Progestasert is not an approved appliance in the Drug Tariff and is therefore only prescribable as a private prescription, which will cost the patient over £33. Pharmacists will not therefore be reimbursed for any FP10 prescription should they dispense this product.

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Arthroscopy of the knee

SIR,—Dr D J Stoker in his comments (29 January, p 287) on Mr Adrian Henry's article on arthroscopy of the knee (8 January, p 87) rightly points out that arthrography has a part to play in the management of intra-articular disorders of the knee. However, his statement that arthrography is the investigation of first choice in the diagnosis of meniscal injury cannot be allowed to go unchallenged.

The great advantage of arthroscopy over arthrography is that it allows the surgeon who is going to operate on the joint to assess the situation for himself. From the patient's point of view both the investigation and operation, if it is required, are one event rather than two separate incidents. Because arthroscopy is carried out under anaesthetic the surgeon may examine the joint with full relaxation and further valuable diagnostic information may be obtained. Finally, in skilful hands the arthroscope allows assessment of meniscal disorder to be as complete as anything that can be achieved by a skilled arthrographer.

While I agree that enthusiasm for one procedure should not blind us to the virtues of the other, it cannot be disputed that, from the point of view of the surgeon, to be able to see the meniscus and its abnormality is preferable to the view of an x-ray film taken by someone else.

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Carboxyhaemoglobin in lead workers

SIR,—In lead poisoning there is evidence of increased destruction of erythrocytes in that the red cell survival time is shortened.^{1,2} However, the mechanism of this is not clear, for the osmotic fragility appears to be little changed^{3,4} and the claim that the mechanical fragility of these cells is increased⁵ has been challenged.^{6,7}

In degradation of haemoglobin the porphyrin ring is opened at the methine bridge and one mole of carbon monoxide is formed from each mole of haemoglobin broken down.⁸ We have investigated the carboxyhaemoglobin levels in non-smoking lead workers and in controls from the same factory but not working with lead. The results were as follows:

Mean blood lead and carboxyhaemoglobin concentrations in workers exposed and not exposed to lead

	No	Mean age in years (range)	Mean blood lead (μmol/l) (±SD)	Mean carboxyhaemoglobin (%) (±SD)
Non-smoking lead workers ..	23	35 (22-60)	*2.29 (±0.84)	†2.47 (±0.90)
Non-smoking controls ..	20	40 (25-56)	*1.15 (±0.18)	†1.12 (±0.22)

Conversion: SI to traditional units—Lead 1 μmol/l ≈ 20.7 μg/100 ml.

*t = 6.40; DF = 25; P < 0.001.

†t = 6.94; DF = 25; P < 0.001.

This observation will be pursued as it opens the possibility for tests for screening workers exposed to lead.

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- ¹ Rubino, G F, *Panminerva Medica*, 1962, **4**, 340.
- ² Sheets, R F, et al, *Journal of Clinical Investigation*, 1951, **30**, 1272.
- ³ Waldron, H A, *British Journal of Industrial Medicine*, 1966, **23**, 83.
- ⁴ Fratianne, R B, Griggs, R G, and Harris, J W, *Clinical Research*, 1959, **7**, 384.
- ⁵ Aub, J C, et al, *Journal of the American Medical Association*, 1924, **83**, 588.
- ⁶ deKrester, A J, and Waldron, H A, *British Journal of Industrial Medicine*, 1963, **20**, 316.
- ⁷ deKrester, A J, and Waldron, H A, *British Journal of Industrial Medicine*, 1965, **22**, 315.
- ⁸ White, P, *Annals of the New York Academy of Sciences*, 1970, **174**, 23.

Timing of cervical smears

SIR,—We have never understood the reasoning behind the payment by the Department of Health and Social Security of fees for cytology tests made on women of 35, especially in recent years when in our unit positive tests are now common at 18, 20, or 25. The age of a patient qua precancer of the cervix is determined by her age at first coitus. Thus a general practitioner who wishes to prevent cervical cancer in his practice (with or without £2.30) takes a test from all patients presenting for family planning or antenatal care. Moreover, if a family doctor advises all his patients at risk to take a regular Papanicolaou test they will accept this from him, while they may ignore a poster. One of us found a 95% acceptance of the test in his practice. In a practice of 2500 it was found that every three years his practice was completely screened, some from antenatal clinics or family planning clinics and the remainder "invited" in rotation. There were seldom more than five tests per week to achieve this screening programme.

Mr Richard Simmons (8 January, p 108) challenges the DHSS advice that a test need be repeated only once in five years. How this figure was arrived at is not clear, unless it is another way of saying "That is all the money we propose to spend on cervical cancer prevention." Whether a fee is collected or not we support Mr Simmons, perhaps modifying his gap of 18 months thus:

- Test 1—negative: repeat in 1 year.
- Test 2—negative: repeat in 1 year.
- Test 3—negative: repeat in 2 years.
- Test 4—negative: repeat in 2 years.

Thereafter every 5 years for life.

