

# Anatomy

## Muscles

The human body has more than 650 muscles, the total varying according to the authority, as some list as separate muscles what others regard as single muscles. Most of the muscles occur in pairs, reflecting the body's bilateral symmetry; five occur singly. In the lists that follow, muscles are grouped as to body area. Following those groupings is an alphabetical index of all of the muscles included, and the body area in which each may be found.

### HEAD AND FACE

**auricularis anterior** (aw-rik'ū-lā'ris ān-tē'rī-or). ACTION: Draws pinna of ear forward and upward. ORIGIN: Superficial temporal fascia. INSERTION: Helix of ear anteriorly. INNERVATION: Facial.

**auricularis posterior** (aw-rik'ū-lā'ris pōs-tē'rē-or). ACTION: Draws pinna of ear backward. ORIGIN: Mastoid process. INSERTION: Root of auricle. INNERVATION: Facial.

**auricularis superior** (aw-rik'ū-lā'ris sū-pē'rē-or). ACTION: Elevates pinna of ear. ORIGIN: Galea aponeurotica. INSERTION: Upper portion of pinna of ear. INNERVATION: Facial.

**buccinator** (būk'sīn-ā'tor). ACTION: Compresses cheek, retracts angle of mouth. ORIGIN: Alveolar process of maxilla, pterygo-mandibular ligament, buccinator ridge of mandible. INSERTION: Orbicularis oris. INNERVATION: Facial.

**ciliaris** (sil-i-ā'ris). ACTION: Alters shape of crystalline lens in accommodation. ORIGIN: (1) Meridional: Junctions of cornea and sclera. (2) Circular: Fibers forming a circle close to iris. INSERTION: (1) External layers of choroid. (2) Ciliary process. INNERVATION: Short ciliary.

**corrugator supercillii** (kōr'ū-gā'tōr sū-pēr-sil'ī-i). ACTION: Draws eyebrows down and in. ORIGIN: Inner end of superciliary arch. INSERTION: Skin above orbital arch. INNERVATION: Facial.

**depressor anguli oris** (dē-prēs'or āng'ū-liō'ris). ACTION: Depresses angle of mouth. ORIGIN: External oblique line of mandible. INSERTION: Angle of mouth. INNERVATION: Facial.

**depressor labii inferioris** (dē-prēs'or lā'bi-i in-fē'rī-ō'ris). ACTION: Draws lower lip down. ORIGIN: External oblique line of the mandible. INSERTION: Lower lip and orbicularis oris. INNERVATION: Facial.

**depressor septi nasi** (dē-prēs'or sēp'tī nā'sī). ACTION: Draws outer wall of nostril downward. ORIGIN: Incisive fossa of superior maxillary bone. INSERTION: Septum and ala of nose. INNERVATION: Facial.

**dilatator naris anterior** (dīl'ā-tor nā'ris ān-tē'rī-or). ACTION: Dilates apertures of nostril. ORIGIN: Cartilage of ala of nose. IN-

sertion: Border of ala. INNERVATION: Facial.

**dilatator naris posterior** (dīl'ā-tor nā'ris pōs-tē'rē-or). ACTION: Dilates apertures of nostril. ORIGIN: Nasal notch of superior maxilla and the sesamoid cartilages. INSERTION: Integument of margin of nostril. INNERVATION: Facial.

**frontalis** (frōn-tā'lis). ACTION: Anterior portion of occipitofrontalis muscle, elevates skin of forehead and eyebrows. ORIGIN: Epicranial aponeurosis. INSERTION: Skin of forehead and eyebrows. INNERVATION: Facial nerve (CN VII).

**levator anguli oris** (lē-vā'tor āng'ū-liō'ris). ACTION: Elevates angle of mouth. ORIGIN: Canine fossa of maxilla. INSERTION: Angle of mouth and orbicularis oris. INNERVATION: Facial.

**levator labii superioris** (lē-vā'tor lā'bi-isū-pē'rē-ō'ris). ACTION: Elevates and extends upper lip. ORIGIN: Lower margin of orbit, malar bone. INSERTION: Upper lip. INNERVATION: Infraorbital branch of facial.

**levator labii superioris alaeque nasi** (lē-vā'tor lā'bi-isū-pē'rē-ō'ris ā-lē'kwēnā'sī). ACTION: Elevates upper lip, dilates nostril. ORIGIN: Nasal process of maxilla. INSERTION: Cartilage of ala of nose and upper lip. INNERVATION: Infraorbital branch of facial.

**levator palpebrae superioris** (lē-vā'tor pāl'pē-brēsū-pē'rē-ō'ris). ACTION: Raises upper eyelid. ORIGIN: Lesser wing of the sphenoid bone. INSERTION: Upper tarsal cartilage. INNERVATION: Oculomotor.

**masseter** (mā-sē'tēr). ACTION: Raises mandible. ORIGIN: Zygomatic arch and malar process of superior maxilla. INSERTION: Angle of ramus and coronoid process of mandible. INNERVATION: Mandibular division of trigeminal.

**mentalis** (mēn-tā'lis). ACTION: Elevates and protrudes lower lip, wrinkles skin of chin. ORIGIN: Incisive fossa of mandible. INSERTION: Integument of chin. INNERVATION: Facial.

**nasalis** (nā-sā'lis). DESCRIPTION: Consists of transverse and alar parts. ACTION: Depresses cartilaginous part of nose and draws the alae medially. ORIGIN: Maxilla.

INSERTION: Bridge of nose. INNERVATION: Buccal branches of facial.

**obliquus inferior oculi** (ób-li'kwūs ín-fē'ri-or ók'ū-lī). ACTION: Rotates eyeball up and out. ORIGIN: Orbital plate of superior maxillary bone. INSERTION: Sclerotic coat at right angles to insertion of rectus externus just below it. INNERVATION: Oculomotor.

**obliquus superior oculi** (ób-li'kwūs sū-pē'rē-or ók'ū-lī). ACTION: Rotates eyeball down and out. ORIGIN: Above optic foramen. INSERTION: By a tendon through trochlea to the sclerotic coat. INNERVATION: Trochlear.

**occipitofrontalis** (ók-síp'í-tō-frón-tā'lis). DESCRIPTION: Consists of (1) occipitalis and (2) frontalis bellies. ACTION: (1) Draws scalp back. (2) Draws scalp forward, raises eyebrows. ORIGIN: (1) Occipital and temporal bones. (2) Procerus, corrugator, and orbicularis muscles. INSERTION: Galea aponeurotica. INNERVATION: Facial.

**orbicularis oculi** (or-bík'ū-lā'ris ók'ū-lī). ACTION: Closes eyelid, wrinkles forehead vertically, compresses lacrimal sac. ORIGIN: (1) (*Pars lacrimalis*) Lacrimal bone. (2) (*Pars orbitalis*) Frontal processes of maxilla and frontal bone. (3) (*Pars palpebralis*) Inner canthus. INSERTION: (1) Joins palpebral portion. (2) Encircles orbit to orbit. (3) Outer canthus. INNERVATION: Facial.

**orbicularis oris** (or-bík'ū-lā'ris ó'ris). ACTION: Closes lips. ORIGIN: Nasal septum and canine fossa of mandible by accessory fibers. INSERTION: Buccinator and adjacent muscles surrounding mouth. INNERVATION: Facial.

**procerus** (prō-sē'rūs). ACTION: Draws skin of forehead down. ORIGIN: Bridge of nose. INSERTION: Skin over root of nose. INNERVATION: Facial.

**pterygoideus lateralis** (tēr-í-goyd'ē-ūs lát'er-ā'lis). ACTION: Brings jaw forward, moves jaw from side to side, opens jaws. ORIGIN: (1) Outer plate of pterygoid process. (2) Great wing of sphenoid and infratemporal ridge. INSERTION: Neck of con-

dyle of mandible. INNERVATION: Lateral pterygoid from trigeminal nerve.

**pterygoideus medialis** (tēr-í-goyd'ē-ūs mē-dī-ā'lis). ACTION: Closes jaw by raising and advancing it. ORIGIN: Pterygoid fossa of sphenoid bone. INSERTION: Inner surface of angle of mandible. INNERVATION: Medial pterygoid from trigeminal nerve.

**rectus externus or lateralis** (rēk'tūs ēks-tēr'nūs,lāt'er-ā'lis). ACTION: Rotates eyeball outward. ORIGIN: Margin of sphenoidal fissure and outer margin of optic foramen. INSERTION: Sclerotic coat. INNERVATION: Abducent.

**rectus inferior** (rēk'tūs ín-fē'ri-or). ACTION: Rotates eyeball downward. ORIGIN: Lower margin of optic foramen. INSERTION: Sclerotic coat. INNERVATION: Oculomotor.

**rectus internus or medialis** (rēk'tūs ín-tēr'nūs,mē-dī-ā'lis). ACTION: Rotates eyeball inward. ORIGIN: Lower margin of optic foramen. INSERTION: Sclerotic coat. INNERVATION: Oculomotor.

**rectus superior** (rēk'tūs sū-pē'rē-or). ACTION: Rotates eyeball upward. ORIGIN: Upper margin of optic foramen. INSERTION: Sclerotic coat. INNERVATION: Oculomotor.

**risorius** (rī-sō'rī-ūs). ACTION: Draws angle of mouth outward ("laughing muscle"). ORIGIN: Fascia over masseter muscle. INSERTION: Angle of mouth. INNERVATION: Facial, buccal branch.

**temporalis** (tēm-pō-rā'lis). ACTION: Closes jaws. ORIGIN: Temporal fossa and temporal fascia. INSERTION: Coronoid process of lower jaw. INNERVATION: Trigeminal, mandibular division.

**zygomaticus major** (zī-gō-māt'ī-kūs mā'jor). ACTION: Draws upper lip backward, upward, and outward. ORIGIN: Zygomatic bone, zygomatic arch. INSERTION: Angle of mouth. INNERVATION: Facial.

**zygomaticus minor** (zī-gō-māt'ī-kūs mī'nor). ACTION: Draws the upper lip up and out. ORIGIN: Zygomatic bone behind the maxillary arch. INSERTION: Angle of mouth, orbicularis oris. INNERVATION: Facial.

## EAR

**antitragicus** (an-tī-trā'jī-kūs). ORIGIN: Anterior part of antitragus. INSERTION: Opposite side at larger auricular fissure. INNERVATION: Posterior auricular branch of facial.

**helicis major and minor** (hēl'ī-sīs mā'jor, mī'nor). ACTION: Tighten the skin of auditory canal. ORIGIN: Tuberosity on helix. INSERTION: Rim of helix. INNERVATION: Auriculo-temporal and posterior auricular.

**obliquus auriculae** (ób-li'kwūs aw-rík'ū-lē). ORIGIN: Concha of the ear. INSERTION: Fossa of anthelix. INNERVATION: Posterior auricular branch of facial.

**stapedius** (stā-pē'dī-ūs). ACTION: Depresses base of the stapes. ORIGIN: Interior

of pyramid. INSERTION: Neck of stapes. INNERVATION: Tympanic branch of facial.

**tensor tympani** (tēn'sōr tím'pān-ī). ACTION: Draws the membrana tympani tense. ORIGIN: Temporal tube, eustachian tube and canal. INSERTION: Handle of malleus. INNERVATION: Branch of mandibular through otic ganglion.

**tragicus** (trā'jī-kūs). ORIGIN: Outer part of tragus. INNERVATION: Temporal branch of facial.

**transversus auriculae** (trāns-vēr'sūs aw-rík'ū-lē). ACTION: Retracts helix. ORIGIN: Cranial surface of pinna. INSERTION: Circumference of pinna. INNERVATION: Posterior auricular branch of facial.

## NECK

**constrictor pharyngis inferior** (kōn-strīk'tor fār-in'jīs in-fē'rī-or). ACTION: Narrows pharynx, as in swallowing. ORIGIN: Sides of cricoid and thyroid cartilage. INSERTION: Posterior raphe of pharyngeal wall. INNERVATION: Pharyngeal plexus.

**constrictor pharyngis medius** (kōn-strīk'tor fār-in'jismē'dē-ūs). ACTION: Narrows pharynx, as in swallowing. ORIGIN: Both cornua of hyoid bone and stylohyoid ligament. INSERTION: Middle of posterior pharyngeal wall. INNERVATION: Pharyngeal plexus.

**constrictor pharyngis superior** (kōn-strīk'tor fār-in'jissū-pē'rē-or). ACTION: Narrows pharynx, as in swallowing. ORIGIN: Internal pterygoid plate, pterygomandibular ligament, jaw, side of tongue. INSERTION: Posterior pharyngeal wall. INNERVATION: Pharyngeal plexus.

**digastricus** (dī-gās'trī-kūs). DESCRIPTION: Consists of (1) anterior and (2) posterior bellies. ACTION: (1) Draws hyoid bone forward. (2) Draws hyoid bone backward. ORIGIN: (1) Lower border of lower jaw. (2) Mastoid groove of temporal bone. INSERTION: Intermediate tendon between both bellies. INNERVATION: (1) Mylohyoid. (2) Facial.

**genioglossus** (jē-nē'ō-glōs'ūs). ACTION: Protrudes and retracts tongue, elevates hyoid. ORIGIN: Inner surface of symphysis of mandible. INSERTION: Hyoid and bottom of tongue. INNERVATION: Hypoglossal.

**geniohyoideus** (jē-nē'ō-hī-oyd'ē-ūs). ACTION: suprahyoid muscle, pulls hyoid bone upward and anteriorly, shortens floor of mouth, widens pharynx. ORIGIN: inferior mental spine of mandible. INSERTION: body of hyoid bone. INNERVATION: C1 nerve fibers via hypoglossal nerve.

**glossopalatinus** (glōs'ō-pāl-ā-tī'nūs). ACTION: Elevates back of tongue and constricts fauces. ORIGIN: Undersurface of soft palate. INSERTION: Side of tongue. INNERVATION: Pharyngeal plexus.

**hyoglossus** (hī'ō-glōs'ūs). ACTION: Depresses side of tongue and retracts tongue. ORIGIN: Cornua and body of hyoid. INSERTION: Side of tongue. INNERVATION: Hypoglossal.

**levator veli palatini** (lē-vā'tor vē'li pāl'ā-tī'nī). ACTION: Elevates soft palate. ORIGIN: Petrous portion of temporal bone and cartilaginous eustachian tube. INSERTION: Aponeurosis of soft palate. INNERVATION: Pharyngeal plexus.

**linguae** (ling-gwē). ACTION: Elevates sides and center of tongue. ORIGIN: Undersurface of tongue. INSERTION: Edge of tongue. INNERVATION: Hypoglossal.

**longus capitis** (lōng'ūs káp'ī-tīs). ACTION: Flexes head. ORIGIN: Transverse processes of 3rd to 6th cervical vertebrae. INSERTION: Occipital bone, basilar process. INNERVATION: Branches of 1st to 3rd cervical nerves.

**longus colli** (lōng'ūs kōl'ī). DESCRIPTION: Consists of three parts: (1) superior oblique, (2) inferior oblique, and (3) vertical. ACTION: Twists and bends neck forward. ORIGIN: (1) Transverse processes of 3rd to 5th cervical vertebrae. (2) Bodies of 1st to 3rd thoracic vertebrae. (3) Bodies of three upper thoracic and three lower cervical vertebrae. INSERTION: (1) Anterior tubercle of atlas. (2) Transverse processes of 5th and 6th cervical vertebrae. (3) Bodies of 2nd to 4th cervical vertebrae. INNERVATION: Branches of 2nd to 7th cervical.

**mylohyoideus** (mī'lō-hī-oyd'ē-ūs). ACTION: Elevates floor of mouth and hyoid, depresses jaw. ORIGIN: Mylohyoid line of mandible. INSERTION: Body of hyoid and median raphe. INNERVATION: Mylohyoid.

**omohyoideus** (ō'mō-hī-oyd'ē-ūs). ACTION: Depresses hyoid. ORIGIN: Upper border of scapula. INSERTION: Hyoid bone. INNERVATION: Upper cervical through ansa hypoglossi.

**pars thyropharyngea musculi constrictoris pharyngis inferioris** (pārz thī'rō-fā-rīn'jē-āmūs'kū-lī kōn-strīk'tōr'īsfā-rīn'jīs in-fēr'ē-ō'īs).

**pharyngopalatinus** (fār-in'gō-pāl-ā-tī'nūs). ACTION: Narrows fauces and shuts off nasopharynx. ORIGIN: Soft palate. INSERTION: Thyroid cartilage and aponeurosis of the pharynx. INNERVATION: Pharyngeal plexus.

**platysma** (plā-tīz'mā). ACTION: Wrinkles skin of neck and chest, depresses jaw and lower lip. ORIGIN: Clavicle, acromion and fascia over deltoid, and pectoralis major. INSERTION: Lower border of mandible, risorius, and opposite platysma. INNERVATION: Cervical branch of facial.

**rectus capitis anterior** (rēk'tūs káp'ī-tīsān-tē'rī-or). ACTION: Turns and inclines the head. ORIGIN: Base of atlas. INSERTION: Occipital bone, basilar process. INNERVATION: Between 1st and 2nd cervical.

**rectus capitis lateralis** (rēk'tūs káp'ī-tīslāt'ēr-ā'līs). ACTION: Inclines head laterally and supports it. ORIGIN: Transverse process of atlas. INSERTION: Jugular process of occipital bone. INNERVATION: Between 1st and 2nd cervical nerves.

**salpingopharyngeus** (sāl-pīn'gō-fār-īn'jē-ūs). ACTION: Elevates nasopharynx. ORIGIN: Eustachian tube close to nasopharynx. INSERTION: Posterior portion of the pharyngopalatinus. INNERVATION: Pharyngeal plexus.

**scalenus anterior** (skā-lē'nūs ān-tē'rī-or). ACTION: Elevates 1st rib and flexes neck. ORIGIN: Transverse processes of 3rd to 6th cervical vertebrae. INSERTION: Tubercle of 1st rib. INNERVATION: Cervical plexus.

**scalenus medius** (skā-lē'nūs mē'dē-ūs). ACTION: Elevates 1st rib and flexes neck. ORIGIN: Transverse processes of 2nd to 6th

cervical vertebrae. INSERTION: First rib. INNERVATION: Cervical plexus.

**scalenus posterior** (skā-lē'nūs pōs-tē'rē-or). ACTION: Elevates 2nd rib and flexes neck. ORIGIN: Transverse processes of 4th to 6th cervical vertebrae. INSERTION: Second rib. INNERVATION: Cervical and brachial plexus.

**sternocleidomastoideus** (stēr'nō-klī-dō-mās-toyd'ē-ūs). ACTION: Rotates and laterally flexes neck. ORIGIN: By two heads, from sternum and clavicle. INSERTION: Mastoid process and outer part of superior curved line of occipital bone. INNERVATION: Spinal accessory.

**sternohyoideus** (stēr'nō-hī-oyd'ē-ūs). ACTION: Depresses hyoid bone. ORIGIN: Manubrium sterni and 1st costal cartilage. INSERTION: Body of hyoid bone. INNERVATION: Upper cervical through ansa hypoglossi.

**sternothyroideus** (stēr'nō-thī-rē-oyd'ē-ūs). ACTION: Depresses thyroid cartilage. ORIGIN: Sternum and 1st costal cartilage. INSERTION: Side of thyroid cartilage. INNERVATION: Upper cervical through ansa hypoglossi.

**styloglossus** (stī'lō-glōs'ūs). ACTION: Retracts and elevates tongue. ORIGIN: Styloid process. INSERTION: Side of tongue. INNERVATION: Hypoglossal.

