schizophrenics. Brains of epileptics were not heavier nor hearts of schizophrenics lighter than in the other group. The livers showed 18% and the spleens 28% higher than the control group of general hospital patients. The writers think that the small livers and spleens are the result of chronic disease or dietary insufficiency. G. W. T. H. FLEMING.

Oxygen Saturation of the Arterial Blood in Epilepsy. (*Arch. Neur. and Psychiat., vol. xxxv, p.* 1198, *June,* 1936.) *Lennox, W. G., and Gibbs, E. L.*

The oxygen saturation and carbon dioxide content of the arterial blood were measured 125 times in 88 patients with epilepsy. In 46% of the patients the initial measurement of the oxygen saturation was below the lower normal limit of 94%, and in 11% it was below 90%. The average measurement was 93·4%. This degree of anoxæmia is present in other neurological diseases. It could be abolished by deep breathing or by the inhalation of oxygen, and it is believed to be an expression of defective pulmonary ventilation. It is not sufficient to be considered a cause of seizures, except perhaps as a contributing one.
G. W. T. H. FLEMING.

Low Plasma Magnesium and High Plasma Potassium in Essential Epilepsy. (*Journ. Pharm. and Exper. Therap., vol. lvii, p.* 127, *June,* 1936.) *Hirschfelder, A. D., and Haury, V. G.*

The writers found amongst essential epileptics low plasma magnesium in 56·7% of 67 cases during the convulsions, low magnesium occurring most frequently in the 32 most severe cases. In the interval between fits, the magnesium was normal in 78 out of 79 cases.

Plasma potassium was above normal during convulsions in 65 out of 67 cases, more than double the normal in 72% of the 32 most severe cases, and in 56% of the 25 moderately severe cases.

The molar K/Mg ratio (normal average 6·15) was above normal in all 67 cases during the convulsions, more than double the normal in 72% of the severest cases, but in only 20% of the moderately severe.

Since Hirschfelder has shown that potassium salts antagonize the narcotic effects of magnesium salts, it is probable that low magnesium, high potassium and especially high K/Mg ratios are important contributing factors in the genesis of epileptic convulsions. Plasma calcium was always normal during the convulsions; phosphate was sometimes increased during the convulsions, but less frequently and less intensely than the potassium; hypoglycæmia was never present before or during convulsions, but blood glucose increased moderately during convulsions.

Oral administration of 2 grm. $MgCl_2$ four times daily for three months did not increase the frequency or intensity of convulsive seizures, nor did oral administration of 2 grm. KCl four times daily increase them. Convulsive seizures were usually inhibited by rectal enemas of 30 grm., and almost always by intramuscular injection of 1 grm. of Epsom salts. G. W. T. H. FLEMING.

Relationship Between the Cerebrospinal Fluid Sugar and the Blood Sugar in Untreated Neurosyphilis. (*Amer. Journ. Psychiat., vol. xciii, p.* 139, *July,* 1936.) *Schube, P. G.*

The spinal fluid sugar was within normal range in 88·2% of the cases, and the blood sugar in 89·2%. The ratio between the fluid sugar and the blood sugar was within the normal range in only 51·2% of the cases of neurosyphilis, 51·5% of the cases of general paralysis, 55% of the cases of cerebrospinal syphilis with psychosis, and in 41·7% of cases of tabes without psychosis. The ratio was below normal in 13·2%, above normal in 35·6% of the cases of neurosyphilis.

There is evidence in 48·8% of cases of untreated neurosyphilis of some abnormality in the hæmato-encephalic barrier to the passage of sugar.
G. W. T. H. FLEMING.