

Pacific Coast Section

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7914 P

Effect of Raw Pancreas upon Blood Lipids of Completely Depancreatized Dogs Maintained with Insulin.*

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It was shown¹ that in the completely depancreatized dog maintained with insulin the blood lipids were markedly reduced. The most pronounced change occurred in the cholesterol, the esterified portion of which was either completely absent or present to the extent of 2-7% of the total cholesterol. The present report deals with the effects of the ingestion of raw pancreas upon blood lipids. It was found that the addition twice daily of 125 gm. of the gland to the diet of the dogs soon after pancreatectomy not only prevented

TABLE I.
Dog D.O.—Female—Weight 12.0 kg.
Whole Blood Lipids.

Interval since pancreatectomy days	Cholesterol				Total fatty acids mg. per 100 cc.	Phospho-lipid mg. per 100 cc.	Total lipid mg. per 100 cc.
	Total mg. per 100 cc.	free mg. per 100 cc.	—Ester— mg. per 100 cc.	% of total			
Preoperative	143	113	30	21	324	293	467
75*	205	132	73	36	412	350	617
91†	110	113	0	0	341	281	451
119*	204	135	69	34			
197†	128	114	14	11			

250 gm. of raw pancreas daily were included in the diet immediately after pancreatectomy until the 75th day and from the 91st to the 119th day.

*This blood lipid followed a period in which raw pancreas was included in the diet.

†This blood lipid followed a period in which raw pancreas was withdrawn from the diet.

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¹ Chaikoff, I. L., and Kaplan, A., *J. Biol. Chem.*, 1934, **106**, 267.

the drop but led to a significant rise above normal in all lipid constituents. In these animals the blood lipids could be made to fluctuate by the addition or removal of the glandular tissue in the diet. The constituent affected to the greatest degree by the ingestion of the pancreas was esterified cholesterol, whereas free cholesterol showed the least change. A typical result is shown in Table I. Following the second removal of raw pancreas from the diet, the esterified cholesterol decreased but did not completely disappear from the blood despite the fact that no pancreas was ingested for a period of 78 days.

7915 P

Growth Rate and Variance in the Razor Clam.

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In discussing the growth of the razor clam (*Siliqua patula*, Dixon) we have pointed out a correlation between the absolute growth rate and the variability as measured by "D", the interdecile range.¹ In this work we used samples of clams representing the normal population of the respective beds. For this reason the numbers in the older age groups were small, and it was not possible to determine the presence or extent of selective mortality which might greatly affect the relation between growth and variance.

Recently we have selected 2 samples of clams, one from Little River, Humboldt County, California, containing 300 specimens, all 7 years of age, and one from Hallo Bay on the Alaskan Peninsula, containing 76 specimens 13 years old. A complete growth record was obtained for each individual by measuring the consecutive annual rings. The mean length and the variance were calculated for each year for the 2 localities, and the tenth, the fiftieth (median), and the ninetieth percentiles were determined for the distribution of sizes at each age. We have, therefore, by this means obtained data which is obviously unaffected by selective mortality.

The absolute growth rate (annual increments) shows a high positive correlation with the variance. During the period preceding the inflection of the growth curve both the growth rate and the

¹Weymouth, F. W., McMillin, H. C., and Rich, Willis H., *J. Exp. Biol.*, 1930, **8**, 228.