**Medical Gross Anatomy**

**Anatomy Tables - Arteries of the Head and Neck**

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| **Artery** | **Source** | **Branches** | **Supply to** | **Notes** |
| alveolar, anterior superior | infraorbital a. | dental brs., mucosal brs. | maxillary incisor and canine teeth; part of the maxillary sinus | anterior superior alveolar a. is located between the inner and outer tables of bone of the maxilla |
| alveolar, inferior | maxillary a. | lingual br., mylohyoid a., dental brs., mental a. | mandibular teeth and gingiva; mandible; mylohyoid m. | inferior alveolar a. runs with the inferior alveolar nerve within the mandibular canal |
| alveolar, middle superior | infraorbital a. | dental brs., mucosal brs. | maxillary premolar teeth; part of the maxillary sinus | middle superior alveolar a. is located between the inner and outer tables of bone of the maxilla |
| alveolar, posterior superior | maxillary a. | dental brs., mucosal brs. | maxillary molar teeth; part of the maxillary sinus | posterior superior alveolar a. enters the maxilla in the infratemporal fossa |
| angular | facial a. | no named branches | orbicularis oculi m. and lacrimal sac | angular a. is the terminal branch of the facial a. |
| anterior cerebral | internal carotid a. | anterior communicating a., medial frontobasal a., polar frontal a., callosomarginal a., precuneal a. | medial and inferior portions of the frontal lobe; medial side of the parietal lobe; corpus callosum and part of the limbic lobe; olfactory bulb and tract; optic nerve, optic chiasm and optic tract | the anterior communicating a. unites the two anterior cerebral aa. across the midline |
| anterior communicating | anterior cerebral a. | perforating aa. | an anastomotic connection | anterior communicating a. is a short vessel of anastomosis which crosses the midline to join the paired anterior cerebral aa.; it is part of the Circle of Willis |
| anterior deep temporal | maxillary a. | no named branches | anterior part of temporalis m. and surrounding deep tissues | anterior deep temporal a. branches in the infratemporal fossa and runs deep to temporalis m. |
| anterior ethmoidal | ophthalmic a. | anterior meningeal a., anterior septal br., anterior lateral nasal br. | anterior ethmoidal air cells, frontal paranasal sinus, dura mater in the anterior cranial fossa, nasal mucosa, olfactory nerves | anterior ethmoidal a. leaves the orbit through the anterior ethmoidal foramen, then runs forward on the cribriform plate |
| anterior inferior cerebellar | basilar a. | labyrinthine (usually) | pons (motor nucleus of cranial nerve V, chief sensory nucleus of cranial nerve V, abducens nucleus, facial nucleus, superior salivatory nucleus); cerebellum; inner ear | shares its region of supply with branches of the basilar a. |
| anterior radicular | they arise as multiple branches of several vessels (vertebral, posterior intercostal, lumbar, and lateral sacral aa.) | they accompany the ventral rootlets to reach the spinal cord | meninges; spinal cord; spinal nerve; ventral rootlets | anterior radicular aa. anastomose with the anterior spinal a. |
| anterior spinal | contributions received from several arteries (vertebral, posterior intercostal, subcostal, lumbar, lateral sacral aa.) | pial arterial plexus | meninges; spinal cord; medulla (dorsal motor nucleus of cranial nerve X, nucleus ambiguus, spinal accessory nucleus and hypoglossal nucleus) | anterior spinal a. anastomoses with the anterior radicular brs. of the spinal rami of the vertebral, posterior intercostal, subcostal, lumbar and lateral sacral aa. |
| anterior superior alveolar | infraorbital a. | dental brs., mucosal brs. | maxillary incisor and canine teeth; part of the maxillary sinus | anterior superior alveolar a. is located between the inner and outer tables of bone of the maxilla |
| anterior tympanic | maxillary a. | no named branches | middle ear | anterior tympanic a. passes through the petrotympanic fissure along with the chorda tympani n. |
| aortic arch | the continuation of the ascending aorta | brachiocephalic trunk, left common carotid a., left subclavian a. | the entire body except the heart | aortic arch continues as the descending thoracic aorta; the fibrous ligamentum arteriosum connects to the inferior surface of the aortic arch and it marks the location of the fetal ductus arteriosus aortic arch continues as the descending thoracic aorta |
| ascending cervical | inferior thyroid a. | unnamed muscular branches | deep muscles of the neck | ascending cervical a. ascends on the anterior surface of the anterior scalene m. beside the phrenic n. |
