which many of the physical properties of cholesterine present to those of the fats, we can hardly suppose that it takes its origin from them, since they for the most part become oxidized in the animal body, whereas in order to form cholesterine they must undergo a process of deoxidation.

4. It maintains the healthy composition of the blood, the chyle, and the lymph,-the three great circulating media or fluids of the economy. The amount of fat in the blood does not vary much in a normal condition, and is, according to Boussingault's numerical investigations, wholly independent of the amount of fat contained in the food : it varies from 0.14 to 0.33 in health. Fat in blood is mostly in a saponified state, but in many diseases the blood has been observed to contain large quantities of unsaponified fat; it is principally deposited in the cells or blood corpuscules. Berzelius said that in the latter it chiefly occurred as phosphorized fat, but at the present day there is reason for questioning the propriety of this opinion, and it is probable that the fat in this situation exists as glycero-phosphoric soid, similar to that discovered by Gobley in the yolk of the egg. Fat of the blood also exists in the serum ; here only a small part is free, the great bulk is present in large quantity as a soap; fat also exists in serum as the crystallizable lipoids, cholesterine and serolin. The fat of serum, compared with that of the blood corpuscules, may be regarded as more readily crystallizable, less tenacious and colorless, but far inferior in respect to quantity. Chyle differs from blood in chiefly containing its fat in a free or unsaponified state, very little being in the soapy state. Tiedmann and Gmelin always found chyle very rich in fat, and the milky turbidity of this fluid as well as that of the lymph is owing to the oil globules which they hold in suspension.

5. Adipose food furnishes various secretions with their normal supply of fat constituent as the biliary and the lacteal ;--mucus and sebaceous matter. Of these milk contains the largest share by far; on an average there is 2.9 per cent, in woman's milk. The oil globules rise to the surface when milk is allowed to remain at rest, constituting cream, which also includes some of the casein, sugar and salts. These may be mostly separated by the process of churning: this ruptures the envelopes of the globules, and butter is formed by the aggregation of the contained oil.

6. It contributes to make up a share of certain excretions. Thus it is a constituent of the faces and of the sweat. The oily character of the perspiration was for a long time ascribed to the accidental incorporation of sebaceous matter, but Krause has shown that in reality the sudoriparous glands themselves secrete true fat—by testing the fluid