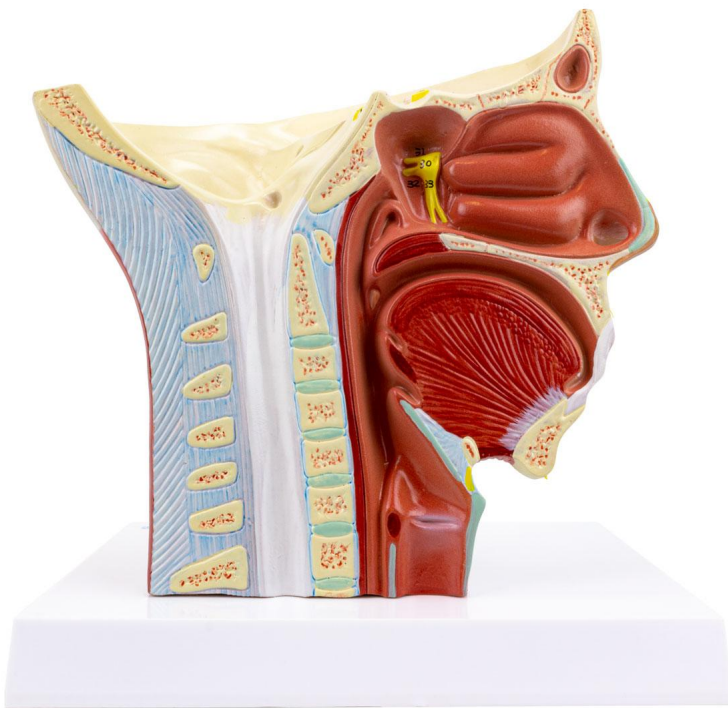
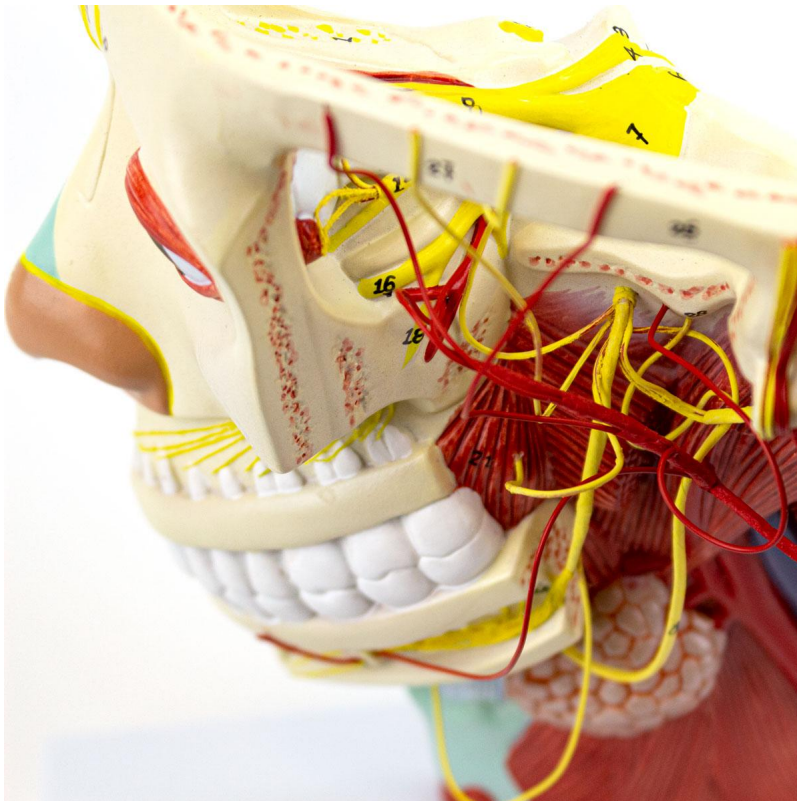
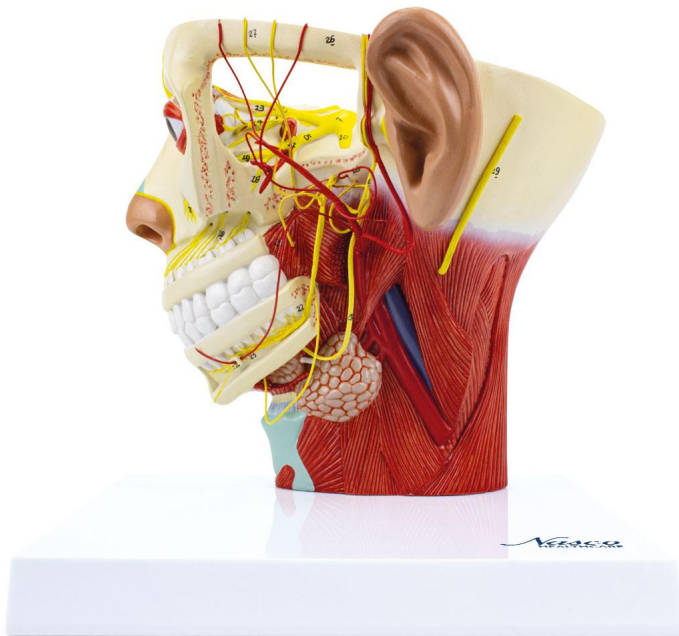




