in most instances. The total leucocyte count tended to vary inversely with the lipoid content of the plasma.

The 3 cases of congenital syphilis showed definite hypocholesterinemia during the course of malarial infection but there was no significant difference between the values obtained at the height of the paroxysm and those found during the afebrile intervals. But one sample of plasma was taken after disappearance of the malaria under quinine therapy. This showed a rise in cholesterol from 85 to 170 mg. per 100 cc. The lecithin and total fatty acids remained within normal limits at comparatively constant levels in these 3 cases. That elevated body temperature *per se* is not responsible for the lowering of the various lipoid constituents is indicated by the fact that fever artificially produced by phenylethylhydantoin failed to have any such effect. The values in the 2 subjects examined were in the upper reaches of the normal zone before the hyperthermia was produced and remained at the same or at slightly higher levels during and after the febrile periods.

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Effect of Sprint Running on the pH of Venous Blood.

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(Introduced by H. C. Bazett.)

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Severe exercise which taxes the human organism to its limits has been shown to produce very profound changes in the blood. In these preliminary experiments, venous blood from 3 runners was obtained. As soon as possible after the run, blood from arm veins was drawn without CO_2 loss into syringes containing carefully neutralized potassium oxalate. The syringes were iced and immediately transported to the laboratory where the pH of the whole blood was determined at 38° C. with a glass electrode. The exercise consisted of running 440 and 880 yds. without competition. The runners were in different states of training, but the small number of determinations does not justify an attempt to correlate change in blood pH and muscular ability. The chief interest is that these pH values of blood after such severe exercise are probably some of the most acid ever obtained in normal subjects.

Great difficulties were encountered in drawing blood samples

immediately after the exercise, due to almost total absence of skin blood and collapse of the superficial veins. In order to facilitate collection of blood, stasis was applied in several instances. But control experiments indicated that such a procedure must be avoided if correct results are to be obtained. However, stasis for 45 sec. during resting conditions, does not seem to induce any very marked effects.

It is also to be noted that there appears a rough correlation between the severity of the run as determined by the time performance and the degree to which the pH is depressed. The return to normal pH is in general comparatively slow, at least within the first 5 minutes after the exercise.

The following is example of 1 series of tests:

TABLE I.

Date	Run	Timed		Sample obtained after end of exercise		Stasis applied		pH
				Time		Time		
1932	Yds.	Min.	Sec.	Min.	Sec.	Min.	Sec.	
				Subject, J. A. N.				
Apr. 25	440	1	3	1	15	1	15	7.15
May 3	440		59		30	No stasis		7.15
				4	6	"		7.19
" 10	440		58		50		30	7.13
				2	30	1		7.02
				4	45		30	7.00
" 17	440		57	1			30	7.16
				2	20	1	7	7.07
				5	12		30	7.11
" 20	Normal	Resting				No stasis		7.38
	"	"					45	7.38
				Subject, M. D. P.				
Apr. 25	440	1		1	15	1	15	6.95
Apr. 26	440		54	1	40	No stasis		7.04
May 3	440		59	2	26	"		7.20
May 13	440	1			40	"		7.14
				1	50		45	7.13
May 19	880	2	6	1	5	No stasis		6.98
				2	5	1	20	6.85
				5	25	No stasis		6.98
May 20	Normal	Resting				No stasis		7.39
				Subject, W.				
May 5	440		58		30		30	6.95
				1	5	No stasis		7.22