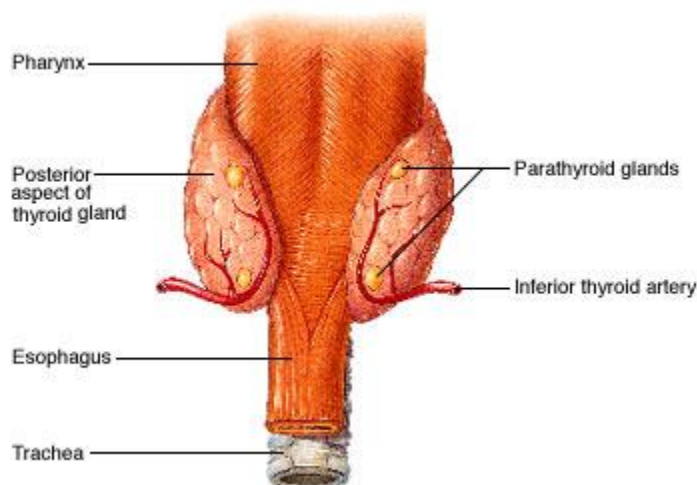




ANATOMY

- **Parathyroid glands:** they are small, flattened, oval glands which lie external to the fibrous capsule on the medial half of the posterior surface of each lobe of the thyroid gland. Notice that most people have four parathyroid glands.
- The two superior parathyroid glands are usually at the level of the inferior border of the cricoid cartilage.
- The inferior parathyroid glands are usually near the inferior poles of the thyroid glands, but they may lie in a variety of positions.
- **Vasculature:**
 - **Arterial supply:**
 - ✓ Inferior thyroid arteries supply both superior and inferior parathyroid glands.
 - **Venous drainage:**
 - ✓ Parathyroid veins drain into the thyroid plexus of veins of the thyroid gland and trachea.
- **Lymphatic drainage:**
 - Lymphatic vessels from the parathyroid glands drain with those of the thyroid gland into the deep cervical and paratracheal lymph nodes.
- **Innervation:**
 - Nerves of parathyroid glands are derived from thyroid branches of the cervical sympathetic ganglia.
 - The nerves are vasomotor but not secretomotor because these glands are hormonally regulated.



HISTOLOGY:

- Instead of follicles, cells are arranged in cords or clumps surrounded by capillary clumps.
- **There are two cell types:**
 - **Principle of chief cells:** they produce parathyroid hormone to maintain proper calcium.
 - **Oxyphil cells:** representing old chief cells.
- Parathyroid hormone counterbalances calcitonin action.
- Parathyroid hormone stimulates osteoclasts activity to release more calcium into blood.
- Parathyroid hormone induces kidney and intestines to absorb and retain more calcium.
- Release of hormone depends on calcium levels and not pituitary hormones.