| ascending palatine | facial a. | no named branches | superior pharyngeal constrictor, soft palate, palatine tonsil | ascending palatine a. shares supply of the tonsil bed with 4 other aa. (see also: tonsillar br. of the facial a., palatine br. of the ascending pharyngeal a., tonsillar br. of the dorsal lingual a., tonsillar br. of the descending palatine a.) |
| ascending pharyngeal | external carotid a. | pharyngeal brs., inferior tympanic a., posterior meningeal a. | pharynx, meninges | ascending pharyngeal a. arises from the medial side of the external carotid a. close to the birfurcation |
| auricular, deep | maxillary a. | no named branches | external auditory meatus, tympanic membrane | deep auricular a. is small and difficult to dissect |
| auricular, posterior | external carotid a. | stylomastoid br., auricular br., occipital br. | part of the external ear, scalp and deeper structures posterior to the ear | posterior auricular and greater occipital share their region of distribution |
| basilar | formed by the joining of the two vertebral aa. | pontine brs., anterior inferior cerebellar a., superior cerebellar a., two posterior cerebral aa. (terminal brs.) | pons (motor nucleus of cranial nerve V, chief sensory nucleus of cranial nerve V, abducens nucleus, facial nucleus, superior salivatory nucleus); oculomotor nucleus; nucleus of Edinger-Westphal; cerebellum; posterior cerebrum | basilar a. contributes blood to the cerebral arterial circle |
| brachiocephalic trunk | aortic arch | right common carotid a., right subclavian a. | right side of the head and neck; right upper limb and right side of the chest wall | there is only one brachiocephalic trunk |
| buccal | maxillary a. | no named branches | cheek and associated muscles | buccal a. runs with the buccal branch of CN V |
| caroticotympanic | internal carotid a. | no named branches | tympanic cavity | caroticotympanic a. courses through the petrous portion of the temporal bone |
| carotid, common | brachiocephalic trunk (right), aortic arch (left) | external carotid a., internal carotid a. | most of the head and upper neck | common carotid a. bifurcates at the level of the superior border of the thyroid cartilage; the internal carotid a. and the external carotid a. are its terminal brs.; the carotid sinus and carotid body are located at the bifurcation |
| carotid, external | common carotid a. | superior thyroid a., ascending pharyngeal a., lingual a., facial a., occipital a., posterior auricular a., maxillary a., superficial temporal a. | upper neck, face and scalp | external carotid a. is the primary blood supply to the face and superficial head; the maxillary a. and superficial temporal a. are its terminal branches |
| carotid, internal | common carotid a. | none in the neck; in the head: ophthalmic a., posterior communicating a., anterior cerebral a., middle cerebral a. | brain; eye and orbit; forehead | internal carotid a. is the primary blood supply to the brain; it anastomoses with the vertebral aa. and the contralateral internal carotid a. in the cerebral arterial circle (of Willis); anterior and middle cerebral aa. are the terminal brs. of the internal carotid a. |
| central, of retina | ophthalmic a. | superior nasal br., inferior nasal br., superior temporal br., inferior temporal br. | retina | central a. of the retina is the sole blood supply to the retina; it has no significant collateral circulation and blockage of this vessel leads to blindness; its branches are viewed in a funduscopic exam |
| cerebellar, anterior inferior | basilar a. | labyrinthine a. (usually) | pons (motor nucleus of cranial nerve V, chief sensory nucleus of cranial nerve V, abducens nucleus, facial nucleus, superior salivatory nucleus); cerebellum; inner ear | anterior inferior cerebella a. shares its region of supply with branches of the basilar a. |
| cerebellar, posterior inferior | vertebral a. | posterior spinal a. | part of cerebellum; medulla (cochlear nucleus, vestibular nucleus, dorsal motor nucleus of cranial nerve X, nucleus ambiguus) | posterior inferior cerebellar a. shares its region of supply with the vertebral a. and anterior spinal a. (watershed region) |
| cerebellar, superior | basilar a. | no named branches | upper cerebellum; trochlear nucleus | there may be more than one superior cerebellar a. arising from the basilar a. on each side |
| cerebral, anterior | internal carotid a. | anterior communicating a., medial frontobasal a., polar frontal a., callosomarginal a., precuneal a. | medial and inferior portions of the frontal lobe; medial side of the parietal lobe; corpus callosum and part of the limbic lobe; olfactory bulb and tract; optic nerve, optic chiasm and optic tract | the anterior communicating a. unites the two anterior cerebral aa. across the midline |
