gested in 30% potassium hydroxide solution made up to a definite volume; also to the pooled livers of 5 fasted rats similarly treated. The results are recorded in Table I.

TABLE I.

Material	Determinations No.	Min. %	Max. %	Mean %
Fresh Beef Liver	6	0.97	1.09	1.06
Pooled Rats' Livers	5	0.03	0.04	0.03

Table II combines the results on the fasted animals killed by decapitation, anesthetized by sodium evipal, and sodium phanodorn respectively.

TABLE II.

Terminal Method	Animals No.	—Glycogen, %— Min.	Max.	Mean	Probable Error of Single Determination	Probable Error of Mean
Decapitation	30	0.03	0.44	0.14	±0.07	±0.02
Sodium Evipal	32	0.04	0.60	0.23	±0.10	±0.03
Sodium Phanodorn	35	0.03	0.45	0.16	±0.08	±0.02

Summary. A comparison of the effect of 2 methods of terminal procedure, decapitation and anesthesia, upon the liver-glycogen content of the albino rat has been made. Neither of the 2 drugs employed depressed the liver-glycogen content; neither was significantly glycogen sparing.

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Effect of Prolonged Exercise on Polynuclear Count in Man.

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It is generally agreed that the white cell count in man increases to a considerable extent after severe exercise of short duration. This increase, however, does not involve any appreciable shift in the polynuclear count and is accordingly to be regarded as due to a redistribution of white cells from "organ reservoirs" rather than as the result of marrow activity.[1] Hitherto no attempt has been made

[1] Ponder, Saslow, and Schweizer, *Quart. J. Exp. Physiol.*, 1932, **22**, 21.

to find the effect of prolonged exercise on the polynuclear count, and it is with this point that this note is concerned.

The experiment was carried out on 14 members of the Brown University football team, all in excellent physical condition, and all between the ages of 19 and 23. The first counts were made before the team went into training, and none of the subjects had been engaged in severe exercise for months previously. The "prolonged exercise" consisted of the usual 3-hour period 6 days a week of training and practice, including the weekly football game, and this continued from September 10th to November 24th. Counts were made at approximately weekly intervals throughout the training period. One hundred polymorphs were counted in each case, and the Cooke and Ponder criterion was used throughout.[2] All the counts were made by the same observer, the accuracy of whose counting had been previously ascertained.

In no case did the polynuclear count show any significant alteration during the period of "prolonged exercise". Initially, the weighted means of the individual counts all lay within the range 2.17-2.38, *i. e.,* within the normal range for this part of the country,[3] and in no case was there any deviation greater than that which might be due to errors in counting. The period of prolonged exercise and training accordingly had no effect on the polynuclear counts of the subjects. This is rather remarkable in view of the fact that the total white cell count during football games, etc., must have fluctuated violently; the activity of the marrow, however, as revealed by the figures for the polynuclear count, appears to have been remarkably steady.

Conclusion. The polynuclear count in man is not significantly affected by prolonged severe exercise, such as football practice of 10 weeks' duration.

2 Cooke, W. E., and Ponder, E., "The Polynuclear Count," London, 1927.

3 Macleod, J., *Am. J. Physiol.*, 1935, **111**, 654.