**stylohyoideus** (stī'lō-hī-oyd'ē-ūs). ACTION: Elevates hyoid, drawing it up and

back. ORIGIN: Styloid process. INSERTION: Body of hyoid bone. INNERVATION: Facial.

**stylopharyngeus** (stī'lō-fār-in'jē-ūs). ACTION: Elevates and dilates pharynx. ORIGIN: Styloid process. INSERTION: Thyroid cartilage and side of pharynx. INNERVATION: Glossopharyngeal.

**tensor veli palatini** (tēn'sōr vē'li pāl'ā-tī'nī). ACTION: Stretches soft palate. ORIGIN: Spine of sphenoid, scaphoid fossa of internal pterygoid process and eustachian tube. INSERTION: Posterior border of hard palate and aponeurosis of soft palate. INNERVATION: Otic ganglion, trigeminal nerve.

**thyrohyoideus** (thī-rō-hī-oyd'ē-ūs). ACTION: Depresses hyoid bone; elevates thyroid cartilage if hyoid bone is fixed. ORIGIN: Side of thyroid cartilage. INSERTION: Cornu and body of hyoid bone. INNERVATION: Hypoglossal.

**thyropharyngeus** (thī-rō-fār-in'jē-ūs). ACTION: Narrows inferior pharynx during swallowing. ORIGIN: Inferior cornu and oblique line of thyroid cartilage. INSERTION: Median raphe of posterior wall of pharynx. INNERVATION: Laryngeal branches of vagus nerve (CN X). SYN: pars thyropharyngea musculi constrictorispharyngis inferioris.

**uvulae** (ū'vū-lē). ACTION: Elevates the uvula. ORIGIN: Posterior nasal spine. INSERTION: Forms large part of uvula. INNERVATION: Pharyngeal plexus.

## LARYNX

**aryepiglotticus** (ār'ē-ēp'i-glōt'īk-ūs). ACTION: Closes glottic opening. ORIGIN: Arytenoid cartilage. INSERTION: Epiglottis. INNERVATION: Laryngeal, recurrent.

**arytenoideus** (ār'ē-tē-noyd'ē-ūs). DESCRIPTION: Consists of (1) arytenoideus obliquus and (2) arytenoideus transversus. ACTION: Closes glottic opening. ORIGIN: Arytenoid cartilage. INSERTION: (1) Aryepiglottic fold. (2) Crosses between the two cartilages of the obliquus portion. INNERVATION: Laryngeal, recurrent.

**cricoarytenoideus lateralis** (krī'kō-ār'ē-tē-noyd'ē-ūslāt'ēr-ā'lis). ACTION: Narrows glottis. ORIGIN: Upper border of arch of cricoid cartilage. INSERTION: Muscular process of arytenoid cartilage. INNERVATION: Laryngeal, recurrent.

**cricoarytenoideus posterior** (krī'kō-ār'ē-tē-noyd'ē-ūspōs-tē'rē-or). ACTION: Opens glottis. ORIGIN: Back of cricoid cartilage. INSERTION: Muscular process of arytenoid cartilage. INNERVATION: Laryngeal, recurrent.

**cricothyroideus** (krī'kō-thī-royd'ē-ūs). ACTION: Tightens vocal cords. ORIGIN: Anterior surface of cricoid cartilage. INSERTION: Thyroid cartilage. INNERVATION: Laryngeal, superior.

**thyroarytenoideus** (thī'rō-ār'ē-tē-noyd'ē-ūs). ACTION: Relaxes vocal cords. ORIGIN: Thyroid cartilage. INSERTION: Arytenoid cartilage. INNERVATION: Laryngeal, recurrent.

**thyroepiglotticus** (thī'rō-ēp'i-glōt'īk-ūs). ACTION: Depresses epiglottis. ORIGIN: Thyroid cartilage. INSERTION: Epiglottis and sacculus laryngis. INNERVATION: Laryngeal, recurrent.

**vocalis** (vō-kā'lis). ACTION: Thin muscle fibers along the medial edge of the thyroarytenoid muscle, relaxes posterior vocal ligament, tenses anterior vocal ligament. ORIGIN: Vocal process of arytenoid cartilage. INSERTION: Vocal ligament. INNERVATION: Recurrent laryngeal branch of vagus nerve (CN X).

## BACK

**iliocostalis cervicis** (il'ē-ō-kōs-tā'lissēr'vī-sīs). ACTION: Extends cervical spine. ORIGIN: Angles of 3rd to 6th ribs. INSERTION: Transverse processes of 4th to 6th cervical vertebrae. INNERVATION: Cervical plexus.

**iliocostalis lumborum** (il'ē-ō-kōs-tā'lislūm-bō'rūm). ACTION: Extends lumbar spine. ORIGIN: With sacrospinalis. INSERTION: In angles of 5th to 12th ribs. INNERVATION: Branches of thoracic and lumbar nerves.

## Muscles

**iliocostalis thoracis** (il'ē-ō-kōs-tā'listhō-rā'sis). ACTION: Keeps dorsal spine erect. ORIGIN: Angles of 12th to 7th ribs. INSERTION: Sixth to 1st ribs and 7th cervical vertebra. INNERVATION: Branches of thoracic nerves.

**interspinales** (in-tēr-spī-nā'lēz). DESCRIPTION: A series. ACTION: Supports and extends vertebral column. ORIGIN: Under surface of spine of one vertebra. INSERTION: Spine of vertebra above. INNERVATION: Branches of cervical, thoracic, and lumbar nerves.

**intertransversarii** (in-tēr-trāns-vēr-sā'rī-i). ACTION: Flexes vertebral column. ORIGIN: Between transverse processes of contiguous vertebrae. INNERVATION: Branches of cervical, thoracic, and lumbar nerves.

**latissimus dorsi** (lā-tīs'ī-mūs dōr'sī). ACTION: Adducts, extends, and rotates arm. ORIGIN: Lower thoracic and lumbar vertebrae, sacrum, and tip of iliac crest. INSERTION: Intertubercular groove of humerus. INNERVATION: Brachial plexus.

**levator scapulae** (lē-vā'tor skāp'ū-lē). ACTION: Elevates posterior angle of scapula. ORIGIN: Transverse process of four upper cervical vertebrae. INSERTION: Superior edge of scapula. INNERVATION: Dorsal scapular from 5th cervical and branches of 3rd and 4th cervical.

**longissimus capitis** (lōn-jīs'ī-mūs kāp'ī-tīs). ACTION: Keeps head erect, draws it backward or to one side. ORIGIN: Upper thoracic and lower and middle cervical vertebrae. INSERTION: Mastoid process. INNERVATION: Cervical plexus.

**longissimus cervicis** (lōn-jīs'ī-mūs sēr'vī-sīs). ACTION: Extends cervical spine. ORIGIN: Upper thoracic vertebrae. INSERTION: Ribs and upper lumbar and thoracic vertebrae. INNERVATION: Cervical plexus and upper thoracic nerves.

**longissimus thoracis** (lōn-jīs'ī-mūs thō-rā'sīs). ACTION: Extends spinal column. ORIGIN: Transverse processes of lumbar and dorsal vertebrae. INSERTION: Lowest ribs and lumbar and dorsal vertebrae. INNERVATION: Lumbar and thoracic nerves.

**multifidus** (mūl-tif'ī-dūs). ACTION: Rotates spinal column. ORIGIN: Sacrum, iliac spine, lumbar, cervical, and dorsal vertebrae. INSERTION: Laminae and spinous processes of next four vertebrae above. INNERVATION: Thoracic and lumbar nerves.

**obliquus capitis inferior** (ōb-lī'kwūs kāp'ī-tīs in-fē'rī-or). ACTION: Rotates head. ORIGIN: Spine of axis. INSERTION: Transverse process of atlas. INNERVATION: Suboccipital.

**obliquus capitis superior** (ōb-lī'kwūs kāp'ī-tīs-sū-pēr-re-or). ACTION: Rotates head. ORIGIN: Transverse process of axis. INSERTION: Occipital bone. INNERVATION: Suboccipital.

**rectus capitis posterior major** (rēk'tūs kāp'ī-tispōs-tē'rē-or mā'jor). ACTION: Rotates and draws head backward. ORIGIN:

Spine of axis. INSERTION: Inferior curved line of occipital bone. INNERVATION: Suboccipital.

**rectus capitis posterior minor** (rēk'tūs kāp'ī-tispōs-tē'rē-or mī'nor). ACTION: Rotates and draws head backward. ORIGIN: Posterior tubercle of atlas. INSERTION: Inferior curved line of occipital bone. INNERVATION: Suboccipital.

**rhomboideus major** (rōm-boy'dē-ūs mā'jor). ACTION: Retracts, elevates, and downwardly rotates scapula. ORIGIN: Spinous processes of 2nd to 5th thoracic vertebrae. INSERTION: Vertebral border of scapula below spine. INNERVATION: Dorsal scapular from brachial plexus.

**rhomboideus minor** (rōm-boy'dē-ūs mī'nor). ACTION: Retracts and elevates scapula. ORIGIN: Spinous processes of 7th cervical vertebra and 1st thoracic vertebra. INSERTION: Border of scapula above spine. INNERVATION: Dorsal scapular from brachial plexus.

**rotatores** (rō-tā-tō'rēz). ACTION: Extends and rotates the vertebral column. ORIGIN: Transverse processes of 2nd to 12th dorsal vertebrae. INSERTION: Lamina of next vertebra above. INNERVATION: Branches of cervical, thoracic, and lumbar nerves.

**sacrospinalis** (sā'krō-spī-nā'lis). ACTION: Extends vertebral column. ORIGIN: Sacrum, lumbar vertebrae, iliac crest. INSERTION: Iliocostalis and longissimus thoracis. INNERVATION: Branches of thoracic and lumbar nerves.

**semispinalis capitis** (sēm'ē-spī-nā'liskāp'ī-tīs). ACTION: Rotates and draws head backward. ORIGIN: Transverse processes of upper six or seven thoracic and lower four cervical vertebrae. INSERTION: Occipital bone, between inferior and superior curved line. INNERVATION: Branches of cervical nerves.

**semispinalis cervicis** (sēm'ē-spī-nā'lissēr'vī-sīs). ACTION: Extends the vertebral column and rotates it toward the opposite side. ORIGIN: Transverse processes of upper five or six thoracic vertebrae. INSERTION: Spines from axis to 5th cervical vertebra. INNERVATION: Branches of cervical nerves.

**semispinalis thoracis** (sēm'ē-spī-nā'listhō-rā'sīs). ACTION: Extends the vertebral column and rotates it toward the opposite side. ORIGIN: Transverse processes of 6th to 10th thoracic vertebrae. INSERTION: Spines of upper four thoracic and lower two cervical vertebrae. INNERVATION: Branches of thoracic nerves.

**serratus posterior inferior** (sēr-ā'tūs pōs-tē'rē-or in-fē'rī-or). ACTION: Draws ribs back and downward. ORIGIN: Spines of lower two thoracic and upper two lumbar vertebrae. INSERTION: Lower four ribs. INNERVATION: Branches of 9th to 12th thoracic nerves.

**serratus posterior superior** (sēr-ā'tūs pōs-tē'rē-orsū-pēr-re-or). ACTION: Elevates the ribs. ORIGIN: Spines of 7th cervical and

two upper thoracic vertebrae. INSERTION: Angles of 2nd to 5th ribs. INNERVATION: Branches of thoracic nerves.

**spinalis capitis** (spī-nā'lis kăp'ī-tīs). ORIGIN: Inconstant; from spines of upper dorsal and lower cervical vertebrae. INSERTION: Blends with the semispinalis capitis.

**spinalis cervicis** (spī-nā'lis sēr'vī-sīs). ACTION: Extends cervical spine. ORIGIN: Spines of 5th, 6th, and 7th cervical vertebrae. INSERTION: Axis and, occasionally, the two vertebrae below. INNERVATION: Branches of cervical nerves.

**spinalis thoracis** (spī-nā'lis thō-rā'sīs). ACTION: Erects spinal column. ORIGIN: Spines of first two lumbar and last two thoracic vertebrae. INSERTION: Spines of middle and upper thoracic vertebrae. INNERVATION: Branches of thoracic and lumbar nerves.

**splenius capitis** (splē'nē-ūs kăp'ī-tīs). ACTION: Rotates and extends head. ORIGIN: Ligamentum nuchae, 7th cervical and first

three thoracic vertebrae. INSERTION: Mastoid process and superior curved line of occiput. INNERVATION: Branches of cervical nerves.

**splenius cervicis** (splē'nē-ūs sēr'vī-sīs). ACTION: Rotates and flexes head and neck. ORIGIN: Spines of 3rd to 6th thoracic vertebrae. INSERTION: Transverse processes of 1st and 2nd cervical vertebrae. INNERVATION: Branches of cervical nerves.

**suspensorius duodeni** (sūs-pēn-sō'rē-ūs doo'ō-dē'nē). ACTION: Acts as a suspensory ligament. Wide, flat band of smooth muscle attached to the left crus of diaphragm and continuous with the muscular layer of the duodenum at its junction with the jejunum. INNERVATION: Celiac plexus.

**trapezius** (trā-pē'zē-ūs). ACTION: Extends head, raises and rotates scapula. ORIGIN: Superior curved line of occipital, spinous processes of 7th cervical and all thoracic vertebrae. INSERTION: Clavicle, acromion, base of spine of scapula. INNERVATION: Spinal accessory and cervical plexus.

## ABDOMEN

**cremaster** (krē-mās'tēr). ACTION: Raises testicle. ORIGIN: Midportion of inguinal ligament. INSERTION: Cremasteric fascia and pubic bone. INNERVATION: Genitofemoral.

**obliquus externus abdominis** (ōb-lī'kwūs ēks-tēr'nūsāb-dōm'ī-nīs). ACTION: Contracts abdomen and viscera. ORIGIN: Lower eight ribs. INSERTION: Iliac crest, Poupart's ligament, linea alba, pubic crest. INNERVATION: Iliohypogastric, ilioinguinal, and branches of intercostal.

**obliquus internus abdominis** (ōb-lī'kwūs īn-tēr'nūsāb-dōm'ī-nīs). ACTION: Compresses viscera, flexes thorax forward. ORIGIN: Iliac crest, inguinal ligament, lumbar fascia. INSERTION: Few lowest ribs, linea alba, pubic crest. INNERVATION: Iliohypogastric, ilioinguinal, and branches of intercostal.

**pyramidalis** (pī-rām'ī-dā'lis). ACTION: Tightens linea alba. ORIGIN: Pubic crest. INSERTION: Linea alba. INNERVATION: Branch of 12th thoracic.

**quadratus lumborum** (kwād-rā'tūs lūm-bō'rūm). ACTION: Flexes trunk laterally and assists lumbar vertebral extension. ORIGIN: Iliac crest, iliolumbar ligament, lower lumbar vertebrae. INSERTION: Twelfth rib and the upper lumbar vertebrae. INNERVATION: Branches of 1st lumbar and 12th thoracic.

**rectus abdominis** (rēk'tūs āb-dōm'ī-nīs). ACTION: Compresses or flattens abdomen. ORIGIN: Pubis. INSERTION: Cartilage of 5th to 7th ribs. INNERVATION: Branches of 7th to 12th intercostal.

**transversus abdominis** (trāns-vēr'sūs āb-dōm'ī-nīs). ACTION: Compresses abdomen, flexes thorax. ORIGIN: Lumbar fascia, 7th to 12th costal cartilages, inguinal ligament, iliaccrest. INSERTION: Xiphoid cartilage, linea alba, pubic crest, and iliopectineal line. INNERVATION: Iliohypogastric, ilioinguinal, branches of intercostal.

## PERINEUM

**bulbospongiosus** (būl'bō-spōn'jē-ō'sūs). ACTION: Constricts bulbous urethra in male; constricts urethra in female. ORIGIN: Central point of perineum and medial raphe. INSERTION: Undersurface of bulb, spongy and cavernous part of penis; root of clitoris. INNERVATION: Perineal branch of pudendal.

**coccygeus** (kōk-sij'ē-ūs). ACTION: Supports coccyx, closes pelvic outlet. ORIGIN: Ischial spine and sacrospinous ligament. INSERTION: Coccyx and lowest portion of sacrum. INNERVATION: Third and 4th sacral.

**corrugator cutis ani** (kōr'ū-gā'tōr kū'tisā'nī). ACTION: Wrinkles skin of anus. ORIGIN: Submucous tissue, interior of anus. INSERTION: Subcutaneous tissue on

opposite side of anus. INNERVATION: Sympathetic.

**depressor urethrae** (dē-prēs'or ū-rē'thrē). ACTION: Depresses urethra. ORIGIN: Ramus of ischium near the transversus perinei profundus. INSERTION: Fibers of constrictor vaginae.

**ischiocavernosus** (is'kē-ō-kā'vēr-nō'sūs). ACTION: Maintains erection of penis or clitoris. ORIGIN: Tuberosity of ischium and great sacrosciatic ligament. INSERTION: Corpora cavernosa of clitoris or penis. INNERVATION: Perineal branch of pudendal.

**levator ani** (lē-vā'tor ā'nī). ACTION: Supports rectum and pelvic floor, aids in defecation. ORIGIN: Pubis, pelvic fascia, ischial

## Muscles

- spine. INSERTION: Rectum, coccyx, and fibrous raphe of perineum. INNERVATION: Sacral and perineal.
- sphincter ani externus** (sfɪŋk'tēr ā'nī ēks-tēr'nūs). ACTION: Closes anus. ORIGIN: Ring of fibers surrounding anus. INSERTION: Coccyx and central point of perineum. INNERVATION: Hemorrhoidal branch of pudendal.
- sphincter ani internus** (sfɪŋk'tēr ā'nī ĩn-tēr'nūs). ACTION: Contracts rectum and anus, but not voluntarily. ORIGIN: Muscular ring of rectal fibers above canal.
- sphincter urethrae membranaceae** (sfɪŋk'tēr ũ-rē'thrēmēm-brā'nā'sē-ē). ACTION: Constricts membranous urethra. ORIGIN: Ramus of pubis. INSERTION: Behind
- and in front of urethra. INNERVATION: Perineal branch of pudendal.
- sphincter vesicae** (sfɪŋk'tēr vēs'ī-kē). ACTION: Shuts off internal orifice of urethra. ORIGIN: Near urethral orifice of bladder. INNERVATION: Sacral and hypogastric.
- transversus perinei profundus** (trāns-vēr'sūs pēr-ī-nē'īprō-fūn'dūs). ACTION: Assists compressor urethrae. ORIGIN: Ramus of ischium. INSERTION: Central tendon. INNERVATION: Perineal branch of pudendal.
- transversus perinei superficialis** (trāns-vēr'sūs pēr-ī-nē'īsoo'pēr-fish-ē-ā'līs). ACTION: Tenses central tendon. ORIGIN: Ramus of ischium. INSERTION: Central point of perineum. INNERVATION: Perineal branch of pudendal.

## THORAX

- diaphragma** (dī'ā-frāg'mā). ACTION: Increases chest capacity and decreases pressure within the thoracic cavity. ORIGIN: Ensiform cartilage, 7th to 12th ribs, arcuate ligaments, and lumbar vertebrae. INSERTION: Central tendon. INNERVATION: Phrenic.
- intercostalis externus** (ĩn'tēr-kōs-tā'līs ēks-tēr'nūs). ACTION: Draws ribs together and raises ribs. ORIGIN: Lower border of rib. INSERTION: Upper border of rib below. INNERVATION: Intercostal.
- intercostalis internus** (ĩn'tēr-kōs-tā'līs ĩn-tēr'nūs). ACTION: Draws ribs together and lowers ribs. ORIGIN: Lower border of rib. INSERTION: Upper border of rib below. INNERVATION: Intercostal.
- levator costarum** (lē-vā-tō'rez kōs-tā'rūm). ACTION: Raises ribs, flexes vertebral column. ORIGIN: Transverse process of 7th cervical and upper 11 thoracic vertebrae. INSERTION: Rib next below. INNERVATION: Branches of intercostal.
- subcostales** (süb-kōs-tā'lēz). ACTION: Draws ribs together and lowers ribs. ORIGIN: Inconstant; inner surface of the ribs. INSERTION: Inner surface of one of the ribs just below. INNERVATION: Intercostal.
- transversus thoracis** (trāns-vēr'sūs thō-rā'sis). ACTION: Narrows the chest. ORIGIN: Xiphoid cartilage and sternum. INSERTION: Costal cartilages, 2nd to 6th ribs. INNERVATION: Branches of intercostal.

