or a pulmonary embolus. The attack was too prolonged for a simple syncope.

Case 2. At the end of the day I consulted my senior partner, Dr. W. J. Meldrum, who told me that he had recently had a similar case. He had been called in at the same hour in the morning to see an aged gardener of 80 who had been clearing snow. He was in a state of pallid collapse, and looked as if he was dying. When seen a few hours later he too had returned to normal.

Case 3. A man of 73 had been asked by a neighbour to catch a horse for him, and to put it in a certain field. Having completed his task he was on his way home when he became so weak that he was compelled to sit by the roadside. A passing motorist gave him a lift home, but when he tried to get from the car to his cottage, he found his legs were useless and fell. He recovered in an hour or so and, when seen by me next day, I could find no abnormality.

What was the cause of the collapse in these cases? Was it spasm of the cerebral arteries? In the two cases seen, the doctor's first impression was that the patient was just about to die, and yet in a matter of hours they were both back to normal. I wonder if other members on the Research Register, have had any similar cases during the recent cold weather?

Techniques in General Practice

A Quick and Simple Method for Blood-Sugar Estimation*

J. LEE, M.B., B.S., M.R.C.P.

(*Lecturer, Department of Physiology, Charing Cross Hospital Medical School*)

Dr. Lee (1954) described a method of estimating blood sugars which can be carried out in approximately 10 minutes and which requires little technical skill or apparatus. It affords a quick and reliable way of estimating the approximate blood sugar in the range of 70-1400 mg/100 ml. It will thus indicate the level of hyperglycaemia but will not distinguish degrees of hypoglycaemia.

Procedure. Into a calibrated tube dinitrosalicylic acid is added drop by drop until the 1 ml. mark is reached. Into this 1 ml. of dinitrosalicylic acid, 0.2 ml. of blood is pipetted. The acid should not be sucked back into the pipette as this makes subsequent cleaning of the pipette difficult, but the last drop of blood can be expelled by blowing. The contents are well shaken, left for 30 seconds, and then filtered through a No. 1 Whatman filter paper (4.25 cm.) into a second calibrated tube. When a suitable volume has collected (about 0.4 ml.), an exactly equal quantity of ' alkaline reagent ' is added by means of a dropper. The contents are again mixed and the tube containing the mixture is placed in boiling

* Dr. J. Lee has kindly supplied this abstract from his paper originally published in *Brit. med. J.*, 1954. **2**, 1084.

water for 3 minutes. When cool, the colour can be compared with the colour standards which range from yellow to red. The comparison is best made about 4 inches from a 60 watt bulb; the light diffused if possible by one thickness of copy paper.

Colour standards are easily made by using the Ilford filter No. 6/53 which singly matches the colour corresponding to a blood sugar of 70 mg/100 ml. Each extra thickness of filter corresponds to an increment of 40 mg. up to 350 mg/100 ml.; above this level it is difficult to appreciate small increments of colour. If the test colour obtained exceeds the value of 350 mg/100 ml., comparison (facilitated by calibration of the tube) can be made after suitable dilution with water. The appropriate dilution factor should then be applied to the answer thus obtained.

In a comparsion of blood sugars obtained by this method—and that of Folin & Wu—on 204 patients attending the diabetic clinic at King's College Hospital it was found that the described method appeared to be reliable and fairly accurate. As the highest value of blood sugar obtained in this series was in the region of 500 mg/100 ml. the accuracy in a higher range was tested with glucose solution. Above 700 mg/100 ml. the error was found to be in the region of 100 mg/100 ml.

It is hoped to make available in the near future a portable apparatus for blood sugar estimations by this method. It will contain 1 ml. ampoules of dinitrosalicylic acid and special dropper bottles of alkaline reagent. The equipment will include filtration requirements, calibrated tubes for colour development, and a suitable miniature water bath heated by " meta " fuel. The box holding each set of reagents and apparatus will be approximately 6½ x 4 x 2½ inches and will incorporate a suitably calibrated, easily operated, comparator colour scale.

Alkaline reagents and dinitrosalicylic acid are obtainable from B.D.H. Suitably calibrated tubes are obtainable from Scientific Supplies, London. If a ready-made comparator scale is desired, enquiries should be made to B.D.H.

Reports

Measles Investigation

The original printing of 5,000 cards was exhausted early in April. On the advice of Dr. M. R. Sampford, our Statistical Advisor for this investigation, we are hoping to keep records of all measles cases seen at least until the end of June so as to have for comparison the figures from an epidemic and from an inter-epidemic year, and for this purpose a further 1,000 record cards were ordered in March. It is regretted that some doctors could not be supplied with all the cards they required for a few weeks recently.