MG29867 | HEAD MUSCLES WITH NERVES



Nasco
HEALTHCARE





The Life-Size Head Musculature Model with Nerves offers a detailed representation of the complex innervations of the craniofacial region. It highlights the trigeminal nerve and its ophthalmic, maxillary, and mandibular branches, as well as presenting the facial nerve and a vast array of other neural and osseous structures crucial for the in-depth study of head anatomy.

Applications:

This model is ideal for the in-depth study of head and neck neuroanatomy, making it a valuable tool for students and professionals in medicine, dentistry, physical therapy, speech therapy, and other health fields. It is perfect for demonstrations in classrooms, anatomy labs, and clinics, assisting in the comprehension of nerve pathways and their relationships with musculature and osseous structures, as well as for continuing education in anatomy, physiology, and pathophysiology.

Technical Differentiators:

The model features a life-size representation, providing realism and accuracy for learning. It stands out for its rich detail in the innervation of the trigeminal nerve and its branches, as well as for the inclusion of several other important nervous and osseous structures of the head, ensuring a comprehensive and detailed study.



3D Technology and Augmented Reality:

Our anatomical models offer an innovative visual complement through informative cards that activate 3D models viewable in augmented reality (A.R.) . This exclusive interactive platform stimulates learning, allowing for comparative analysis of anatomical structures and offering opportunities for continuing education in anatomy, physiology, and pathophysiology.

Technical Specifications:

* Scale: Life-size

Main Structures:

Greater auricular nerve: Branch of the cervical plexus, responsible for sensory innervation of the skin over the parotid gland, the angle of the mandible, and the lower portion of the ear.

Auriculotemporal nerve: Branch of the mandibular nerve (V3) , part of the trigeminal nerve. Provides sensory innervation to the temporal region, the temporomandibular joint (TMJ) , and the parotid gland (postganglionic parasympathetic fibers) .

Deep temporal nerve: Motor branches of the mandibular nerve (V3) that innervate the temporal muscles, responsible for elevation and retraction of the mandible during mastication.

Inferior alveolar nerve: Branch of the mandibular nerve (V3) , responsible for sensory innervation of the lower teeth, vestibular gingiva of the mandible (except molars) , and lower lip. Before entering the mandibular canal, it gives rise to the mylohyoid nerve.

Inferior dental plexus: Network of nerves formed by the branches of the inferior alveolar nerve within the mandibular canal, which innervate the lower incisors, canines, premolars, and molars.

Mental nerve: Terminal branch of the inferior alveolar nerve, which emerges from the mental foramen in the mandible. Responsible for sensory innervation of the skin of the chin and the lower lip.

Buccal nerve: Sensory branch of the mandibular nerve (V3) , which innervates the skin and mucosa of the cheek, as well as the vestibular gingiva of the lower molars. It should not be confused with the buccal branch of the facial nerve.

Superior dental plexus: Network of nerves formed by the superior alveolar nerves (anterior, middle, and posterior) , branches of the maxillary nerve (V2) , which innervate the upper teeth and adjacent gingiva.

Infraorbital nerve: Terminal branch of the maxillary nerve (V2) that emerges from the



infraorbital foramen. Provides sensory innervation for the lower eyelid, ala of the nose, upper lip, and part of the cheek.