## SHOULDER

- deltoides** (dēl-toy'dē-ūs). ACTION: Raises and rotates arm. ORIGIN: Clavicle, acromion process, and spine of scapula. INSERTION: Shaft of humerus. INNERVATION: Axillary (circumflex) from brachial plexus.
- infraspinatus** (ĩn'frā-spī-nā'tūs). ACTION: Rotates arm back and out. ORIGIN: Infraspinous fossa of scapula. INSERTION: Great tuberosity of humerus. INNERVATION: Suprascapular from brachial plexus.
- pectoralis major** (pēk'tō-rā'līs mā'jor). ACTION: Flexes, adducts, and rotates arm. ORIGIN: Sternum, clavicle, and cartilages of 1st to 6th ribs. INSERTION: Bicipital ridge of humerus. INNERVATION: Pectoral from brachial plexus.
- pectoralis minor** (pēk'tō-rā'līs mī'nor). ACTION: Draws down scapula and point to shoulder, raises ribs. ORIGIN: Third to 5th ribs. INSERTION: Coracoid process of scapula. INNERVATION: Pectoral from brachial plexus.
- serratus anterior** (sēr-ā'tūs ān-tē'rī-or). ACTION: Elevates ribs, rotates scapula. ORIGIN: Upper eight or nine ribs. INSERTION: Angles and vertebral border of scapula. INNERVATION: Long thoracic from brachial plexus.
- subclavius** (süb-klā'vē-ūs). ACTION: Draws clavicle down and forward or elevates the 1st rib. ORIGIN: First rib and cartilage. INSERTION: Undersurface of clavicle. INNERVATION: Branches of 5th and 6th cervical.
- subscapularis** (süb-skāp-ū-lā'ris). ACTION: Rotates humerus inward and lowers it. ORIGIN: Subscapular fossa. INSERTION: Lesser tubercle of humerus. INNERVATION: Subscapular.
- supraspinatus** (soo'prā-spī-nā'tūs). ACTION: Abducts and raises arm. ORIGIN: Supraspinous fossa of scapula. INSERTION: Greater tubercle of humerus. INNERVATION: Branches of suprascapular.
- teres major** (tē'rēz mā'jor). ACTION: Inwardly rotates, adducts, and extends arm. ORIGIN: Axillary border of scapula. INSERTION: Lesser tubercle of humerus. INNERVATION: Branch of lower subscapular.
- teres minor** (tē'rēz mī'nor). ACTION: Rotates arm outward. ORIGIN: Axillary border of scapula. INSERTION: Greater tubercle of humerus. INNERVATION: Branch of axillary (circumflex).

## ARM AND FOREARM

**anconeus** (än-kō'nē-ūs). ACTION: Extends forearm. ORIGIN: Lateral epicondyle of humerus. INSERTION: Olecranon and posterior surface of ulna. INNERVATION: Branch of radial.

**biceps brachii** (bī'sēps brā'kē-ī). ACTION: Flexes arm and forearm and supinates forearm. ORIGIN: (1) Short head from coracoid process. (2) Long head from the supraglenoid tuberosity at the margin of the glenoid cavity. INSERTION: Bicipital tuberosity of radius. INNERVATION: Musculocutaneous.

**brachialis** (brā'kē-äl'īs). ACTION: Flexes forearm. ORIGIN: Lower half of anterior surface of humerus. INSERTION: Coronoid process of ulna. INNERVATION: Musculocutaneous and radial.

**brachioradialis** (brā'kē-ō-rā'dē-ä'līs). ACTION: Flexes and supinates forearm. ORIGIN: Supracondylar ridge of humerus. INSERTION: Styloid process of radius. INNERVATION: Branch of radial. SYN: supinator longus

**coracobrachialis** (kor'ä-kō-brā'kē-äl'īs). ACTION: Raises and adducts arm. ORIGIN: Coracoid process of scapula. INSERTION: Middle of inner border of humerus. INNERVATION: Musculocutaneous.

**extensor carpi radialis brevis** (ëks-tën'sör kar'pī rā'dē-ä'līsbrē'vīs). ACTION: Extends and abducts wrist. ORIGIN: External condyloid ridge of humerus. INSERTION: Base of 3rd metacarpal. INNERVATION: Branch of radial.

**extensor carpi radialis longus** (ëks-tën'sör kar'pī rā'dē-ä'līslöng'ūs). ACTION: Extends and abducts wrist. ORIGIN: External condyloid ridge of humerus. INSERTION: Base of 2nd metacarpal. INNERVATION: Branch of radial.

**extensor carpi ulnaris** (ëks-tën'sör kar'pī ül-nā'rīs). ACTION: Extends and adducts hand and wrist. ORIGIN: Lateral epicondyle of humerus. INSERTION: Base of 5th metacarpal. INNERVATION: Branch of radial.

**extensor digiti minimi** (ëks-tën'sör dij'ī-tīmīn'im-ī). ACTION: Extends little finger. ORIGIN: External epicondyle of humerus. INSERTION: Dorsum of 1st phalanx of little finger. INNERVATION: Branch of radial.

**extensor digitorum communis** (ëks-tën'sör dij'ī-tō'rümköm-mū'nīs). ACTION: Extends fingers and wrist. ORIGIN: External epicondyle of humerus. INSERTION: Second and 3rd phalanges. INNERVATION: Branch of radial.

**extensor indicis proprius** (ëks-tën'sör ĩn'dī-sisprō'prē-ūs). ACTION: Extends index finger. ORIGIN: Dorsal surface of ulna and interosseous membrane. INSERTION: First tendon of extensor digitorum communis. INNERVATION: Branch of radial.

**extensor pollicis brevis** (ëks-tën'sör pöl'ī-sisbrē'vīs). ACTION: Extends thumb

and abducts 1st metacarpal. ORIGIN: Dorsal surface of radius. INSERTION: Base of 1st phalanx of thumb. INNERVATION: Branch of radial.

**extensor pollicis longus** (ëks-tën'sör pöl'ī-sīslöng'ūs). ACTION: Extends terminal phalanx of thumb and abducts hand. ORIGIN: Dorsal surface of ulna. INSERTION: Base of 2nd phalanx of thumb. INNERVATION: Branch of radial.

**flexor carpi radialis** (flëks'or kar'pī rā'dē-ä'līs). ACTION: Flexes and abducts wrist. ORIGIN: Medial epicondyle of humerus. INSERTION: Base of 2nd metacarpal. INNERVATION: Branch of median.

**flexor carpi ulnaris** (flëks'or kar'pī ül-nā'rīs). DESCRIPTION: Consists of (1) humeral head and (2) ulnar head. ACTION: Flexes and adducts wrist. ORIGIN: (1) Medial epicondyle of humerus. (2) Olecranon process and posterior border of ulna. INSERTION: Pisiform bone and 5th metacarpal. INNERVATION: Branch of ulnar.

**flexor digitorum profundus** (flëks'or dij'ī-tō'rümpfō-fün'dūs). ACTION: Flexes the distal interphalangeal joints of the fingers. ORIGIN: Upper three fourths of shaft of ulna. INSERTION: Terminal phalanges of fingers. INNERVATION: Branch of ulnar and branch of median.

**flexor digitorum sublimis** (flëks'or dij'ī-tō'rümsüb-lī'mīs). SYN: flexor digitorum superficialis

**flexor digitorum superficialis** (flëks'or dij'ī-tō'rümsoo'për-fish-ē-ä'līs). DESCRIPTION: Consists of three heads: (1) humeral, (2) ulnar, and (3) radial. ACTION: Flexes the middle and proximal phalanges, carpal flexion of hand. ORIGIN: (1) Medial epicondyle of humerus. (2) Medial side of coronoid process. (3) Outer border of radius. INSERTION: Second phalanx of each finger. INNERVATION: Branches of median. SYN: flexor digitorum sublimis

**flexor pollicis longus** (flëks'or pöl'ī-sīslöng'ūs). ACTION: Flexes thumb. ORIGIN: Anterior surface of middle third of radius. INSERTION: Terminal phalanx of thumb. INNERVATION: Branch of median.

**palmaris longus** (päl-mār'īs löng'ūs). ACTION: Tightens palmar fascia, flexes wrist. ORIGIN: Medial epicondyle of humerus. INSERTION: Transverse carpal ligament and palmar fascia. INNERVATION: Branch of median.

**pronator quadratus** (prō-nā'tor kwäd-rä'tūs). ACTION: Pronates forearm. ORIGIN: Lower fourth of ulna. INSERTION: Lower fourth of radius. INNERVATION: Volar interosseous.

**pronator teres** (prō-nā'tor tēr'rëz). DESCRIPTION: Consists of (1) humeral head and (2) ulnar head. ACTION: Pronates hand. ORIGIN: (1) Medial epicondyle of humerus. (2) Coronoid process of ulna. INSE-

## Muscles

TION: Lateral surface of shaft of radius. INNERVATION: Branch of median.

**supinator** (soo'pī-nā'tor). ACTION: Supinates forearm. ORIGIN: Lateral epicondyle of humerus, oblique line of ulna, elbow joint. INSERTION: Outer surface of radius. INNERVATION: Branch of radial.

**supinator longus** (soo'pī-nā'tor lōng'ūs). SYN: brachioradialis

**triceps brachii** (trī'sēps brā'kē-i). DESCRIPTION: Consists of three heads: (1) long, (2) lateral, and (3) medial. ACTION: Extends forearm and arm. ORIGIN: (1) Infraglenoid tubercle of scapula. (2) Posterior surface of humerus below great tubercle. (3) Humerus below radial groove. INSERTION: Olecranon process of ulna. INNERVATION: Branches of radial.

## HAND

**abductor digiti minimi manus** (āb-dūk'tōr dij-ī-tīmīn'ī-mī mā'nūs). ACTION: Abducts little finger. ORIGIN: Pisiform bone and ligaments. INSERTION: Inner side of 1st phalanx of little finger. INNERVATION: Ulnar, palmar branch.

**abductor pollicis brevis** (āb-dūk'tōr pōl'ī-sīsbrē'vīs). ACTION: Abducts thumb. ORIGIN: Ridge of trapezius and transverse carpal ligament. INSERTION: Outer side of 1st phalanx of thumb. INNERVATION: Branch of median.

**abductor pollicis longus** (āb-dūk'tōr pōl'ī-sīslōng'ūs). ACTION: Abducts and assists in extending thumb. ORIGIN: Posterior surface of radius and ulna. INSERTION: Outer side of base of 1st metacarpal. INNERVATION: Branch of radial.

**adductor pollicis** (ād-dūk'tōr pōl'ī-sīs). ACTION: Adducts thumb. ORIGIN: Third metacarpal bone. INSERTION: Inner side of base of 1st phalanx of thumb. INNERVATION: Ulnar.

**extensor indicis** (ēks-tēn'sōr īn'dī-sīs). ACTION: Extends 2nd digit, aids extension of hand. ORIGIN: Posterior surface of ulna and interosseus membrane. INSERTION: Extensor expansion of 2nd digit. INNERVATION: Posterior interosseus branch of radial nerve (C7-C8).

**flexor digiti minimi brevis manus** (flēks'ōr dij-ī-tīmīn'ī-mī brē'vīs mā'nūs). ACTION: Intrinsic hand muscle, flexes 5th digit. ORIGIN: Hook of hamate bone and flexor retinaculum. INSERTION: Medial edge of proximal phalanx of 5th digit. INNERVATION: Deep branch of ulnar nerve (C8-T1).

**flexor digiti quinti brevis manus** (flēks'ōr dij-ī-tī kwīn'tibrē'vīs mā'nūs). ACTION: Flexes 1st phalanx of little finger. ORIGIN: Unciform bone. INSERTION: First phalanx of little finger. INNERVATION: Branch of ulnar.

**flexor pollicis brevis** (flēks'ōr pōl'ī-sīsbrē'vīs). ACTION: Flexes 1st phalanx of thumb. ORIGIN: Transverse carpal liga-

ment, metacarpal bone. INSERTION: Base of 1st phalanx of thumb. INNERVATION: Branch of median and ulnar.

**interossei dorsales manus** (īn'tēr-ōs'ē-īdōr-sā'lēz mā'nūs). DESCRIPTION: Four. ACTION: Abducts and adducts fingers. ORIGIN: Sides of metacarpal bones. INSERTION: First phalanges. INNERVATION: Branch of ulnar.

**interossei volares** (īn'tēr-ōs'ē-īvō-lā'rēz). DESCRIPTION: Three. ACTION: Adducts index finger, abducts ring and little fingers. ORIGIN: Metacarpal bones laterally. INSERTION: Ulnar side of index finger, and radial sides of ring and little fingers. INNERVATION: Branch of ulnar.

**lumbricales manus** (lūm-brī-kā'lēz mā'nūs). DESCRIPTION: Four. ACTION: Flexes 1st and extends 2nd and 3rd phalanges. ORIGIN: Tendon of flexor digitorum profundus. INSERTION: First phalanx and extensor tendon. INNERVATION: Median and ulnar.

**opponens digiti minimi** (ōp-pō'nēns dij-ī-tīmīn'ī-mī). ACTION: Intrinsic hand muscle, pulls 5th metacarpal toward thumb to allow 5th digit to oppose thumb. ORIGIN: Hook of hamate bone and flexor retinaculum. INSERTION: Medial edge of 5th metacarpal. INNERVATION: Ulnar nerve (C8-T1).

**opponens digiti quinti** (ōp-pō'nēns dij-ī-tīkwīn'tī). ACTION: Flexes and adducts little finger. ORIGIN: Unciform bone, transverse carpal ligament. INSERTION: Fifth metacarpal bone. INNERVATION: Branch of ulnar.

**opponens pollicis** (ōp-pō'nēns pōl'ī-sīs). ACTION: Flexes and adducts thumb. ORIGIN: Trapezium and transverse carpal ligament. INSERTION: First metacarpal bone. INNERVATION: Median.

**palmaris brevis** (pāl-mā'rīs brē'vīs). ACTION: Wrinkles skin on inner side of hand. ORIGIN: Central portion of palmar aponeurosis and transverse carpal ligament. INSERTION: Skin of ulnar side of hand. INNERVATION: Branch of ulnar.

## HIP AND THIGH

**adductor brevis** (ād-dūk'tōr brē'vīs). ACTION: Flexes, adducts, and tends to rotate thigh medially. ORIGIN: Ramus of pubis. INSERTION: Upper portion of linea aspera of femur. INNERVATION: Branch of obturator.

**adductor longus** (ād-dūk'tōr lōng'ūs). ACTION: Adducts, flexes, and tends to rotate thigh medially. ORIGIN: Pubic crest and symphysis. INSERTION: Middle of linea aspera of femur. INNERVATION: Branch of obturator.

**adductor magnus** (äd-dük'tor mäg'nūs). ACTION: Adducts thigh and rotates it outward. ORIGIN: Ramus of ischium and pubis. INSERTION: Linea aspera of femur and medial condyle. INNERVATION: Branch of sciatic and obturator.

**articularis genu** (är-tik'ū-lā-risjē'nūs). ACTION: Elevates capsule of knee joint. ORIGIN: Lower quarter of anterior surface of femoral shaft. INSERTION: Synovial membrane of knee joint. INNERVATION: Branch of femoral.

**biceps femoris** (bi'seps fēm'ō-rīs). ACTION: Flexes knee and rotates it outward. ORIGIN: (1) Short head from linea aspera. (2) Long head from ischial tuberosity. INSERTION: Head of fibula; lateral condyle of tibia. INNERVATION: (1) Peroneal and (2) tibial portions of sciatic.

**gemellus inferior** (jē-mēl'ūs in-fē'rī-or). ACTION: Rotates thigh outward. ORIGIN: Ischial tuberosity. INSERTION: Medial surface of greater trochanter. INNERVATION: Sacral.

**gemellus superior** (jē-mēl'ūs sü-pē'rē-or). ACTION: Rotates thigh outward. ORIGIN: Spine of ischium. INSERTION: Medial surface of greater trochanter. INNERVATION: Sacral plexus.

**gluteus maximus** (gloo'tē-ūs māk'sēmūs). ACTION: Extends and rotates thigh. ORIGIN: Superior curved iliac line and crest, coccyx, and sacrum. INSERTION: Fascia lata and femur below greater trochanter. INNERVATION: Inferior gluteal.

**gluteus medius** (gloo'tē-ūs mē'dē-ūs). ACTION: Abducts and rotates thigh. ORIGIN: Lateral surface of ilium. INSERTION: Greater trochanter. INNERVATION: Branches of superior gluteal.

**gluteus minimus** (gloo'tē-ūs mīn'i-mūs). ACTION: Abducts and extends thigh. ORIGIN: Lateral surface of ilium. INSERTION: Greater trochanter. INNERVATION: Branch of superior gluteal.

**gracilis** (gräs'i-līs). ACTION: Flexes and adducts leg, adducts thigh. ORIGIN: Symphysis pubis and pubic arch. INSERTION: Medial surface of shaft of tibia. INNERVATION: Branch of obturator.

**iliacus** (i-lī'ä-kūs). ACTION: Flexes and rotates thigh. ORIGIN: Margin of iliac fossa. INSERTION: Lesser trochanter. INNERVATION: Branches of femoral.

**obturator internus** (öb'tū-rā'tor in-tēr'nūs). ACTION: Rotates thigh outward. ORIGIN: Pubes, ischium, obturator foramen. INSERTION: Inner surface of greater trochanter. INNERVATION: Branch of obturator.

**pectineus** (pěk-tin'ē-ūs). ACTION: Flexes and adducts thigh. ORIGIN: Pubic spine, iliopectineal line. INSERTION: Pectineal line of femur. INNERVATION: Branch of obturator and femoral.

**piriformis** (pī-rī-for'mīs). ACTION: Abducts and rotates thigh outward. ORIGIN: Mar-

gins of anterior sacral foramina and sacrosciatic notch of ilium. INSERTION: Upper margin of greater trochanter. INNERVATION: Branch of sacral.

**psaos major** (sō'äs mā'jor). ACTION: Flexes thigh, adducts and rotates it medially. ORIGIN: Last thoracic and all of the lumbar vertebrae. INSERTION: Lesser trochanter of femur. INNERVATION: Lumbar plexus.

**psaos minor** (sō'äs mī'nor). ACTION: Tenses iliac fascia. ORIGIN: Twelfth thoracic and 1st lumbar vertebrae. INSERTION: Iliac fascia and iliopectineal tuberosity. INNERVATION: Branch of lumbar.

**quadratus femoris** (kwäd-rā'tūs fēm'ō-rīs). ACTION: Rotates thigh outward. ORIGIN: Ischial tuberosity. INSERTION: Intertrochanteric ridge. INNERVATION: Sciatic.

**quadriceps femoris** (kwäd'rī-séps fēm'ō-rīs). ACTION: Extends leg. ORIGIN: By four heads: rectus femoris, vastus medialis, vastus lateralis, and vastus intermedius. INSERTION: Patella and tibial tuberosity. INNERVATION: Branches of femoral.

