756). Children are particularly prone to become addicted to the use of these inhalers and many of my patients have used one a month and some every three or even two weeks, and of course take it to school with them.

The following case deserves to be recorded not only because it illustrates an extra-extraordinary degree of addiction but because of the relationship this may bear to death in similar cases.

A boy, now aged 9½, had been using a Rybar inhaler since the early age of 4 years, but in spite of this he had to be admitted annually to hospital in Germany. On returning to this country in March 1965 he began using Medihaler-Iso, which contains 400 measured doses. Even on three a week he had a mild almost constant wheeze, and resisted the strenuous efforts of his family doctor to overcome his increasing addiction. He was accordingly admitted for treatment in May 1965 and low-dosage long-term steroid therapy instituted. On the dose prescribed (prednisone 2.5 mg. daily) he nevertheless got through one inhaler a week, less often when the dose of prednisone was increased temporarily to 5 mg. However, two months ago he developed another bad attack of asthma and used up an entire inhaler between lunchtime and bedtime. When he found it empty during the night and another not available he panicked, and his asthma did not respond to an aminophylline suppository. He was again admitted to Sydenham Children's Hospital at 8.45 a.m. At 3 p.m. I advised prednisone 5 mg. q.i.d., and told the boy the idea was thereby to get him off the "pump." Thereupon his asthma became steadily worse and he pleaded for his inhaler. When this was refused, at 4 p.m., he immediately became very distressed, cyanosed, and shocked, and stopped breathing. He required endotracheal intubation and oxygen insufflation before spontaneous respiration returned. Hydrocortisone 100 mg. was also given, intravenously, and he regained consciousness within the hour. Since being discharged from hospital he has been receiving prednisone 5 mg. b.d., which is being slowly reduced, and has used up one inhaler during the past month. It is obviously going to be very difficult to wean him altogether, especially since the inhaler containing a placebo was alleged to have "made him worse."

Could not asthma deaths be due not only to an excessive dosage of bronchodilators obtained through pressurized aerosols, as suggested by many of your correspondents, but also to sudden withdrawal in one addicted to their use?—I am, etc.,

London W.1.

S. B. DIMSON.

SIR,—We have investigated the effects of inhaled doses of isoprenaline on the peripheral circulation, and, unlike Professor A. C. Dornhorst and Dr. R. L. Hodge (13 May, p. 441), who found no alteration in continuous arterial pressure recordings, we have been able to detect changes in forearm blood flow measured by venous occlusion plethysmography. Two of us inhaled several single doses of 0.5 mg. and 0.1 mg. isoprenaline from different strengths of commercially available aerosols. Repeated measurements were made to eliminate errors from misuse of the apparatus or from anxiety over the consequences. When the same respiratory procedures were carried out with the inhaler in the mouth, though sealed, no changes in flow were recorded.

In each case there was a marked transient increase in flow through the forearm vessels, which was maximal at 15–30 seconds and did not usually persist longer than 45–60

seconds (see Table). One of us experienced tachycardia and slight palpitations after repeated inhalations of the 0.5 mg. concentration isoprenaline.

The Percentage Increase in Blood Flow Through the Forearm Muscles Following Inhalation of Single Doses of 0.5 mg. and 0.1 mg. Isoprenaline

Subject	Dose	15 Sec.	30 Sec.	45 Sec.	60 Sec.
N.M.C.	0.5 mg.	460	420	290	150
		175	290	224	128
J.S.K.	0.1 "	268	258	190	0
	0.5 "	186	240	126	0
		178	274	220	0

While we do not wish to exaggerate the danger of bronchodilator drugs presented in aerosols, nor diminish their usefulness in the treatment of asthma, it is clear that they can produce rapid and marked effects on the peripheral circulation.—We are, etc.,

NICHOLAS M. COHEN.

J. S. KEATES.

B. YOUNG.

Guy's Hospital Medical
School,
London S.E.1.

Abortion Law Reform

SIR,—I have had fairly extensive experience of patients referred for consideration of termination of pregnancy on psychiatric grounds, and follow a moderately conservative pattern in the number I recommend for operation. I have learned considerable respect for the complexity of many of the clinical and social situations presented, but I doubt whether this complexity is recognized by some at least of the more vociferous proponents and opponents of legal changes.

Much of the argument in favour of such changes is bathed in the roseate light of liberal humanitarian reform, which in most other contexts has considerable personal attraction for me. It is, however, obvious that the appropriate time to exercise freedom of choice in the matter of procreation is *before* not *after* conception, and what is clearly required is a far more active and less ambivalent, not to say less hypocritical, campaign for effective contraception, and a controlled extension of sterilization for both men and women.

