

had to be drilled and drilled again to gain even a reasonable mastery of the mechanics of their art.

Continued practice, particularly if interest is awakened, can however do much, and I can think of many laymen who in their teens, when the do-it-yourself movement was in its infancy, showed no particular aptitudes, but are now amateur carpenters and mechanics of virtually professional standard. Be that as it may, some talents are incompatible. A good gardener is rarely a good mechanic whatever the level of intelligence, and there may be many other examples of this.

Would it be an oversimplification, if aptitude tests become the rage, for those applicants distinguishing themselves in the nuts and bolts tests to be channelled into orthopaedic and accident surgery and those above the average in modelling and tests based on the plastic arts to be guided into soft tissue and related forms of surgery?—I am, etc.,

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Encouraging Obesity

SIR,—The dangers of obesity, even of a minor degree, are now well established, and it is encouraging to see that efforts are being made to inform the public about these dangers and of how to avoid them. What a pity it is therefore to observe the appearance of large posters on the hoardings offering the following advice "Six slices a day is the well balanced way. You need the goodness of bread." (Issued by the Flour Advisory Bureau.)

This advice demands an intake of at least 60 g of carbohydrate in a day—that is, more than half the carbohydrate allowance of a modest weight reducing diet, or half that taken by many diabetics. This underlines the uphill struggle facing those who seek to educate the public on health matters in the face of commercial interests.—I am, etc.,

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Viper Bites

SIR,—In June a few years ago a strong young farm bailiff picked up a female viper, *Viperus berus*, near a petrol pump. He was bitten on the left thumb and, thinking that the reptile was the harmless grass snake, did nothing else than suck the double puncture wound which bled freely. Within 30 minutes he felt extremely ill, the whole arm was swollen and bruised, and a swollen tongue with glottal oedema rendered speech impossible. A doctor injected 10 mg of chlorpheniramine (Piriton) intramuscularly, and soon after the patient said he felt better, was able to speak faintly but vomited and passed a copious loose stool.

On arrival at the Royal Salop Infirmary his blood pressure was 98/40, his face was swollen and cyanotic, and his breathing laboured. Hydrocortisone 25 mg was injected intramuscularly, and two hours later the blood pressure had risen to 131/80. An hour later specific antiserum arrived from Birmingham, and 10 ml was injected intramuscularly, no side effects occurring later. Hydro-

cortisone 25 mg was given orally at six-hourly intervals for the next 48 hours, and though diarrhoea persisted for all of 24 hours the glottal oedema subsided rendering a contemplated tracheostomy unnecessary. However, during this period bruising, swelling, and severe pain in the left arm and hand persisted and had not quite subsided when the patient was discharged eight days later.

One fatal case has been reported to me since, but the victim was a lady aged 76 who was picking bilberries when bitten on the wrist. I myself have seen two more cases, but in each the reaction was less severe. The season was later and the bites little more than pricks.

The viper is alleged to be increasing and may be found in any dry place in the countryside. It may be abundant over considerable portions of its range. A bite is attended with much swelling, reflex vomiting, and profuse perspiration.¹ It is not a reptile to be trifled with, and the speed and severity with which acute illness may follow a bite points the need for prompt treatment. It is an open question whether antiserum is helpful. Troublesome side effects have been seen, whereas the rapidly beneficial effects of chlorpheniramine combined with hydrocortisone are undoubted.—I am, etc.,

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¹ Ditmars, R. L., *Snakes of the World*. New York, Macmillan, 1931.

African Cobra Bite

SIR,—Dr. R. A. Davidson's memorandum (12 December, p. 660) contains the statement that "... African cobra bite does not appear to have been reported." We feel this statement might warrant some clarification. In the *Bibliography of Snake Venoms and Venomous Snakes*¹ more than 50 publications are noted which deal with bites by African cobras. These entries do not include the fine case reports by Christensen,^{2,3} nor the cases mentioned by F. W. Fitzsimons,^{4,6} the compendium of V. F. M. Fitzsimons,⁷ the short text by Visser,⁸ nor the recent excellent review of bites by African cobras and other African snakes by Chapman.⁹

A listing of antivenins available for bites by African cobras will be found in the *Transactions of the Royal Society of Tropical Medicine and Hygiene*.¹⁰—We are, etc.,

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¹ Russell, F. E., and Scharffenberg, R. S., *Bibliography of Snake Venoms and Venomous Snakes*, pp. 220, Bibliographic Associates, West Covina, Calif., 1964.

