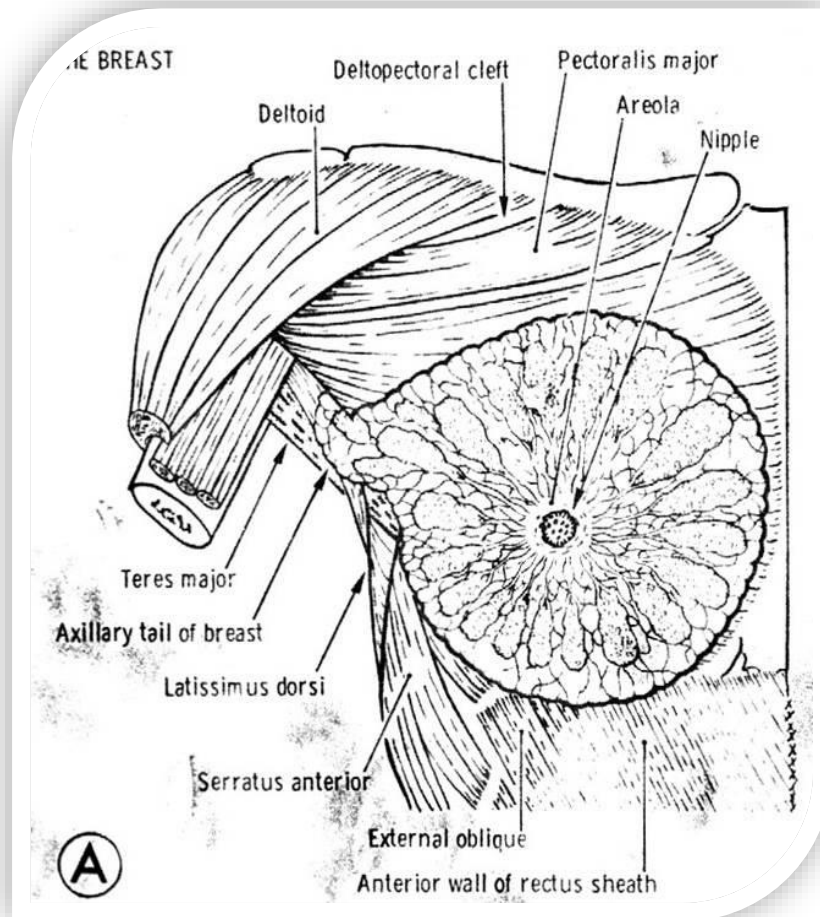


✚ The pectoral region & breast

The pectoral region is that part of the trunk extending from the midline to the midaxillary line & from the clavicle above to the level of the 7th costal cartilage below.

The breast is that part of the pectoral region extending from the 2nd to the 6th ribs and from the lateral edge of the sternum to the midaxillary line. An *axillary tail* arises from the upper lateral quadrant of the breast & extends posterolaterally to the axilla over the 2nd & 3rd ribs deep to pectoralis major.



The breast consists mainly of fatty superficial fascia with the covering skin containing the *nipple* & *areola*. Within the fatty fascia is embedded the mammary gland. The *mammary gland* is constant but its size & maturity depend on age & sex:

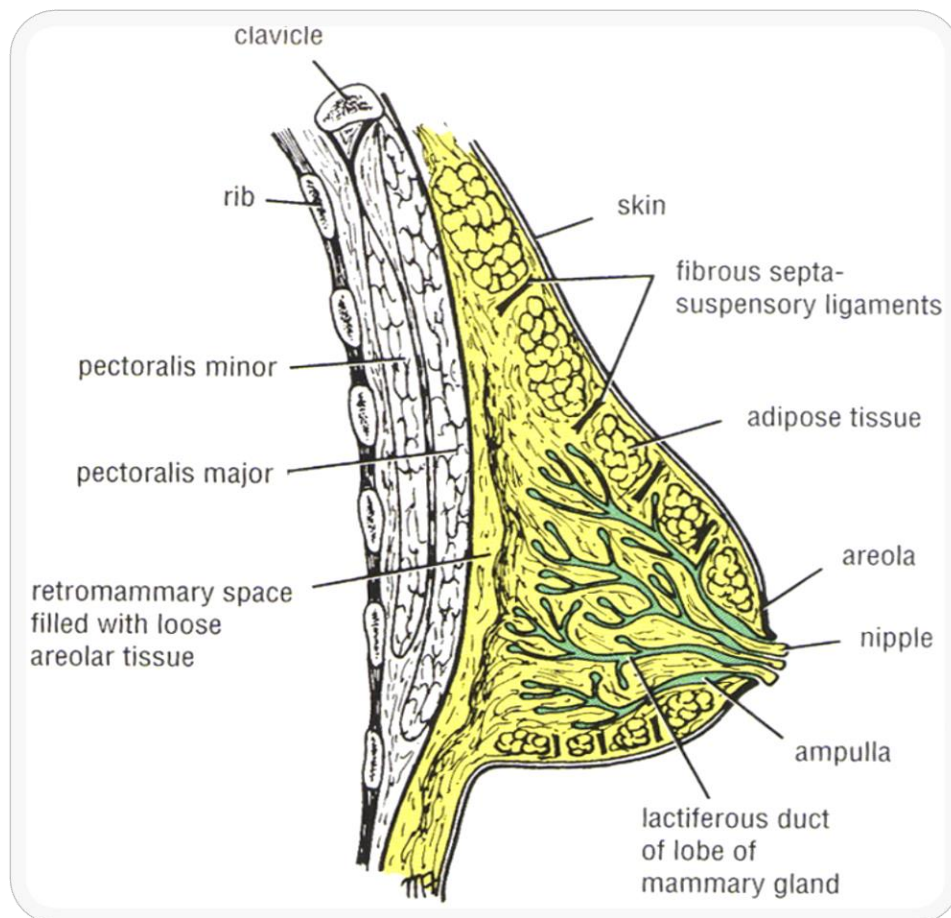
- In the male: the mammary gland is *rudimentary*, there's little fat in the superficial fascia, the nipple is small, the areola is surrounded by hair and the whole breast is stretched by the pectoralis major muscle.
- In the non-lactating female: the breast is composed mainly of fatty superficial fascia, the mammary gland is not fully mature, the nipple & areola are small and light (pink) colored and the whole breast tends to stand forward.

