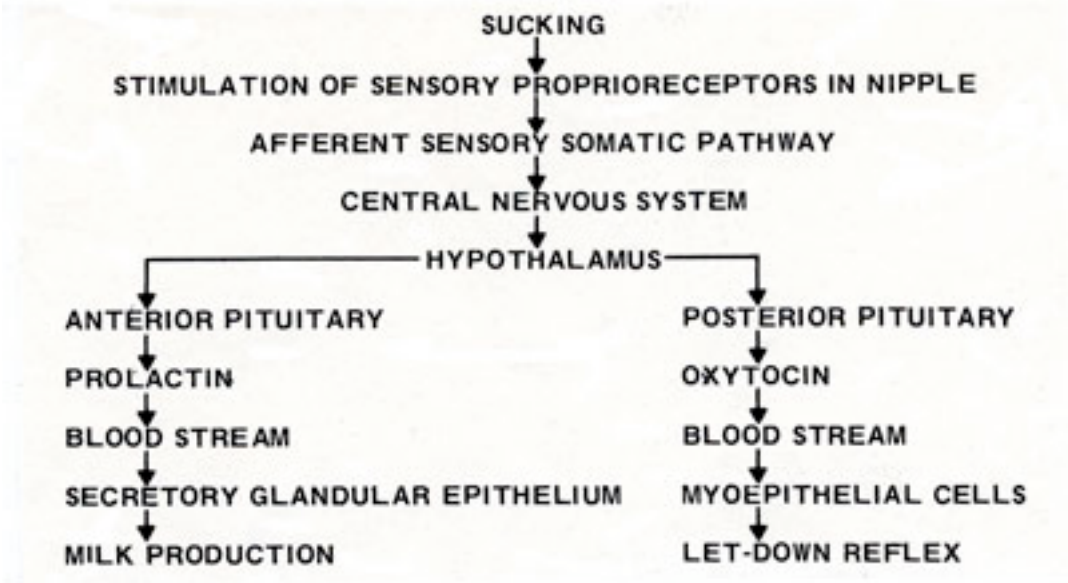
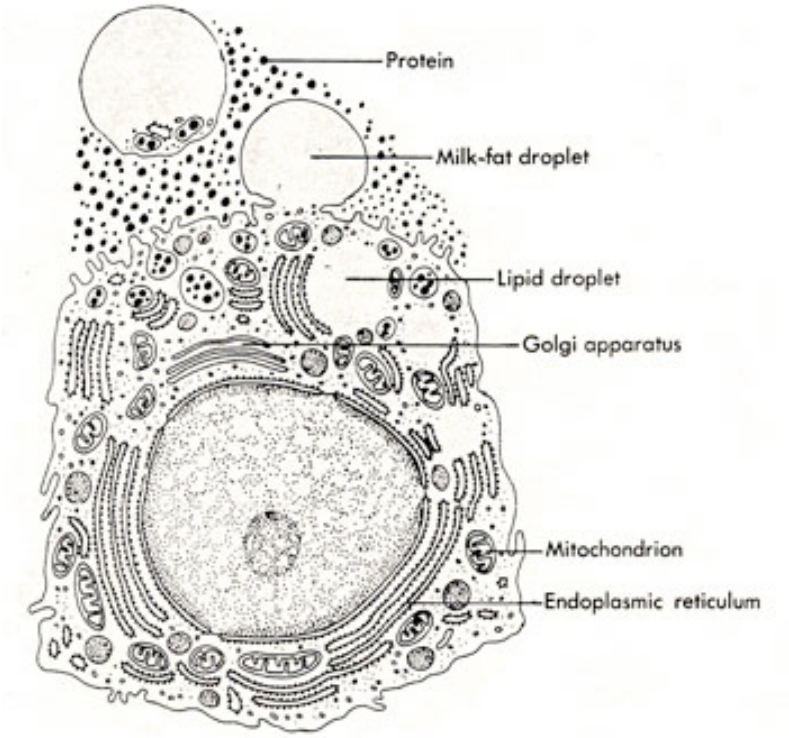
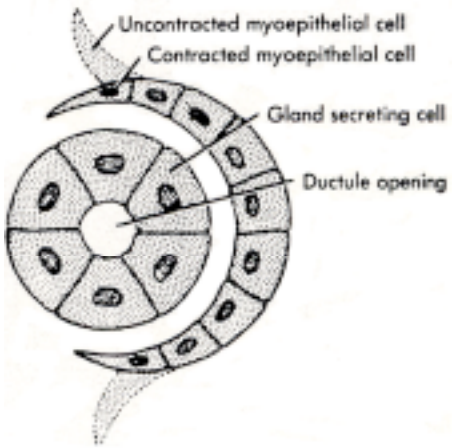
LACTATION

Neurohormonal Pathways of Lactation





Milk Synthesis. Diagrammatic representation of a mammary gland cell showing the basic cuboidal shape with typical microvillus border and basal nucleus. Cytoplasmic organization is characteristic of cells undergoing active protein synthesis and secretion. The synthetic apparatus consists of many free ribosomes and an extensive system of rough endoplasmic reticulum. A large Golgi body is located above the nucleus, and associated with it are some vacuoles containing fibrillar or particulate material that condenses into a central core or granule. Toward the apex the granules become progressively larger and contain more dense protein granules. The vacuoles fuse with the surface membrane and liberate their contents intact into the lumen. Fat droplets are found throughout the cell but are largest near the apex. They protrude into the lumen and appear to pinch off from the cell proper along with a small bit of cytoplasm. Other cytoplasmic structures include large mitochondria with closely packed cristae, lysosomes, and a small number of smooth membranous tubules and vesicles.



Milk Ejection. Diagram of the mammary alveolus surrounded by a long, thin myoepithelial cell. Contraction of the myoepithelial cell promotes a "squeezing" pressure on the gland cells so that milk is forced to move along the attached duct system.