

# Anatomy

## *FEMALE REPRODUCTIVE SYSTEM*

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## Mammary gland

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Mammary gland is a modified sweat gland of exocrine that nourishes the young, its consist of the mamma and teat. Undeveloped in both the male and female at birth, the female mammary gland begins to develop as a secondary sex characteristic at puberty. With the birth of the first young, and first lactation, the mammary gland attains its full size and function. When suckling by the young stops, milk production ceases and the gland regresses. Shortly before the next and subsequent parturitions, the gland is stimulated by hormonal changes to produce milk.

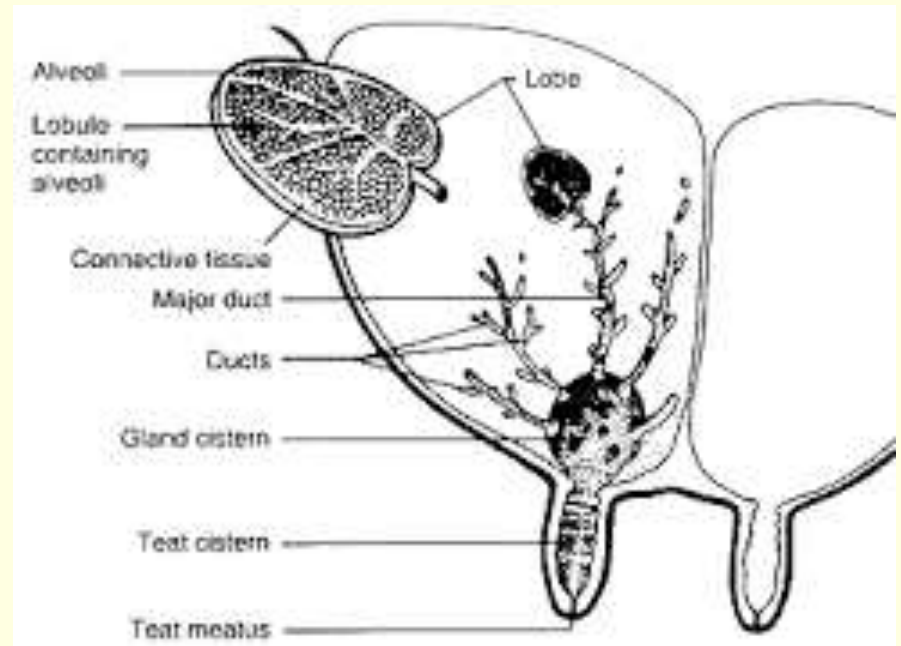


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- The mammary gland consist of species–specific number of mammary complex. Arranged in bilaterally symmetrical order to either sides of the midline on the ventral aspect of the trunk.
  - Note : udder: the term designating all the mammae in the ruminants, mare( sometime used for the sow also.

Species	Primates	Elephant	Ewe, doe	Guinea Pig	Cow	Mare	Rat	bitch	Sow	Cat
<b>Number of Mammae /teats</b>	2	2	2	2	4	4 (2 teats)	~10	~10	8-18	8
<b>Position</b>	Pectoral	Pectoral	Inguinal	Inguinal	Inguinal	Inguinal	Abdominal, Ventral	Thoracoabdominoinguinal	Thoracoabdominoinguinal	Thoracoabdominal
<b>Teat Ducts</b>	10-20	Several	1	1	1	2	1	8-22	2	4-8

## Lobes

The internal compartments of mamma separated by adipose tissue (fat). The lobes are divided into lobules. Lobules consist of connective tissue contain alveoli, the grape like clusters of milk secreting cells of the mammary gland .



**Milk duct:** is a large ducts conveying milk from the alveoli to the milk sinus.

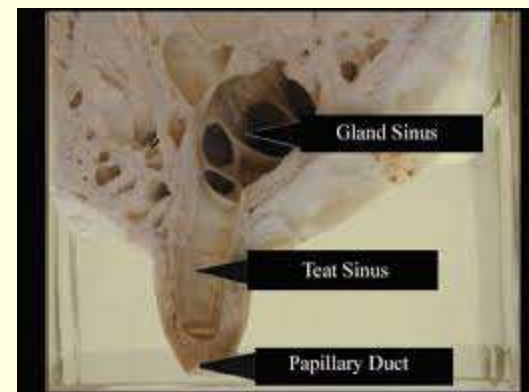
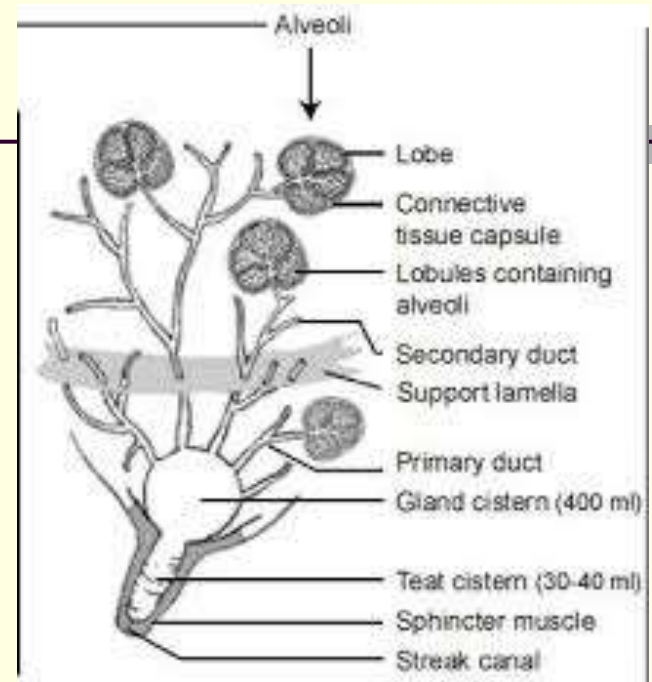
**Lactiferous sinus:** the large milk storage cavity within the teat and glandular body.

**Teat or papilla:** the projecting part of the mammary gland containing part of the milk sinus , it is lined with a double layer of columnar epithelium.

**Teat canal, papillary duct or streak canal:** the duct leading from milk sinus to the teat opening lined with stratified epithelium.

**Teat opening :** the opening of teat canal.

**Sphincter muscle:** the muscular fibers around the teat opening that prevent milk flow, except during sucking and milking.



## Suspensory apparatus

In species with large udders, especially in dairy cattle, there is a suspensory apparatus, which is organised into the lateral and medial laminae suspending the mammary gland from the ventral aspect of the trunk by their attachment to the pubic symphysis. The **lateral lamina** consists of collagen fibres from the fascia of the pubic symphysis and the edge of the superficial inguinal ring. The **medial lamina** consists of elastic fibres from the tunica flava ventral to the pubic symphysis. The **intermammary groove** divides the left and right rows of mammae.