| cerebral arterial circle | an anastomotic circle of blood vessels formed by portions of the following vessels: posterior cerebral aa. (2); posterior communicating aa. (2); internal carotid aa. (2); anterior cerebral aa. (2); anterior communicating a. | this is an anastomotic loop; major named vessels connect here, but there are no named branches of the arterial circle | brain and midbrain | also known as: arterial circle of Willis |
| cerebral, middle | internal carotid a. | lateral frontobasal a.; prefrontal sulcal a.; precentral sulcal a.; central sulcal a.; anterior parietal a.; posterior parietal a.; anterior, middle and posterior temporal aa. | frontal, parietal and temporal lobes, especially on their lateral surfaces | the middle cerebral a. is the direct continuation of the internal carotid a. |
| cerebral, posterior | basilar a. | posterior cerebral a.; anterior and posterior temporal brs.; medial occipital a. | part of the brainstem (oculomotor nucleus, nucleus of Edinger-Westphal, trochlear nucleus); medial and inferior portions of the temporal lobe; occipital lobe | the two posterior cerebral aa. are the terminal brs. of the basilar a. |
| cervical, ascending | inferior thyroid a. | unnamed muscular branches | deep muscles of the neck | ascending cervical a. ascends on the anterior surface of the anterior scalene m. beside the phrenic n. |
| cervical, deep | costocervical trunk | unnamed muscular branches | deep muscles of the posterior neck | deep cervical a. anastomoses with the occipital a. near the occipital bone |
| cervical, transverse | thyrocervical trunk | unnamed muscular branches, possibly the dorsal scapular a. | trapezius muscle and surrounding tissues | transverse cervical a. gives rise to the dorsal scapular a. ~30% of the time |
| choroidal | internal carotid a. | no named branches | choroid plexus; optic nerve, optic chiasm and optic tract | choroidal a. follows the optic tract |
| ciliary, anterior | muscular brs. of the ophthalmic a. | no named branches | anterior part of eyeball | anterior ciliary aa. course deep to the conjunctiva to reach the region surrounding the iris |
| ciliary, posterior | ophthalmic a. | no named branches | eyeball | posterior ciliary aa. may be classified as short (supplying the posterior eyeball) and lone (supplying the anterior eyeball); short and long posterior ciliary aa. are identical in their size and course external to the eyeball |
| common carotid | brachiocephalic trunk (right), aortic arch (left) | external carotid a., internal carotid a. | most of the head and upper neck | common carotid a. bifurcates at the level of the superior border of the thyroid cartilage; the internal carotid a. and the external carotid a. are its terminal brs.; the carotid sinus and carotid body are located at the bifurcation |
| communicating, anterior | anterior cerebral a. | perforating aa. | an anastomotic connection | anterior communicating a. is a short vessel of anastomosis which crosses the midline to join the paired anterior cerebral aa.; it is part of the Circle of Willis |
| communicating, posterior | internal carotid a. | perforating aa. | an anastomotic connection | a vessel of anastomosis which connects the internal carotid a. to the posterior cerebral a.; part of the cerebral arterial circle (of Willis) |
| costocervical trunk | subclavian a., 2nd part | deep cervical a., highest intercostal a. | deep muscles of the posterior neck; posterior ends of the first 2 intercostal spaces | costocervical trunk is located between the anterior scalene m. and the middle scalene m.; it arches posteriorly over the cervical parietal pleura |
| cricothyroid | superior thyroid a. | no named branches | cricothyroid m., inferior pharyngeal constrictor m. | cricothyroid a. travels with the external br. of the superior laryngeal n. |
| deep cervical | costocervical trunk | unnamed muscular branches | deep muscles of the posterior neck | deep cervical a. anastomoses with the occipital a. near the occipital bone |
| descending palatine | maxillary a. | greater palatine a., lesser palatine a. | palate | descending palatine a. accompanies the greater palatine n. within the palatine canal |
| dorsal lingual | lingual a. | no named branches | posterior tongue, palatine tonsil, soft palate | dorsal lingual a. is only one of five arteries that supply the tonsil bed |
| dorsal nasal | ophthalmic a. | no named branches | dorsum of the nose | dorsal nasal a. anastomoses with the angular a. |
| dorsal scapular | subclavian a., 3rd part | unnamed muscular branches | levator scapulae m., rhomboideus major m., rhomboideus minor m. | dorsal scapular a. anastomoses with the suprascapular a. and the subscapular a. to form the scapular anastomosis; dorsal scapular a is a branch of the transverse cervical a. in ~30% of cases |