Whatever view one holds, there is surely now sufficient evidence of widespread conflict of opinion to justify a Royal Commission as the only rational way of adequately exploring the situation.—I am, etc.,

Bridgend,
Glamorgan.

K. S. JONES.

Preventing Pressure Sores

SIR,—Dr. J. R. Silver (18 March, p. 697 and 3 June, p. 638) emphasizes many points in the management of bedsores with which I am in entire agreement, especially the responsibility of the consultant-in-charge to train his staff in the daily examination of patients at risk and in the maintenance of a strict prophylactic regimen. The 100% success rate in bedsores prevention achieved by strict two-hourly turning at Stoke Mandeville and at Liverpool paraplegic units is very commendable. Reasons why such methods are not universally applied in geriatric medicine include, on the patients' side,

confusion and failure to stay in the positions in which they are placed, and, on the staffing side, insufficient numbers, inadequate training, and indifference.

In our trial on geriatric wards we attempted to introduce a regimen of two-hourly turning. Lapses from the time-table were frequent by day and almost universal at night, when staffing shortage made it impossible. This served to emphasize the importance of seeking a mechanical alternative to a trained team of dedicated nurses. Our control—to which Dr. Silver objects—was not one imposed by the organization of the trial, but merely the existing method of ward care to which we were obliged to return after a period of encouragement in two-hourly turning. However unpalatable, the probability that this does represent the average standard of nursing in geriatric wards has to be accepted.

In describing the types of sore which he finds benefit from the use of antibiotics, Dr. Silver is referring to paraplegic patients. Extensive, deep sores are also common in geriatric patients, but they appear to be confined to walled-off sinuses in the subcutaneous tissues and I have never known one to be associated with osteomyelitis. Probably none is sufficiently longstanding to be able to cause the amyloid which occurs in paraplegics. Antibiotics are likely to be useful in surgical procedures to heal deep sores in all types of patient, but they are of no value in the general treatment of sores in the elderly. Both the sores and the toxæmia, which certainly occurs in these patients, respond rapidly to measures to improve the general condition, such as ensuring adequate fluid and protein intake, and to relief of pressure alone.—I am, etc.,

Glasgow S.1.

MARY R. BLISS.

Peripheral Gangrene in Infancy and Childhood

SIR,—The description by Dr. Anne Lloyd and her colleagues of four cases of peripheral gangrene in infancy and childhood (25 February, p. 468) prompts the following case report. A search through the literature has failed to reveal reports of similar cases in African children.

An 8-year-old Zambian African girl was referred to the Ndola General Hospital from the Kasama District Hospital in March 1965 because of gangrene of the fingers of a few weeks' duration. The mother stated that the joint swellings, accompanied by a fever, had commenced in 1962. Physical examination revealed a malnourished child with gangrene of the terminal phalanges of the right forefinger and little finger and of the left forefinger (Fig. 1). In addition, a severe polyarthritis was present, involving the proximal and distal interphalangeal joints of the fingers, metacarpophalangeal joints, wrists, elbows, knees, and ankles (Fig. 2). All peripheral pulses were present, full, and equal. A soft pansystolic murmur was present at the apex, the chest was clear, and the lymph nodes were not enlarged. The liver extended 4 cm. below the costal region, and the spleen was grossly enlarged to the umbilicus. The child was apyrexial.

Investigations: Hb 7.9 g./100 ml., M.C.H.C. 25%. E.S.R. 115 mm. (Westergren). Blood smear negative for malarial parasites. Nucleated cells 8,000/cu. mm. (polymorphs 64%, lymphocytes 15%, monocytes 19%, eosinophils 2%). Platelets appeared reduced in numbers, and the red cells were hypochromic and showed

increased rouleaux formation. Most of the mononuclear cells appeared atypical.

Cold agglutinins and cryoglobulins were not detected. The direct test for sickling was negative. The Coombs (direct and indirect) and Kahn tests were negative. The latex test (Hyland Laboratories rapid slide screening test for rheumatoid arthritis) was strongly positive on several occasions. L.E. cells were absent in several different preparations. A bone-marrow aspirate was normal. Total serum protein 8.2 g./100 ml. (albumin 2.2, globulin 6). Serum protein electrophoresis showed a marked increase in gammaglobulin, but further identification of this was not possible.

Typhoid, paratyphoid, and brucella agglutination tests were negative. The gonococcal complement fixation test was negative. Heaf test was positive. Stool contained hookworm ova. Tests were carried out for proteinuria, which varied from nil to + + + +. At times pus cells and granular casts were present. Bence-Jones protein was not detected. Reducing substances were absent.

