**Common carotid artery**

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| **Origin:** | * **Right side**: bifurcation of brachiocephalic A behind RT sternoclavicular joint * **Left side**: from aortic arch & ascend in the neck behind left sternoclavicular joint |
| **Course** | * Ascend upwards and backwards within the carotid sheath with the internal jugular vein laterally and vagus in ( ) |
| **Termination** | * At the level of Upper border of thyroid cartilage opposite **disc between C3 & C4 by dividing into ICA / ECA** |
| **Branches:** | * No branches {only terminal branches (ECA & ICA)} |

**External carotid artery**

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| --- | --- |
| **Origin:** | * **One of terminal branches of common carotid artery** * At the level of the upper border of thyroid cartilage ( ) C3. 4 |
| **Course** | * **Divided by posterior belly of digastric into** * 1st part: below it (in the carotid triangle) , **gives 5 branches** : * **F**acial * **A**scending pharyngeal * **L**ingual * **S**uperior thyroid * **O**ccipital * 2nd part: deep to it and stylohyoid muscle **, 2nd part is separated from the internal carotid artery by** * **2 muscles** : stylopharyngeus / styloglossus * **2 nerves** : glossopharyngeal & pharyngeal branch of vagus * **Styloid and deep part of parotid** * 3rd part: above it and stylohyoid muscle. * Enter the substance of parotid gland * become related to retromandibular vein and facial nerve gives posterior auricular artery . * This part gives small branches to parotid gland |
| **Termination** | * inside parotid gland, behind neck of mandible **Dividing into superficial temporal & maxillary arteries** |
| **Branches:** | * **From medial aspect** : Ascending pharyngeal A * **From anterior aspect** : Superior thyroid , Lingual artery , Facial artery * **From posterior aspect :** Occipital artery , Posterior auricular A * **Two terminal branches :** maxillary , superficial temporal |

|  |  |  |
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|  | **Superior thyroid artery** | **Lingual artery** |
| **Origin**: | * Anterior aspect of external carotid artery **below greater horn of hyoid** | * Anterior surface of ECA, **opposite greater horn of hyoid bone** ( ) superior thyroid artery , facial artery above |
| **Course:** | * Descends downward in carotid triangle , on middle conistrictor * Descends downward & forward on the thyroid membrane * Accompanied by superior , external laryngeal nerve * Then pass deep to infrahyoid ms * Enters the apex of thyroid gland | * **Divided by hyoglossus into** * **1st part:** In carotid triangle   From the origin to the posterior border of hyoglossus  Form a loop (around the tip of hyoid bone) which is crossed by hypoglossal nerve  **2nd part:** deep to hyoglossus  **3rd part:** along anterior border of hyoglossus  Pass deep to submandibular & sublingual glands to enter the tongue |
| **Termination** | * Pierce the pre-tracheal fascia and divide into **anterior & posterior terminal glandular branches** along the anterior & posterior borders of the gland |  |
| **Branches** | 1. Infra-hyoid A: to infrahyoid muscle 2. Superior laryngeal A: 3. Pierce thyrohyoid membrane **with** internal laryngeal nerve **to** supply the larynx above vocal cords . 4. Sternomastoid A: to sternomastoid muscle 5. Cricothyroid A: to cricothyroid muscle 6. Glandular branches: to upper 1/3 of the lobe & upper 1/2 part of isthmus |  |

**Ascending pharyngeal artery**

**Origin:** Medial surface of external carotid artery

**Course:** Ascend on middle & superior pharyngeal constrictor to base of skull

**Branches**

Pharyngeal: to side wall of upper pharynx & tonsil

Meningeal: enter skull through foramen lacerum & jugular foramen

Inferior tympanic: to middle ear

Muscular: to prevertebral muscles

**Lingual artery**

**Origin:** Anterior surface of ECA, opposite greater horn of hyoid bone

**Course:** Divided by hyoglossus into

**1st part:** In carotid triangle

From the origin to the posterior border of hyoglossus

Form a loop (around the tip of hyoid bone) which is crossed by hypoglossal nerve

**2nd part:** deep to hyoglossus

**3rd part:** along anterior border of hyoglossus

Pass deep to submandibular & sublingual glands to enter the tongue

**Branches**

**From 1st part**:suprahyoid A

Run along upper border of greater cornu & body of hyoid bone o Supply surrounding muscles