| ethmoidal, anterior | ophthalmic a. | anterior meningeal a., anterior septal br., anterior lateral nasal br. | anterior ethmoidal air cells, frontal paranasal sinus, dura mater in the anterior cranial fossa, nasal mucosa, olfactory nerves | anterior ethmoidal a. leaves the orbit through the anterior ethmoidal foramen, then runs forward on the cribriform plate |
| ethmoidal, posterior | ophthalmic a. | no named branches | posterior ethmoidal air cells; olfactory nerves | posterior ethmoidal a. leaves the orbit through the posterior ethmoidal foramen |
| external carotid | common carotid | superior thyroid a., ascending pharyngeal a., lingual a., facial a., occipital a., posterior auricular a., maxillary a., superficial temporal a. | upper neck, face and scalp | external carotid a. is the primary blood supply to the face and superficial head; the maxillary a. and superficial temporal a. are its terminal branches |
| facial | external carotid a. | ascending palatine a., tonsilar br., submental a., superior labial a., inferior labial a., lateral nasal a., angular a. | lower part of the palatine tonsil, submandibular gland, facial muscles and fascia | the angular branch of the facial a. anastomoses with the ophthalmic a. |
| facial, transverse | superficial temporal a. | no named branches | parotid gland, masseter m., facial muscles and skin | transverse facial a. anastomoses with branches of the buccal, infraorbital and facial aa. |
| greater palatine | descending palatine a. | no named branches | hard palate, palatine glands, palatine mucosa | greater palatine a. accompanies the greater palatine n., it is endangered by anesthetic injections for dental procedures |
| inferior alveolar | maxillary a. | lingual br., mylohyoid a., dental brs., mental a. | mandibular teeth and gingiva; mandible; mylohyoid m. | inferior alveolar a. runs with the inferior alveolar nerve within the mandibular canal |
| inferior labial | facial a. | no named branches | skin, muscles, fasciae and mucosa of the lower lip | inferior labial a. shares its region of distribution with branches of the mental a. |
| inferior laryngeal | inferior thyroid a. | no named branches | internal part of the inferior larynx | inferior laryngeal a. accompanies the inferior laryngeal n. |
| inferior thyroid | thyrocervical trunk | ascending cervical a., inferior laryngeal a., esophageal brs., tracheal brs., glandular brs. | thyroid gland, lower larynx, upper trachea, upper esophagus, deep neck muscles | inferior thyroid a. gives rise to the ascending cervical a. as it arches medially |
| internal carotid | common carotid a. | none in the neck; in the head: ophthalmic a., posterior communicating a., anterior cerebral a., middle cerebral a. | brain; eye and orbit; forehead | internal carotid a. is the primary blood supply to the brain; it anastomoses with the vertebral aa. and the contralateral internal carotid a. in the cerebral arterial circle (of Willis); anterior and middle cerebral aa. are the terminal brs. of the internal carotid a. |
| infraorbital | maxillary a. | anterior superior alveolar a., middle superior alveolar a. | maxillary sinus, maxillary incisors, canine and premolar teeth, skin of the cheek below the orbit, mucosa over the maxillary alveolar arch and the adjacent cheek | infraorbital a. is one of four terminal branches of the maxillary a. (see also: descending palatine a., sphenopalatine a., posterior superior alveolar a.) |
| labial, inferior | facial a. | no named branches | skin, muscles, fasciae and mucosa of the lower lip | inferior labial a. shares its region of distribution with branches of the mental a. |
| labial, superior | facial a. | septal br. | skin, muscles, fasciae and mucosa of the upper lip, lower part of the anterior end of the nasal septum | superior labial a. supplies the orbicularis oris m. and the levator labii superioris m. |
| labyrinthine | anterior inferior cerebellar a. (or basilar a.) | no named branches | internal ear | labyrinthine a. accompanies cranial nerves VII and VIII through the internal acoustic meatus |
| lacrimal | ophthalmic a. | lateral palpebral aa. (2) | lacrimal gland, lateral sides of the eyelids | lacrimal a. accompanies the lacrimal n. |
| laryngeal, inferior | inferior thyroid a. | no named branches | internal part of the inferior larynx | inferior laryngeal a. accompanies the inferior laryngeal n. |
| laryngeal, superior | superior thyroid a. | no named branches | internal aspect of the superior larynx | superior laryngeal a. penetrates the thyrohyoid membrane in company with the internal br. of the superior laryngeal n. |
