

multiple-pressure method was superior to the scratch technique in persons previously successfully vaccinated, and the difference between the success rates was due to the greater failure of the scratch method in previously vaccinated males. No significant difference for either sex or with either technique was noted among primary vaccinations. Mole³ also made a direct comparison of the scratch and multiple-pressure techniques in adults and demonstrated that multiple pressure gave a significantly higher success rate among persons previously successfully vaccinated. Males showed a higher failure rate, but analysis of his figures did not demonstrate any significant difference for these methods among males and females; however, the success rate was lowest when the scratch method was used in males.

The two studies quoted refer to vaccination in adults, but Rees⁴ has compared the success rates of scratch and multiple-pressure methods among primary vaccination in infants, and is of the opinion that multiple pressure is superior to scarification, as judged by the number of successful primary and repeat primary reactions.

It would appear reasonable to perfect one method of vaccination, and until evidence is produced to the contrary the multiple-pressure technique should be adopted in preference to the scratch method.

We entirely agree that failed vaccinations should not be accepted as proof of immunity to smallpox; nurses have died because they were allowed in contact with the disease after several failures of primary vaccination.^{1b} When repeated attempts to produce a primary vaccination reaction are unsuccessful the subject should be advised that there is a temporary insusceptibility to vaccinia which does not constitute immunity to smallpox.^{1c}—We are, etc.,

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Exercise and Fibrinolysis

SIR,—Dr. J. D. Cash's observation (27 August, p. 502) that there appeared no significant change in fibrinolytic reactivity during the menstrual cycle confirms earlier findings of Macfarlane and Briggs,¹ Beller *et al.*,² and Rao.³ On the other hand a marked increase in fibrinolytic activity was observed about seven to 28 hours after the onset of menstrual flow by Bergerot-Blondel *et al.*,⁴ and increase in fibrinolytic activity during menstruation has also been reported by Smith and Smith,⁵ and Willson and Munnell.⁶

Cash's other finding of a greater fibrinolytic reactivity in women than in men is most interesting, which is contrary to the earlier observation of Brakman *et al.*,⁷ who found no significant difference between men and women.

In a study⁸ of fasting fibrinolytic activity in 26 healthy young males and 25 healthy young females (33 medical students, the other 18 being laboratory assistants, nursing staff, and secretaries) males were found to have slightly increased fibrinolytic activity com-

pared with females. The mean euglobulin-lysis time for males was 164 minutes and for females 192 minutes. The mean euglobulin-lysis time of six females who were menstruating at the time of examination did not show any significant variation from the mean euglobulin-lysis time of the rest of the females.—I am, etc.,

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Open-door X-ray Departments

SIR,—I have been following with great interest the recent article and subsequent letters on the subject of "open access" to x-ray departments, and especially noted Dr. R. L. Richards's letter (10 September, p. 643).

For fourteen years a restricted service has been in operation in my departments offering chest, abdominal, sinus, and some pregnancy x-ray examinations directly to general practitioners. The departments have recently been operating an extended service for a trial

period to include barium contrast examinations, intravenous pyelograms, cholecystograms, and general radiography of the spine, skull, etc. This is being carried out at the request of the Sheffield Regional Hospital Board, who are operating several such schemes in certain types of hospitals in an effort to obtain some indication of the change in the amount of work entailed in x-ray departments operating a full general-practitioner service by direct cases.

Since 1957 chest cases referred directly by general practitioners to my departments have been examined using 100-mm. Odelca photo-fluorographic unit. A postero-anterior and lateral projection are carried out routinely, the radiographs checked before the patient leaves the department, additional films taken if necessary, and the report posted to the general practitioner concerned the same afternoon. With experience, large films are seldom needed, and the chief fault of newcomers to the technique is over-diagnosis rather than errors of omission.

I have maintained for many years that when patients are referred with symptoms, particularly those referable to chest disease, a single postero-lateral radiograph is useless as a diagnostic examination. A lateral should always be taken as well unless the examination is a routine one on a supposedly healthy person for employment or emigration. Properly used a 100-mm. Odelca camera unit is an accurate and economic piece of x-ray equipment.—I am, etc.,

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Transistorized Enuresis Alarm

SIR,—Enuresis alarms work on the principle that, urine being a good conductor of electricity, in a wet bed a current may easily be made to flow between two aluminium foil electrodes in a detector pad. Unfortunately,

commercial devices are not very sensitive and the pad resistance has to fall to about 100 ohms before the alarm will sound, allowing milliampere currents to flow. This new transistorized version limits the current to a

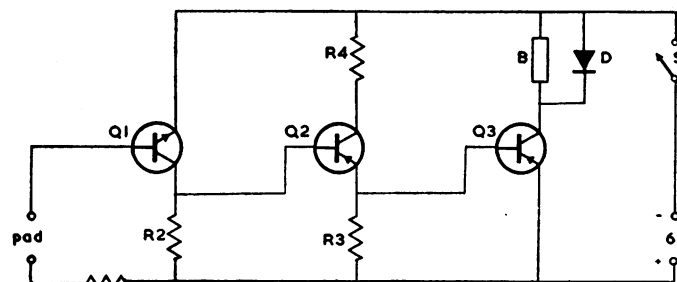


FIG. 1



FIG. 2

few microamperes—a reduction of 1,000 times. The sensitivity is also much greater and the device will operate when the pad resistance falls to 10 K ohm. Furthermore, the unit is light in weight, robust, and may be built in an hour for a cost of 30s.

The circuit (Fig. 1) is that of a current amplifier which sounds a buzzer when the pad current flows. A diode is connected across the buzzer to prevent any high voltage developed in the buzzer from damaging the transistor Q₃. The transistors Q₂ and Q₃ must be firmly mounted on a heat sink, a piece of aluminium sheet 5 in. (13 cm.) square will suffice should a proprietary heat sink not be available. The unit is powered