**rectus femoris** (rēk'tūs fēm'ō-rīs). ACTION: Extends leg and assists flexion of thigh. ORIGIN: Iliac spine, upper margin of acetabulum. INSERTION: Base of patella. INNERVATION: Femoral.

**sartorius** (sär-tō'rē-ūs). ACTION: Flexes and rotates thigh and leg. ORIGIN: Anterior superior iliac spine. INSERTION: Tibial tuberosity. INNERVATION: Branches of femoral.

**semimembranosus** (sēm'ē-mēm'brän-ō'sūs). ACTION: Flexes and rotates leg, extends thigh. ORIGIN: Ischial tuberosity. INSERTION: Medial condyle of tibia. INNERVATION: Tibial portion of sciatic.

**semitendinosus** (sēm'ē-tēn'din-ō'sūs). ACTION: Flexes and rotates leg, extends thigh. ORIGIN: Ischial tuberosity. INSERTION: Shaft of tibia below internal tuberosity. INNERVATION: Tibial portion of sciatic.

**tensor fasciae latae** (tēn'sōr fāsh'ē-ēlā'tē). ACTION: Flexes and rotates thigh. ORIGIN: Iliac crest, iliac spine, fascia lata. INSERTION: Iliotibial band of fascia lata. INNERVATION: Branch of superior gluteal.

**vastus intermedius** (väs'tūs in'tēr-mē'dē-ūs). ORIGIN: Upper part of anterior surface of shaft of femur. INSERTION: Common tendon of quadriceps femoris. INNERVATION: Branches of femoral.

**vastus lateralis** (väs'tūs lät'er-ā'līs). ACTION: Extends knee. ORIGIN: Linea aspera to greater trochanter. INSERTION: Common tendon of quadriceps femoris. INNERVATION: Branches of femoral.

**vastus medialis** (väs'tūs mē-dī-ā'līs). ACTION: Extends leg, draws patella in. ORIGIN: Linea aspera of femur. INSERTION: Common tendon of quadriceps femoris. INNERVATION: Branches of femoral.

## LEG

**extensor digitorum longus** (ëks-tën'sör dij-i-tō'rümlóng'üs). ACTION: Extends toes, dorsiflexes foot. ORIGIN: External tuberosity of tibia; body of fibula. INSERTION: Second and 3rd phalanges of toes. INNERVATION: Branches of peroneal.

**extensor hallucis longus** (ëks-tën'sör hä-l-oo'sislóng'üs). ACTION: Extends great toe, flexes foot. ORIGIN: Front of fibula and interosseous membrane. INSERTION: Terminal phalanx of great toe. INNERVATION: Branch of peroneal.

**fibularis tertius** (fib-ü-lär'is tēr'shüs). ACTION: Dorsiflexes ankle, aids eversion of foot. ORIGIN: Lower anterior surface of fibula and interosseous membrane. INSERTION: Dorsal surface of base of 5th metatarsal. INNERVATION: Deep branch of fibular nerve (L5-S1).

**flexor digitorum longus** (flëks'or dij-i-tō'rümlóng'üs). ACTION: Flexes the toes. ORIGIN: Posterior surface of tibia. INSERTION: Terminal phalanges of lesser toes. INNERVATION: Branch of tibial.

**flexor hallucis longus** (flëks'or hä-l-oo'sis löng'üs). ACTION: Flexes phalanges, primarily the distal phalanges, and plantar flexes the foot. ORIGIN: Lower portion of shaft of fibula. INSERTION: Distal phalanx of great toe. INNERVATION: Posterior tibial.

**gastrocnemius** (gäs'trök-në'më-üs). ACTION: Plantar flexes foot and flexes knee. ORIGIN: External and internal femoral condyles. INSERTION: By tendo calcaneus into os calcis. INNERVATION: Branches of tibial.

**peroneus brevis** (për-ö-në'üs brë'vis). ACTION: Extends and abducts foot. ORIGIN:

Midportion of shaft of fibula. INSERTION: Base of 5th metatarsal bone. INNERVATION: Branch of peroneal.

**peroneus longus** (për-ö-në'üs löng'üs). ACTION: Extends, abducts, and everts foot. ORIGIN: Upper fibula and external condyle of tibia. INSERTION: By tendon to internal cuneiform and 1st metatarsal bone. INNERVATION: Branch of peroneal.

**peroneus tertius** (për-ö-në'üs tēr'shë-üs). ACTION: Flexes foot. ORIGIN: Lower part of fibula. INSERTION: Fifth metatarsal bone. INNERVATION: Branch of peroneal.

**plantaris** (plän-tär'is). ACTION: Extends foot. ORIGIN: External supracondyloid ridge of femur. INSERTION: Inner border of tendo calcaneus. INNERVATION: Branch of tibial.

**popliteus** (pöp-lit'ë-üs). ACTION: Flexes leg and rotates it inward. ORIGIN: External condyle of femur. INSERTION: Posterior surface of tibia. INNERVATION: Branch of tibial.

**soleus** (sö'lë-üs). ACTION: Plantar flexes foot. ORIGIN: Upper shaft of fibula, oblique line of tibia. INSERTION: By tendo calcaneus to os calcis. INNERVATION: Tibial.

**tibialis anterior** (tib'ë-ä'lis än-të'rï-or). ACTION: Dorsiflexes foot and increases the arch in the takeoff of walking. ORIGIN: Upper tibia, interosseous membrane, and intermuscular septum. INSERTION: Internal cuneiform and 1st metatarsal. INNERVATION: Branch of peroneal.

**tibialis posterior** (tib'ë-ä'lis pös-të'rë-or). ACTION: Plantar flexes foot. ORIGIN: Shaft of fibula and tibia. INSERTION: Tuberosity of scaphoid, 2nd to 4th metatarsal, internal cuneiform. INNERVATION: Branch of tibial.

## FOOT

**abductor digiti minimi pedis** (äb-dük'tor dij-i-timïn'i-mi pë'dis). ACTION: Abducts little toe. ORIGIN: Outer tuberosity of calcaneus, plantar fascia, and intermuscular septum. INSERTION: External side of 1st phalanx of little toe. INNERVATION: Lateral plantar.

**abductor hallucis** (äb-dük'tor hä-l-oo'sis). ACTION: Abducts great toe. ORIGIN: Inner tuberosity of os calcis, plantar fascia. INSERTION: Inner side, 1st phalanx of great toe. INNERVATION: Medial plantar.

**adductor hallucis** (äd-dük'tor hä-l-oo'sis). ACTION: Adducts great toe. ORIGIN: Tarsal terminations of the three middle metatarsal bones. INSERTION: Lateral side of base of 1st phalanx of great toe. INNERVATION: Branch of lateral plantar.

**extensor digitorum brevis** (ëks-tën'sör dij-i-tō'rümbre'vis). ACTION: Extends toes. ORIGIN: Dorsal surface of os calcis. INSERTION: To 1st phalanx of great toe and the tendons of extensor digitorumlongus. INNERVATION: Branch of peroneal.

**flexor accessorius** (flëks'or äk-së-sö'rë-üs). SYN: quadratus plantae

**flexor digiti minimi brevis pedis** (flëks'or dij-i-timïn'i-mi brë'vis pë'dis). ACTION: Intrinsic foot muscle, flexes 5th digit. ORIGIN: Base of 5th metatarsal. INSERTION: Base of proximal phalanx of 5th digit of foot. INNERVATION: Lateral plantar branch of tibial nerve (S2-S3).

**flexor digiti quinti brevis pedis** (flëks'or dij-i-ti kwïn'tibrë'vis pë'dis). ACTION: Flexes the little toe. ORIGIN: Base of metatarsal of little toe and sheath of peroneus longus. INSERTION: Outer side of base of 1st phalanx of little toe. INNERVATION: External plantar.

**flexor digitorum brevis** (flëks'or dij-i-tör'ümbre'vis). ACTION: Flexes toe. ORIGIN: Os calcis and plantar fascia. INSERTION: Second phalanges of lesser toes. INNERVATION: Internal plantar.

**flexor hallucis brevis** (flëks'or hä-l-oo'sisbrë'vis). ACTION: Intrinsic foot muscle, flexes 1st digit. ORIGIN: Plantar sur-

faces of cuboid and lateral cuneiform bones. INSERTION: Both sides of base of proximal phalanx of 1st digit. INNERVATION: Medial plantar branch of tibial nerve (S2-S3).

**flexor hallucis longus** (flēks'ōr hāl-oo'sislōng'ūs). ACTION: Flexes 1st digit of foot, aids plantar flexion of foot, supports medial arch of foot. ORIGIN: Lower posterior surface of fibula and interosseus membrane. INSERTION: Base of distal phalanx of 1st digit. INNERVATION: Tibial nerve (S2-S3).

**interossei dorsales pedis** (in'tēr-ōs'ē-īdōr-sā'lēz pē'dīs). DESCRIPTION: Four. ACTION: Adducts 2nd toe, abducts 2nd, 3rd, and 4th toes. ORIGIN: Shafts of adjacent metatarsal bones. INSERTION: First phalanges of lesser toes. INNERVATION: External plantar.

**interossei plantares** (in'tēr-ōs'ē-īplān-tār'īs). DESCRIPTION: Three. ACTION: Ad-

ducts three outer toes. ORIGIN: Third, 4th, and 5th metatarsal bones. INSERTION: First phalanx of corresponding toe. INNERVATION: External plantar.

**lumbricales pedis** (lūm-brī-kā'lēz pē'dīs). DESCRIPTION: Four. ACTION: Flexes the 1st and extends the 2nd and 3rd phalanges. ORIGIN: Tendons of flexor digitorum longus. INSERTION: First phalanx and extensor tendon. INNERVATION: External and internal plantar.

**quadratus plantae** (kwād-rā'tūs plān'tē). ACTION: Assists flexion of toes. ORIGIN: Inferior surface of os calcis by two heads from outer and inner borders. INSERTION: Tendons of flexor digitorum longus. INNERVATION: Branch of lateral plantar. SYN: flexor accessorius

GENERAL

**arrectores pilorum** (ā'rēk-tō'rēz pīl-ō'rūm). ACTION: Elevates hairs of skin. ORIGIN: Papillary layer of skin. INSERTION: Hair follicles. INNERVATION: Sympathetic.

MUSCLES INDICATING BODY AREAS

Muscle Indicating its Body Area

Muscle	Body Area	Muscle	Body Area
abductor digiti minimi manus	hand	constrictor pharyngis superior	neck
abductor digiti minimi pedis	foot	coracobrachialis	arm and forearm
abductor hallucis	foot	corrugator cutis ani	perineum
abductor pollicis brevis	hand	corrugator supercilii	head and face
abductor pollicis longus	hand	cremaster	abdomen
adductor brevis	hip and thigh	cricoaerytenoideus lateralis	larynx
adductor hallucis	foot	cricoaerytenoideus posterior	larynx
adductor longus	hip and thigh	cricothyroideus	larynx
adductor magnus	hip and thigh	deltoid	shoulder
adductor pollicis anconeus	hand	depressor anguli oris	head and face
antitragicus	ear	depressor labii inferioris	head and face
arrectores pilorum	general	depressor septi nasi	head and face
articularis genu	hip and thigh	depressor urethrae	perineum
aryepiglotticus	larynx	diaphragma	thorax
arytenoideus	larynx	digastricus	neck
auricularis anterior	head and face	dilatator naris anterior	head and face
auricularis posterior	head and face	dilatator naris posterior	head and face
auricularis superior	head and face	extensor carpi radialis brevis	arm and forearm
biceps brachii	arm and forearm	extensor carpi radialis longus	arm and forearm
biceps femoris	hip and thigh	extensor carpi ulnaris	arm and forearm
brachialis	arm and forearm	extensor digiti minimi	arm and forearm
brachioradialis	arm and forearm	extensor digitorum brevis	foot
buccinator	head and face	extensor digitorum communis	arm and forearm
bulbospongiosus	perineum		
ciliaris	head and face		
coccygeus	perineum		
constrictor pharyngis inferior	neck		
constrictor pharyngis medius	neck		

## Muscle Indicating its Body Area

<i>Muscle</i>	<i>Body Area</i>	<i>Muscle</i>	<i>Body Area</i>
extensor digitorum longus	leg	interspinales	back
extensor hallucis longus	leg	intertransversarii	back
extensor indicis	hand	ischiocavernosus	perineum
extensor indicis proprius	arm and forearm	latissimus dorsi	back
extensor pollicis brevis	arm and forearm	levator anguli oris	head and face
extensor pollicis longus	arm and forearm	levator ani	perineum
fibularis tertius	foot	levator labii superioris	head and face
flexor accessorius	foot	levator labii superioris alaeque nasi	head and face
flexor carpi radialis	arm and forearm	levator palpebrae superioris	head and face
flexor carpi ulnaris	arm and forearm	levator scapulae	back
flexor digiti minimi brevis manus	hand	levator veli palatini	neck
flexor digiti minimi brevis pedis	foot	levatores costarum	thorax
flexor digiti quinti brevis manus	hand	linguae	neck
flexor digitorum brevis	foot	longissimus capitis	back
flexor digitorum longus	leg	longissimus cervicis	back
flexor digitorum profundus	arm and forearm	longissimus thoracis	back
flexor digitorum sublimis	arm and forearm	longus capitis	neck
flexor digitorum superficialis	arm and forearm	lumbricales manus	hand
flexor hallucis brevis	foot	lumbricales pedis	foot
flexor hallucis longus	leg	masseter	head and face
flexor pollicis brevis	hand	mentalis	head and face
flexor pollicis longus	arm and forearm	multifidus	back
frontalis	face	mylohyoideus	neck
gastrocnemius	leg	nasalis	head and face
gemellus inferior	hip and thigh	obliquus auriculae	ear
gemellus superior	hip and thigh	obliquus capitis inferior	back
genioglossus	neck	obliquus capitis superior	back
geniohyoideus	neck	obliquus externus abdominis	abdomen
glossopalatinus	neck	obliquus inferior oculi	head and face
gluteus maximus	hip and thigh	obliquus internus abdominis	abdomen
gluteus medius	hip and thigh	obliquus superior oculi	head and face
gluteus minimus	hip and thigh	obturator internus	hip and thigh
gracilis	hip and thigh	occipitofrontalis	head and face
helicus major and minor	ear	omohyoideus	neck
hyoglossus	neck	opponens digiti minimi	hand
iliacus	hip and thigh	opponens digiti quinti	hand
iliocostalis cervicis	back	opponens pollicis	hand
iliocostalis lumborum	back	orbicularis oculi	head and face
iliocostalis thoracis	back	orbicularis oris	head and face
infraspinatus	shoulder	palmaris brevis	hand
intercostalis externus	thorax	palmaris longus	arm and forearm
intercostalis internus	thorax	pectineus	hip and thigh
interossei dorsales manus	hand	pectoralis major	shoulder
interossei dorsales pedis	foot	pectoralis minor	shoulder
interossei plantares	foot	peroneus brevis	leg
interossei volares	hand	peroneus longus	leg
		peroneus tertius	leg
		pharyngopalatinus	neck
		piriformis	hip and thigh
		plantaris	leg
		platysma	neck
		popliteus	leg
		procerus	head and face
		pronator quadratus	arm and forearm
		pronator teres	arm and forearm

<i>Muscle</i>	<i>Body Area</i>	<i>Muscle</i>	<i>Body Area</i>
psoas major	hip and thigh	sphincter urethrae	perineum
psoas minor	hip and thigh	membranaceae	
pterygoideus lateralis	head and face	sphincter vesicae	perineum
pterygoideus medialis	head and face	spinalis capitis	back
pyramidalis	abdomen	spinalis cervicis	back
quadratus femoris	hip and thigh	spinalis thoracis	back
quadratus lumborum	abdomen	splenius capitis	back
quadratus plantae	foot	splenius cervicis	back
quadriceps femoris	hip and thigh	stapedius	ear
rectus abdominis	abdomen	sternocleidomastoideus	neck
rectus capitis anterior	neck	sternothyroideus	neck
rectus capitis lateralis	neck	styloglossus	neck
rectus capitis posterior major	back	stylohyoideus	neck
rectus capitis posterior minor	back	stylopharyngeus	neck
rectus externus or lateralis	head and face	subclavius	shoulder
rectus femoris	hip and thigh	subcostales	thorax
rectus inferior	head and face	subscapularis	shoulder
rectus internus or medialis	head and face	supinator	arm and forearm
rectus superior	head and face	suspensorius duodeni	back
rhomboideus major	back	supraspinatus	shoulder
rhomboideus minor	back	temporalis	head and face
risorius	head and face	tensor fasciae latae	hip and thigh
rotatores	back	tensor tympani	ear
sacrospinalis	back	tensor veli palatini	neck
salpingopharyngeus	neck	teres major	shoulder
sartorius	hip and thigh	teres minor	shoulder
scalenus anterior	neck	thyroarytenoideus	larynx
scalenus medius	neck	thyroepiglotticus	larynx
scalenus posterior	neck	thyrohyoideus	neck
semimembranosus	hip and thigh	thyropharyngeus	pharynx
semispinalis capitis	back	tibialis anterior	leg
semispinalis cervicis	back	tibialis posterior	leg
semispinalis thoracis	back	tragicus	ear
semitendinosus	hip and thigh	transversus abdominis	abdomen
serratus anterior	shoulder	transversus auricularae	ear
serratus posterior inferior	back	transversus perinei profundus	perineum
serratus posterior superior	back	transversus perinei superficialis	perineum
soleus	leg	transversus thoracis	thorax
sphincter ani externus	perineum	trapezius	back
sphincter ani internus	perineum	triceps brachii	arm and forearm
		uvulae	neck
		vastus intermedius	hip and thigh
		vastus lateralis	hip and thigh
		vastus medialis	hip and thigh
		vocalis	larynx
		zygomaticus major	head and face
		zygomaticus minor	head and face

## Principal Joints

### Principal Joints

<i>Name</i>	<i>Type</i>	<i>Ligaments</i>
Acromioclavicular	Gliding	Capsular; superior and inferior acromioclavicular; articular disk; coracoclavicular (trapezoid and conoid)
Atlas and axis	Pivot (trochoid)	Capsular; anterior and posterior atlantoaxial; transverse
Atlas and occipital	Condyloid	Capsular; anterior and posterior atlanto-occipital membrane; lateral; tectorial membrane; alar; apical odontoid
Calcaneocuboid	Gliding	Capsular; dorsal calcaneocuboid; bifurcated; long plantar; plantar-calcaneocuboid
Carpometacarpal	Gliding	Dorsal; volar; interosseous
Femur and tibia	Hinge (ginglymus)	Capsular; patellar; oblique and arcuate popliteal; tibial and fibularcollateral; anterior and posterior cruciate; medial and lateral menisci; transverse; coronary
Hip bone and femur	Ball and socket (enarthrosis)	Capsular; iliofemoral; pubocapsular; ischiofemoral; round ligament of femur; transverse acetabular
Humerus and ulna	Hinge (ginglymus)	Capsular; ulnar and radial collateral
Intercarpal		
Carpal, proximal	Gliding	Dorsal; volar; interosseous
Carpal, distal	Gliding	Dorsal; volar; interosseous
Carpal bones, two rows with each other		Volar; dorsal; collateral
Interphalangeal	Hinge (ginglymus)	Collateral; volar in fingers and plantar in toes
Mandible and temporal	Condyloid	Capsular; temporomandibular; sphenomandibular; articular disk; stylomandibular
Metacarpophalangeal	Condyloid	Volar; collateral
Metatarsophalangeal	Condyloid	Plantar; collateral
Pubic bones	Symphysis	Superior and arcuate pubic; interpubic fibrocartilaginous layer
Radioulnar, distal	Pivot (trochoid)	Ulnar collateral; articular disk
Radioulnar, proximal	Pivot (trochoid)	Annular