| lateral nasal | facial a. | no named branches | lateral side of the nose | lateral nasal a. anastomoses with the dorsal nasal a. |
| lateral palpebral | lacrimal a. | superior br., inferior br. | lateral sides of the upper and lower eyelids | the 2 lateral palpebral aa. anastomose with the two medial palpebral aa. to form the superior and inferior palpebral arches |
| lesser palatine | descending palatine a. | no named branches | muscles of the soft palate, mucosa and glands of the soft palate, upper part of the tonsil bed | lesser palatine a. is endangered by anesthetic injections for dental procedures |
| lingual | external carotid a. | suprahyoid br., dorsal lingual brs., deep lingual a., sublingual a. | tongue, suprahyoid muscles, palatine tonsil | lingual a. is the 2nd branch off of the anterior side of the external carotid a.; it may arise in common with the facial a. |
| lingual, deep | lingual a. | no named branches | anterior tongue | deep lingual a. is the terminal br. of the lingual a. |
| lingual, dorsal | lingual a. | no named branches | posterior tongue, palatine tonsil, soft palate | dorsal lingual a. is only one of five arteries that supply the tonsil bed |
| masseteric | maxillary a. | no named branches | masseter m. | masseteric a. passes through the mandibular notch to enter the deep surface of the masseter m. |
| maxillary | external carotid a. | deep auricular a., anterior tympanic a., middle meningeal a., inferior alveolar a., masseteric a., posterior deep temporal a., anterior deep temporal a., buccal a., posterior superior alveolar a., infraorbital a., a. of the pterygoid canal, descending palatine a., sphenopalatine a. | deep face, infratemporal fossa, tympanic cavity, muscles of mastication | maxillary a. may course medial or lateral to the lateral pterygoid m. |
| medial palpebral | ophthalmic a. | superior br., inferior br. | medial aspects of the upper and lower eyelids | the 2 medial palpebral aa. anastomose with the two lateral palpebral aa. to form the superior & inferior palpebral arches |
| meningeal, middle | maxillary a. | frontal br., parietal br., petrous br., superior tympanic br. | most of the dura mater (approx. 80%), bones of the cranial vault | middle meningeal a. passes through the foramen spinosum; it may be torn by a fracture at the pterion; it is encircled by the auriculotemporal n. |
| mental | inferior alveolar a. | no named branches | skin, superficial fascia and facial mm. of the chin and lower lip | mental a.passes through the mental foramen; it anastomoses with the inferior labial a.; it accompanies the mental n. |
| middle cerebral | internal carotid a. | lateral frontobasal a.; prefrontal sulcal a.; precentral sulcal a.; central sulcal a.; anterior parietal a.; posterior parietal a.; anterior, middle and posterior temporal aa. | frontal, parietal and temporal lobes, especially on their lateral surfaces | the middle cerebral a. is the direct continuation of the internal carotid a. |
| middle meningeal | maxillary a. | frontal br., parietal br., petrous br., superior tympanic br. | most of the dura mater (approx. 80%), bones of the cranial vault | middle meningeal a. passes through the foramen spinosum; it may be torn by a fracture at the pterion; it is encircled by the auriculotemporal n. |
| middle superior alveolar | infraorbital a. | dental brs., mucosal brs. | maxillary premolar teeth; part of the maxillary sinus | middle superior alveolar a. is located between the inner and outer tables of bone of the maxilla |
| middle temporal | superficial temporal a. | no named branches | temporalis m. | middle temporal a. anastomoses with the posterior br. of the deep temporal a. |
| mylohyoid | inferior alveolar a. | no named branches | mylohyoid m. | mylohyoid a. accompanies the mylohyoid n. to the mylohyoid m.; a rare artery because it enters the superficial surface of its target muscle |
| nasal, dorsal | ophthalmic a. | no named branches | dorsum of the nose | dorsal nasal a. anastomoses with the angular a. |
| nasal, lateral | facial a. | no named branches | lateral side of the nose | lateral nasal a. anastomoses with the dorsal nasal a. |
| occipital | external carotid a. | sternocleidomastoid brs., auricular br., mastoid br., descending br., occipital brs. | lateral neck, posterior neck, posterior scalp | occipital a. anastomoses with the deep cervical a.; it courses with the greater occipital nerve on the posterior surface of the head |
| ophthalmic | internal carotid a. | central retinal a., lacrimal a., muscular brs., anterior ethmoidal a., posterior ethmoidal a., medial palpebral a., supraorbital a., supratrochlear a., dorsal nasal a. | optic nerve, optic chiasm optic tract, retina, extraocular mm., eyelids, forehead, ethmoidal air cells, lateral nasal wall, dorsum of the nose | ophthalmic a. provides the only artery to the retina (central retinal a.) |
