Boundaries:
Behind: the anterior border of trapezius muscle
Anterior: the posterior border of the sterno-mastoid
Below: the middle third of the clavicle
Above: the superior nuchal line where sterno-mastoid meets the trapezius.
The Roof: formed of skin, superficial fascia and investing layer of the deep fascia
The Floor: formed of 5 muscles from above downward.
  o Semispinalis capitis !!!
  o Splenius capitis,
  o Levator scapulae
  o Scalenus Medius
  o Scalenus Anterior
♫ All these muscles covered with the pre-vertebral layer of the deep fascia.

Divisions: It divided by the inferior belly of omohyoid muscle into:
a. Large occipital triangle (above)
b. Small subclavian triangle (below)

Contents: The main contents of the triangle are
Nerves:
  ✓ Spinal part of the accessory nerve.
  ✓ The roots and trunks of brachial plexus.
  ✓ Branches of the cervical plexus.
Vessels:
  ✓ The subclavian vessels and their branches.(tranverse cervical and supra scapular)
  ✓ 3rd part of the occipital artery
  ✓ Terminal part of the external jugular vein.
Muscles:
  ✓ The inferior belly of omohyoid muscle.
Lymph nodes:
  ✓ Occipital L.N. at the apex, supraclavicular L.N. at the base.
The spinal part of accessory nerve

Course:
- Appear at the middle of the posterior border of the sterno-mastoid muscle.
- Runs obliquely downwards on the levator scapulae muscle embedded in the deep surface of the fascia of the neck.
- Disappear undercover of the trapezius muscle 5 cm above the clavicle.

Distribution: It gives supply to the sterno-mastoid and trapezius muscles.

Brachial plexus

- It lies in the posterior triangle of the neck between the scalenus medius and anterior.
- Formed of five stages: Roots, Trunks, Divisions, Cords, Branches.

Roots: formed by the ventral rami of the last four cervical nerves and the first thoracic nerve. (C 5,6,7,8 and T 1).

Trunks:
- Upper trunk (C 5,6).
- Middle trunk (C 7).
- Lower trunk (C 8,T 1).
- The root and trunks are present in the triangle (between the subclavian artery and the scalenus medius muscle)
- The divisions lie behind the clavicle
- The cords and branches lie in the axilla

The cutaneous branches of the cervical plexus

Site: Appear at the middle of the posterior border of the sterno-mastoid muscle.

Branches:
The branches of the cervical plexus in posterior triangle are:
- **Great auricular nerve:** Supply the skin over the angle of the mandible and the lower part of the auricle(outer surface).
- **The lesser occipital.**
- **The transverse cervical:** to the sides and front of the neck.
- **The supraclavicular:** nerves to the shoulder.
The Third Part of the Subclavian Artery

**Beginning:** Appear in the triangle at the lateral border of the scalenus anterior between it and scalenus medius.

**Termination:** it continues as the axillary artery at the lateral border of the first rib.

**Relations:**
- **Posterior:** related to the 8th cervical nerve which unite the 1st thoracic to form the lower trunk of brachial plexus.
- **Anterior:** the terminal part of the external jugular vein.

**Branches:**
- The third part usually gives **no branches**, but may give rise to the **deep branch of the transverse cervical artery. (dorsal scapular.)**

Transverse cervical artery

**Origin:** from the thyro-cervical trunk (arise from first part of the subclavian artery).

**Course:** It crosses scalenus anterior muscle in front of the trunks of the brachial plexus.

**Termination:** at the anterior border of the levator scapulae by give two terminal branches:
  - **Superficial branch:** pass superficial to the levator scapula muscle.
  - **Deep branch:** deep to the levator scapula muscle.

Suprascapular artery

**Origin:** from the thyro-cervical trunk (arise from first part of the subclavian artery).

**Course:** It crosses scalenus anterior muscle, passes behind the clavicle to reach the upper border of the scapula

The Subclavian vein

**Beginning:** as continuation of the axillary vein at the outer border of the first rib.

**Course:** pass superficial to scalenus anterior. (more superficial structure)

**Termination:** joins the internal jugular vein to form the **brachiocephalic vein** behind the sterno-clavicular joint

**Tributaries:** One tributary (the external jugular vein.)
The External Jugular Vein

**Formation**
- At the lower end of the parotid gland by union of posterior division of the retromandibular vein with ............... (complete.

**Course:**
- It descends on the sterno-mastoid muscle under the cover of the skin and superficial fascia and platysma.
- It pierces the deep fascia of the neck to pass behind the sterno-mastoid muscle.

**Termination:** into the subclavian vein.

**Tributaries of the external jugular vein:**
1. Posterior auricular vein.
2. Posterior division of retromandibular vein.
4. Anterior jugular vein.
5. Transeverse cervical vein.

**The Inferior Belly of Omohyoid Muscle**

**Origin:** From the upper border of the scapula near Suprascapular notch.

**Insertion:** Pass upwards to the join the superior belly by intermediate tendon.

**Nerve supply:** ansa cervicalis.

**Action:** help in stabilizing the hyoid bone.
Sternomastoid muscle

- The muscle lies on the side of the neck, divide it into anterior and posterior triangle.

**Origin**: it has two heads.
- **Sternal head** rounded:
  Arise from the anterior surface of the upper end of the sternum.
- **Clavicular head** flat
  From the upper surface of the medial third of the clavicle.

**Insertion**:
- The outer surface of mastoid process.
- Lateral half of superior nuchal line.

**Nerve supply**:
- **Motor**: Spinal part of the accessory nerve.
- **Properioceptive sensation**: From the cervical plexus.

**Action**:
- The two muscles acting together:
  - Anterior fibers: flex the head on the vertebral column.
  - Posterior fibers: extend the head, lifting the face forward.

- One muscle acting alone:
  - Turn the head upwards and to the opposite side.
  - If the head is fixed it elevate the sternum and the first rib, important in forced inspiration.