patient was in the hospital and was thought to be mittelschmerz (the patient had had her last menstruation two weeks previously).

Mercury deposited in the lung can be absorbed into the blood stream because elemental mercury readily diffuses through the lipid-containing alveolar walls. This, however, is not necessarily fatal.[1] The hazard of broken thermometers would be mainly from the broken glass rather than the mercury itself.[2] So far as we can determine from various sources it is a common practice for nursing personnel to put thermometers in patients' mouths and leave them unattended both in the inpatient and outpatient department. This can also be construed from the case report of Johnson and Parker.[3] Though we did not find a case similar to ours in the literature and believe this to be a rare occurrence, an unfortunate event like this could easily be prevented by taking proper precautions, at least in the vulnerable population.—We are, etc.,

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Maternal Blood Group A and Pre-eclampsia

SIR,—Blood group A predisposes to a number of pathological states. These include carcinoma of the stomach,[1] venous thromboembolic disease in pregnancy and oral contraceptive therapy,[2] coronary artery thrombosis,[3] and chorion carcinoma.[4]

In clinical practice severe fulminating pre-eclampsia was noted to be commonly associated with group A blood. Two retrospective surveys were therefore undertaken to see whether group A mothers were more likely to develop pre-eclampsia than those with blood of group O. In the first study the incidence of pre-eclampsia in group A and group O primigravidae was compared. Pre-eclampsia was defined as a rise of diastolic blood pressure to 90 mm Hg or more on two or more occasions in the second half of pregnancy, associated with either oedema or proteinuria. Hypertension occurring for the first time in labour was not included. In the second study the incidence of group A was determined in patients with moderately severe or severe pre-eclampsia. In these patients the diastolic blood pressure was 100 mm Hg or more and proteinuria was present. In 400 unselected maternity patients the incidence of group A was 43% and of group O 45·5%.

In the first study 35 out of 103 group A primigravidae developed pre-eclampsia compared with 18 out of 101 group O primigravidae. The relative risk (A:O) of pre-eclampsia was therefore 2·7:1. In the second study 31 out of 47 patients with moderately severe or severe pre-eclampsia were of group A and 10 were of group O. Without allowing for the greater frequency of group O in normal maternity patients this gives a relative risk rate of 3·1:1.

The pathogenesis of pre-eclampsia is not fully understood. It is known, however, that the level of fibrin breakdown products is elevated, suggesting a process of disseminated intravascular coagulation, and Page[5] suggested a hypothesis for the pathogenesis of pre-eclampsia based on this process.

It is interesting to note that the relative risk (A:O) for developing venous thrombosis while on oral contraceptive therapy—2·8:1[2]—is similar to the risk found in this study for the risk of pre-eclampsia—2·7:1. The increased risk to patients with group A of developing pre-eclampsia may therefore be another manifestation of an increased tendency to intravascular coagulation in this group.—I am, etc.,

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2 Jick, H., *et al.*, *Lancet*, 1969, **1**, 539.
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Influenza Vaccination

SIR,—With reference to the letter from Dr. J. D. Avison (10 November, p. 358) quoting Tauraso *et al.*[1] on the effects of giving influenza vaccine intradermally, it is important that the conclusions of these authors are examined fully. In accepting that an intradermal inoculation of vaccine in an amount equivalent to one-fifth the subcutaneous dose should be considered, Tauraso *et al.* mentioned that a disturbing feature about the use of the intradermal route is that it is technically complicated and requires well-trained personnel to perform the injections.

If one were to administer a 0·1-ml dose by the intradermal route but inadvertently to inject it subcutaneously, the recipient, instead of receiving his immunization by the better route, would receive it by the less favourable one. With the jet injector a small amount of leakage may occur. Small leakage from a subcutaneous injection makes little difference to the immunity conferred. A similar leakage from an intradermal dose would result in little or no protection.

One further factor to consider is that the intradermal vaccination appears to be more painful and has a higher rate of local reactions, thus reducing the acceptability of such injections.—I am, etc.,

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1 Tauraso, N. M., *et al.*, *Bulletin of the World Health Organization*, 1969, **41**, 507.

Ventricular Dysrhythmias and Thioridazine in Alcohol Withdrawal

SIR,—The occurrence of ventricular dysrhythmias associated with the use of thioridazine hydrochloride in patients withdrawing from alcohol reported by Dr. M. A. Sydney (24 November, p. 467) demands comment since his conclusions are questionable.

He correctly points out that severe hypokalaemia is a recognized complication of chronic alcoholism, producing ST-segment and T-wave abnormalities and U waves in the electrocardiogram. Vetter *et al.*[1] reported that in a series of 50 patients 64% were hypokalaemic and 18% severely depleted in potassium (less than 2·5 mEq/l). Of these patients 28% had cardiac dysrhythmias on admission and in one case death occurred following irreversible ventricular tachycardia. I would therefore endorse that determination of serum potassium levels and routine electrocardiograph recordings form part of the basic management of patients after acute alcohol withdrawal.

It is unfortunate, however, that the ventricular dysrhythmias arising in the two patients reported should have been aetiologically linked to thioridazine hydrochloride administration. There is no information in either case as to the clinical features prior to the episodes and one patient was on other drug therapy. In particular, in delirium tremens agitation, irritability, and convulsions commonly occur[2] and particularly when associated with severe hypokalaemia may contribute greatly to inducing ventricular dysrhythmias. In these two patients thioridazine hydrochloride, a useful and relatively safe drug, was given in modest dosage and there is little, if any, reason to conclude that its administration was implicated in the problems that arose.—I am, etc.,

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Effect of Polyunsaturated Fatty Acids on Lymphocyte Activity

SIR,—With reference to the letter from Dr. J. Mertin (10 November, p. 357) it is important to bear in mind that polyunsaturated fatty acids (PUFA) are only one of a number of factors which may influence the interaction of sensitized lymphocytes with specific antigen in vivo, and that the final intensity of the reaction may represent the algebraic sum of enhancing and inhibitory influences. Important among the latter may be a serum factor which appears to be "tailor-made" to the autologous lymphocytes in that it is more effective in suppressing these cells than those from another individual.[1] This lymphocyte depressing factor (L.D.F.) may well be identical with the α_2-macroglobulin described by Cooperband *et al.*[2 3] as immunoregulatory. Despite its being a potential physiological regulator, no serious attempts appear to have been made to manipulate L.D.F. therapeutically.[1] In general the level of L.D.F. is elevated in all conditions[4 5] which lead to lymphocyte sensitization so that it may act in "dampening down" over-reaction to biologically unimportant stimuli.

That the L.D.F. mechanism is distinct from that of PUFA is shown by some recent studies in which a rise in linoleic acid-like activity after an oral dose of linoleic acid was followed with the macrophage electrophoretic mobility (M.E.M.) test[6] on the interaction of normal lymphocytes with thyroid (F1) antigen. Serum was prepared at intervals after an oral dose of 10 ml of a purified linoleic acid (kindly supplied by Bio-Oils Research, Ltd., Nantwich) and separated into an ether-soluble fraction (containing linoleic acid) and an insoluble fraction (containing protein). It can be seen