| palatine, ascending | facial a. | no named branches | superior pharyngeal constrictor, soft palate, palatine tonsil | ascending palatine a. shares supply of the tonsil bed with 4 other aa. (see also: tonsillar br. of the facial a., palatine br. of the ascending pharyngeal a., tonsillar br. of the dorsal lingual a., tonsillar br. of the descending palatine a.) |
| palatine, descending | maxillary a. | greater palatine a., lesser palatine a. | palate | descending palatine a. accompanies the greater palatine n. within the palatine canal |
| palatine, greater | descending palatine a. | no named branches | hard palate, palatine glands, palatine mucosa | greater palatine a. accompanies the greater palatine n., it is endangered by anesthetic injections for dental procedures |
| palatine, lesser | descending palatine a. | no named branches | muscles of the soft palate, mucosa and glands of the soft palate, upper part of the tonsil bed | lesser palatine a. is endangered by anesthetic injections for dental procedures |
| palpebral, lateral | lacrimal a. | superior br., inferior br. | lateral sides of the upper and lower eyelids | the 2 lateral palpebral aa. anastomose with the two medial palpebral aa. to form the superior and inferior palpebral arches |
| palpebral, medial | ophthalmic a. | superior br., inferior br. | medial aspects of the upper and lower eyelids | the 2 medial palpebral aa. anastomose with the two lateral palpebral aa. to form the superior & inferior palpebral arches |
| pharyngeal, ascending | external carotid | pharyngeal brs., inferior tympanic, posterior meningeal | pharynx | arises from the medial side of the external carotid a. close to the birfurcation |
| posterior auricular | external carotid a. | stylomastoid br., auricular br., occipital br. | part of the external ear, scalp and deeper structures posterior to the ear | posterior auricular and greater occipital share their region of distribution |
| posterior cerebral | basilar a. | posterior cerebral a.; anterior and posterior temporal brs.; medial occipital a. | part of the brainstem (oculomotor nucleus, nucleus of Edinger-Westphal, trochlear nucleus); medial and inferior portions of the temporal lobe; occipital lobe | the two posterior cerebral aa. are the terminal brs. of the basilar a. |
| posterior communicating | internal carotid a. | perforating aa. | an anastomotic connection | a vessel of anastomosis which connects the internal carotid a. to the posterior cerebral a.; part of the cerebral arterial circle (of Willis) |
| posterior deep temporal | maxillary a. | no named branches | posterior part of the temporalis m. | posterior deep temporal a. branches in the infratemporal fossa and runs deep to temporalis m. |
| posterior ethmoidal | ophthalmic a. | no named branches | posterior ethmoidal air cells; olfactory nerves | posterior ethmoidal a. leaves the orbit through the posterior ethmoidal foramen |
| posterior inferior cerebellar | vertebral a. | posterior spinal a. | part of cerebellum; medulla (cochlear nucleus, vestibular nucleus, dorsal motor nucleus of cranial nerve X, nucleus ambiguus) | posterior inferior cerebellar a. shares its region of supply with the vertebral a. and anterior spinal a. (watershed region) |
| posterior radicular | they arise as multiple branches of several vessels (vertebral, posterior intercostal, lumbar, and lateral sacral aa.) | no named branches | meninges; spinal cord; spinal nerve; dorsal rootlets | posterior radicular aa. accompany the dorsal rootlets; they anastomose with the posterior spinal aa. |
| posterior septal | sphenopalatine a. (several small brs.) | no named branches | posterior aspect of the nasal septum | posterior septal a. supplies the mucous membrane of the nasal septum |
| posterior spinal | contributions received from several arteries (posterior inferior cerebellar, vertebral, posterior intercostal, subcostal, lumbar, lateral sacral aa.) | pial arterial plexus | spinal cord, especially the dorsal columns; medulla (nucleus cuneatus and nucleus gracilis) | paired; posterior spinal aa. anastomose with the posterior radicular brs. of the spinal rami of the vertebral, posterior intercostal, subcostal, lumbar and lateral sacral aa. |
| posterior superior alveolar | maxillary a. | dental brs., mucosal brs. | maxillary molar teeth; part of the maxillary sinus | posterior superior alveolar a. enters the maxilla in the infratemporal fossa |
| quadrigeminal | posterior cerebral | no named branches | trochlear nerve; corpora quadrigemina | blockage of the quadrigeminal a. results in paralysis of the superior oblique m. of the eye |
