new "safety" measures are applied, the possibility will continue to exist that somebody, sometime, somehow will be given a gas mixture to breathe that contains no oxygen.

May I make a plea that no more piped nitrous oxide systems are installed? Careful thought should also be given to the safety of existing systems. The use of cylinders in operating suites may be inconvenient, but surely this inconvenience ought to be accepted in the interest of safety. The existing piping should either fall into disuse or be used for non-lethal gases. Examples might include compressed air, 28% oxygen enriched air, Entonox nitrous oxide/oxygen mixture, or extra suction as part of an active gas scavenging system. Anything but 100% nitrous oxide.

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Paget's disease of bone

SIR,—The report by Dr D J P Barker and others (7 May, p 1181) shows both the high overall incidence of Paget's disease and its regional variation in the 14 British towns which they investigated. By comparison the great rarity of Paget's disease in all Black people of the Bantu tribes throughout southern Africa is as curious, and possibly as significant, as Holmes's dog that failed to bark.

In the several years since we reported in the *South African Medical Journal* the first radiologically and histologically proved case in a Bantu man the great rarity of osteitis deformans in that race has remained very obvious. Nor is that due to failure to look for it or to identify it properly; because of language communication problems x-rays are over- rather than under-used in the major hospitals which provide specialist services for non-White patients.

While the disease is encountered occasionally in persons of mixed race (Coloured, Asiatic, Malaysian, etc), it is exceptional in the Bantu people. As a random example, Livingstone Hospital serves well over one million Bantu from several different tribes in eastern Cape Province and encounters no more than one or two suspect cases per year. Personal experience, supported by several colleagues, indicates that the usual finding in the Bantu is a localised and limited lesion, while the advanced, crippling,

and not infrequently malignant changes, unfortunately so common in Britain, are extraordinarily rare.

Are hereditary, climatic, or even skin pigmentation factors involved? Despite its radiological and histological identification, is the disease process one and the same thing in different racial groups or in different places? Surely an international demographical survey is needed. It well may indicate the aetiological factor or factors in a disease which remains "of cause unknown" and which has been shown to be as prevalent and serious in Britain and elsewhere as it is strangely rare in many parts of Africa.

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Diet and coronary heart disease

SIR,—I am grateful for Dr V M Hawthorne's reply (16 July, p 186) to my intentionally challenging letter (4 June, p 1467). He confirms my view that many epidemiologists, ignoring evidence from clinical and laboratory investigators, wish through the media to persuade the public to change their diet.

Epidemiological evidence is by definition restricted, and statistical correlations are not necessarily causal. Any view of coronary disease which is based on one type of study and which omits appreciation of the whole collateral range of meticulous research is incomplete and therefore biased.

The speculation that elevated blood lipids cause atheroma is now regarded as untenable by many distinguished investigators of long experience in this field.¹ Thus informed modern medical opinion is swinging away from the lipid hypothesis of causation and is unlikely, on present evidence, to condone the imposition on the public of any major change in the nature of the fats they consume.

J McMICHAEL

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¹ McMichael, J, *European Journal of Cardiology*. In press.

Abdominal wound dehiscence

SIR,—A number of letters and articles have recently appeared in your and other journals on the subject of the cause of the "burst abdomen." For some inexplicable reason most authors seem deliberately to avoid the all-important factor—the nature of the incision which caused the burst abdomen.

I think everyone now accepts the evidence that transverse and oblique abdominal incisions heal better than vertical ones, and yet vertical incisions are still persistently used in operations that could just as easily be performed through incisions that are so much less likely to cause subsequent trouble. I recently reviewed a series of 400 cholecystectomies that had been performed on my unit. An oblique subcostal incision had been used routinely. There was one burst abdomen, which followed a very extensive haematoma of the abdominal wall, and this patient subsequently developed an incisional hernia. The only other burst abdomen, also followed by an incisional hernia, occurred in a patient in whom a perforated gall bladder was removed through a

paramedian incision as a result of a faulty preoperative diagnosis. If only vertical incisions were avoided whenever possible I am quite sure that the incidence of both wound dehiscence and incisional hernia would almost disappear, regardless of the type of suture material employed.

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How dangerous is obesity?