## Principal Joints (Continued)

<i>Name</i>	<i>Type</i>	<i>Ligaments</i>
Ribs, heads of	Gliding	Capsular; radiate; intra-articular
Ribs, tubercles and necks of	Gliding	Capsular; anterior and posterior costotransverse; neck of rib; tubercle of rib
Sacrococcygeal	Symphysis	Anterior, posterior, and lateral sacrococcygeal; interposed fibrocartilaginous; interarticular
Sacroiliac	Gliding (slight)	Anterior and posterior sacroiliac; interosseous
Scapula and humerus	Ball and socket (enarthrosis)	Capsular; coracohumeral; glenohumeral; transverse humeral; glenoid of humerus
Sternoclavicular	Double gliding	Capsular; anterior and posterior sternoclavicular; inter- and costoclavicular; articular disk
Sternocostal	Gliding	Capsular; radiate and intra-articular sternocostal; costoxiphoid
Talus and calcaneus	Gliding	Capsular; anterior, posterior, lateral, medial, and interosseous; talocalcaneal
Talus and navicular	Gliding	Capsular; dorsal talonavicular
Tarsometatarsal	Gliding	Dorsal; plantar; interosseous
Tibia-fibula and talus (ankle)	Hinge (ginglymus)	Capsular; deltoid; anterior and posterior talofibular; calcaneofibular
Tibiofibular, proximal	Gliding	Capsular; anterior; posterior
Tibiofibular, distal	Syndesmosis	Anterior and posterior tibiofibular; inferior transverse; interosseous
Vertebral arches	Gliding	Capsular; flaval; supraspinal; nuchal; interspinal; intertransverse
Vertebral bodies	Symphysis	Anterior and posterior longitudinal; intervertebral fibrocartilaginous
Radius-ulna and carpals (wrist)	Condyloid	Volar and dorsal radiocarpal; ulnar and radial collateral

## Nerves

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Function</i>	<i>Distribution</i>
Abducent (6th cranial n.)	N. abducens	Pons	Motor	Lateral rectus muscle of eye
Accessory (11th cranial n.)	N. accessorius	Medulla oblongata and spinal cord	Motor	Sternomastoid and trapezius muscles
Alveolar, inferior	N. alveolaris inferior	Mandibular div. of trigeminal	Sensory and motor	Teeth of lower jaw, mylohyoid muscle, and skin of chin
Alveolar, superior	Nn. alveolares superiores	Maxillary div. of trigeminal	Sensory	Upper teeth and gums
Auditory (8th cranial n.) SEE: <i>Vestibulocochlear</i>				
Auricular, great	N. auricularis magnus	Second and third cervical through cervical plexus	Sensory	Side of neck; skin of ear and cheek
Auricular, posterior	N. auricularis posterior	Facial	Motor	Posterior auricular muscle
Auriculotemporal	N. auriculotemporalis	Mandibular div. of trigeminal	Sensory	Side of scalp
Buccal	N. buccalis	Mandibular div. of trigeminal	Sensory	Skin and mucous membrane of cheek
Cervical n., superficial (Cutaneous cervical n.; transverse n. of neck)	N. transversus colli	Second and third cervical through cervical plexus	Sensory	Skin of front of neck
Chorda tympani		Facial	Motor and sensory	Sublingual and submaxillary glands; sense of taste
Ciliary, long	Nn. ciliares longi	Nasal	Sensory and motor	Cornea, iris, and ciliary body
Ciliary, short	Nn. ciliares breves	Ciliary ganglion	Sensory and motor	Cornea, iris, and ciliary body
Circumflex (Axillary)	N. axillaris	Posterior cord of brachial plexus	Motor and sensory	Deltoid, teres minor, shoulder joint, and overlying skin
Coccygeal	N. coccygeus	Spinal cord	Motor and sensory	Coccygeus muscle and skin over coccyx
Cochlear	N. cochlearis	Auditory	Sense of hearing	Cochlea

**Nerves (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Function</i>	<i>Distribution</i>
Cutaneous, lateral, of forearm	N. cutaneus antebrachii medialis	Musculocutaneous nerve	General sensory	Side of forearm
Cutaneous, medial, of forearm	N. cutaneus antebrachii medialis	Brachial plexus	General sensory	Front and medial forearm
Cutaneous, posterior, of forearm	N. cutaneus antebrachii posterior	Radial nerve	General sensory	Back of forearm
Cutaneous, lateral inferior, of arm	N. cutaneus brachii lateralis inferior	Radial nerve	General sensory	Lateral side of arm
Cutaneous, lateral superior, of arm	N. cutaneus brachii lateralis superior	Axillary nerve	General sensory	Back of arm
Cutaneous, medial, of arm	N. cutaneus brachii medialis	Brachial plexus	General sensory	Middle and back of arm
Cutaneous, posterior, of arm	N. cutaneus brachii posterior	Radial nerve in axilla	General sensory	Back of arm
Cutaneous, intermediate dorsal	N. cutaneus dorsalis intermedius	Superficial peroneal nerve	General sensory	Front of lower leg; dorsum of foot; toes
Cutaneous, lateral dorsal	N. cutaneus dorsalis lateralis	Sural nerve	General sensory	Lateral side of foot
Cutaneous, medial dorsal	N. cutaneus dorsalis medialis	Superficial peroneal nerve	General sensory	Medial side of foot; big toe; second and third toes
Cutaneous, lateral femoral	N. cutaneus femoralis lateralis	Lumbar plexus	General sensory	Lateral and front thigh
Cutaneous, posterior femoral	N. cutaneus femoralis posterior	Sacral plexus	General sensory	Buttocks; external genitals; back of thigh and calf
Cutaneous, lateral, of calf	N. cutaneus surae lateralis	Common fibular nerve	General sensory	Lateral side of back of leg
Cutaneous, medial, of calf	N. cutaneus surae medialis	Tibial nerve	General sensory	Back of leg
Digastric		Facial	Motor	Stylohyoid and posterior belly of digastric muscle

Facial (7th cranial n.)	N. facialis	Pons	Motor	Muscles of expression; sense of taste
Femoral (Anterior crural n.)	N. femoralis	2nd, 3rd, and 4th lumbar	Motor and sensory	Muscles and skin of thigh
Frontal	N. frontalis	Ophthalmic div. of trigeminal	Sensory	Skin of forehead
Genitofemoral (Genito-crural n.)	N. genitofemoralis	1st and 2nd lumbar	Sensory and motor	Cremaster muscle and skin of groin and upper part of thigh
Glossopharyngeal (9th cranial n.)	N. glossopharyngeus	Medulla oblongata	Motor and sensory	Muscles and mucous membrane of pharynx, fauces, and posterior third of tongue; sense of taste
Gluteal, inferior	N. gluteus inferior	5th lumbar and 1st and 2nd sacral	Motor	Gluteus maximus
Gluteal, superior	N. gluteus superior	4th and 5th lumbar and 1st sacral	Motor	Gluteus medius and minimus, tensor fasciae femoris
Hypogastric	N. hypogastricus	Iliohypogastric	Motor and sensory	Muscles and skin of abdominal wall
Hypoglossal (12th cranial n.)	N. hypoglossus	Hypoglossal nucleus in medulla oblongata	Motor	Intrinsic and extrinsic muscles of tongue
Iliohypogastric	N. iliohypogastricus	1st lumbar	Sensory and motor	Muscles and skin of hypogastrium
Ilioinguinal	N. ilioinguinalis	1st lumbar	Sensory and motor	Muscles of abdominal wall, skin of upper thigh, skin of root of penis and scrotum (in male), and skin of mons pubis and labium majus (infemale)
Infraorbital	N. infraorbitalis	Maxillary div. of trigeminal	Sensory	Skin of cheek and all upper teeth except molars
Infratrochlear	N. infratrochlearis	Nasociliary	Sensory	Skin of lower eyelid and root of nose, conjunctiva, and lacrimal sac and caruncle

**Nerves (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Function</i>	<i>Distribution</i>
Intercostal	Nn. intercostales	Thoracic	Sensory and motor	Muscles and skin of back, thorax, and upper abdomen
Intercostobrachial	Nn. intercostobrachiales	2nd intercostal	Sensory	Skin of axilla and medial side of arm
Interosseous, anterior (Volar interosseous n.)	N. interosseus anterior	Median	Motor	Deep flexor and pronator muscles of forearm
Interosseous, posterior	N. interosseus posterior	Musculospiral (Radial)	Motor and sensory	Muscles and skin of back of forearm and wrist
Lacrimal	N. lacrimalis	Ophthalmic div. of trigeminal	Sensory	Lacrimal gland, conjunctiva, and skin of upper eyelid
Laryngeal, inferior	N. laryngeus inferior	Branch of recurrent laryngeal	Motor	Muscles of larynx except cricothyroid
Laryngeal, recurrent	N. laryngeus recurrens	Nucleus ambiguus in the hindbrain via vagus nerve (CN X)	Motor	All intrinsic muscles of larynx except cricothyroid.
Laryngeal, superior	N. laryngeus superior	Vagus	Motor and sensory	Mucous membrane of larynx; arytenoid and cricothyroid muscles
Lingual	N. lingualis	Mandibular div. of trigeminal	Sensory	Mucous membrane of anterior two thirds of tongue and floor and outer wall of mouth
Lumbar	Nn. lumbales	Spinal cord	Motor and sensory	Loins and front of lower abdomen and thigh to help in forming lumbar and sacral plexuses

Mandibular	N. mandibularis	Trigeminal	Motor and sensory	Teeth, gums, and skin of lower jaw and cheek; muscles of mastication; mucous membrane of anterior two thirds of tongue
Masseteric	N. massetericus	Mandibular div. of trigeminal	Motor	Masseter muscle
Maxillary	N. maxillaris	Trigeminal	Sensory	Nasal pharynx, palate, teeth of upper jaw and skin of cheek
Median	N. medianus	Internal and external cords of brachial plexus	Motor and sensory	Pronators and flexors of forearm, two external lumbricales, thenar muscles, skin of palm and first four fingers
Mental	N. mentalis	Inferior alveolar	Sensory	Skin and mucous membrane of lower lip and chin
Musculocutaneous	N. musculocutaneus	External cord of brachial plexus	Motor and sensory	Flexors of upper arm and skin of external aspect of forearm
Mylohyoid	N. mylohyoideus	Inferior alveolar	Motor	Mylohyoid muscle and anterior belly of digastric muscle
Nasal (Nasociliary n.)	N. nasociliaris	Ophthalmic div. of trigeminal	Sensory	Ciliary ganglion, iris, conjunctiva, ethmoid cells, mucous membrane and skin of nose
Nasopalatine	N. nasopalatinus	Meckel's ganglion (Sphenopalatine ganglion)	Sensory	Mucous membrane of nose and palate
Obturator	N. obturatorius	2nd, 3rd, and 4th lumbar through lumbar plexus	Motor and sensory	Adductors of thigh, hip, and knee joints; skin of inner aspect of thigh
Occipital, greater	N. occipitalis major	2nd cervical	Motor and sensory	Muscles of back of neck; skin over occiput
Occipital, lesser	N. occipitalis minor	2nd and 3rd cervical	Sensory	Skin behind ear and on back of scalp

**Nerves (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Function</i>	<i>Distribution</i>
Occipital, third	N. occipitalis tertius	3rd cervical	Sensory	Skin of back of head and nape of neck
Oculomotor (3rd cranial n.)	N. oculomotorius	Floor of aqueduct of Sylvius	Motor	All ocular muscles except lateral rectus and superior oblique
Olfactory (1st cranial n.)	Nn. olfactorii	Olfactory lobe	Special sense of smell	Olfactory receptors
Ophthalmic	N. ophthalmicus	1st div. of trigeminal	Sensory	Lacrimal gland, conjunctiva, skin of forehead, skin and mucous-membrane of nose
Optic (2nd cranial n.)	N. opticus	Corpora quadrigemina	Special sense of sight	Retina
Palatine, anterior, middle, and posterior	Nn. palatini	Meckel's ganglion	Sensory and motor	Mucous membrane of palate; autonomic to glands
Pectoralis	N. pectoralis lateralis, N. pectoralis medialis	Brachial plexus	Motor	Pectoralis minor and major muscles
Perineal	N. perineales	Pudendal	Motor and sensory	Muscles and skin of perineum
Peroneal, common	N. peroneus communis	Sciatic	Motor and sensory	Extensor muscles of lower leg and foot and overlying skin
Phrenic	N. phrenicus	3rd, 4th, and 5th cervical	Motor and sensory	Diaphragm
Pneumogastric. SEE: <i>Vagus n.</i>				
Pterygoid	N. pterygoideus lateralis medialis	Mandibular div. of trigeminal	Motor	Lateral and medial pterygoid muscles
Pterygoid canal, n. of (Vidian n.)	N. canalis pterygoidei	Facial	Sensory	Meckel's ganglion (sphenopalatine ganglion)
Pterygopalatine	N. pterygopalatini	Maxillary div. of trigeminal	Sensory	Meckel's ganglion
Pudendal	N. pudendus	2nd, 3rd, and 4th sacral	Sensory	Skin and muscles of perineum and genitalia

Radial (musculospiral n.)	N. radialis	Brachial plexus	Motor and sensory	Skin of back of entire arm and hand; extensor muscles of entire arm and hand
Sacral	Nn. sacrales	Spinal cord	Motor and sensory	Muscles and skin of loins and lower extremities
Saphenous, external or short. SEE: <i>Sural n.</i>				
Saphenous, internal or long	N. saphenus	Femoral	Sensory	Skin of inner aspect of knee, leg, ankle, and dorsum of foot
Sciatic (Great sciatic n.)	N. ischiadicus	Sacral plexus	Motor and sensory	Muscles of calf and back of thigh; skin of lower calf and upper-surface of foot
Spinal accessory. SEE: <i>Accessory n. (11th cranial n.)</i>				
Stapedial	N. stapedius	Facial	Motor	Stapedius muscle
Stylohyoid		Facial	Motor	Stylohyoid muscle
Suboccipital	N. suboccipitalis	Posterior div. of 1st cervical	Motor	Complexus oblique and rectus muscles of back of neck
Subscapular	N. subscapularis	Posterior cord of brachial plexus	Motor	Teres major and subscapularis muscles
Supraclavicular, intermediate (Supraclavicular n., middle; supraclavicular n.)	Nn. supraclaviculares intermedii	3rd and 4th cervical	Sensory	Skin of fossa below collarbone
Supraclavicular, lateral (Supraclavicular n., posterior; supra-acromial n.)	Nn. supraclaviculares laterales	3rd and 4th cervical	Sensory	Skin of shoulder
Supraclavicular, medial (Supraclavicular n., anterior; suprasternal n.)	Nn. supraclaviculares mediales	3rd and 4th cervical	Sensory	Skin over upper part of thorax
Supraorbital	N. supraorbitalis	Frontal	Sensory	Forehead, upper eyelid, scalp, and frontal sinus

**Nerves (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Function</i>	<i>Distribution</i>
Suprascapular	N. suprascapularis	5th and 6th cervical	Motor	Suprasspinatus and infraspinatus muscles and the shoulder joint
Supratrochlear	N. supratrochlearis	Frontal	Sensory	Skin of upper eyelid and root of nose
Sural	N. suralis	Common peroneal and tibial n.'s	Sensory	Skin of calf and medial side of foot to great toe
Temporal, deep	Nn. temporales profundi	Mandibular div. of trigeminal	Motor	Temporal muscle
Thoracic	Nn. thoracici	Spinal cord	Motor and sensory	Muscles and skin of thorax
Thoracic, long (Posterior thoracic n.; external respiratory n. of Bell)	N. thoracicus longus	5th, 6th, and 7th cervical	Motor	Serratus anterior muscle
Thoracodorsal	N.thoracodorsalis	C6-C8 nerve fibers via brachial plexus	Motor	Latissimus dorsi
Tibial	N. tibialis	Sciatic	Motor and sensory	Flexor muscles of back of knee joint and calf; skin of lower leg
Trigeminal (5th cranial n.; trifacial n.)	N. trigeminus	Midbrain and pons	Motor and sensory	Skin of face, tongue, teeth; muscles of mastication
Trochlear (4th cranial n.; pathetic n.)	N. trochlearis	Floor of aqueduct of Sylvius	Motor	Superior oblique muscle of eye
Tympanic (Jacobson's n.)	N. tympanicus	Glossopharyngeal	Sensory	Tympanum, eustachian tube, and structures of middle ear
Ulnar	N. ulnaris	Medial cord of brachial plexus	Motor and sensory	Muscles and skin of forearm and hand

Vagus (10th cranial n.; pneumogastric n.)	N. vagus	Medulla oblongata	Motor and sensory	Pharynx, larynx, heart, lungs, stomach and other abdominal viscera
Vestibulocochlear (8th cranial n.; acoustic n.; auditory n.)	N. vestibulocochlearis	Ganglion of Scarpa and ganglion of Corti	Sense of hearing and equilibrium	Cochlea, semicircular canals, utricle, and saccule
Zygomatic	N. zygomaticus	Maxillary div. of trigeminal	Sensory	Skin of temple and cheekbone