Lingual nerve: Branch of the mandibular nerve (V3) that provides general sensory innervation to the anterior two-thirds of the tongue, floor of the mouth, and lingual gingiva. It also carries chorda tympani fibers (for taste and parasympathetics) .

Chorda tympani: Branch of the facial nerve (VII) that carries taste fibers from the anterior two-thirds of the tongue and preganglionic parasympathetic fibers to the submandibular and sublingual glands. It joins the lingual nerve.

Cribriform plate: Horizontal portion of the ethmoid bone, perforated by multiple foramina that allow the passage of the filaments of the olfactory nerve (NC I) from the nasal cavity to the olfactory bulb in the cranium.

Optic nerve: Second cranial nerve (NC II) , responsible for transmitting visual information from the retina to the brain. It is an extension of the diencephalon and not a true peripheral nerve.

Chorda tympani: Branch of the facial nerve (VII) that carries taste fibers from the anterior two-thirds of the tongue and preganglionic parasympathetic fibers to the submandibular and sublingual glands. It joins the lingual nerve.

Trochlear nerve: Fourth cranial nerve (NC IV) , the smallest of the cranial nerves. It is a motor nerve that innervates the superior oblique muscle of the eye, responsible for internal rotation and depression movements of the eyeball.

Abducens nerve: Sixth cranial nerve (NC VI) , a motor nerve that innervates the lateral rectus muscle of the eye, responsible for abduction (lateral movement) of the eyeball.

Trigeminal nerve: Fifth cranial nerve (NC V) , the largest of the cranial nerves. It is a mixed nerve, with large sensory components for the face, scalp, teeth, and mucous membranes, and a motor component for the muscles of mastication. It has three main branches: ophthalmic (V1) , maxillary (V2) , and mandibular (V3) .

Trigeminal ganglion: Also known as the Gasserian ganglion or semilunar ganglion, it is a sensory ganglion that contains the cell bodies of the pseudounipolar neurons that form the ophthalmic, maxillary, and mandibular branches of the trigeminal nerve.

Mandibular nerve: The third and largest branch of the trigeminal nerve (V3) . It is a mixed nerve, providing sensory innervation to the mandible, lower teeth, lower lip, cheek, part of the tongue, and temporomandibular joint, as well as motor innervation to the muscles of mastication.



Ophthalmic nerve: The first and smallest branch of the trigeminal nerve (V1). It is purely sensory, innervating the skin of the forehead, scalp, upper eyelid, cornea, conjunctiva, nose, and paranasal sinuses.

Frontal nerve: Branch of the ophthalmic nerve (V1), which divides into the supraorbital nerve and the supratrochlear nerve. Provides sensory innervation to the forehead, anterior scalp, and upper eyelid.

Supratrochlear nerve: Terminal branch of the frontal nerve (V1), which innervates the skin of the medial part of the upper eyelid, the root of the nose, and the medial forehead.

Supraorbital nerve: Terminal branch of the frontal nerve (V1), which emerges from the supraorbital foramen. Innervates the skin of the forehead, scalp up to the vertex, and upper eyelid.

3D Technology and Augmented Reality:

Our anatomical models offer an innovative visual complement through informative cards that activate 3D models viewable in augmented reality (AR). This exclusive interactive platform stimulates learning, allowing comparative analysis of anatomical structures and offering opportunities for continuing education in anatomy, physiology, and pathophysiology.

Customizable Skin Tones:

This anatomical model offers the option to choose between three skin tones to better represent human diversity and meet different educational and clinical needs. You can choose from light skin, intermediate tone, and dark skin, providing greater realism and inclusion during training and demonstrations.

Smart Tags:

Designed to provide comprehensive training in the healthcare field, with interactive simulations covering Retina, Ear, and Throat exams. This solution assists in the development of diagnostic skills in different clinical scenarios, allowing professionals and students to explore and enhance their skills with greater safety and accuracy.

Retinal exams: Simulate 39 retinal conditions, from normal and diabetic retinopathy (various stages) to rare diseases like retinitis pigmentosa and macular degeneration.

