



MG31100 | BRAIN SECTION WITH PATHOLOGY



Nasco
HEALTHCARE







Brain Section with Pathologies is a life-size anatomical model representing three pathologies of the cerebral vascular system: arteriovenous malformation (AVM), aneurysm, and cerebral hemorrhage (stroke). The model is meticulously crafted and mounted on a base with a metal support and rod, including markings and references to facilitate study.

Applications:

The model is indicated for the study of anatomy in schools and universities, training, assisting in patient explanations, medical and scientific information, study of the nervous system, anatomical studies, surgical dissection training, use in clinics, classrooms, and for patient education and procedure demonstration.

Technical Characteristics:

- * Detailed representation of relevant anatomical structures of the nervous and circulatory systems.
- * High fidelity in the reproduction of pathologies.
- * High-quality natural molding.
- * Manufactured from stable synthetic material and resin approved in toxicological tests.
- * Precise replicas.
- * Includes an information card with an interactive 3D model in augmented reality.



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 for comparative analysis of anatomical structures and offering resources for continuing education in anatomy, physiology, and pathophysiology.

Technical Specifications:

- * Scale: Life-size
- * Material: Resin
- * References and markings

Main Structures:

Arteriovenous Malformation: A congenital vascular condition characterized by an abnormal tangle of blood vessels, arteries, and veins, connecting directly without the presence of a normal capillary bed. This can lead to bleeding, diversion of blood flow to adjacent tissues, and other neurological problems.

Aneurysm: A cerebral aneurysm is an abnormal dilation of an artery in the brain. This dilation can rupture, causing a potentially fatal subarachnoid hemorrhage.

Subarachnoid Hemorrhage: Bleeding that occurs in the subarachnoid space, between the surface of the brain and the meninges that cover it. It is frequently associated with the rupture of an aneurysm or arteriovenous malformation.

Hemorrhagic Stroke: A type of stroke caused by the rupture of a blood vessel in the brain, resulting in bleeding into the brain tissue. This can cause significant damage to nerve tissue and lead to permanent neurological deficits.

Arterioles and Microaneurysm: Arterioles are small arteries that branch directly from the arteries, carrying blood to the capillaries. A microaneurysm is a small dilation of an arteriole or capillary, frequently associated with diseases such as diabetic retinopathy.

Subdural Hematoma: Accumulation of blood between the surface of the brain and the dura mater, the outermost layer of the meninges. It usually occurs after a cranioencephalic trauma, potentially causing elevated intracranial pressure and severe neurological damage.

Intracerebral Hemorrhage: Bleeding into the brain tissue itself, which can be



intraparenchymal (within the brain parenchyma) or intraventricular (within the cerebral ventricles). It causes direct damage to neuronal tissue and cerebral edema.

Circle of Willis with Aneurysm: The Circle of Willis is an anastomosing network of arteries at the base of the brain that ensures collateral blood flow. An aneurysm in this region is particularly dangerous due to its location and potential to cause extensive hemorrhage.

Ischemic Stroke: A type of stroke caused by the interruption of blood flow to a part of the brain, usually due to the formation of a blood clot (thrombosis) or embolus (embolism). The lack of oxygen and nutrients causes damage to brain tissue.

Effects of Alcoholism: Chronic alcoholism can lead to a number of changes in the brain, including brain atrophy, damage to blood vessels, and inflammation. These effects can contribute to an increased risk of stroke and other neurological diseases.

Other structures can be checked 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 parts for teaching and research. They present the main morphological characteristics with excellent cost-benefit, good resistance, manual painting, and numbering for precise identification of structures.

List of all visible structures:

- Arteriovenous malformation
- Aneurysm
- Migraine due to dilated arteries
- Cross-section of the brain with subarachnoid hemorrhage
- Hemorrhagic stroke (CVA)