## Nerve Plexuses

- aortic** (ā-ō'tīk). SPECIFIC: Abdominal ORIGIN: Semilunar, lumbar ganglia, renal and solar plexuses. LOCATION: Sides and front of aorta. DISTRIBUTION: Inferior mesenteric, spermatic and hypogastric plexus. Filaments to inferior vena cava. SPECIFIC: Thoracic ORIGIN: Thoracic ganglia of sympathetic nerve, cardiac plexus. LOCATION: Surrounding the thoracic aorta. DISTRIBUTION: Solar plexus, aorta.
- brachial** (brā'kē-āl). ORIGIN: Anterior branches of 5th, 6th, 7th, 8th cervical, and greater part of 1st thoracic nerves. LOCATION: Lower part of neck to axilla. DISTRIBUTION: Sixteen branches of suprascapular, subscapular, rhomboid, median, ulnar, musculospiral, posterior thoracic, musculothoracic, circumflex, musculocutaneous nerves.
- cardiac** (kār'dē-āk). SPECIFIC: Great or Deep ORIGIN: Cardiac nerves of cervical ganglion of sympathetic and vagus. LOCATION: In front of bifurcation of trachea. DISTRIBUTION: Pulmonary, coronary and cardiac plexuses. SPECIFIC: Superficial or Anterior ORIGIN: Left superior cardiac nerve, branch of vagus, and filaments of deep cardiac plexus. LOCATION: Beneath arch of aorta. Front of right pulmonary artery. DISTRIBUTION: Coronary and pulmonary plexuses.
- carotid** (kā-rōt'id). SPECIFIC: External ORIGIN: Pharyngeal plexus, superior cardiac nerve, and superior cervical ganglion. LOCATION: Around external carotid artery. DISTRIBUTION: External carotid artery and its branches. SPECIFIC: Internal ORIGIN: Postganglionic sympathetic fibers. LOCATION: Surrounding internal carotid artery. DISTRIBUTION: Tympanic plexus, sphenopalatine ganglion, abducens and oculomotor nerves, the cerebral vessels, and the ciliary ganglion.
- cavernous** (kāv'ēr-nūs). ORIGIN: 3rd to 6th cranial nerves and ophthalmic ganglion. LOCATION: Cavernous sinus. DISTRIBUTION: Wall of internal carotid artery.
- celiac** (sē'lē-āk). ORIGIN: Solar plexus, branches from lesser splanchnic and vagus nerves. LOCATION: Behind stomach, in front of aorta at level of origin of celiac artery. DISTRIBUTION: Coronary, hepatic, pyloric, gastroduodenal, gastroepiploic, and splenic plexuses. SYN: solar plexus
- cervical** (ser'vī-kāl). ORIGIN: Anterior branches of first four cervical nerves. LOCATION: Beneath sternocleidomastoid muscle opposite first four cervical vertebrae. DISTRIBUTION: Skin and muscles of neck; phrenic nerve to diaphragm.
- coccygeal** (kōk-sij'ē-āl). ORIGIN: Fourth and 5th sacral and the coccygeal nerves. LOCATION: Dorsal surface of coccyx and caudal end of sacrum. DISTRIBUTION: Anococcygeal nerves.
- cystic** (sīs'tīk). ORIGIN: Hepatic plexus. LOCATION: At gallbladder. DISTRIBUTION: Gallbladder.
- esophageal** (ē-sōf'ā-jē-āl). ORIGIN: Vagus nerve, thoracic sympathetic ganglia. LOCATION: Around the esophagus. DISTRIBUTION: Esophagus.
- gastric** (gās'trīk). ORIGIN: Celiac plexus and continuations of esophageal plexuses. LOCATION: Gastric artery. DISTRIBUTION: Stomach.
- hemorrhoidal** (hēm-ō-roy'dāl). ORIGIN: Pelvic and inferior mesenteric plexuses. LOCATION: Rectum and sides of rectum. DISTRIBUTION: Rectum.
- hepatic** (hē-pāt'īk). ORIGIN: Celiac plexus, left vagus, right phrenic. LOCATION: Accompanies hepatic artery. DISTRIBUTION: Liver.
- hypogastric** (hī'pō-gās'trīk). ORIGIN: Aortic plexus and lumbar ganglia. LOCATION: Promontory of sacrum. DISTRIBUTION: Pelvic plexus.
- lumbar** (lūm'bār). ORIGIN: Anterior branches of first four lumbar nerves. LOCATION: Psoas muscle. DISTRIBUTION: Iliohypogastric, ilioinguinal, genitocrural, external cutaneous, obturator, accessory, and anterior crural nerves.
- Meissner's** (mīs'nērz). ORIGIN: Superior mesenteric plexus (controls secretions of the bowels). LOCATION: Submucosa of alimentary tube. DISTRIBUTION: Mucosal glands and smooth muscle. SYN: submucosal plexus
- mesenteric** (mēs'ēn-tēr'īk). ORIGIN: Celiac plexus and left side of aortic plexus. LOCATION: Surrounding the inferior and superior mesenteric arteries. DISTRIBUTION: Descending colon, sigmoid, rectum, intestines.
- myenteric** (mī'ēn-tēr'īk). ORIGIN: Sympathetic and parasympathetic nerves. LOCATION: Between circular and longitudinal smooth muscle layers of alimentary tube. DISTRIBUTION: Smooth muscle of alimentary tube; controls peristalsis. SYN: Auerbach's plexus
- ophthalmic** (ōf-thāl'mīk). ORIGIN: Internal carotid plexus. LOCATION: Around ophthalmic artery and optic nerve. DISTRIBUTION: Optic region.
- pancreatic** (pān'krē-āt'īk). ORIGIN: Splenic plexus. LOCATION: Near pancreas. DISTRIBUTION: Filaments to pancreas.
- pancreaticoduodenal** (pān'krē-āt'ī-kō-dū-ō-dē'nāl). ORIGIN: Hepatic plexus. LOCATION: Near head of pancreas. DISTRIBUTION: Filaments to pancreas and duodenum.
- pelvic** (pēl'vīk). ORIGIN: Hypogastric plexus, 2nd to 4th sacral nerves, 1st and 2nd sacral ganglia (pelvic brain). LOCATION: Side of rectum and bladder. DISTRIBUTION: Viscera of pelvis, pelvic plexus.

## Nerve Plexuses

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**phrenic** (frĕn'ĭk). ORIGIN: Cervical plexus, semilunar ganglia. LOCATION: Accompanies phrenic artery to diaphragm. DISTRIBUTION: Diaphragm and suprarenal capsules.

**prostatic** (prōs-tăt'ĭk). ORIGIN: Hypogastric plexus. LOCATION: Vesical arteries. DISTRIBUTION: Bladder.

**pulmonary** (pŭl'mō-nĕ-rĕ). ORIGIN: Anterior and posterior pulmonary branches of vagus and sympathetic nerves. LOCATION: Root of lungs, front and back. DISTRIBUTION: Root of lungs.

**pyloric** (pĭ-lor'ĭk). ORIGIN: Hepatic plexus. LOCATION: Near pylorus. DISTRIBUTION: Filaments to pylorus.

**renal** (rĕ'nāl). ORIGIN: Solar and aortic plexuses and semilunar ganglia. LOCATION: Renal artery. DISTRIBUTION: Kidneys, posterior vena cava, spermatic plexus.

**sacral** (sā'krāl). ORIGIN: Anterior branch of 4th and 5th lumbar and 1st, 2nd, 3rd, and 4th sacral nerves. LOCATION: Front of sacrum on piriformis muscle. DISTRIBUTION: Muscular, pudic, superior gluteal, great and small sciatic nerves.

**solar** (sō'lār). SPECIFIC: Epigastric ORIGIN: Splanchnics and right vagus. LOCATION: Back of stomach. DISTRIBUTION: Semilunar ganglia, suprarenal, renal, spermatic, celiac, superior mesenteric, and aortic plexuses. Called *abdominal brain*. SYN: celiac plexus

**spermatic** (spĕr-măt'ĭk). SPECIFIC: Ovarian ORIGIN: Aortic plexus. LOCATION: Accompanies spermatic vessels to testes or ovaries. DISTRIBUTION: Testes or ovaries.

**splenic** (splĕn'ĭk). ORIGIN: Celiac plexus, left semilunar ganglion, right vagus nerve. LOCATION: Accompanies splenic artery. DISTRIBUTION: Spleen, pancreatic plexus, left gastroepiploic plexus.

**suprarenal** (soo'prā-rĕ'nāl). ORIGIN: Diaphragmatic, solar, and renal plexuses. LOCATION: Around suprarenal capsules. DISTRIBUTION: Filaments to medulla of suprarenal capsules.

**thyroid** (thĭ'royd). SPECIFIC: Inferior ORIGIN: Middle cervical ganglion. LOCATION: Around external carotid and inferior thyroid arteries. DISTRIBUTION: Larynx, pharynx, thyroid gland. SPECIFIC: Superior ORIGIN: Superior laryngeal and cardiac nerves. LOCATION: Around the thyroid gland. DISTRIBUTION: Thyroid region.

**uterine** (ŭ'tĕriĭn). ORIGIN: Pelvic plexus. LOCATION: Accompanies uterine arteries. DISTRIBUTION: Cervix and lower part of uterus.

**vaginal** (vāj'ĭn-āl). ORIGIN: Pelvic plexus. LOCATION: Vaginal walls. DISTRIBUTION: Vagina.

**vertebral** (vĕr'tĕ-brāl). ORIGIN: First part thoracic ganglion, upper cervical nerves. LOCATION: Surrounding basilar and vertebral arteries. DISTRIBUTION: Vertebral and cerebellar regions.

**vesical** (vĕs'ĭ-kāl). ORIGIN: Pelvic plexus. LOCATION: Accompanies vesical arteries. DISTRIBUTION: Vesicula seminalis, vas deferens.

## Cranial Nerves

<i>No.</i>	<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution and Function</i>
1st	Olfactory	Nn. olfactorii	Olfactory mucosa to olfactory bulb	Olfactory receptors, sensory for smell
2nd	Optic	N. opticus	Retina to optic chiasma	Rods and cones of the retina, sensory for sight
3rd	Oculomotor	N. oculomotorius	Midbrain	Motor and muscle sense for 4 extrinsic muscles of the eyeball (superior rectus, inferior rectus, medial rectus, and inferior oblique) and levator palpebrae superioris of the eyelid Motor to ciliary muscle that encircles lens; contracts for near vision Motor (parasympathetic) to sphincter smooth muscle fibers of the iris; constricts the pupil
4th	Trochlear	N. trochlearis	Midbrain	Motor and muscle sense for the superior oblique, an extrinsic muscle of the eyeball
5th	Trigeminal	N. trigeminus	Pons	Ophthalmic branch – sensory for the skin of the upper face and anterior scalp Maxillary branch – sensory for the upper teeth and lip, palate, nasal mucosa and pharyngeal mucosa Mandibular branch – sensory for lower teeth and lower face; somatic sensory for the anterior two-thirds of the tongue; motor and muscle sense for chewing muscles
6th	Abducent	N. abducens	Pons	Motor and muscle sense for the lateral rectus, an extrinsic muscle of the eyeball
7th	Facial	N. facialis	Pons	Sensory for taste for the anterior two-thirds of tongue Motor and muscle sense for the muscles of facial expression Motor (parasympathetic) to the sublingual and submandibular salivary glands Motor (parasympathetic) to the lacrimal glands

8th	Auditory (Acoustic)	N. vestibulocochlearis	Cochlea to medulla; Semicircular canals and vestibule to pons and cerebellum	Cochlear branch – sensory for the hair cells of the organ of Corti, for hearing Vestibular branch – sensory for static equilibrium (hair cells of the utricle and saccule) and for equilibrium of motion (hair cells of the semicircular canals)
9th	Glossopharyngeal	N. glossopharyngeus	Medulla oblongata	Sensory for taste and somatic senses for posterior one-third of the tongue Sensory for carotid sinus (pressoreceptors) and carotid body (chemoreceptors) as part of cardiac, respiratory, and blood pressure reflexes Motor (parasympathetic) to the parotid salivary gland Motor and muscle sense for swallowing muscles
10th	Vagus	N. vagus	Medulla oblongata	Sensory for aortic sinus (pressoreceptors) and aortic body (chemoreceptors) as part of cardiac, respiratory, and blood pressure reflexes Sensory for visceral sensation for thoracic and abdominal organs Inhibitory (parasympathetic) to heart Motor and muscle sense for muscles of the pharynx Motor to smooth muscle of the bronchial tree Motor to smooth muscle of the esophagus, stomach, intestines, and gallbladder Motor to gastrointestinal glands Motor to the muscles of the larynx
11th	Accessory	N. accessorius	Medulla oblongata and cervical spinal cord	Motor and muscle sense for muscles of the pharynx, soft palate, and larynx Motor and muscle sense for the trapezius and sternocleidomastoid muscles
12th	Hypoglossal	N. hypoglossus	Medulla oblongata	Motor and muscle sense for muscles of the tongue

## Arteries

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Branches</i>
Alveolar, inferior	A. alveolaris inferior	Maxillary	Lower anterior skull	Dental; mylohyoid; mental
Angular	A. angularis	Terminal branch of external maxillary	Neck and face	
<i>Aorta. SEE: aorta in vocabulary</i>				
Arcuate (Metatarsal a.)	A. arcuata pedis	Dorsal a. of foot	Foot and toes	Deep plantar; dorsal metatarsal; dorsal digital
A. of the pterygoid canal	A. canalis pterygoidei	Maxillary	Roof of pharynx; auditory (eustachian) tube	
Auditory, internal	A. labyrinthi	Middle of basilar or anterior inferior cerebellar	Internal ear	
Auricular, deep	A. auricularis profunda	Maxillary	Skin of auditory canal, tympanic membrane, and temporomandibular joint	
Auricular, posterior	A. auricularis posterior	External carotid	Middle ear; mastoid cells; auricle; parotid gland	Stylomastoid; auricular; occipital
Axillary	A. axillaris	Subclavian	Forms brachial artery and seven branches	Superior; thoracic; thoracoacromial; lateral thoracic; subscapular; anterior and posterior humeral; thoracodorsal; brachial
Basilar	A. basilaris	Vertebral	Pons	Posterior cerebral; pontine; internal auditory; anterior inferior cerebellar; superior cerebellar
Brachial	A. brachialis	Axillary	Upper arm	Deep brachial; nutrient; superior and inferior collateral; muscular

Brachial, deep	A. profunda brachii	Brachial	Accompanies radial nerve	
Brachiocephalic trunk (Innominate a.)	Truncus brachiocephalicus	Arch of aorta	Right side of head, neck, and arm	Right subclavian; right common carotid
Bronchial	Rr. bronchiales	Thoracic aorta	Bronchi; lower trachea; pulmonary vessels; pericardium; part of esophagus	Left and right bronchial
Buccal (Buccinator a.)	A. buccalis	Maxillary	Buccinator muscle; mucous membrane of mouth	
Capsular, middle. SEE: <i>Suprarenal a., middle</i>				
Carotid, common	A. carotis communis	Brachiocephalic trunk (right); aortic arch (left)	Neck and thyroid	External and internal carotid
Carotid, external	A. carotis externa	Common carotid	Neck; face; skull	Superior thyroid; ascending pharyngeal; lingual; facial; occipital; posterior auricular; superficial temporal; maxillary
Carotid, internal	A. carotis interna	Common carotid	Anterior brain; eyes; forehead; nose	Caroticotympanic; vidian; cavernous; hypophyseal; semilunar; anterior meningeal; ophthalmic; anterior and middle cerebral; posterior communicating; choroidal
Celiac	Truncus celiacus	Abdominal aorta	Stomach; liver; pancreas; duodenum; spleen	Left gastric; common hepatic; splenic
Cerebellar, anterior inferior	A. cerebelli inferior anterior	Basilar	Anterior undersurface of cerebellum	
Cerebellar, posterior inferior	A. cerebelli inferior posterior	Vertebral	Cerebellum	
Cerebellar, superior	A. cerebelli superior	Near termination of basilar	Upper cerebellum; midbrain; pineal body	

**Arteries (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Branches</i>
Cerebral, anterior	A. cerebri anterior	Internal carotid	Cerebrum	Cortical; central; anterior communicating
Cerebral, posterior	A. cerebri posterior	Basilar	Cerebrum	Central; posterior choroidal; cortical temporal; calcarine; parieto-occipital
Cervical, ascending	A. cervicalis ascendens	Inferior thyroid	Muscles of neck and spinal cord	
Cervical, superficial		Thyroid axis	Muscles of shoulder	
Cervical, transverse	A. transversa colli	Thyroid axis	Muscles and glands of neck	Deep and superficial rami
Choroidal, anterior (Choroid)	A. choroides anterior	Internal carotid	Internal capsule	
Ciliary, anterior	Aa. ciliares anteriores	Ophthalmic and lacrimal	Iris; conjunctiva	
Ciliary, long posterior	Aa. ciliares posteriores longae	Ophthalmic	Iris and ciliary process	
Ciliary, short posterior	Aa. ciliares posteriores breves	Ophthalmic	Choroid coat of eye	
Circumflex, anterior humeral	A. circumflexa humeri anterior	Lateral side of axillary	Shoulder joint and upper arm	
Circumflex iliac a., deep	A. circumflexa ilium profunda	External iliac	Muscles of skin and lower abdomen	
Circumflex, posterior humeral	A. circumflexa humeri posterior	Axillary	Deltoid and shoulder joint; upper arm	
Colic, left	A. colica sinistra	Inferior mesenteric	Descending and transverse colon	Ascending and descending colic
Colic, middle	A. colica media	Superior mesenteric	Transverse colon	Right and left colic
Colic, right	A. colica dextra	Superior mesenteric	Ascending colon	Ascending and descending colic

Collateral, inferior ulnar	A. collateralis ulnaris inferior	Brachial	Muscles at back of elbow	
Collateral, superior ulnar	A. collateralis ulnaris superior	Brachial	Elbow joint and triceps muscles	
Communicating, posterior	A. communicans posterior cerebri	Internal carotid	Hippocampus; thalamus	
Coronary, left	A. coronaria sinistra	Ascending aorta	Left ventricle and atrium	Anterior descending coronary; circumflex
Coronary, right	A. coronaria dextra	Ascending aorta	Right ventricle and atrium	Posterior descending; marginal
Cystic	A. cystica	Proper hepatic	Gallbladder; liver	
Digital, common palmar	Aa. digitales palmares communes	Palmar arch	Fingers	Proper palmar digital
Digital, proper palmar (Collateral digital a.)	Aa. digitales palmares propriae	Common palmar digital	Fingers	
Dorsal, of foot	A. dorsalis pedis	Continuation of anterior tibial	Foot	Lateral and medial tarsal; deep plantar; arcuate; first dorsal metatarsal
Epigastric, inferior	A. epigastrica inferior	External iliac	Abdominal muscles; peritoneum	Cremasteric
Epigastric, superficial	A. epigastrica superficialis	Femoral	Skin of abdomen; superficial fascia; inguinal lymph nodes	
Epigastric, superior	A. epigastrica superior	Internal thoracic	Abdominal muscles and skin; diaphragm	
Esophageal		In front of aorta	Esophagus	
Ethmoidal, anterior	A. ethmoidalis anterior	Ophthalmic	Ethmoidal cells and frontal sinus; dura mater; nasal cavity	Anterior meningeal

**Arteries (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Branches</i>
Ethmoidal, posterior	A. ethmoidalis posterior	Ophthalmic	Ethmoidal cells; dura mater; nasal cavity	Posterior meningeal
Facial (External maxillary a.)	A. facialis	Carotid triangle	Face; tonsil; palate; submandibular gland	Ascending palatine; tonsillar; submental; inferior and superiorlabial; angular; glandular; lateral nasal; muscular
Facial, transverse	A. transversa faciei	Superficial temporal	Parotid gland; skin of face; masseter muscle	
Femoral	A. femoralis	Continuation of external iliac	Lower abdominal wall; external genitalia; lower extremity	Superficial epigastric; superficial circumflex iliac; external pudendal; deep femoral; descending genicular
Femoral, deep	A. profunda femoris	Femoral	Thigh muscles; hip joint; gluteal muscles; femur	Perforating; medial and lateral circumflex
Femoral, lateral circumflex	A. circumflexa femoris lateralis	Deep femoral a.	Hip joint; thigh muscles	Ascending; descending; transverse
Femoral, medial circumflex	A. circumflexa femoris medialis	Medial aspect of deep femoral a.	Hip joint; thigh muscles	Deep; acetabular; transverse; superficial
Fibula. SEE: <i>Peroneal a.</i>				
Frontal	A. supratrochlearis	Ophthalmic	Forehead muscles; cranium	
Gastric, left	A. gastrica sinistra	Celiac trunk	Abdominal section of esophagus; stomach; left lobe of liver	Anterior and posterior gastric; cardioesophageal
Gastric, right	A. gastrica dextra	Common hepatic	Lesser curvature of stomach	

Gastric, short	Aa. gastricae breves	End of splenic	Greater curvature of stomach	
Gastroduodenal	A. gastroduodenalis	Common hepatic trunk	Stomach; duodenum; pancreas; greater omentum	Superior pancreaticoduodenal; right gastroepiploic; retroduodenal
Gastro-omental, left	A. gastro-omentalis sinistra	Splenic	Stomach; greater omentum	
Gastro-omental, right	A. gastro-omentalis dextra	Gastroduodenal	Stomach; greater omentum	Ascending pyloric and ascending branches to stomach
Genicular, descending	A. genus descendens	Femoral	Knee joint; skin of upper and medial section of leg	Saphenous; musculo-articular
Genicular, inferior	A. genus inferior lateralis	Popliteal	Knee joint; skin of upper and middle leg	
Genicular, middle	A. genus media	Popliteal	Knee joint, ligaments and synovial membrane of knee	
Genicular, superior	A. genus superior lateralis	On either side of popliteal	Knee joint; femur; patella	
Gluteal, inferior	A. glutea inferior	Internal iliac	Buttocks and back of thigh	Sciatic
Gluteal, superior	A. glutea superior	Internal iliac	Gluteal region	Superficial and deep gluteal
Hemorrhoidal, middle	A. rectalis media	Internal iliac	Rectum; prostate; seminal vesicles	
Hemorrhoidal, superior	A. rectalis superior	Inferior mesenteric	Rectum	
Hepatic, common	A. hepatica communis	Celiac trunk	Stomach; pancreas; duodenum; liver; gallbladder; greater omentum	Right gastric; gastroduodenal; proper hepatic
Hepatic, proper	A. hepatica propria	Common hepatic	Liver and gallbladder	Cystic
Ileocolic	A. ileocolica	Superior mesenteric	Ileum; cecum; appendix; ascending colon	Superior and inferior ileocolic; appendicular
Iliac, common	A. iliaca communis	End of abdominal aorta	Pelvis; abdominal wall; lower limbs	External and internal iliac