With such a mesh in the net very few precancers will slip through. Acceptability, however, is important as Dr Elizabeth McGregor of Aberdeen has emphasised.¹ The more senior the patient, the more difficult it is to persuade her to take a test and return for further tests, whereas the young antenatal or family planning patient is, in practice, very co-operative.

Not only GPs are involved in cancer

prophylaxis. In a recent visit to the Middle West of the USA we noted that hospital visiting staff of all specialties were obliged to offer a Papanicolaou test or state in writing why not. A patient refusing this test was also obliged to sign a form. Whether this policy was based on the aphorism that a patient is not properly examined without a cervical test or a reflection of defensive medicine in a litigious era is hard to say. From the patient's viewpoint there is much to commend "routine Pap tests" coupled with advice as to when the test should be repeated.

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¹ McGregor, J E, *Proceedings of the British Society for Clinical Cytology*, Aberdeen, 1974.

Radiation-induced breast cancer

SIR,—Following on the suggestion of Simon and Silverstone,¹ quoted in your leading article 22 January (p 191), that repeated mammography should be avoided in fit women with a life expectancy greater than 20 years, may I suggest that it should also be avoided in breasts in which the malignant potentiality of the epithelium is known to be relatively high? The best example is the opposite breast following the development of carcinoma in one breast, a situation in which regular follow-up by mammography was once regarded as particularly indicated. The same theoretical considerations are an argument against the treatment of carcinoma of the breast by excision of the lump and radiotherapy to the remaining breast tissue.

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¹ Simon, N, and Silverstone, S M, *Bulletin of the New York Academy of Medicine*, 1976, **52**, 741.

Missing tails

SIR,—A significant number of women fitted with an intrauterine contraceptive device (IUCD) are being referred with the problem of strings being no longer visible or palpable on vaginal examination. It is common practice for such patients to be sent for a plain x-ray film of the abdomen to locate the IUCD. With increasing use of this method of contraception the problem will occur more frequently and needs proper assessment.

Three questions should be considered: (1) Is the IUCD still present in the patient? (2) Is the IUCD properly situated within the uterine cavity? (3) Is the patient pregnant? A routine plain film of the abdomen will answer question 1 but not 2 and is certainly contra-indicated if the patient is in early pregnancy. Further, spontaneous expulsion of an IUCD unnoticed by the user is extremely uncommon. It is more useful to take posteroanterior and lateral plain films of the abdomen with a metal sound in the uterus as a marker, provided pregnancy has been excluded. On occasion passage of the sound rubs against the IUCD, aiding diagnosis. If the x-rays suggest that the IUCD is still within the uterine cavity no further action need be taken unless there is some indication for removal of the device. One to three months later the cervix should be visualised following a

menstrual period to see if the string is now visible. If the films suggest that the IUCD is no longer within the uterus the matter should be fully discussed with the patient and a laparoscopy or laparotomy performed to remove the IUCD. Fitting a further IUCD following such an abdominal procedure would seem unwise.

The apparent increase in the missing tails problem may in part be due to cutting the string too short after insertion (at least 5 cm (2 in) should be left). Investigations should not be started if there is any possibility of pregnancy (itself a cause of missing tail).

If the patient is pregnant—but that is another problem.

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Disopyramide in ventricular fibrillation

SIR,—In the case referred to by Dr D P Atukorale (25 December, p 1564) the ventricular arrhythmia appears to have been "torsade de pointes."¹ This may result from overdosage with cardioselective drugs such as lignocaine, procaine, quinidine sulphate, alprenolol, or pindolol, all used by him. The arrhythmia responded to omission of these drugs. In our patient, however (2 October, 1976, p 795), the lignocaine was tailed off only when the patient responded to disopyramide; hence the cessation of ventricular fibrillation in this case could not have been due to the omission of lignocaine. Comparison of disopyramide with cardioactive agents such as lignocaine is currently under test in an open ward trial.²

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¹ Krikler, D M, and Curry, V L, *British Heart Journal*, 1976, **38**, 117.

² Jennings, A, et al, *Lancet*, 1976, **1**, 51.

Tetracycline resistance of group A streptococci from different sites

SIR,—The nationwide survey of tetracycline resistance in pneumococci and Group A streptococci (15 January, p 131) very wisely points out the necessity for making local surveys before deciding which antibiotic to use. This prompted us to review the tetracycline resistance of strains of Group A streptococci isolated in this laboratory over the past 15 months. We found that in the 305 strains isolated tetracycline resistance was almost the same in the two centres from which we receive specimens (Alton 29 out of 107 (27.1%); Basingstoke 51 out of 198 (25.8%)). The incidence of tetracycline resistance in 187 respiratory strains was 29.4%, and in 118 non-respiratory strains 21.2%. This difference is not significant ($0.2 > P > 0.1$). This latter finding does not support the nationwide survey conclusions.

However, more interesting was the analysis of the tetracycline resistance of strains causing infection of skin and soft tissues. These were divided into three groups: "impetigo/infected eczema" (all from general practice); "superficial lesions" (consisting predominantly of infections of the hands and feet, often clinically referred to as paronychia, from general practitioners and the accident and emergency

department); and "deep lesions" (consisting of abscesses from general practice and the accident and emergency department and three inpatient wound infections). The results are shown in the table.

