

The transudation theory assumes that milk is filtered from the blood. The objections are that neither casein nor milk sugar, which are constituents of milk, are found in the blood; hence must be a result of cell activity. The fat in the milk is also in much greater proportions than found in the blood; while the ash constituents of milk and blood have their proportions of soda and potash reversed. If the udder were simply a filter, we should expect milk and blood to be similar in composition.

The secretion of milk is also ascribed to ferments acting upon the blood in the cow's udder, but this does not seem feasible.

A combination of the metamorphic, or change, and the transudation, or filter, theories, possibly offers the best explanation. The fat, casein, sugar, and some of the ash constituents of milk are probably the result of cell activity, while the water, albumen, and some other parts are probably filtered from the blood by the glands.

Milk may be drawn from the udder through the teats after the death of the cow.

Strippings (last drawn milk) are richer in fat than the first or middle portions of the milking, because the fat globules are retarded in their flow from the vesicles by the walls of the ducts through which the milk flows on its way to the milk-cistern.

Cows' udders may be classified as "well-balanced," "deficient in front," "poor behind," "deficient in one-quarter," "bottle-shaped," "pendulous," "fleshy," "small," "large," and "elastic."