² Christensen, P. A., *South African Snake Venoms and Antivenoms*, p. 1. Johannesburg, South African Institute for Medical Research, 1955.

³ Christensen, P. A., *South African Medical Journal*, 1969, 43, 1253.

⁴ Fitzsimons, F. W., *The Snakes of South Africa: Their Venom and the Treatment of Snake Bite*. Cape Town, Miller, 1912.

⁵ Fitzsimons, F. W., *The Snakes of South Africa*, 3rd. edn. Cape Town, Miller, 1919.

⁶ Fitzsimons, F. W., *Snakes and the Treatment of Snake Bite*, 2nd edn. Cape Town, Specialty Press, 1929.

⁷ Fitzsimons, V. F. M., *Snakes of Southern Africa*. Cape Town, Purnell and Sons (S.A.), 1962.

⁸ Visser, J., *Poisonous Snakes of Southern Africa and the Treatment of Snakebite*. Cape Town, Timmins, 1967.

⁹ Chapman, D. S., in *Companion to Surgery in Africa*, ed. W. W. Davey, p. 127. Edinburgh, Livingstone, 1968.

¹⁰ Russell, F. E., and Lauritzen, L., *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 1966, 60, 797.

Penicillin and the Mouth Flora

SIR,—In the last paragraph of your leading article "Penicillin and the Mouth Flora" (10 April, p. 63) you suggested erythromycin estolate as a hopeful antibiotic cover for dental extraction.

The question of an efficient antibiotic cover for the prevention of endocarditis following dental extraction and other post-operative bacteraemia is no longer a problem. In Canada I have tested erythromycin estolate (Ilosone) orally in 42 patients with doses of 250 mg to 1 g and have increased the period of absorption of the drug from 1½ to 4 hours. The estolate assay in the patients' sera, even after the full 1 g dose given four hours before extraction, gave blood concentrations varying from 1.0 to 2.0 µg/ml, but I still obtained 38% of the post-extraction blood cultures positive, yielding different combinations of aerobic and anaerobic organisms.¹

I then tried pyrrolidinomethyl tetracycline (Reverin) in a pre-operative dose of 275 mg dissolved in 10 ml sterile distilled pyrogen-free water injected intravenously to 100 patients, also in Canada. The injections were given slowly, in 2 to 3 minutes, and the tooth or teeth extracted immediately afterwards. The serum titres of pyrrolidinomethyl tetracycline in samples taken at the time of blood culture one minute following the extractions corresponded to a blood concentration of 18 to 25 µg/ml which was 15 to 20 times the concentration achieved after the oral estolate cover. At the end of the 10 minute transient bacteraemia it still was 10 to 15 times the concentration attained with the oral antibiotic. The post-extraction blood culture results were striking. Only 3 of the 100 patients gave positive blood cultures each due to a single type of aerobic organism: viridans streptococci in two cases, and a corynebacterium in one case. A concentrated intravenous antibiotic such as pyrrolidinomethyl tetracycline is certainly more likely to kill the shower of bacteria as soon as they are released into the circulation and within the 10-minute period of bacteraemia.

In a third series, also in Canada, of post-extraction blood cultures from 100 unpremedicated patients taken as a control, 64 positive results were obtained which yielded 67 aerobes and 88 non-aerobes. These represent a far greater recovery of non-aerobes than previously reported by other workers.² Therefore the success with pyrrolidinomethyl tetracycline represented a reduction of positive blood cultures of 61% (from 64% to 3%) and a reduction in the number of the bacteraemic organisms isolated, from a total of 155 aerobes and anaerobes to three aerobes. All the 242 pre-extraction blood cultures in the three series, taken from the same persons, were sterile.—I am, etc.,

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¹ Khairat O., *Journal of Clinical Pathology*, 1966, 19, 561.

² Khairat, O., *Journal of Dental Research*, 1966, 45, 1191.