TABLE I.
Average Rate of O_2 Uptake of Rat Liver after Subcutaneous Injection of Dinitrophenol (40 mg. per kilo body weight).

No. of Animals	Oxygen Uptake in Minutes 60	120	Respiratory Quotient	Remarks
	Cu. mm. / mg. dry tissue			
3	9.2	15.8		Control —Phosphate Ringer's
5	8.4	15.4		Dinitrophenol—Average temperature increase 4.6° F.
3	11.9	21.8	0.807	Control —Glucose phosphate Ringer's
4	9.7	18.3	0.732	Dinitrophenol—Average temperature increase 4.9° F.

control. The oxygen uptake of the liver tissue obtained from injected animals, when suspended in phosphate Ringer's solution containing glucose, was slightly less than that of the control liver. The respiratory quotient of the liver tissue from injected animals was lower than that of the control liver.

Experiments are now in progress in which observations are being made on the oxygen uptake of other rat tissues and also experiments dealing with the effect of the dinitrophenol on the oxygen uptake of rat tissue *in vitro*.

7250 P

The Acid-Base Balance of the Blood in Migraine.*

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The present study was prompted by the findings of R. and S. Weissmann-Netter[1] who have made a series of observations on the carbon dioxide and the pH of the blood of patients with migraine. They found that the hydrogen ion concentration and the alkali reserve are normal in the periods of freedom from attacks but that a tendency to alkalosis develops 48 hours prior to an attack. They also reported that hyperventilation may result in an attack of mi-

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[1] Weissmann-Netter, R., and Weissmann-Netter, S., *Compt. rend. Soc. de biol.*, 1925, **92**, 341.

graine, probably through an excessive loss of carbon dioxide. As a result of the apparent success of controlling the migraine attacks by treatment with ketogenic diets,[2] it seemed desirable to reinvestigate the acid-base balance of the blood of individuals subject to migraine. To date 10 cases of migraine have been followed at intervals, the blood having been taken as early in the attack as possible, at the height of an attack, and immediately after cessation of the attack. It was found that the serum pH, CO_2 content, chloride and total base remained within normal limits, if one excepts 2 cases in which the pH was elevated slightly, due in all probability to the accompanying vomiting. It is probably of some significance that a fairly definite elevation of the blood cholesterol occurred in 50% of the cases.

7251 C

A Rapid Method for Analyzing Time-dilution Curves for Haemolytic Systems.

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The time-dilution curve obtained for most haemolytic systems, which is described by the equation

$$kt = \frac{p}{p-1}\left\{c^{\frac{p-1}{p}} - (c-x)^{\frac{p-1}{p}}\right\}$$

can be analyzed by a method already described (Ponder and Yeager[1]). The method is somewhat laborious and the analysis is more easily carried out as follows:

One requires a piece of cellophane, about 40 cm. square. The length of the right hand side is divided in such a way that the divisions represent 12.2, 24.4, 36.6, 48.8, 61.0, 73.2, 85.4, and 100% of that side. A series of lines are drawn on the cellophane joining each of these divisions to the left hand corner.

The time-dilution curve is drawn on a large scale in the usual way, and the asymptote (x) is marked with a horizontal line. Place the lower edge of the cellophane along the abscissa of the curve, and move it from right to left until the oblique line corresponding to

[2] Barborka, C. J., *J. Am. Med. Assn.*, 1930, **95**, 1825.

[1] Ponder and Yeager, *Proc. Roy. Soc. B.*, 1930, **106**, 506.