**Arteries (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Branches</i>
Iliac, external	A. iliaca externa	Common iliac	Abdominal wall; external genitalia; lower limb	Inferior epigastric; deep circumflex iliac
Iliac, internal	A. iliaca interna	Common iliac	Walls and viscera of pelvis, buttocks, reproductive organs; medial side of thighs	Superior, middle, and inferior vesical; middle hemorrhoidal; obturator; internal pudendal; inferior gluteal; uterine; vaginal; iliolumbar; lateral sacral; superior gluteal
Iliac, superficial circumflex	A. circumflexa ilium superficialis	Femoral	Inguinal glands; skin of thigh and abdomen	
Infraorbital	A. infraorbitalis	Maxillary	Maxillary sinus; center of face	Anterior superior alveolar; orbital
Intercostal	Aa. intercostales posteriores	Thoracic aorta	Intercostal spaces; back muscles; vertebral column; thoracic wall	Anterior and posterior rami
Interosseous, anterior (Volar interosseous a.)	A. interossea anterior	Common interosseous	Deep structures of anterior forearm	Median; nutrient; muscular
Interosseous, common	A. interossea communis	Ulnar	Deep structure of forearm	Anterior and posterior interosseous
Interosseous, posterior	A. interossea posterior	Common interosseous	Muscles of posterior forearm	Recurrent interosseous
Intestinal		Superior mesenteric	Jejunum and ileum	
Labial, inferior	A. labialis inferior	Near angle of mouth	Lower lip	
Labial, superior	A. labialis superior	Near angle of mouth	Upper lip	
Lacrimal	A. lacrimalis	Ophthalmic	Lacrimal gland; eyelid; conjunctiva	Lateral palpebral; zygomatic; recurrent

Laryngeal, inferior	A. laryngea inferior	Inferior thyroid	Muscles and mucous membrane of trachea and larynx	
Laryngeal, superior	A. laryngea superior	Superior thyroid	Muscles, mucous membrane, and glands of larynx	
Lingual	A. lingualis	External carotid	Undersurface of tongue; tonsil; epiglottis	Suprahyoid; dorsal and deep lingual; sublingual
Lingual, deep	A. profunda linguae	End of lingual	Undersurface of tongue	
Lingual, dorsal	Rr. dorsales linguae	Lingual	Mucous membrane on dorsum of tongue; glossopalatine arch; tonsil; soft palate; epiglottis	
Lumbar	Aa. lumbales	Abdominal aorta	Abdominal wall; vertebrae; lumbar muscles; renal capsule	Posterior lumbar; muscular
Malleolar, lateral anterior	A. malleolaris anterior lateralis	Anterior tibial	Ankle joint	
Malleolar, medial anterior	A. malleolaris anterior medialis	Anterior tibial	Ankle joint	
Malleolar, medial posterior	Rr. malleolares mediales arteriae tibialis posterioris	Peroneal	Tibial malleolus	
Masseteric	A. masseterica	Maxillary	Masseter muscle	

**Arteries (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Branches</i>
Maxillary (Internal maxillary a.)	A. maxillaris	External carotid	Jaws and teeth; muscles of mastication; ear; meninges; nose; nasal sinus; palate	Anterior tympanic; deep auricular; middle and accessory meningeal; inferior and posterior superior alveolar; deep temporal; pterygoid; masseteric; buccal; infraorbital; greater palatine; pharyngeal; sphenopalatine
Maxillary, external. SEE: <i>Facial a.</i>				
Mediastinal, anterior	Rr. mediastinales arteriae thoracicae internae	Internal thoracic	Anterior mediastinal cavity; portion of thymus	
Medullary (Bulbar a.)		Vertebral	Medulla oblongata	
Meningeal, middle	A. meningea media	Maxillary	Dura mater; cranial bones	Superficial; petrosal; superior tympanic; orbital; temporal; and numerous small vessels
Mesenteric, inferior	A. mesenterica inferior	Abdominal aorta	Left half of transverse colon; descending, iliac, and sigmoid colon; part of rectum	Left colic; sigmoid; superior hemorrhoidal
Mesenteric, superior	A. mesenterica superior	Abdominal aorta	Small intestine; cecum; ascending colon; part of transverse colon	Inferior pancreaticoduodenal; jejunal; ileal; ileocolic; right and middle colon
Metacarpal, palmar	Aa. metacarpales palmares	Deep palmar arch	Interosseous muscles and bones	
Metatarsal, first dorsal		Dorsal a. of foot	Medial border of foot	

Musculophrenic	A. musculophrenica	Internal thoracic	Diaphragm; abdominal and thoracic walls	
Nasal, dorsal	A. dorsalis nasi	Ophthalmic	Lacrimal sac; integuments of nose	Lacrimal
Obturator	A. obturatoria	Internal iliac	Pelvis and thigh	Iliac; vesical; pubic; anterior and posterior obturator
Occipital	A. occipitalis	Posterior part of external carotid	Muscles of neck and scalp; meninges; mastoid	Muscular; meningeal; sternomastoid; descending occipital; auricular
Ophthalmic	A. ophthalmica	Internal carotid	Eye and adjacent structures of face	Lacrimal; supraorbital; posterior and anterior ethmoidal; medial palpebral; frontal; dorsal nasal; central a. of retina; short posterior, long posterior, and anterior ciliary; muscular
Ovarian	A. ovarica	Abdominal aorta	Ovaries; uterine tubes; ureter	Ureteral
Palatine, ascending	A. palatina ascendens	Facial	Base of skull; palate; auditory tube	
Palatine, greater	A. palatina major	Maxillary	Palate and tonsils	Greater and lesser palatine
Palpebral, medial (Internal Palpebral a.)	Aa. palpebrales mediales	Ophthalmic	Upper and lower eyelids	Superior and inferior palpebral
Pancreaticoduodenal, inferior	Aa. pancreaticoduodenales inferiores	Superior mesenteric	Pancreas; duodenum	
Pancreaticoduodenal, superior	Aa. supraduodenales superiores	Gastroduodenal	Pancreas; duodenum	
Perforating	Aa. perforantes	Deep femoral	Back of thigh	
Pericardiophrenic	A. pericardiophrenica	Internal thoracic	Diaphragm; pericardium; pleura	

**Arteries (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Branches</i>
Peroneal (Fibular)	A. peronea (A. fibularis)	Posterior tibial	Ankle; deep calf muscles	Perforating; communicating; calcaneal; tibial and fibular nutrient; lateral and medial malleolar
Pharyngeal, ascending	A. pharyngea ascendens	Posterior part of external carotid	Pharynx; soft palate; ear; meninges; cranial nerves; capitis muscles	Pharyngeal; palatine; posterior meningeal; prevertebral; inferior tympanic
Phrenic	Aa. phrenicae inferiores	Aorta, abdominal	Diaphragm; adrenal glands	Medial, lateral, and superior adrenal
Phrenic	Aa. phrenicae superiores	Aorta, thoracic	Diaphragm	
Plantar, deep	R. plantaris profunda	Dorsal a. of foot	Sole of foot	First plantar metatarsal
Plantar, lateral	A. plantaris lateralis	Posterior tibial	Toes and sole of foot	Plantar arch and plantar metatarsal
Plantar, medial	A. plantaris medialis	Posterior tibial	Muscles and skin of sole of foot and toes	Superficial digital
Popliteal	A. poplitea	Continuation of femoral	Knee and calf	Anterior and posterior tibial; lateral and medial superior genicular; middle, sural, lateral, and medial inferior genicular; genicular articular
Pudendal, external	Aa. pudendae externae	Femoral	External genitalia; medial thigh	

Pudendal, internal	A. pudenda interna	Internal iliac	External genitalia	Posterior scrotal or posterior labial; inferior hemorrhoidal; perineal; urethral; a. of bulb of penis or vestibule; deep a. of penis or clitoris; dorsal a. of penis or clitoris
Pulmonary	Truncus pulmonalis	Right ventricle	Lungs	Right and left pulmonary
Pulmonary, left	A. pulmonalis sinistra	Pulmonary trunk	Left lung	Numerous branches
Pulmonary, right	A. pulmonalis dextra	Pulmonary trunk	Right lung	Numerous branches
Radial	A. radialis	Brachial	Forearm; wrist; hand	Recurrent radial; muscular; palmar and dorsal carpal; superficial palmar; first dorsal metacarpal; principal a. of thumb; perforating; recurrent; palmar
Radial, of index finger	A. radialis indicis	Principal a. of thumb	Index finger	
Rectal, inferior	A. rectalis inferior	Internal iliac artery via internal pudental artery	Anus, anal sphincter, and surrounding skin	
Rectal, middle	A. rectalis media	Internal iliac artery	Inferior rectum and anal canal	
Rectal, superior	A. rectalis superior	Inferior mesenteric artery	Rectum and anal canal	
Recurrent, anterior tibial	A. recurrens tibialis anterior	Anterior tibial	Knee joint	
Recurrent, posterior tibial	A. recurrens tibialis posterior	Anterior tibial	Knee joint	
Recurrent, radial	A. recurrens radialis	Below elbow from radial	Elbow joint; muscles of forearm	
Recurrent, ulnar	A. recurrens ulnaris	Ulnar	Elbow joint; skin and muscles of elbow	Anterior and posterior recurrent

**Arteries (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Branches</i>
Renal	A. renalis	Abdominal aorta	Kidney; suprarenal gland; ureter	Inferior suprarenal
Retroduodenal		Gastroduodenal	Head of pancreas; duodenum; bile duct	
Sacral, lateral	Aa. sacrales laterales	Internal iliac	Coccyx and sacrum	
Sacral, middle	A. sacralis mediana	Abdominal aorta	Sacrum; coccyx; rectum	Lowest lumbar
Scapula, circumflex a. of	A. circumflexa scapulae	Subscapular	Lateral border of scapula; infraspinous fossa	
Scapular, descending (Dorsal scapular a.)	A. scapularis descendens	Subclavian	Medial border of scapula	
Sigmoid	Aa. sigmoideae	Inferior mesenteric	Iliac, sigmoid, and pelvic colon	
Spermatic, internal. SEE: <i>Testicular a.</i>				
Sphenopalatine (Nasopalatine a.)	A. sphenopalatina	Maxillary	Nose	Posterior lateral nasal; posterior septal
Spinal, anterior (Ventral spinal a.)	A. spinalis anterior	Vertebral	Anterior spinal cord	
Spinal, posterior (Dorsal spinal a.)	A. spinalis posterior	Vertebral	Posterior spinal cord	
Splenic	A. splenica	Celiac trunk	Pancreas; spleen; stomach; greater omentum	Pancreatic; left gastroepiploic; short gastric; splenic
Sternomastoid	Rr. sternocleidomastoidei arteriae occipitalis	Occipital or external carotid	Sternocleidomastoid muscles	
Stylomastoid	A. stylomastoidea	Posterior auricular	Mastoid; tympanic cavity; stapedius muscle	

Subclavian	A. subclavia	Brachiocephalic trunk (right); arch of aorta (left)	Brain; meninges; spinal cord; neck; thoracic walls; upper limbs	Vertebral; internal thoracic; thyrocervical; costocervical; transverse cervical
Subcostal	A. subcostalis	Thoracic aorta	Upper abdominal wall	Dorsal and spinal
Sublingual	A. sublingualis	Anterior margin of hypoglossus	Sublingual gland and mucous membrane of mouth and gums	
Submental	A. submentalis	Facial	Mylohyoid muscle; submandibular and sublingual glands; lowerlip	
Subscapular	A. subscapularis	Axillary	Shoulder	Scapular circumflex and thoracodorsal
Supraorbital	A. supraorbitalis	Ophthalmic	Forehead; frontal sinus; upper eyelid; upper muscles of orbit	
Suprarenal, middle (Middle capsular a.)	A. suprarenalis media	Abdominal aorta	Suprarenal gland	
Suprascapular (Transverse scapular a.)	A. suprascapularis	Thyroid axis	Scapular; clavicle; shoulder joint	Acromial; suprasternal
Sural	Aa. surales	Popliteal opposite knee joint	Calf	
Tarsal, lateral	A. tarsalis lateralis	Dorsal a. of foot	Muscles and joints of tarsus	
Tarsal, medial	Aa. mediales	Dorsal a. of foot	Middle portion of foot	
Temporal, middle	A. temporalis media	Above zygomatic arch	Temporal muscle	
Temporal, superficial	A. temporalis superficialis	End of external carotid	Parotid gland; auricle; scalp; skin of face; masseter muscle	Transverse facial; middle temporal; anterior auricular; frontal; parietal
Testicular (Internal spermatic a.)	A. testicularis	Abdominal aorta	Ureter; epididymis; testes	Ureteral

**Arteries (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Branches</i>
Thoracic, internal (Internal mammary a.)	A. thoracica interna	Subclavian	Anterior thoracic wall; mediastinal structures; diaphragm	Pericardiophrenic; anterior mediastinal; pericardial; sternal; intercostal; perforating; musculophrenic; superior epigastric
Thoracic, lateral	A. thoracica lateralis	Axillary	Shoulder muscles and axillary glands	In the female, external mammary
Thoracic, superior	A. thoracica suprema	Thoracoacromial	Muscles of chest	
Thoracoacromial	A. thoracoacromialis	Axillary	Muscles and skin of upper arm, shoulder, and chest	Pectoral; acromial; clavicular; deltoid
Thoracodorsal	A. thoracodorsalis	Subscapular	Posterior portion of axillary	
Thumb, principal a. of	A. princeps pollicis	Radial	Sides and palmar aspect of thumb	Radial a. of index finger
Thyroid, inferior	A. thyroidea inferior	Thyroid axis	Thyroid gland; esophagus	Inferior laryngeal; tracheal; muscular; esophageal; ascending cervical
Thyroid, superior	A. thyroidea superior	External carotid	Hyoid muscles; larynx; thyroid gland; pharynx	Hyoid; sternomastoid; superior laryngeal; cricothyroid
Tibial, anterior	A. tibialis anterior	Popliteal	Leg; ankle; foot	Anterior and posterior tibial recurrent; fibular; lateral and medial anterior malleolar
Tibial, posterior	A. tibialis posterior	Lower end of popliteal	Leg; foot; heel	Peroneal; lateral and medial posterior malleolar; communicating; plantar; tibial and fibular nutrient

Tympanic, anterior	A. tympanica anterior	Maxillary	Lining of tympanic arch	
Tympanic, inferior	A. tympanica inferior	Ascending pharyngeal	Tympanic cavity	
Ulnar	A. ulnaris	Brachial	Forearm; wrist and hand	Anterior and posterior recurrent; common interosseous; muscular; palmar and dorsal carpal; deep palmar; superficial palmar arch
Uterine	A. uterina	Internal iliac	Uterus; uterine tubes; ovary; vagina	Vaginal; ovarian; tubal
Vaginal	A. vaginalis	Uterine	Vagina; bladder	
Vertebral	A. vertebralis	Subclavian	Muscles of neck; vertebrae; spinal cord; cerebellum; interior of cerebrum	Spinal; muscular; anterior and posterior spinal; posterior inferior cerebellar; medullary
Vesical, inferior	A. vesicalis inferior	Internal iliac	Bladder; prostate; seminal vesicles	
Vesical, superior	Aa. vesicales superiores	Internal iliac	Upper part of bladder	A. to the ductus deferens

### Veins

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Description</i>
Angular	V. angularis	Union of supratrochlear and supraorbital veins	Continues inferiorly as facial v.	Short superficial v. in nasal region
Antebrachial, median	V. mediana antebrachii	Base of dorsum of thumb	Ascends forearm between cephalic and basilic veins to elbow where it joins these veins	Superficial v. in forearm

**Veins (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Description</i>
Auricular, posterior	V. auricularis posterior	Plexus on side of head	From side of head it descends behind the pinna where it unites with retromandibular v. to form the external jugular v.	Superficial v. that drains parietal and posterior part of temporal region
Axillary	V. axillaris	Junction of basilic and brachial veins	Lower border of teres major muscles to lateral border of first rib where it becomes the subclavian v.	Portion of venous trunk of upper extremity
Azygos	V. azygos	Arises from ascending lumbar v.	From level of diaphragm up posterior thoracic wall on right of vertebral bodies to superior vena cava	Trunk that connects superior and inferior venae cavae
Basilic	V. basilica	Ulnar side of dorsal rete of hand	Ascends posteriorly on the forearm. Below the elbow it moves to exterior surface where it joins axillary v.	Superficial v. of hand and forearm
Brachial	Vv. brachiales	Tributaries from structures in upper arm	Follows course of brachial artery and joins axillary v.	Each v. drains an arm
Brachiocephalic (Innominate v.)	Vv. brachiocephalicae (dextra et sinistra)	Union of internal jugular and subclavian veins	From sternal end of clavicle it descends below the cartilage of first rib to form superior vena cava	Paired veins that drain blood from head, neck, and upper extremities and unite to form superior vena cava
Bronchial	Vv. bronchiales	Capillaries of bronchi and roots of lungs	Empties into azygos v. on the right and into hemiazygos or superior intercostal veins on left	Several veins that return blood from larger bronchi and roots of lungs

Cardiac	Vv. cordis; Vv. cardiaca (4)	Capillaries of myocardium	Usually empty into coronary sinus	Drain blood from myocardium
Cardinal		Each v. receives a v. from caudal and cephalic portions of embryo	Include precardinal and postcardinal veins	First veins to appear in body of embryo
Cephalic	V. cephalica	Radial border of dorsal rete of hand	Winds anteriorly up arm and empties into axillary v.	Superficial v. of arm and forearm
Cerebellar, inferior	Vv. cerebelli inferiores	Undersurface of cerebellum	Empty into transverse, superior, petrosal, and occipital sinuses	Large veins of undersurface of cerebellum
Cerebellar, superior	Vv. cerebelli superiores	Upper surface of cerebellum	Empty into straight sinus or transverse sinus	Veins from upper surface of cerebellum
Cerebral, great	V. cerebri magna	Formed by union of two internal cerebral veins	Curves backward and upward around the splenium of the corpus callosum and continues as a straight sinus	Short median trunk
Cerebral, inferior	Vv. cerebri inferiores	Tributaries in lobes of cerebrum	From various lobes they empty into cavernous and transverse sinuses	Small-sized veins that drain undersurfaces of hemispheres
Cerebral, internal	Vv. cerebri internae	Formed near interventricular foramen by union of terminal and choroid veins	Run backward parallel to one another and unite at the splenium of the corpus callosum to form great cerebral v.	Two veins that drain deep parts of hemispheres
Cerebral, superficial middle	V. cerebri media superficialis	Lateral surface of cerebral hemisphere	Follows lateral cerebral fissure and empties into cavernous sinus	Drains lateral surface of cerebral hemisphere
Cerebral, superior	Vv. cerebri superiores	Capillaries of cerebrum	From cerebrum to longitudinal cerebral fissure, opening into superior sagittal sinus	Eight to twelve veins that drain the surface of the cerebral hemisphere

