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The Degree of Saturation of Blood Fats Mobilized During Diabetes.*

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It is known that a lipemia may occur in diabetes. Depancreatized dogs develop a lipemia which is more marked and appears earlier than that of phlorhizinized dogs.¹ However, the character of the fatty acids mobilized has not been determined. Hence in the present study the iodine numbers have been ascertained on 12 depancreatized and 7 phlorhizinized dogs. Iodine number and total fat content of each sample of blood were estimated, the former according to the modification of Gibson and Howard² and the latter according to that of Himwich, Friedman and Spiers.³ An increase in the blood fat was always accompanied by a decrease in the iodine number. Typical experiments are presented in Table I.

TABLE I.

Blood fat and iodine numbers before and after pancreatectomy or injections of phlorhizin—mg. %.

Time	Phlorhizin		Pancreatectomy	
	total fat	iodine numbers	total fat	iodine numbers
Before	556	118	507	83
1 day	735	105	993	52
2 days	717	94	1494	46
3 "	1031	57	2508	33
4 "	1022	65		

Since the iodine number depends on the fraction $\frac{\text{iodine absorbed}}{\text{total fatty acids}}$ the diminution of the iodine number indicates that the amount of unsaturated fatty acids does not vary as much as the saturated, *i. e.*, saturated rather than unsaturated fatty acids are mobilized.

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¹ Himwich, H. E., Chambers, W. H., Hunter, A. L., and Spiers, M. A. To appear in the *Am. J. Physiol.*, 1931.

² Gibson, R. B., and Howard, C. P., *Arch. Int. Med.*, 1923, **32**, 1.

³ Himwich, H. E., Friedman, H., and Spiers, M. A. To appear in the *Biochem. J.*, 1931.