1963. The mean serum urate concentration during an acute attack was 0·49 mmol/l (8·2 mg/100 ml), but there were 10 men, additional to those described here, whose levels ranged from 0·24 to 0·38 mmol/l (4·0 to 6·4 mg/100 ml) and who were taking no drugs. A further three patients, including one woman, had concentrations of 0·22, 0·24, and 0·25 mmol/l (3·7, 4·0, and 4·2 mg/100 ml) respectively but were taking phenylbutazone or probenecid.

A normal serum urate concentration in acute gout may be misleading diagnostically. Polarising microscopy is simple and specific, and the value of a therapeutic test with colchicine should not be forgotten.

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Response of patients offered influenza vaccination by injection and by nasal insufflation

Vaccination against influenza has been advocated particularly in those who are at risk from complications of infection. In the present study "at risk" patients in a general practice with 5400 patients in a residential area in the suburbs of Glasgow were identified using a feature card retrieval system[1 2] and offered vaccination either subcutaneously or intranasally. Patients included were those in the 70 years and over age group, those with chronic chest or heart disease, and patients taking steroids. Four hundred and thirty-four such patients were identified. The aim was to determine the number of patients at risk; the number who accepted the offer of influenza immunisation; whether the form of immunisation affected the response rate; and to compare the response in the "at risk" patients with those in a "healthy" group.

The study

"At risk" patients were randomly allocated to one of two groups, those from the same family being allocated to the same group. The 228 patients in group A were sent a letter which invited them to attend the surgery without an appointment for immunisation by nasal insufflation, using a killed virus vaccine insufflation manufactured by Duphar Laboratories. The 206 patients in group B were invited to telephone to arrange an appointment for influenza vaccination by injection. Overall, about one-third of the patients accepted the offer of immunization (table). In the group of patients with disease about one-half responded, compared with just over a quarter in the 70 and over age group. There was no significant difference in the response rate between those offered immunisation by injection and those offered immunisation by insufflation.

A further 310 "healthy" patients in the age group 50-69 were selected from the practice. This group was subdivided randomly into two groups, one group being offered immunisation by injection and the other immunisation by insufflation. As with the "at risk" group, overall about one-third of the patients responded. Nevertheless, in this group more patients responded to the offer of immunisation by insufflation (37%) than to immunisation by injection (23%)—a significant difference ($P < 0.01$).

Number of "at risk" patients responding when offered influenza vaccination

	Patients with chronic respiratory or cardiac disease or on steroids		Patients aged 70 years and over		Total	
	No offered	No (%) accepting	No offered	No (%) accepting	No offered	No (%) accepting
Nasal insufflation..	44	22 (50)	184	52 (28)	228	74 (32)
Injection ..	33	16 (48)	173	48 (28)	206	64 (31)
Total ..	77	38 (49)	357	100 (28)	434	138 (32)

Discussion

While immunisation of patients at risk from influenza (estimated in this study to be about 8% of the practice) is widely advocated, this advice is not always followed in practice and only a small proportion of such patients are in fact protected. In this study, only one-third of patients responded to the offer of immunisation, although a higher proportion of patients with disease responded than patients in the 70 years and over age group. This difference could not be accounted for by difficulty in attending the surgery as domiciliary immunisation was also offered to this group. Possibly patients in the older age group are less willing to accept medical intervention unless they consider it necessary. Many patients in this group may have felt well and indeed the response rate was similar to the overall response rate in the 50-60-year-old control group.

We felt that the fear of an injection might deter patients from accepting immunisation. While this might be a factor in the "healthy" group of patients, there was no evidence for this in the "at risk" group. Thus, if a maximum response rate is wished for in "healthy" patients immunisation intranasally is more likely to achieve this than subcutaneous administration of the vaccine.

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Cushing's disease: failure of treatment with cyproheptadine

The successful treatment of three patients with pituitary-dependent Cushing's disease with cyproheptadine has recently been reported.[1] We have studied pituitary and adrenal function in a 13-year-old boy with Cushing's disease and found cyproheptadine to be ineffective.

Case report

A 13-year-old boy presented in November 1975 with obesity and short stature. He had always been plump but had not grown for three years. He had become an extremely light sleeper and emotionally labile but had had no headaches, visual disturbance, or weakness. His weight was above the 75th centile and height below the 3rd centile. He had a plethoric facies, a moderate "buffalo" hump, profuse axillary hair, pubic hair stage 4, external genitalia stage 3, and testicular volumes of 8 and 6 ml. Blood pressure, fundi, and visual fields were normal. Bone age was 12·3 years.[2] Skull *x*-ray picture was normal. Pituitary and adrenal function tests (table) confirmed the diagnosis of Cushing's disease. The plasma cortisol rose from a rather high resting concentration of 402 nmol/l to 520 nmol/l (14·6 μg/