group, a Model E-1 GE Sunlamp and three 115 watt CX bulbs, one 60 watt, one 300 watt and a third of 500 watt size.

It was found by comparison that the ordinary quartz mercury arc without reflectance is about 2,000 times as strong a source of ultra-violet as the 60 watt CX lamp. However, the latter with a reflector, the rays falling perpendicularly upon the legs of chickens, almost cured rickets in 28 daily exposures of 20 minutes each, the distance being 4½ inches from floor to lamp.

One hour daily exposure to this CX lamp without reflectance at a distance of 13 inches and with pens 26 inches in diameter give the first signs of prevention of rickets in animals allowed to walk about in the pen. This seems to be the threshold value for the prevention of rickets in chickens. Two hours' exposure to the same lamp gave approximately 50% the irradiation necessary for complete prevention.

Ten daily exposures of 30 minutes each, to a 60 watt CX bulb gave the first signs of recovery in the cure of rachitic rats. The lamp had no reflectance and was placed 4⅜ inches between the bulb and the floor of the cage. This we consider the threshold value for cure of rickets in rats. Radiations from a 300 watt Mazda CX lamp under the same conditions except that the distance was 8 inches instead of 4⅜ produced definite healing in all the rats, but not with maximum rapidity.

A 500 watt CX lamp at a distance of 11⅜ inches and 50 minutes exposure gave a rate of recovery only slightly less than maximum.

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Unexpected Differences in Distribution of Blood Groups among American Indians.

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The distribution of the blood groups among the American Indians has been a matter of considerable interest to both anthropologists and serologists, because of the unusually high incidence of

* I wish to acknowledge my gratitude to Dr. H. F. Schrader, Senior Physician, Blackfeet Agency, Browning, Montana, for his assistance in obtaining blood specimens for this investigation.

group O among them, as reported by several investigators. On the basis of these findings it has been suggested by Snyder and others that the human family was at one time a pure group O species and that the American Indian became separated from the rest of mankind before A and B agglutinogens developed in the cells.

The writer had the opportunity of examining specimens of blood from the Blackfeet and Blood tribes of American Indians to determine whether the same high occurrence of group O exists among them.

Brief Tribal History.† In the early days the "Blackfeet", which included the "Piegans" and "Bloods" of Canada, ranged from the Rocky Mountains east to the Sioux territory, south into what is now Wyoming, and north into Canada. The agency records show admixtures with other tribes such as Canadian Cree, American Cree, Chippewa, Cherokee, Snake, Shoshone, Sioux, Gros Ventre, Flathead, Kootanai, and Alaskan, as well as others. In the early days captive women and children were adopted by the tribe and later members of other tribes came and settled with the Blackfeet. The first white men to come into contact with the Blackfeet were probably the first trappers and traders that came up the Missouri River. These Indians made Fort Benton and other forts on the Missouri their trading centers. In classifying them as to their degree of Indian blood, only where there is white or Negro admixture are they shown on the records as mixed.

Samples of blood were collected from 350 Blackfeet Indians, 115 of which were full-bloods. Contrary to the findings of the other workers among various other tribes, these Indians (putative full bloods) proved to be only 23.5% group O, and 76.5% group A. A similar distribution was observed among another branch of the Blackfeet, namely the Blood tribe of Alberta, Canada, which gave 83.3% group A.

TABLE I.
Percentage Distribution of Blood Groups Among the Blackfeet Tribe of Indians.

Degree of Blood	No. Examined	Distribution							
		O		A		B		AB	
		No.	%	No.	%	No.	%	No.	%
Putative full bloods	115	27	23.5	88	76.5	0	0	0	0
Known mixed bloods	235	107	45.5	119	50.6	5	2.1	4	1.8

† The historical information concerning the Blackfeet Indians was supplied by Superintendent Forrest R. Stone of the Blackfeet Agency to whom we acknowledge our thanks.

That these unexpected findings are not due to some error is evident from the fact that distribution of blood groups among 104 Indians belonging to a number of tribes other than Blackfeet or Blood and secured by the use of the same typing sera was found to correspond with that reported by other investigators—that is 83.6% group O; 11.5% group A; 2% group B and 2.9% group A.B.

It does not seem unlikely that the Blackfeet and Blood tribes were at one time a pure group A people and that racial crossing and admixtures with other tribes has modified the blood group distribution among them.

These results suggest the necessity for reconsidering the origin of the American Indian.

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Vitamin G Potency of Purified Liver Preparations.

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Commercial liver extracts which have been used extensively in the treatment of pernicious anemia are known to be rich in vitamin G (B_2, anti-pellagric factor).[1] It was thought of interest, therefore, to determine whether vitamin G is present in a purified preparation of the P.A. factor.

Purification of Lilly liver extract 343 was carried out by methods described[2] by one of us (W.), the material used being a regenerated amorphous barium derivative precipitated from alcohol, 200-250 mg. of which gave a maximal reticulocyte response when injected into a pernicious anemia patient. Three preparations (A, B and C) of this material were used, about 1 gm. each was obtained from 400 gm. of the Lilly Extract.

Vitamin G deficiency was induced in young rats (21 days old) of the Wistar strain according to the technique previously described.[3]

A total of 55 animals were employed for the experiments. The

[1] Guha, B. C., *Biochem. J.*, 1931, **25**, 945.

[2] West, R., and Howe, M., *J. Clin. Inv.*, 1930, **9**, 1.

[3] Stucky, C. J., and Brand, E., PROC. SOC. EXP. BIOL. AND MED., 1933, **30**, 1404.