Cl) be considered to be NaCl which has diffused through the gastric mucosa as an isotonic solution, and if this volume of non-acid fluid replaces *py* in the above formula, the solution of the simple equation gives the following values of x:

0.12 (1), 0.13 (1), 0.15 (2), 0.16 (2), 0.17 (4).
The mean of $x = 0.16$; the S. D. $= 0.02$.

According to the first value of x (0.19) the concentration of HCl as secreted by the cell would be 0.53 per cent, and according to the second value (0.16), it would be 0.63 per cent. These figures are suggestive when compared with the figure usually given as the maximum HCl concentration of the total gastric juice.

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The influence of lymphocytes on peptic digestion.

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It has been demonstrated[1] that polymorphonuclear leucocoytes neither activate nor contribute to the proteolytic power of pepsin when added in quantities (100,000 to 500,000 per cc.) commonly occurring in the gastric juice of dogs. It has now been found that lymphocytes behave in a similar manner, (see Tables I and II). Lymphocytes (lymphocytes 93 per cent, monocytes 4 per cent, polymorphs. 3 per cent) from the dog's thoracic duct lymph, were, after repeated washings in saline, suspended in distilled water and immediately added either to dog's gastric juice or to known dilutions of Merck's pepsin and the whole adjusted to constant volume and acidity. The ferment activity was estimated by Mett's method.

TABLE I.

Pepsin concentration	0	0.001	0.01	0.03	0.10	0.35	0.6
Control. No lymphocytes	0	0	0.6	1.3	2.4	3.6	4.2
150,000 lymphocytes	0	0	0.6	1.3	2.3	3.6	4.2

[1] Hou, H. C., *Am. J. Physiol.*, 1926 (in press).

TABLE II.

No. of lymphocytes added	0	150,000	300,000	400,000	450,000	800,000
No pepsin	—	0	0	—	0	0
Merck's pepsin 0.35 per cent	3.6	3.6	3.5	—	—	3.3
Dog gastric juice (unfilt'd)	2.0	1.9	—	1.9	—	1.8
Dog gastric juice (filtered)	1.9	1.9	1.8	1.8	1.7	1.7

The results are given in mm.

These results do not lend support to the theory[2, 3] that the lymphocytes play a role in the peptic digestion of gastric juice.

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Effect on the eye of instillations of a ten per cent solution of pseudo-ephedrine.

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The alkaloid pseudophedrine is the dextroisomer of ephedrine. The salt used in our experiments, as prepared by Chou,[1] was the hydrochloride ($C_{10}H_{15}ON.HCl$) with a melting point of 179 to 181° C, and an optical rotation of $(\alpha)_D^{22°}$ C. + 58.75. It was very soluble in water and alcohol.

Experimental tests with a 10 per cent solution of pseudoephedrine were made on the eyes of thirteen individuals. The object of the tests was to determine what effect, if any, the drug has upon the acuity of vision, the sensitivity of the ocular mucous membrane, the intra-ocular tension, the pupil, the range of accommodation, the near-point of convergence, or in producing any other symptoms. subjective or objective. A record was first made

[2] Ohno, R., *Mitteil a. d. med. Fakultät d. Kaiserl.* Kyushu Universitat, 1924, lx, 307.

[3] Pavlovsky, A. J., *Semana med.*, 1920, xxvii, 398.

[1] Chou, T. Q., PROC. SOC. EXP. BIOL. AND MED., 1926, xxiii, 618.