- Normal
- Tessellated Fundus
- Large Optic Disc Cupping
- DR1 (Diabetic Retinopathy - Stage 1)
- DR2 (Diabetic Retinopathy - Stage 2)



- DR3 (Diabetic Retinopathy - Stage 3)
- Branch Retinal Vein Occlusion (BRVO)
- Central Retinal Vein Occlusion (CRVO)
- Retinal Artery Occlusion (RAO)
- Rhegmatogenous Retinal Detachment
- Central Serous Chorioretinopathy (CSCR)
- Vogt-Koyanagi-Harada Disease (VKH)
- Maculopathy
- Epiretinal Membrane (ERM)
- Macular Hole (MH)
- Pathological Myopia
- Possible Glaucoma
- Optic Atrophy
- Severe Hypertensive Retinopathy
- Optic Disc Swelling and Elevation
- Displaced Optic Disc
- Congenital Optic Disc Anomaly
- Retinitis Pigmentosa
- Bietti's Crystalline Dystrophy
- Peripheral Retinal Degeneration and Tear
- Myelinated Nerve Fibers
- Particles in Vitreous
- Fundus Neoplasia
- Massive Hard Exudates
- Yellowish-White Spots (Flecks)
- Cotton Wool Spots
- Vessel Tortuosity
- Chorioretinal Atrophy - Coloboma
- Preretinal Hemorrhage
- Fibrosis
- Laser Marks
- Silicone Oil in Eye
- Blurred Fundus Without PDR (Proliferative Diabetic Retinopathy)
- Blurred Fundus With Suspected PDR (Proliferative Diabetic Retinopathy)

Ear exams: Conduct 9 realistic diagnostic exams.

- AOM
- Chronic
- Ear Ventilation
- Earwax
- Foreign Object
- Normal
- Otitis Externa



- Pseudomembrane
- Tympanosclerosis

Virtual Patient Monitor: Provides an immersive and realistic training environment for healthcare students. It allows instructors to customize parameters for various vital signs, empowering students to interpret signals, develop critical thinking, and enhance their clinical reasoning skills through realistic scenarios.

Customizable Vital Signs

- Blood Pressure
- SpO2
- Heart Rate

ECG Interpretation: Train on 18 diverse ECG scenarios, including: Atrial Fibrillation, Ventricular Tachycardia and Heart Blocks. The monitor also simulates synchronized pulses with ECG for truly realistic cardiology training.

ECG Patterns

- Sinus Rhythm
- Atrial Extrasystole
- Atrial Flutter
- Atrial Fibrillation
- Paroxysmal Supraventricular Tachycardia (PSVT)
- Ventricular Extrasystole
- Ventricular Tachycardia (VT)
- Ventricular Fibrillation (VF)
- First-Degree Atrioventricular Block (AVB)
- Second-Degree Atrioventricular Block
- Third-Degree Atrioventricular Block (Complete Block)
- Long QT Syndrome
- ST Segment Elevation
- ST Segment Depression
- T Wave Inversion
- Left Ventricular Hypertrophy (LVH)
- Right Ventricular Hypertrophy (RVH)
- Wolff-Parkinson-White Syndrome (WPW)

Breathing Patterns

- Normal
- Dyspnea
- Apnea
- Cheyne-Stokes
- Biot
- Kussmaul

**About Anatomical Models:**

They are developed with resin replication technology, supplying the shortage of natural anatomical parts for teaching and research. They present all the essential morphological characteristics with excellent cost-benefit, resistance, manual painting, and numbering for precise identification of structures.

List of all visible structures:

- Greater auricular nerve
- Auriculotemporal nerve
- Deep temporal nerve
- Inferior alveolar nerve
- Inferior dental plexus
- Mental nerve
- Buccal nerve
- Superior dental plexus
- Infraorbital nerve
- Lingual nerve
- Chorda tympani
- Cribriform plate
- Optic nerve
- Chorda tympani
- Trochlear nerve
- Abducens nerve
- Trigeminal nerve
- Trigeminal ganglion
- Mandibular nerve
- Ophthalmic nerve
- Frontal nerve
- Supratrochlear nerve
- Supraorbital nerve
- Lacrimal nerve
- Nasociliary nerve
- Ciliary ganglion
- Oculomotor nerve
- Maxillary nerve
- Ganglionic branches to pterygopalatine ganglion
- Infraorbital nerve
- Anterior superior alveolar nerve
- Supraorbital nerve



- Supratrochlear nerve
- Greater petrosal nerve
- Pterygopalatine ganglion
- Greater and lesser palatine nerves
- Deep petrosal nerve