| radicular, anterior | they arise as multiple branches of several vessels (vertebral, posterior intercostal, lumbar, and lateral sacral aa.) | they accompany the ventral rootlets to reach the spinal cord | meninges; spinal cord; spinal nerve; ventral rootlets | anterior radicular aa. anastomose with the anterior spinal a. |
| radicular, great anterior | the spinal br. of the lower posterior intercostal a., subcostal a., or upper lumbar a., usually on left | no named branches | lower spinal cord | great anterior radicular a. anastomoses with the anterior spinal a. at lower thoracic or upper lumbar spinal cord levels |
| radicular, posterior | they arise as multiple branches of several vessels (vertebral, posterior intercostal, lumbar, and lateral sacral aa.) | no named branches | meninges; spinal cord; spinal nerve; dorsal rootlets | posterior radicular aa. accompany the dorsal rootlets; they anastomose with the posterior spinal aa. |
| sphenopalatine | maxillary a. | posterior lateral nasal brs., posterior septal brs. | posterolateral nasal wall, posteroinferior nasal septum, hard palate behind the maxillary incisor teeth | sphenopalatine a. accompanies the nasopalatine n. |
| spinal, anterior | contributions received from several arteries (vertebral, posterior intercostal, subcostal, lumbar, lateral sacral aa.) | pial arterial plexus | meninges; spinal cord; medulla (dorsal motor nucleus of cranial nerve X, nucleus ambiguus, spinal accessory nucleus and hypoglossal nucleus) | the anterior spinal a. anastomoses with the anterior radicular brs. of the spinal rami of the vertebral, posterior intercostal, subcostal, lumbar and lateral sacral aa. |
| spinal, posterior | contributions received from several arteries (posterior inferior cerebellar, vertebral, posterior intercostal, subcostal, lumbar, lateral sacral aa.) | pial arterial plexus | spinal cord, especially the dorsal columns; medulla (nucleus cuneatus and nucleus gracilis) | paired; posterior spinal aa. anastomose with the posterior radicular brs. of the spinal rami of the vertebral, posterior intercostal, subcostal, lumbar and lateral sacral aa. |
| stylomastoid | posterior auricular a. | no named branches | tympanic cavity, mastoid air cells | stylomastoid br. of the posterior auricular a. passes through the stylomastoid foramen in company with the facial n. |
| subclavian | brachiocephalic a. (right), aortic arch (left) | 1st part: vertebral a., thyrocervical trunk, internal thoracic a.; 2nd part: costocervical trunk; 3rd part: dorsal scapular a. (70%) | neck, brain, spinal cord, thyroid gland, larynx, shoulder, chest muscles, upper limb | subclavian a. is continuous with the axillary a., the name change occurs at the lateral border of the first rib; anterior scalene muscle passes anterior to the subclavian a., dividing it into 3 parts |
| sublingual | lingual a. | no named branches | mylohyoid m., sublingual gland, floor of the mouth | sublingual a. is one of three branches of the lingual a. (see also: dorsal lingual a., deep lingual a.) |
| submental | facial a. | no named branches | muscles, skin and fascia under the chin; submandibular gland | submental a. supplies the submandibular gland and the mylohyoid m. in addition to the skin and superficial fascia |
| superficial temporal | external carotid a. | transverse facial a.; anterior auricular brs.; zygomatico-orbital a.; middle temporal a.; frontal br.; parietal br. | scalp of the lateral side of the head; lateral face; temporalis m. | superficial temporal a. and maxillary a. are the terminal branches of the external carotid a. |
| superior cerebellar | basilar a. | no named branches | upper cerebellum; trochlear nucleus | there may be more than one superior cerebellar a. arising from the basilar a. on each side |
| superior labial | facial a. | septal br. | skin, muscles, fasciae and mucosa of the upper lip, lower part of the anterior end of the nasal septum | superior labial a. supplies the orbicularis oris m. and the levator labii superioris m. |
| superior laryngeal | superior thyroid a. | no named branches | internal aspect of the superior larynx | superior laryngeal a. penetrates the thyrohyoid membrane in company with the internal br. of the superior laryngeal n. |
| superior thyroid | external carotid a. | infrahyoid br., sternocleidomastoid br., superior laryngeal a., cricothyroid br., glandular brs. | thyroid gland, upper part of the larynx, infrahyoid mm., sternocleidomastoid m. | superior thyroid a. is usually the first branch of the external carotid a. |
| supraorbital | ophthalmic a. | no named branches | muscles, skin and fascia of the forehead | supraorbital a. accompanies the supraorbital n. |