**From 2nd part**:dorsal arteries of tongueo One or more, pass deep to hyoglossus

Supply tongue, tonsils, floor of mouth & soft palate

**From 3rd part**:sublingual artery

Supply tongue, floor of mouth (anterior part) & sublingual salivary gland

**Facial artery**

**Origin**: Anterior aspect of ECA, above tip of greater cornu of hyoid bone

**Course**

**Cervical part**: ascend in the neck deep to posterior belly of digastric

**Submandibular part**:

Enter deep groove on posterior end of submandibular gland o Curve downward between the gland & medial pterygoid

Reach lower border of the mandible

Enter the face at antero-inferior angle of masseter

**Facial part:** Pass upward & forward to angle of mouth then ascend vertically by side ofnose till the angle of the eye

**Terminate** as angular A anastomose with dorsal nasal a (branch from ophthalmic A)

**Branches**

**Cervical part**

Ascending palatine A:

Winds around upper border of superior constrictor to reach soft palate o Tonsillar artery: pierce superior constrictor to Supply the tonsils

**Submandibular part**

Glandular branches: submandibular salivary gland o Submental A: submental triangle muscles & skin

**Facial part**:

Inferior labial A: to lower lip

Superior labial A: to upper lip & gives a branch to lower part of nasal septum o Lateral nasal arteries: to side of nose

**Occipital artery**

**Origin**: Posterior aspect of ECA

**Course**

**1st part**: Pass backward along lower border of posterior belly of digastric

**2nd part**: the occipital bone

**3rd part**: cross apex of posterior triangle of the neck

**4th part**: pierce trapezius 1 inch lateral to external occipital protuberance

**Branches**

**Occipital**: posterior regions of scalp

**Muscular**: muscles of back of neck

**Mastoid**: enter mastoid foramen & supply mastoid air sinus

**Styloid**: enter styloid foramen supply middle ear, mastoid antrum

**Sternomastoid**: to sternomastoid muscle

**Posterior auricular artery**

Origin: From posterior aspect of ECA

Course:

Pass upward & backward on upper border of posterior belly of digastric

Cross base of mastoid process & ascend behind auricle

Branches

**Stylo-mastoid A**: Enter stylomastoid foramen & supply middle ear & mastoid air sinus

**Auricular**: to back of auricle

Terminal branches: supply scalp behind the auricle

**Superficial temporal artery**

**Origin:** Behind neck of mandible within parotid gland

**Course**

Leave the gland at its upper pole (border)

Cross zygomatic arch in front of auricle where its pulsation felt

Accompanied by superficial temporal vein & auriculotemporal N

5cm above zygomatic arch divides into anterior & posterior branches

**Branches**

**Transverse facial artery**

Arise within the gland & Run forward between zygomatic arch & parotid duct o Accompanied by zygomatic branch of facial N

**Supply**: parotid & lateral part of face

**Anterior auricular As**: to auricle & external auditory meatus

**Zygomatico-orbital A**: supply the face

**Middle temporal A**: in temporal fossa deep to temporalis

**Anterior terminal branch**: run toward the frontal eminence

**Posterior terminal branch**: run toward parietal eminence

**Subclavian artery**

**Origin**

**Right side**: from brachiocephalic A behind sternoclavicular joint

**Left side**: arch of aorta, enters the neck behind left sternoclavicular joint

**Course:** Divided by scalenus anterior muscle into 3 parts

**Termination** Outer border of 1strib **(continue as axillary A)**

**Branches**

**1st part**

**Vertebral artery (see neuroanatomy)**

**Thyrocervical trunk** Short stem divides at medial border of scalenus anterior into

**Transverse cervical & suprascapular A**

Run superficial to scalenus anterior to muscles of lower part of neck & shoulder

**Inferior thyroid artery gives**:

Course:

Ascend upward & medially then downward behind carotid sheath

**Its terminal part accompanied by recurrent laryngeal N**

Terminate by dividing into many branches to thyroid gland

Branches:

Glandular branches: to lower 2/3 of thyroid lobe & lower part of isthmus & parathyroid glands

Inferior laryngeal A: to lower part of laryngeal cavity

Tracheal & esophageal branches

Ascending cervical A: anterior to scalenus anterior muscle

**Internal thoracic artery**

**2nd part**

**Costocervical trunk: divides into**

**Superior intercostal artery**: supply 1st& 2ndintercostal space

**Deep cervical artery**: to the muscles of the back

**3rd part: Dorsal scapular artery**