



**MG32071 | BRAIN STEN WITH  
HYPOTHALAMUS, 2 TIMES ENLARGED 4  
PARTS**







This four-part anatomical model, twice life-size, offers a detailed representation of the human brainstem and hypothalamus. The brainstem is sectioned to reveal the hypothalamic nuclei, and the thalamus is removable and divisible into two parts for a complete internal examination. Cranial nerve insertions are clearly visible on the model's surface. Important anatomical structures are numbered and colored for easy understanding. An information card accompanies the product, detailing the structures represented.

**Applications:**

- \* Anatomy study in schools and universities.
- \* Professional training.
- \* Patient explanations.
- \* Medical and scientific information.
- \* Neuroanatomy studies.
- \* Surgical dissection training.
- \* Patient education and procedure demonstration.

**Technical Characteristics:**



- \* High didactic level.
- \* Created from detailed prototypes.
- \* Numbered and hand-painted.
- \* High-precision natural molding.
- \* Manufactured from stable and resistant synthetic material.
- \* Detailed replicas.
- \* Includes an information card with related structures.
- \* Resin approved in toxicological tests.

### **3D Technology and Augmented Reality:**

Our anatomical models offer a visual complement through information cards that activate 3D models viewable in augmented reality (AR). This interactive platform assists learning, allowing comparative analysis of anatomical structures and offering resources for continuing education in anatomy, physiology, and pathophysiology.

### **Technical Specifications:**

- \* Scale: 2x life size
- \* Material: Synthetic resin
- \* Number of Parts: 4
- \* Assembly Type: No support base

### **Main Structures:**

**Insula:** The insula is a cortical region located deep within the lateral sulcus, partially covered by the frontal, parietal, and temporal lobes. It plays a crucial role in several functions, including emotion processing, gustatory perception, and integration of sensory information.

**Caudate Nucleus:** The caudate nucleus is a "C"-shaped subcortical structure that is part of the basal ganglia. It is involved in the planning and execution of movements, motor learning, and cognitive processes such as working memory and attention.

**Internal Capsule:** The internal capsule is a large mass of white matter located between the basal ganglia. It contains important ascending and descending tracts that connect the cerebral cortex to other parts of the central nervous system.

**Thalamus:** The thalamus is a paired structure located in the diencephalon that acts as an important relay center for sensory information (except smell) to the cerebral cortex. It is also



involved in the control of sleep and wakefulness.

**Optic Nerve (II):** The optic nerve is the second cranial nerve, responsible for transmitting visual information from the retina to the brain.

**Optic Tract:** The optic tract is the continuation of the optic nerve after the optic chiasm, carrying visual information to the lateral geniculate bodies and other areas of the brain.

**Lateral Geniculate Body:** The lateral geniculate body is a thalamic nucleus that receives visual information from the optic tract and relays it to the visual cortex.

**Medial Geniculate Body:** The medial geniculate body is a thalamic nucleus that receives auditory information and relays it to the auditory cortex.

**Pineal Body:** The pineal body is a small endocrine gland located in the epithalamus, responsible for the production of melatonin, a hormone that regulates the circadian rhythm.

**Superior Colliculus:** The superior colliculi are structures of the midbrain involved in visual processing and ocular reflexes. Other structures can be verified directly on the physical piece or on the interactive 3D model.

#### **About the Anatomical Models:**

They are developed with resin replication technology, meeting the demand for anatomical pieces for teaching and research. They present the essential morphological characteristics with excellent cost-benefit, resistance, hand painting, and numbering for precise identification of structures.

#### **List of all visible structures:**

- insula
- caudate nucleus
- internal capsule
- thalamus
- optic nerve (II)
- optic tract
- lateral geniculate body
- medial geniculate body
- pineal body
- superior colliculus
- inferior colliculus
- trochlear nerve (IV)



- superior cerebellar peduncle
- medial eminence
- facial colliculus
- vestibular area
- stria medullaris
- hypoglossal trigone
- vagal trigone
- gracile tubercle
- cuneate tubercle
- inferior cerebellar peduncle
- middle cerebellar peduncle
- pituitary gland
- cerebellar peduncle
- oculomotor nerve
- pons
- abducens nerve (VI)
- facial nerve (VII)
- vestibulocochlear (VIII)
- glossopharyngeal nerve (IX)
- vagus nerve (X)
- olive
- accessory nerve (XI)
- hypoglossal nerve (XII)
- pyramid of the medulla oblongata
- pyramidal decussation
- Caudate nucleus
- Insula
- Anterior commissure
- Preoptic nuclei
- Paraventricular nuclei
- Anterior hypothalamic nucleus
- Supraoptic nucleus
- Dorsomedial nucleus of the intermediate hypothalamus
- Ventromedial nucleus of the hypothalamus
- Tuberal and arcuate nucleus
- Posterior hypothalamic nucleus
- Mammillary body
- Infundibulum
- Optic chiasm
- Tuber cinereum
- Pituitary gland
- Optic chiasm
- Optic tract



- Internal capsule
- Superior colliculus
- Inferior colliculus
- Trochlear nerve (IV)
- Medial eminence
- Facial colliculus
- Vestibular area
- Medullary stria
- Hypoglossal triangle
- Vagal triangle
- Gracile tubercle
- Cuneate tubercle
- Superior cerebellar peduncle
- Middle cerebellar peduncle
- Inferior cerebellar peduncle
- Oculomotor nerve
- Trigeminal nerve (V)
- Facial nerve (VII)
- Vestibulocochlear (VIII)
- Glossopharyngeal nerve (IX)
- Olive
- Vagus nerve (X)
- Accessory nerve (XI)
- Hypoglossal nerve (XII)
- Pyramid of the medulla oblongata
- Decussation of the pyramids
- Abducens nerve (VI)
- Pons
- Pituitary gland
- Oculomotor nerve
- Optic chiasm
- Abducens nerve
- Central canal
- Terminal stria
- Pineal gland
- Thalamus
- Hypothalamus
- Interthalamic adhesion
- Medial nuclei
- Anterior nuclei
- Dorsal lateral nuclei
- Ventral anterior nuclei
- Ventral lateral nuclei



- Ventral posteromedial nuclei
- Medial nuclei
- Posterior commissure
- Medial geniculate body
- Lateral geniculate body
- Pulvinar
- Posterior lateral nuclei
- Ventral posterior nuclei
- Intralaminar nuclei group
- Thalamus