**Veins (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Description</i>
Cervical, deep	V. cervicalis profunda	Plexus in suboccipital triangle	Follows deep cervical artery down neck and empties into vertebral or brachiocephalic v.	Deep v. of neck
Cervical, transverse	Vv. transversae cervicis	Capillaries of supraspinous region of scapula and neck	From supraspinous region of scapula diagonally across shoulder to subclavian or external jugular v.	Drain blood from supraspinous region of scapula and neck
Cutaneous	V. cutanea	Capillaries of superficial tissues of body wall	Throughout subcutaneous tissue of body wall	One of the veins located beneath layers of superficial fascia immediately under the skin
Cystic	V. cystica	Capillaries of gallbladder	From gallbladder along cystic duct to enter right branch of portal v. just below liver	Drains gallbladder
Deep		Extremities	Throughout the body	Accompany homonymous arteries and usually enclosed in sheaths with those vessels
Digital, palmar	Vv. digitales palmares	Capillaries of superficial tissues of palmar surface of fingers	Along proper and common digital arteries	Superficial veins of palmar surface of fingers
Digital, plantar	Vv. digitales plantares	Capillaries of toes	Along plantar surface of toes to foot to form four metatarsal veins	Veins of plantar surface of toes

Diploic	Vv. diploicae	Spongy bone between internal and external skull surfaces	Connect with meningeal veins, sinuses of the dura mater, and veins of the pericranium	Large veins of the skull. Main veins are frontal, anterior and posterior temporal, and occipital.
Emissary	Vv. emissariae	Cerebral sinuses	Pass through foramina of skull	Small valveless veins that connect sinuses inside the skull and veins external to it
Epigastric, inferior	V. epigastrica inferior	Capillaries of internal surface of lower anterior abdominal walls	Internal surface of abdominal wall diagonally across wall to flow into external iliac v.	V. of lower anterior abdominal wall
Epigastric, superficial	V. epigastrica superficialis	Superficial tissues of lower portion of anterior abdominal wall	Follows superficial epigastric artery and opens into great saphenous v.	Drains lower and medial portion of abdominal wall
Esophageal	Vv. esophageae	Capillaries of esophagus	From esophagus empty into inferior thyroid, hemiazygos, azygos, or left brachiocephalic v.	Several small trunks that drain esophagus
Facial	V. facialis	Continuation of angular v.	From inner angle of orbit it passes diagonally downward and outward to lower jaw	Deep v. of face. Branches drain deep structures of face.
Femoral	V. femoralis	Continuation of popliteal v.	From posterior region of knee it follows course of femoral artery, becoming external iliac v. at inguinal ligament	Large v. of thigh
Femoral, deep	V. profunda femoris	Tributaries from posterior region of thigh	Accompanies deep femoral artery to femoral triangle where it joins femoral v.	Deep v. of thigh

**Veins (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Description</i>
Gastric, left	V. gastrica sinistra	Gastrohepatic omentum	Right to left along lesser curvature of stomach to enter portal v.	Drains both surfaces of stomach
Gastric, right (Pyloric)	V. gastrica dextra	Small v. from upper portion of stomach	From upper stomach runs left to right along pyloric portion of lesser curvature of stomach to end in portal v.	Drains upper portion of stomach
Gastric, short	Vv. gastricae breves	Capillaries of fundus of stomach	From wall of stomach empty into splenic v.	Drain wall of stomach
Gastro-omental, left	V. gastro-omentalis sinistra	Branches from stomach and greater omentum	Right to left on greater curvature of stomach to empty into splenic v.	V. of upper stomach
Gastro-omental, right	V. gastro-omentalis dextra	Branches from greater omentum and lower surfaces of stomach	Left to right on greater curvature of stomach to empty into superior mesenteric v.	V. of lower stomach
Gluteal, inferior (Sciatic v.)	Vv. gluteae inferiores	Capillaries of upper part of back of thigh	Upper back thigh through lower sciatic foramen where they unite into a single v. and empty into internal iliac v.	V. of lower region of hip
Gluteal, superior	Vv. gluteae superiores	Capillaries of gluteal and adjacent muscles	From tissues of hip they pass through sciatic foramen to empty into internal iliac v.	Drain muscles of buttocks
Hemiazygos	V. hemiazygos	Left ascending lumbar v.	Lumbar region through diaphragm, crossing in front of spine and emptying into azygos v.	Single v. of lower left thoracic wall

Hemiazygos, accessory	V. hemiazygos accessoria	Capillaries of upper intercostal spaces	From left side of vertebra crosses over spine to enter azygos v.	Drains blood from intercostal spaces above level of sixth to seventh
Hepatic	Vv. hepaticae	Tissues of liver	From liver empty into inferior vena cava	Drain the liver
Ileocolic	V. ileocolica	Capillaries of organs in area of ileum and colon	From lower portion of ascending colon runs parallel with ileocolic artery and empties into superior mesenteric v.	Large tributary of mesenteric v. that drains the ileum, appendix, cecum, and lower part of ascending colon
Iliac, common	V. iliaca communis	Union of internal and external iliac veins	Diagonally across pelvis	Large v. that drains blood from pelvis and leg. One on each side meets to form inferior vena cava
Iliac, deep circumflex	V. circumflexa ilium profunda	Capillaries of deep muscles of upper portion of thigh and lower portion of abdomen	Deep tissues of anterior superior spine along inner surface of pelvic brim to external iliac v.	V. of deep structures of iliac region
Iliac, external	V. iliaca externa	Begins behind inguinal ligament as continuation of external iliac v.	Behind inguinal ligament to sacroiliac articulation where it unites with internal iliac v. to form common iliac v.	Upward continuation of external iliac v.
Iliac, internal (Hypogastric v.)	V. iliaca interna	Near upper part of greater sciatic foramen	Upper part of greater sciatic foramen	Short v. that draws blood from pelvis
Intercostal		Tributaries of other veins of intercostal spaces	Intercostal spaces to region of lower ribs	One of a number of veins (anterior, posterior, right, left, superior, and highest) that drain blood from intercostal spaces

**Veins (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Description</i>
Intervertebral	V. intervertebralis	Vertebral plexuses	Vertebral plexuses through intervertebral foramina where they empty into regional veins	One of numerous veins that drain vertebral plexuses and accompany spinal nerves
Jugular, anterior	V. jugularis anterior	From veins of region of lower lip	From lower jaw descends neck anteriorly and enters external jugular v.	Superficial v. of anterior region of neck
Jugular, external	V. jugularis externa	Formed at parotid gland by union of posterior auricular and retromandibular veins	From parotid gland descends perpendicularly in neck to empty into subclavian, internal jugular, or brachiocephalic v.	A large superficial v. that receives greater part of blood from exterior of cranium and deep parts of face
Jugular, internal	V. jugularis interna	Continuous from transverse sinus at base of skull	Runs vertically in neck and unites with subclavian v. at root of neck to form the brachiocephalic v.	Largest v. of head and neck. Collects blood from brain, superficial parts of face, and neck
Lingual	V. lingualis	Capillaries of tongue and sublingual areas	Follows distribution of lingual artery	Deep v. of tongue
Lumbar	Vv. lumbales	Capillaries of abdominal walls	Abdominal walls to ascending lumbar v., inferior vena cava, and ilio-lumbar v.	Four or five veins of abdominal walls
Lumbar, ascending	V. lumbalis ascendens	Lateral sacral veins	Lateral sacral v. along lateral border of spinal column to first lumbar vertebra where it becomes azygos v. on right side and hemiazygos v. on left side	Longitudinal v. that connects lumbar veins

Meningeal	Vv. meningeae	Meninges of brain	Accompany meningeal arteries from meninges and empty into regional sinuses and veins	Multiple veins of dura mater of brain
Mesenteric, superior	V. mesenterica superior	Capillaries of small intestine	From ileum in right iliac fossa it follows distribution of its artery and unites with splenic v. behind pancreas to form portal v.	Large v. from small intestine
Mesenteric, inferior	V. mesenterica inferior	Capillaries of colon and rectum	As a continuation of superior rectal v. ascends behind peritoneum and enters splenic v.	Drains blood from rectum and sigmoid and descending parts of colon
Metacarpal, dorsal	Vv. metacarpeae dorsales	Capillaries of hand	From digital venous arches join to form dorsal venous rete of hand	Superficial veins of back of hand
Metacarpal, palmar	Vv. metacarpeae palmares	Capillaries of palm	Deep tissues of palm along metacarpal bone to deep venous arches	Deep veins on both sides of hand
Metatarsal, dorsal	Vv. metatarsales dorsales	Dorsal digital veins of toes	Through metatarsal spaces to unite to form dorsal venous arch	Deep veins of back of foot
Metatarsal, plantar	Vv. metatarsales plantares	Plantar digital veins	From toes to ankles and open into plantar venous arch	Deep veins of solar aspect of foot
Musculophrenic	Vv. musculophrenicae	Capillaries of upper abdominal wall, lower intercostal spaces, and diaphragm	Along thoracic surface of diaphragm upward lateral to sternum to unite with superior epigastric v. to form internal thoracic v.	Drains blood from thoracic surface of diaphragm and from walls of thorax and abdomen

**Veins (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Description</i>
Obturator	Vv. obturatoriae	Union of tributaries of hip and muscle of upper posterior thigh	From upper portion of adductor region of thigh run through upper part of obturator foramen and run back to empty into internal iliac v.	Drains blood from obturator foramen
Occipital	v. occipitale	Plexus at back part of vertex of skull	From plexus of occipital region, occasionally following course of occipital artery, extends to internal or external jugular v.	Superficial veins that drain occipital region
Ophthalmic, inferior	V. ophthalmica inferior	Venous network at forepart of orbit	Runs backward in lower orbit and divides into two branches. One passes through inferior orbital fissure and joins pterygoid venous plexus; the second enters cranium through superior orbital fissure and ends in cavernous sinus	Ophthalmic v. that divides into two terminal branches
Ophthalmic, superior	V. ophthalmica superior	Inner angle of orbit	Follows course of ophthalmic artery into cavernous sinus	Paired veins of orbital cavity
Ovarian, right and left	V. ovarica dextra and V. ovarica sinistra	Capillaries of ovaries, uterine tubes, and adjacent structures	Pampiniform plexus of broad ligament into inferior vena cava on right and left renal v. on left	Drains ovaries
Palatine, external	V. palatina externa	Capillaries of deep tissues of neck	Palatine regions into facial v.	Drains blood from tonsils and soft palate

Pancreatic	Vv. pancreaticae	Capillaries of pancreas	From pancreas into splenic and superior mesenteric veins	V. of pancreas
Parietal emissary	V. emissaria parietalis	Upper skull	Connects superior sagittal sinus with extracranial veins	Small v. that passes through the parietal foramen of the skull
Parumbilical	Vv. parumbilicales	Cutaneous veins in region of umbilicus	From region of umbilicus run backward and upward to left portal v.	Small important veins that establish communication between portal v. and superior and inferior epigastric veins
Penis, dorsal v. of	V. dorsalis profunda penis	Capillaries of skin or tissue of penis	Runs length of penis between two dorsal arteries	Two (deep and superficial) veins of penis
Peroneal (Fibular veins)	Vv. peroneae (fibulares)	Veins of ankle and capillaries of tissues of leg	From venous plexus in region of heel upward along lateral region of deep tissue to flow into posterior tibial v.	Deep veins of leg
Pharyngeal	Vv. pharyngeae	Pharyngeal plexus	Empty from pharyngeal plexus into internal jugular v.	Drain pharyngeal plexus
Phrenic, inferior	Vv. phrenicae inferiores	Tissues of diaphragm	From diaphragm flow to inferior vena cava on right side and left suprarenal v. on left side	Drain abdominal surface of diaphragm
Popliteal	V. poplitea	Union of tibial veins at lower border of popliteus muscle	From tibial veins upward to adductor hiatus to become femoral v.	Large v. in posterior region of knee
Portal	V. portae hepatis	Union of superior mesenteric and splenic veins	Abdominal cavity	Subdivision of systemic venous system. Collects blood from digestive tract and conveys it to the liver.

**Veins (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Description</i>
Pudendal, external	Vv. pudendae externae	Capillaries of superficial tissues of lower abdomen, scrotum, or labia	From lower abdomen transversely across upper region of thigh to great saphenous or femoral v.	Drain blood from superficial regions of medial aspect of upper thigh and receive subcutaneous dorsal veins of external genitals
Pudendal, internal	V. pudenda interna	Deep vein of penis or clitoris	Follows course of internal pudendal artery and opens into internal iliac v.	Drains the perineum and external genitals
Pulmonary	Vv. pulmonales	Capillaries around air sacs of lungs	Lungs to left atrium	Four veins that return oxygenated blood from lungs to left atrium of heart
Radial	Vv. radiales	Palmar arches of hand	From palmar arches of hand accompany radial artery along lateral side of forearm in deep tissues to unite with ulnar v. to form brachial v.	Large deep veins on radial side of forearm
Rectal, inferior	Vv. rectales inferiores	Venous plexus of anal canal	Anal canal to internal pudendal v.	Drain the rectal plexus
Rectal, middle	Vv. rectales mediae	Rectal plexus with tributaries from bladder, prostate, and seminal vesicles	Run laterally from rectal plexus to internal iliac v.	Drain the rectal plexus
Rectal, superior	V. rectalis superior	Capillaries of rectum	Ascends from rectal plexus to brim of pelvis into inferior mesenteric v.	Drains upper part of rectal plexus
Renal	Vv. renales	Capillaries of kidneys. The left v. receives the left suprarenal v. and left gonadal v.	From kidneys transversely across posterior abdominal wall to inferior vena cava	Short thick trunks that drain the kidneys. The left is longer than the right

Sacral, lateral	Vv. sacrales laterales	Tissues of posterior pelvic wall	Posterior pelvic wall upward along sacrum to empty into internal iliac v.	Large v. of posterior pelvic wall veins
Sacral, middle	V. sacralis mediana	Capillaries of tissues of posterior pelvic wall	From pelvic wall in sacral region follows middle sacral artery to empty into common iliac v.	Large v. of posterior pelvic wall
Saphenous, great	V. saphena magna	Medial marginal v. of dorsum of foot	Dorsum of foot to femoral v. just below the inguinal ligament	Longest v. in body
Saphenous, small	V. saphena parva	Continuation of marginal v.	From behind malleolus ascends back of leg to knee joint where it opens into popliteal v.	Large superficial v. of back of leg
Sciatic. SEE: <i>Gluteal v., inferior</i>				
Spinal, anterior and posterior	Vv. spinales anteriores and Vv. superiores	Spinal cord and its pia mater	Spinal cord through roots to internal vertebral venous plexuses	Network of veins draining blood from spinal cord
Splenic	V. splenica	Union of several small veins at the hilus of the spleen	From spleen transversely across abdomen to head of pancreas; forms portal v. by joining the superior mesenteric v.	Large v. that drains blood from spleen and part of stomach
Subcardinal. SEE: <i>Cardinal v.</i>				
Subclavian	V. subclavia	Continuation of axillary v.	Outer border of first rib to sternal end of clavicle where it joins the internal jugular v. to form the brachiocephalic v.	Main venous trunk of upper extremity

### Veins (Continued)

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Description</i>
Supraorbital	V. supraorbitalis	Capillaries and superficial tissues of region of eye	From region of eye along lateral wall of orbital cavity to root of nose where it unites with supratrochlear v. to form angular v.	Drains upper portion of orbital cavity
Suprarenal, left	V. suprarenalis sinistra	Capillaries of left adrenal gland	Hilum of left suprarenal gland, ascending to left renal v.	V. of left adrenal gland
Suprarenal, right	V. suprarenalis dextra	Capillaries of right adrenal gland	Hilum of right adrenal gland to inferior vena cava	V. of right adrenal gland
Supratrochlear (Frontal v.) (2)	Vv. supratrochleares	Capillaries of anterior region of scalp	From venous plexuses in forehead diagonally to left of root of nose where they unite with supraorbital v. to form angular v.	Drain the anterior scalp
Temporal, middle	V. temporalis media	Substance of temporal muscle	From lateral superficial plexus of skull it passes to zygoma where it joins superficial temporal v. to form retromandibular v.	Superficial v. of lateral portion of stomach
Temporal, superficial	Vv. temporales superficiales	Lateral scalp in parietal and frontal region	Temporal region of scalp diagonally to ear and downward to mandible where they unite with maxillary v. to form retromandibular v.	Veins of superficial tissues of skull

Testicular	V. testicularis dextra and sinistra	Capillaries of testes	From brim of pelvis upward along posterior abdominal wall to inferior vena cava on right and renal v. on left	Receives blood from testis and epididymis
Thoracic, internal	Vv. thoracicae internae	Tributaries from tissues of intercostal spaces	Tributaries form a single trunk that runs up medial side of internal thoracic artery and ends in brachiocephalic v.	Deep v. of chest draining intercostal spaces
Thoracic, lateral (Long thoracic v.)	V. thoracica lateralis	Capillaries of muscles and glands of anterior chest	Tissues of anterior chest muscles to axillary v.	A large tributary v. of the axillary v. that drains the lateral thoracic wall
Thoracoepigastric	Vv. thoracoepigastricae	Region of superficial epigastric v.	Run laterally along trunk from superficial epigastric v. to lateral thoracic v.	Superficial v. of trunk that establishes an important communication between the femoral and axillary veins
Thyroid, inferior	V. thyroidea inferior	Veins from thyroid glands	Downward to brachiocephalic v.	Two or more veins that arise in venous plexuses on thyroid gland
Thyroid, superior	V. thyroidea superior	Substance and surface of thyroid gland	Accompanies superior thyroid artery and empties into internal jugular v.	One v. from either side of thyroid
Tibial, anterior	Vv. tibiales anteriores	Capillaries of leg tissue and dorsal metatarsal v.	Accompany anterior tibial artery, ascending between tibia and fibula and uniting with posterior tibial v. to form popliteal v.	Deep veins of anterior aspect of leg
Tibial, posterior	Vv. tibiales posteriores	Capillaries of deep tissues of leg	From ankle up posterior aspect of leg to unite with anterior tibial v. to form popliteal v. just below knee	Deep veins of back of leg

**Veins (Continued)**

<i>Name</i>	<i>Nomina Anatomica Term</i>	<i>Origin</i>	<i>Distribution</i>	<i>Description</i>
Ulnar	Vv. ulnares	Palmar arches of hand	Palmar arches of hand upward in deep tissues along ulnar side of forearm to form brachial v. with radial v. at elbow	Large deep veins of medial aspect of forearm
Umbilical	V. umbilicalis sinistra	Placental tissues	Along umbilical cord through umbilicus to liver upward through inferior vena cava to heart	V. that carries blood from placenta to fetus
Uterine	Vv. uterinae	Tissues of uterus	Uterine plexus through part of the broad ligament to empty into internal iliac v.	Veins carrying blood from uterus
Vena cava inferior	V. cava inferior	Right and left iliac veins	From union of iliac veins at level of fifth lumbar vertebra to right atrium of heart	Returns blood from lower half of body
Vena cava superior	V. cava superior	Two brachiocephalic veins	From below right costal cartilage to right atrium of heart	Drains blood from upper half of body
Vertebral	V. vertebralis	Numerous small tributaries in the suboccipital triangle	Base of skull down neck, opening into brachiocephalic v.	Drains blood from internal vertebral venous plexuses
Vertebral, anterior	V. vertebralis anterior	Plexus around transverse process of upper cervical vertebrae	Descends from region of upper cervical vertebrae with ascending cervical artery and opens into terminal part of vertebral v.	Small v.