- Causes the production of **melanin**

- The thyroid gland is on the anterior surface of the trachea
  - Highly vascularized
    - Supplied by the **superior thyroid artery** (from the external carotid artery)
    - Supplied by the **inferior thyroid artery** (from the thyrocervical trunk)
  - Made of two lobes connected via an **isthmus**
  - Consists of thyroid follicles
  - This is the only gland that stores its hormone products

for slide 53 just know the anatomy of the things that surround the things that are labeled

Thyroid gland

- Thyroid follicles manufacture thyroid hormones
  - Do not need to know below
  - Follicles are lined with simple cuboidal epithelium and T thyrocytes (follicular cells)
    - Follicular cells secrete thyroglobulin into the follicle
    - Follicular cells transport iodine into the follicle
    - The combination of iodine and the colloidal material within the follicle results in the formation of the thyroid hormones

- Hormones of the thyroid gland
  - **Calcitonin (CT)**
    - Targets osteoclasts of bones
    - Causes a decrease in blood calcium ion concentration by:
      - Stimulating calcium ion excretion at the kidneys-not too often, very few times we want to excrete calcium, most of the time we repackage it and send it back into the circulation
      - Calcium located in sarcoplasmic reticulum of skeletal muscles and the heart, and is stored in the terminal cisternae within the sarcoplasmic reticulum, calcium causes all contractions
      - Inhibiting osteoclast activity (therefore calcium ions do not leave the bones to enter the blood)
  - **Thyroxine (T_4)-looking at in blood to check thyroid function**
    - Targets general cells
    - Causes an increase in metabolism
  - **Triiodothyronine (T_3)-looking at in blood to check thyroid function**
    - Targets general cells
    - Causes an increase in metabolism

**As you get older normal for metabolism to drop hypothyroidism(low hormone levels, gain weight) and hyperthyroidism(high hormone levels, lose weight) exist though as well

People who are putting on a lot of weight look at T3 and T4

When there is an issue with T3 and T4 you have to increase hormone levels within body**

Thyroid gland