- In the pregnant & lactating female: the mammary gland is fully developed taking the place of many of the fatty tissue and becoming functional in milk formation & secretion. The nipple & areola enlarge and become darker. The mammary gland is composed of 15-20 lobes drained by *lactiferous (milk) ducts*. The ducts are dilated near the nipple as the *lactiferous sinuses (ampulla)* which narrow again to open separately on the apex of the nipple. The lobes & ducts and fat collections are separated from each other by *fibrous septa* which pass from the skin to the ducts. These septa are called the *suspensory ligaments* of the breast.

❖ **Posterior relation of the breast:**

The structures lying posterior to the breast include:

1. The pectoralis major & its (pectoral) fascia. The muscle is separated from the breast by a very thin space filled with loose tissue called the *retromammary space*.
2. Pectoralis minor & its (clavipectoral) fascia.
3. The serratus anterior & external oblique muscles (inferolaterally).
4. The 2nd to the 6th ribs & intercostals spaces & muscles.



❖ **The nipple:**

The nipple contains 2 layers of smooth muscles, a longitudinal layer that flattens the nipple and a circular layer that erects it.

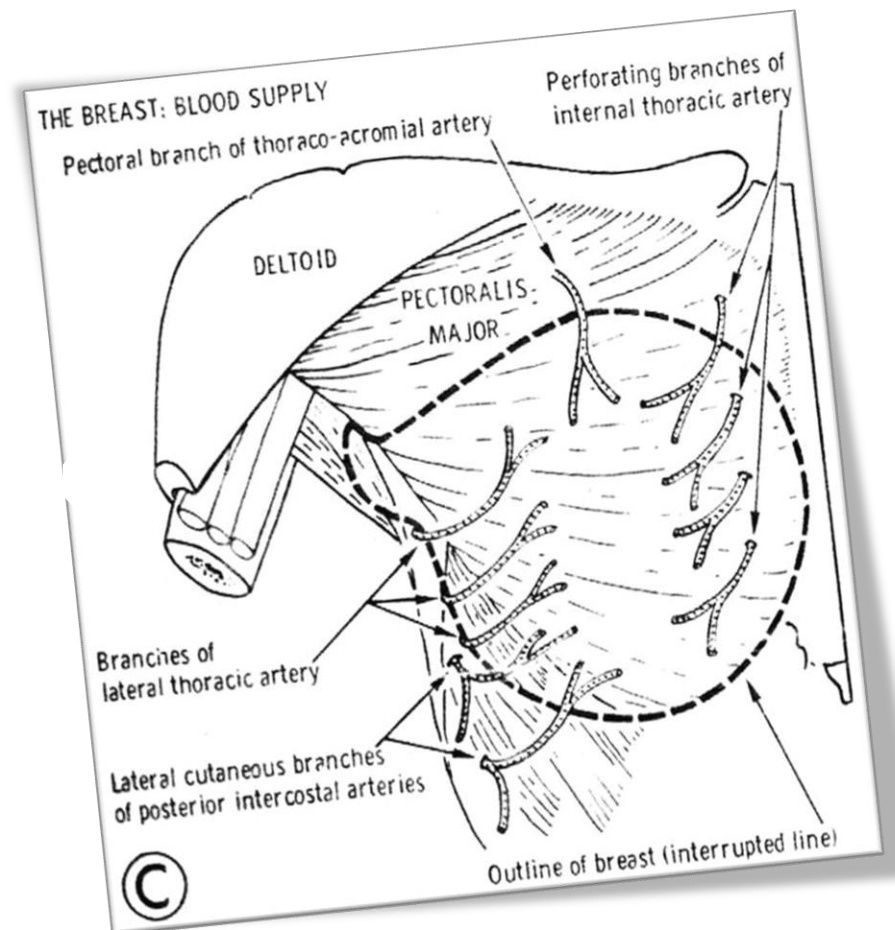
❖ **The areola:**

The circular areola is composed of pigmented skin containing modified sweat & sebaceous glands which enlarge during pregnancy and become visible (Montgomery tubercles).

❖ **Blood supply of the breast:**

The breast is supplied by **perforating branches** from the following arteries:

- Internal thoracic artery (*medially*).
- Lateral thoracic artery (*Laterally*)
- Anterior intercostals arteries. (*anteriorly*)
- Thoracoacromial artery. (*superiorly*)
- Posterior intercostal arteries. (*inferolaterally*)



❖ *Lymphatic drainage of the breast:*

Lymph from the breast tissue drains to the following lymph nodes:

- The *pectoral* lymph nodes: receive lymph from most of the *lateral* part of the breast through lymph vessels which run along the *axillary tail*.
- The *parasternal* nodes (around the *internal thoracic artery*) receive lymph of the *medial* side of the breast.
- The *infraclavicular* nodes receive lymph from the *upper* part via lymphatics which run along the *thoracoacromial artery*. Lymph then passes from the infraclavicular to the *apical* nodes.
- The *intercostals* nodes receive lymphatics running along the intercostals arteries.
- There are *communicating lymphatics* between the 2 breasts. (This plays a role in spread of infection & cancer from one breast to the other).

