must be inhaled in order to produce asbestosis?" Although we have no answer directly applicable to man, we do have some indirect evidence that fairly heavy concentrations of asbestos dust are required to produce alveolar fibrosis in animals.

Thus, in one experimental investigation[3] exposure to inadequate concentrations of asbestos dust has been held responsible for the dictum that short-fibred asbestos dust was non-pathogenic,[4] a concept now believed erroneous.[4-6] We have found 10 mg. of short-fibred chrysotile dust injected intratracheally in rats to produce only transient focal fibrosis[6] and exposure of guinea-pigs and rats to extremely fine chrysotile dust (19 mg./c.mm.) for three and a half months resulted in barely perceptible fibrosis in some animals and none in others as long as 10 months later.[7]

The implications in Professor Thomson's communications point up the need for more direct data than are now available on the minimal amount of asbestos dust required for the production of recognizable asbestotic alveolar fibrosis. Our present information, although indirect, suggests that asbestos dust is less pathogenic than is quartz dust on a weight for weight basis.—I am, etc.,

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Transient Focal Cerebral Ischaemia

SIR,—May we reply to the comments of Professor D. Denny-Brown (October 12, p. 930)?

He states that presyncopal symptoms commonly accompany a local cerebral haemodynamic crisis occurring as a result of blood loss, cardiac arrhythmia, or shock. This is not to be denied. But transient ischaemic attacks (T.I.A.) occurring in this setting constitute only about 5% of cases. The arresting feature about the overwhelming majority of T.I.A.s is that they occur without evidence of disturbance in other parts of the central nervous system or in other systems. He further states that the symptoms described may not indicate cerebral ischaemia but may be due to carotid sinus stimulation; but surely the ultimate effect of this stimulation is to produce cerebral ischaemia? The fact is that if the common type of T.I.A. was due to hypotension one would expect to be able to reproduce it before the onset of signs of general ischaemia.

The transient disorders of extreme hypertension are not irrelevant to the task of alerting clinicians, for the case quoted is not the only example we have met of hypotensive therapy being stopped on the assumption that it was causing hypotensive episodes, when in fact the crises were hypertensive in nature.

We did not, of course, produce generalized cerebral ischaemia at pressures of 95, 90, and 70–80 mm. of mercury. These pressures were taken from the digital arteries, as stated in the paper; the cerebral blood-pressure is much lower than this. The question as to whether hypotension is well tolerated in hypertensive states can only be settled by clinical trial. We have other evidence on this point which we hope will be published shortly.—We are, etc.,

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Bacteriological Examination of Urine

SIR,—The problem[1-3] is essentially one of obtaining an approximately quantitative measure of the numbers and types of bacteria in urine, with particular reference to counts over 10^5/ml. I suggest that the drop method[4,5] using a platinum-glass pipette[6,7] might be a very convenient method for this purpose.

The pipettes are held in tubes containing 70% alcohol and pre-poured plates of a suitable medium (nutrient agar, blood agar, MacConkey agar, or any desired differential medium) made available as required. Plastic Petri dishes are very convenient. Immediately before use the pipette is "burnt off" and one drop of urine added to 10 ml. Ringer solution using screw-capped bottles or tubes with Astell seals. After mixing, and using a fresh pipette, one drop of the dilution is allowed to form *very slowly* and fall from a height of about 1 in. (2.5 cm.) on to the centre of the plate. The greater the height the larger the spread. A drop of Ringer is approximately 0.02 ml., so that this procedure adds 1/25,000 ml. of urine to a plate. The size of the drop is given by the formula $V=\frac{2\pi r\sigma}{d g \phi}$ where V=volume, r=radius of tip, σ=surface tension, d=density, g=acceleration due to gravity, and ϕ is a correction factor. For the greatest accuracy the pipette used for the urine should be calibrated for urine, as this will have slightly different values for σ and d, but this is probably unnecessary for the level of accuracy involved in this type of work. If the count of the urine is 10^6 about 40 colonies are obtained per drop. Three drops may be utilized and the average taken if desired. If a high count is anticipated one drop may be spread over the whole plate using a platinum or iron wire, bent in a gentle curve.

This spreading technique is especially useful because *Proteus* is often present in urine and swarming colonies may spoil the plate. For this reason the well-known devices should be employed to reduce this spreading—e.g., using a high concentration of agar, a thin layer of medium, a selective medium, counting the colonies at the earliest possible time, etc.

A second dilution can of course be made for very high counts, but this is usually not necessary for a preliminary screening test.

In addition to the convenience of this method (the outfit is very light and portable), surface culture has certain advantages over pour-plate methods.[7] The pipettes may of course be autoclaved if desired.—I am, etc.,

London W.1. J. G. DAVIS.

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Ingrowing Toenails

SIR,—Ingrown toenails, also ingrown fingernails, are very common among the masses in China. The question of how to treat them has always been with us; articles in the medical press have been relatively common for the past 40 or 50 years, to my knowledge.

For people who in general walk barefooted or with straw sandals or cotton shoes the ordinary methods of treatment invariably fail, as I found to my cost after about ten years of trial in Chinese out-patient departments. It thus came about that eventually I was forced to attack the nail directly, in spite of all the warnings to the contrary. For the past 20 years or more I have found it entirely satisfactory, and I have even cured myself by the same method. There need be no blood.

The method is to anaesthetize the digit, and with fine sharp-pointed scissors, any granulations having first been removed, cut down the side of the nail so that a sliver of about $\frac{1}{8}$ in (3.2 mm.) or less is free down to the nail-bed. This piece is then avulsed.

With a little practice this can be done without anaesthetic (and one got plenty of practice in China). The point of the scissors must point outward—that is, against the under-surface of the nail and not against the very sensitive "quick." Further, the plane of the blades of the scissors must be in the radius of the digit. Only the fact that this works gives me the courage to write in this way.—I am, etc.,

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SIR,—In your annotation on "ingrowing" toenails (October 12, p. 884) you rightly commend the efforts of Lloyd-Davies and Brill[1] in showing that conservative treatment can be effective in the management of embedded toenails. It must be appreciated, however, that their