Circulatory Pathways - Systemic Circulation

**Function**: Brings oxygenated blood supply to all the body’s tissues, delivers nutrients from digestive tract to tissues and carried away CO2 and metabolic waste.

**Oxygen Rich Blood Flow**: Oxygen rich blood is pumped from the heart:
- **left ventricle** through the **semilunar valve** into the **ascending aorta**
  *Opposite each semilunar valve cusp is an **aortic sinus** which contains **pressoreceptors** involved in blood pressure regulation. The semilunar valve prevents the back flow of blood back into the heart.
- **ascending aorta** arches up (in front of pulmonary trunk) and gives off **right** and **left coronary arteries**
- **ascending aorta** becomes the **aortic arch**
- **aortic arch** gives off the **brachiocephalic trunk** (under right clavicle)
  - the **brachiocephalic trunk** branches into **right common carotid artery** and **right subclavian artery**.
- Next **aortic arch** gives off the **left common carotid artery** and the **right subclavian artery**
- **aortic arch** becomes the **descending aorta**
Circulatory Pathways - Systemic Circulation

right lung
(3 lobes)

left lung
(2 lobes)

right common carotid artery
right subclavian artery
brachiocephalic trunk
ascending aorta

left common carotid artery
left subclavian artery
descending aorta

aortic arch
left ventricle
thoracic aorta
Arteries of the Circulatory System

- vertebral artery
- common carotid artery
- subclavian artery (shoulder)
- axillary artery (armpit)
- coronary arteries
- brachial artery (upper arm)
- radial artery (lateral forearm)
- ulnar artery (medial arm)
- digital arteries
- external iliac artery
- median sacral artery
- deep femoral artery
- femoral artery
- popliteal artery (behind knee)
- anterior tibial artery
- posterior tibial artery
- arcuate artery
- dorsal metatarsal arteries

Inferior phrenic
celiac trunk (3 branches):
- common hepatic artery
- splenic artery
- left gastric artery

Suprarenals
Superior mesenteric
Renals
Gonadals
Inferior mesenteric
Lumbar arteries
Common iliac artery
Internal iliac artery