The plasma cholesterol values of the hens shown in Table 1 indicate a clear elevation in the fat-free versus the normal hens. By contrast, and in agreement with the observation of Horlick et al.[8], on a low-fat diet the visual aortic scores were actually lower in the fat-free, compared with the normal birds (Table 1).

In summary, it appears that in the chicken the exclusion of essential fatty acids from the diet does not aggravate atherogenesis even though the level of cholesterol in the blood is elevated. Moreover, no overt deficiency symptoms such as skin lesions or impaired reproductive functions were encountered.

This work was supported, in part, by grants-in-aid from the U.S. Public Health Service and New Jersey Heart Association.

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Anthropometric Correlations between Adult Brothers

ANTHROPOMETRIC measurements have been made on 32 pairs of brothers. All subjects are adult men. The average age of the younger brothers is 32·3 yr., that of older brothers, 39·4. Age differences between members of the same pair vary from 1 to 20 years. The brother–brother correlations are shown in Table 1. Some coefficients are low but, unless below 0·35, they are significant at the 5–1 per cent level. Low coefficients are to be expected because in a panmictic population a brother–brother correlation should not significantly exceed 0·50 (or 0·42 for autosomal dominant characters). Other coefficients are higher but, as for low significant correlations, with two exceptions there is no significant departure from 0·50. For head breadth and cephalic index, correlations are surprisingly high and significantly above 0·50. Such values can be expected if, instead of random mating, there is a fairly high degree of homogamy. In man, assortative mating exists primarily for body-height, secondarily for some characters correlated with stature. In our sample, fraternal correlation for body-height is low and does not differ significantly from 0·50, the limiting value compatible with panmixia. One can guess that assortative mating is directly related to some other anatomical traits, but it is hard to believe that cephalic index, which gives the strongest correlation, can be sexually attractive. A quite different explanation seems to be more credible.

Table 1. CORRELATIONS BETWEEN PAIRS OF ADULT BROTHERS

	This sample r	Howells's data* r
Stature	0·35	0·47
Sitting height	0·50	0·39
Trunk height	0·62	—
Vertex-suprasternale	0·64	—
Neck length	0·82	—
Upper limb length	0·15	—
Lower limb length	0·40	—
Head length	0·54	0·38
Head breadth	0·72	0·48
Head heigth	−0·11	0·49
Cephalic index	0·76	—
Minimum frontal breadth	0·34	0·47
Bizygomatic breadth	0·16	0·29
Face height	0·16	0·59
Nose height	0·27	0·51
Nose breadth	0·44	0·25
Mouth breadth	0·41	—

* Corrected figures published by J. M. Tanner (ref. 1).

Our sample does not represent a definite geographical area. As for many other samples, it is fortuitously mixed, because subjects come from different parts of the country. Two groups of fraternal pairs come from two distinct areas, the populations of which are anthropologically different. One is far more dolichocephalic than the other. In our small sample, these two groups are strong enough to increase the coefficient of correlation. The mingling of two more or less dissimilar groups—panmictic but 'allopatric'—can exaggerate fraternal correlations in a way which simulates homogamy. After all, in this case, excessively high correlations are due to a kind of assortative mating, not by choice, but by geographical isolation. Therefore, both exceptionally high fraternal correlations are not intrinsically wrong, but their numerical value should be reduced in some way.

On the whole, significant correlations are in accordance with other data. Unfortunately, so far as I know, only three series of fraternal correlations have been published, with not entirely comparable assortments of characters[1]. Seven correlations of Table 1, without corresponding values in Howells's data, have been calculated probably for the first time. In 22 pairs, the eye colour, classified as light (blue, grey) and dark (all other shades), is similar ($\chi_1^2 = 4·57$; $P = <0·05$). But for hair colour there is no fraternal similarity.

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Goblet Cells in the Swim Bladder of Ophiocephalus striatus (Bloch)

DURING investigations on the mechanism of gas secretion by the gas gland epithelium in the swim bladder of teleosts, a preliminary investigation was made of the histology and histochemistry of the gas gland to identify the types of cells which are involved in the secretion of gases.

Adult Ophiocephalus striatus were caught as and when required and stunned by a blow on the head and the swim bladder rapidly dissected out and fixed in Zenker's, Helly's and Champy's fluids, a saturated solution of mercuric chloride in 70 per cent alcohol with 2·5 per cent potassium dichromate, a mixture of equal parts of saturated aqueous mercuric chloride and 2·5 per cent aqueous potassium dichromate, and a solution of equal volumes of 8 per cent aqueous basic