

The glands consist of tissue, fat, nerves, arteries, and veins. The secretion takes place in the lobules, which are made up of from three to eight vesicles grouped together. These vesicles are lined with cells having a common outlet. These outlets, or tiny ducts, connect with other ducts, and finally empty into the sinus or milk-cistern placed in the upper part of each teat. From the milk-cistern the milk passes through a teat-canal to the opening at the bottom of the teat. This opening is closed with a muscle. When cows leak their milk it is due to the muscle being too weak. When cows are hard to milk this muscle is too tense, or there may be obstructions in the teat-canal. There is no remedy for the latter. A sharp three-edged knife may be used to release the tension of the muscle in bad cases.

The glands are not equally active at all periods of life with the cow. The call upon the dam to provide nourishment for her offspring is the first stimulant to milk secretion. Withdrawing the milk by the calf, or by the skilful hand, is the second cause of stimulation. The secretion of milk is usually most active during the third, fourth, fifth and sixth lactation periods, but may continue active up to the tenth or twelfth.

Various explanations have been given of the secretion of milk, none of which is satisfactory. The metamorphic theory assumes that milk is formed by the decomposition of the cells of the gland. An objection to this theory is that with cows giving a large quantity of milk the glands would have to be built up several times during the day, which is impossible.