Group	Total No of isolates	No (%) resistant to tetracycline
Impetigo/eczema ..	41	4 (9.8)
Superficial ..	38	8 (21.1)
Deep ..	19	8 (42.1)

These figures suggest that, while the locality of the patient may be important in deciding initial treatment, the locality of the lesion may be equally important.

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Possible immunological effect of oxprenolol

SIR,—The report of Dr L F W McMahon on a possible immunological effect of oxprenolol (4 December, p 1388) is rather in contrast with previous observations on this subject reported in the literature. Other beta-blockers in fact, like butoxamine and propranolol, are known to enhance in-vivo antibody synthesis to heterologous protein in rats,¹ although propranolol added in culture does not modify PHA-induced transformation of human lymphocytes.² On the contrary, a beta-agonist like isoprenaline inhibits lymphocyte transformation³⁻⁴ and IgE synthesis in vitro.⁵

Since alpha-adrenergic stimulation by norepinephrine at physiological concentrations enhances lymphocyte transformation² while alpha-blockade by phenoxybenzamine depresses antibody synthesis in animals,⁶⁻⁹ it might be postulated that immunodepression is related to a beta-adrenergic effect and that it can be modified according to the usual pattern of adrenergic stimulation and blockade. It could be very interesting, then, if further studies would confirm this hypothesis or, so far as Dr McMahon's letter is concerned, would provide conclusive evidence against it.

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¹ Benner, M H, et al, *Journal of Allergy*, 1968, **41**, 110.

² Hadden, W J, Hadden, E M, and Middleton, E, *Cellular Immunology*, 1970, **1**, 583.

³ Smith, J W, et al, *Federation Proceedings*, 1969, **28**, 566.

⁴ Szentivanyi, A, *Journal of Allergy*, 1968, **42**, 203.

⁵ Patterson, R, et al, *Journal of Immunology*, 1976, **117**, 97.

⁶ Rosenblatt, E, and Johnson, A G, *Proceedings of the Society of Experimental Biology and Medicine*, 1963, **113**, 156.

⁷ Pieroni, R E, and Levine, L, *Nature*, 1967, **213**, 1015.

⁸ Pieroni, R E, *New England Journal of Medicine*, 1971, **284**, 793.

⁹ Flier, J S, *New England Journal of Medicine*, 1971, **284**, 1159.

Antibiotic myths

SIR,—I have recently discovered that two old beliefs about the use of antibiotics are still so widely held and so misleading that they deserve publicity.

The first is that if you have started to give a patient an antibiotic and shortly discover that antibiotic to be inappropriate you must

nevertheless complete the course. Five days is the usual time mentioned. Prevention of the emergence of resistance in some unspecified bacterial population is the usual reason cited.

The second misconception is that if you have decided on clinical grounds that a patient needs antibiotic treatment and have also decided to send appropriate material to the laboratory for culture you should wait for the results of the laboratory investigation before starting treatment. If a patient needs treatment with an antibiotic, he needs treatment *now*—at the time the indication for treatment is recognised. Of course, if material for culture is to be taken it should be collected before the antibiotic is given, but only just before. The antibiotic most likely to be effective should then be given. If later that agent proves inappropriate it should be stopped immediately and a more appropriate one substituted.

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Access to oral contraceptives

SIR,—The signatories to the letter under this heading (22 January, p 228) omit any reference to consideration of British women's own individual needs and wishes in respect of their health, wellbeing, and future fertility in using oral contraceptives. We are doctors, not vets. Many women know what the "pill" is doing—and say so.

Whatever happens in the Third World does not, surely, invalidate our medical responsibility here. When we as doctors know that the oral contraceptives' long-term effects on individual women's physiology are unknown and women themselves (for example, Sonia Behr in the *Sunday Times* of 23 January) are questioning the suppression of facts—such as the increasing frequency of post-pill amenorrhoea—are we prepared to lie to our patients about the need for continuing medical responsibility and prescription?

Is this the "exemplar to the developed world" that Judith Bury, Malcolm Potts, John Lorraine, and others want?

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Local gold toxicity

SIR,—Dr D C Dick (1 January, p 51) has suggested that the patient I described (27 November, p 1294) had a recurrence of a nickel dermatitis and in support of his contention he cites the observations of Stoddart.¹

The needles used in our clinic contain 8–12% nickel and my patient was exposed to such needles on two occasions before sodium aurothiomalate was given and on several occasions since, for the purpose of venepuncture, without any untoward effect. The duration of exposure for both venepuncture and intramuscular injection is similar and short. The two cases of recurrent nickel dermatitis described by Stoddart¹ occurred in patients in whom nickel-steel-shafted infusion sets were inserted into a forearm vein during elective surgery. The duration of exposure was hours rather than seconds and the reaction manifestations were generalised in both and localised in one. In his conclusions the author