SIR,—Dr John Womersley draws attention (9 July, p 119) to the confusion which exists about the effects of obesity on health. Lack of exercise is accepted as an adverse factor in relation to coronary heart disease, and it is perhaps logical to consider obesity in relation to exercise.

The person who is mildly overweight will continue his normal way of life, expending more energy in the process; a further degree of obesity will slow him down. Thus a man who is 2 stones (13 kg) over Metropolitan Life Insurance Company ideal weight will probably still walk to work and climb the stairs when he gets there. In doing so he is exercising more vigorously than the man of "ideal" weight. When he reaches 4 stones (25 kg) above ideal weight he will be more likely to ride to work and to use the lift when he gets there. Thus the conclusion reached by the Chicago People's Gas Company Study¹ that "moderate overweight appears to be a sign of good health" is not surprising.

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¹ Dyer, A R, et al, *Journal of Chronic Diseases*, 1975, 28, 109.

Campylobacter enteritis

SIR,—Dr M B Skirrow has reported the possible importance of campylobacters as a cause of enteritis (2 July, p 9). During a three-month period from the end of March 1977 we have examined 338 faecal specimens for campylobacters using the methods described by Dr Skirrow. Of these, 182 were from cases of sporadic diarrhoea, 60 from persons being screened prior to work in the food industry, 31 from convalescent carriers of intestinal pathogens, and 65 for whom no clinical details were available. The results are shown in the accompanying table.

The campylobacter isolates were kindly examined by Dr Skirrow and found to conform to the group *C jejuni/C coli*. Two-thirds of the isolates were from patients in the age

range 15-44 years and the sex ratio was approximately equal.

These results, obtained from an urban area in the north-west of England, appear to confirm Dr Skirrow's observations that campylobacter is a common cause of sporadic diarrhoea in the community.

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Management of the elderly agitated demented patient

SIR,—I would like to communicate some preliminary observations on the use of haloperidol in the management of the elderly agitated demented patient. Such patients present as sudden crises in the community and are a relatively common cause for the general practitioner requesting a domiciliary visit by a consultant psychiatrist. Often the picture is that of an elderly relative who, despite some years of dementia, has been tolerated quite happily at home but suddenly becomes an impossible burden owing to the onset of extreme agitation. The latter, which may be due to a small but important cerebral infarct, means that the relative begins wandering during the day, often dangerously into the street, and becomes very noisy and restless at night. The emotional burden on the family is sudden and intense and there is often considerable embarrassment with the neighbours. Sometimes the general practitioner has tried phenothiazines or benzodiazepine tranquilisers without success, and it is most important to prove to the family that the difficult behaviour can be controlled rapidly and effectively, as the demand for admission to a non-existent psychogeriatric bed is intense and angry from the family.

Haloperidol in doses of 10 mg thrice daily and 30 mg at night to start with is quite safe in the old and often physically infirm. It has negligible effects upon the cardiovascular system and respiration,¹ often a major hazard with phenothiazines.² Furthermore, an analysis of such cases seen over the past two years suggests that demented patients show very much less Parkinsonian side effects than are seen in other subjects. Anti-Parkinsonian agents were rarely necessary at all, which is particularly important as the elderly seem prone to develop confusion with these drugs. A theoretical reason for this may well be the fact that recently it has been demonstrated that there is a significant reduction of choline acetylase in the neostriatum in senile dementia. This is a specific loss of cholinergic activity which is normally under tonic inhibition by

Pathogens isolated from 338 faecal specimens

Category of specimen	No of specimens	Pathogens isolated	No	%
Sporadic cases of diarrhoea	182	<i>Salmonella</i> sp	1	0.5
		<i>Shigella</i> sp	2	1.1
		Enteropathogenic <i>Escherichia coli</i>	1	0.5
		<i>Giardia</i>	5	2.7
		<i>Campylobacter</i>	14	7.6
Healthy asymptomatic (screening)	60	<i>Campylobacter</i>	1	0.2
Convalescent carrier	31	<i>Salmonella</i> sp	16	51.0
		Enteropathogenic <i>E coli</i>	1	3.2
No clinical information available	65	<i>Salmonella</i> sp	2	3.9
		<i>Shigella</i> sp	3	4.6