

The bile secreted from a portion of the rabbit's liver far advanced in an atrophy of the sort described, and competing with a large liver mass which received the entire portal stream, is almost colorless and may give but a weak Pettenkofer reaction. Glycogen, though, is present in the atrophic cells in approximately the same amount and distribution as in the hypertrophic parenchyma of the same animal.

The type of local liver destruction here considered, which is dependent upon hypertrophy elsewhere, contrasts interestingly with the local hypertrophy dependent upon destruction which has long been familiar to pathologists.

The fact that a parenchymal shift follows local changes in the portal stream has a bearing on the cause of certain alterations in the shape of the normal liver which have been attributed to pressure from the surrounding organs.

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#### **The utilization of the calcium of carrots by man.**

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Four healthy young women were given rations with a calcium content approximating their minimum requirement, and calcium balance determined from analysis of food, urine and feces. In two cases the experimental period was about two weeks, and in the other two, about three weeks. In two cases the carrot period was preceded by a period in which the calcium was derived chiefly from milk. In all cases the subjects had had their digestive capacity tested by previous digestion experiments.

About 400 grams of cooked carrot were eaten by each subject daily, furnishing from 55 to 84 per cent. of the calcium ingested. In all cases but one there was a positive calcium balance, and in this case the loss was small. In one case, the balance was nearly the same on a diet in which 55 per cent. of the calcium was derived from carrots as on one in which 70 per cent. was furnished by

milk. The total calcium intake and the per cent. of the intake gained or lost are shown below:

AVERAGE DAILY INTAKE OF CALCIUM AND PER CENT. OF INTAKE RETAINED OR LOST.

Subject.	Diet.	Intake Grams Ca.	Per Cent. Calcium from Carrots.	Per Cent. Gain or Loss.
E. D. B.....	"Milk"	0.383	—	+16
R. S. E.....	"Milk"	0.383	—	+23
E. D. B.....	"Carrot"	0.315	55	+17
R. S. E.....	"Carrot"	0.315	55	- 7
E. H.....	"Carrot"	0.261	84	+ 4
E. W.....	"Carrot"	0.297	82	+27

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### Sugar and oxygen relationships in the blood of dogs.

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Before subjecting the organism to certain experimental conditions capable of changing the sugar and oxygen relationships of dog's blood, it was thought advisable to determine the variations and relationships which might normally be encountered within the same individual at different times and in different individuals.

The blood sugar was estimated by the MacLean method. The capacity of the blood for oxygen and its actual oxygen content were determined by the Van Slyke technic. Specimens of blood from the external jugular veins of resting dogs were drawn by aspiration without exposure to the air, at intervals of one and one half or two hours over periods of six, or seven and one half hours. To date eleven such series of observations on eight dogs have been completed.

In view of the frequent statement in the literature that even a slight amount of hemorrhage may induce hyperglycemia and because loss of corpuscles would tend to reduce the oxygen-carrying capacity of the blood, the effects of loss of blood on the factors to be studied were examined. The total amount of blood in the body was assumed to be five per cent. of the body weight. Successive samples were drawn until about ten per cent. of the