| suprascapular | thyrocervical trunk | muscular | supraspinatus & infraspinatus, shoulder joint | anastomoses with the circumflex scapular a. and the dorsal scapular a. to form the scapular anastomosis |
| supratrochlear | ophthalmic a. | no named branches | muscles, skin and fascia of the medial forehead | supratrochlear a. accompanies the supratrochlear n. |
| temporal, anterior deep | maxillary a. | no named branches | anterior part of temporalis m. and surrounding deep tissues | anterior deep temporal a. branches in the infratemporal fossa and runs deep to temporalis m. |
| temporal, middle | superficial temporal a. | no named branches | temporalis m. | middle temporal a. anastomoses with the posterior br. of the deep temporal a. |
| temporal, posterior deep | maxillary a. | no named branches | posterior part of the temporalis m. | posterior deep temporal a. branches in the infratemporal fossa and runs deep to temporalis m. |
| temporal, superficial | external carotid a. | transverse facial a.; anterior auricular brs.; zygomatico-orbital a.; middle temporal a.; frontal br.; parietal br. | scalp of the lateral side of the head; lateral face; temporalis m. | superficial temporal a. and maxillary a. are the terminal branches of the external carotid a. |
| thoracic, internal | subclavian a. (1st part) | pericardiocophrenic a., perforating brs., anterior intercostal aa., mediastinal brs., thymic brs., musculophrenic a., superior epigastric a. | mediastinum, anterior thoracic wall, anterior abdominal wall, respiratory diaphragm | internal thoracic a. is also known as: internal mammary a. |
| thyrocervical trunk | subclavian a., 1st part | inferior thyroid a., transverse cervical a., suprascapular a. | lower neck, posterior shoulder, thyroid gland | thyrocervical trunk does not give rise to the ascending cervical a.- it is a branch of the inferior thyroid a. |
| thyroid, inferior | thyrocervical trunk | ascending cervical a., inferior laryngeal a., esophageal brs., tracheal brs., glandular brs. | thyroid gland, lower larynx, upper trachea, upper esophagus, deep neck muscles | inferior thyroid a. gives rise to the ascending cervical a. as it arches medially |
| thyroid, superior | external carotid a. | infrahyoid br., sternocleidomastoid br., superior laryngeal a., cricothyroid br., glandular brs. | thyroid gland, upper part of the larynx, infrahyoid mm., sternocleidomastoid m. | superior thyroid a. is usually the first branch of the external carotid a. |
| thyroidea ima | brachiocephalic a. or aortic arch | no named branches | isthmus of the thyroid gland, upper trachea | thyroidea ima a. is present in 10% of individuals; it is clinically significant because it is a midline artery in the region of tracheostomy; ima means "lowest" |
| transverse cervical | thyrocervical trunk | unnamed muscular branches, possibly the dorsal scapular a. | trapezius muscle and surrounding tissues | transverse cervical a. gives rise to the dorsal scapular a. ~30% of the time |
| transverse facial | superficial temporal a. | no named branches | parotid gland, masseter m., facial muscles and skin | transverse facial a. anastomoses with branches of the buccal, infraorbital and facial aa. |
| trunk, brachiocephalic | aortic arch | right common carotid a., right subclavian a. | right side of the head and neck; right upper limb and right side of the chest wall | there is only one brachiocephalic trunk |
| trunk, costocervical | subclavian a., 2nd part | deep cervical a., highest intercostal a. | deep muscles of the posterior neck; posterior ends of the first 2 intercostal spaces | costocervical trunk is located between the anterior scalene m. and the middle scalene m.; it arches posteriorly over the cervical parietal pleura |
| trunk, thyrocervical | subclavian a., 1st part | inferior thyroid a., transverse cervical a., suprascapular a. | lower neck, posterior shoulder, thyroid gland | thyrocervical trunk does not give rise to the ascending cervical a.- it is a branch of the inferior thyroid a. |
| tympanic, anterior | maxillary a. | no named branches | middle ear | anterior tympanic a. passes through the petrotympanic fissure along with the chorda tympani n. |
| vertebral | subclavian a.(1st part) | spinal brs., muscular brs., anterior spinal a., posterior inferior cerebellar a., medullary brs., meningeal brs., basilar a. | deep neck, cervical spinal cord, spinal cord; medulla (dorsal motor nucleus of cranial nerve X, nucleus ambiguus, spinal accessory nucleus and hypoglossal nucleus) | vertebral a. anastomoses with the internal carotid a. in the cerebral arterial circle (of Willis); it courses through the transverse foramina of vertebrae C1-C6 |