Chest x-ray was normal except for a calcified focus in the left hilum. X-ray of the hands showed bony destruction of the gangrenous phalanges, and the carpal bones showed marked rarefaction. The sole cardiographic abnormality was a sinus tachycardia. Liver biopsy: "Tiny fragment of liver; too small for adequate diagnosis but suggests the possibility of cirrhosis." Biopsy of the synovium of the wrist joint: "Section of biopsy shows pyogenic inflammatory change; the picture is one of synovitis of pyogenic origin."

The four-month inpatient stay was punctuated by episodes of fever, generalized lymphadenopathy, exacerbation of arthritis, and by one epileptiform convulsion. The gangrenous process did not progress.

The patient was treated with antimalarials, buphenium, iron, vitamins, antibiotics, cortico-

steroids, and blood transfusions. the gangrenous areas healed with little trouble and the general condition gradually improved. At the time of discharge the weight was 38½ lb. (17.46 kg.) and the height was 3 ft. 8½ in. (113.7 cm.)

She has been followed up at regular intervals and maintained on proguanil, 50 mg. daily, and vitamin supplements. When last seen in April 1967 the general condition was satisfactory, the weight 42 lb. (19.05 kg.), and the height 3 ft. 9 in. (114.3 cm.). The liver was palpable and the spleen three fingerbreadths below the costal margin. However, the arthritis had not noticeably altered since the patient was first seen, and flexion contractures of elbows and wrists were present.

This patient had polyarthritis and peripheral gangrene, and these suggest that the basis of the gangrene, as in the cases of Dr. Lloyd and colleagues, was an autoimmune disease. However, the histology of the synovial membrane was more suggestive of an infectious process, and the latex fixation test has been shown to give a high proportion of false-positive results in areas of malarial endemicity.¹

I am grateful to Dr. J. Fine, Kitwe Central Hospital, for the report on the histology of the synovial membrane, and to Professor M. S. R. Hutt, Makerere University College, for the liver biopsy report.

Dr. M. M. Nalumango, Permanent Secretary, Ministry of Health, Zambia, kindly gave permission for the publication of this letter.

—I am, etc.,

General Hospital,
Ndola, Zambia.

MARK N. LOWENTHAL.

REFERENCE

- Houba, V., and Allison, A. C., *Lancet*, 1966, 1, 848.

FIG. 2.—Generalized polyarthritis.

FIG. 1.—Gangrenous fingers and arthritis of joints of hands and wrists. Latter show scars of home treatment.

SIR,—I have just read the article on this subject by Dr. Anne Lloyd and her colleagues (25 February, p. 468), and it reminded me of a case I had only a few months ago.

On 20 January 1967 a baby 2 weeks old was brought to the hospital with a history of irritability and fever of a few days' duration. On examination the baby was well nourished, but crying constantly and had a swollen shiny right leg with blue foot. The cord had fallen and the umbilicus was healthy. The child was admitted and put on antibiotics and some sedatives. By the next morning the foot had gone quite blue and by 6 February the demarcation line was distinct. The gangrenous portion of the foot was removed followed with debridement. The wound healed leaving a stump.—I am, etc.,

XTO. G. OKOJIE.

Zuma Memorial Hospital,
Irrua, Nigeria.

Sexual Promiscuity

SIR,—I see that you have been taken to task by Dr. G. B. Leyton (20 May, p. 511) for your statement in your leader (25 March, p. 711) that "sexual promiscuity is debasing to the personalities of those who practise it, fraught with serious dangers, especially to women, and damaging to the interests of society."

From an experience of more than 40 years of the problems of social psychiatry I would say that your statement is 100% correct. I wonder what experience Dr. Leyton has of the sexual neuroses and of their extreme intractability both within and without marriage?

I readily admit that it is not necessary to become promiscuous or even to lose virginity to become a sexual neurotic—implanted fear states, sexual emotional arrest at the auto-erotic stage of puberty, etc., will always keep up a good supply—but in my experience the almost certain way to acquire these neuroses (the anxiety-linked, the fixated, the compulsive sexual neuroses, etc.) is to indulge in promiscuity, or in fact to bring the sexual instinct into use in any circumstances divorced from the links of the tender emotions. In sexual maturity the latter emotions supply all the drive of the sexual instinct and at the same time completely circumscribe its use to conditions which are healthy psychologically.

The further repercussions of neurotic sex expression on the whole personality would require several lengthy articles to describe, but they can be quite devastating.—I am, etc.,

Pinner,
Middlesex.

ROBERT THOMPSON.

Death Certification

SIR,—It appears that Dr. Gavin Thurston (6 May, p. 361) when writing on the importance of accuracy in death certification in order that "the national" statistics may be reliable is unaware that the death certificate on which certain statistics regarding the Scottish nation are compiled differs from that used in England and Wales. Among the many improvements which were introduced