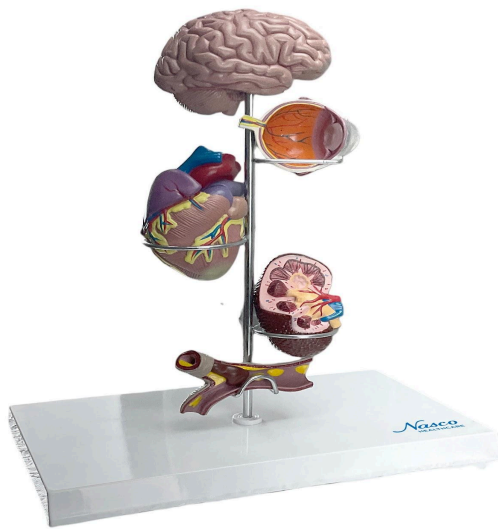
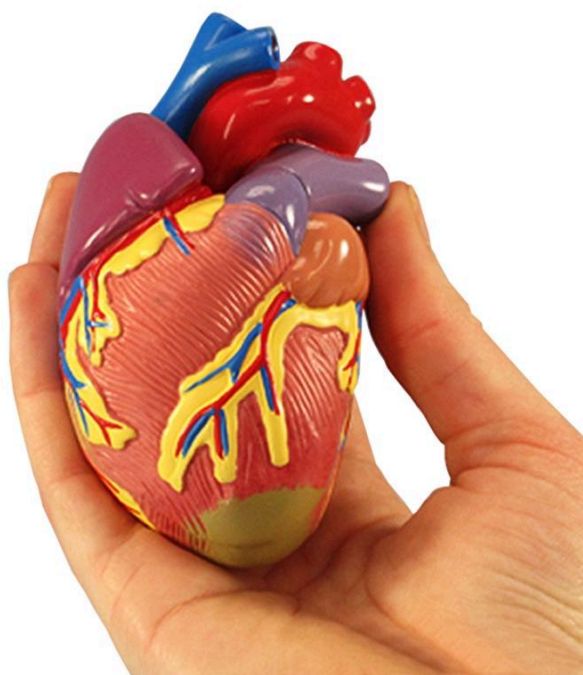




MG29749 | EFFECTS OF ARTERIAL HYPERTENSION

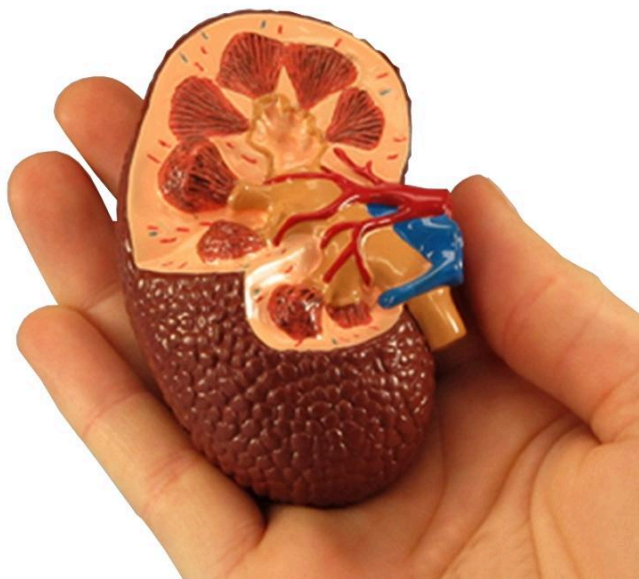


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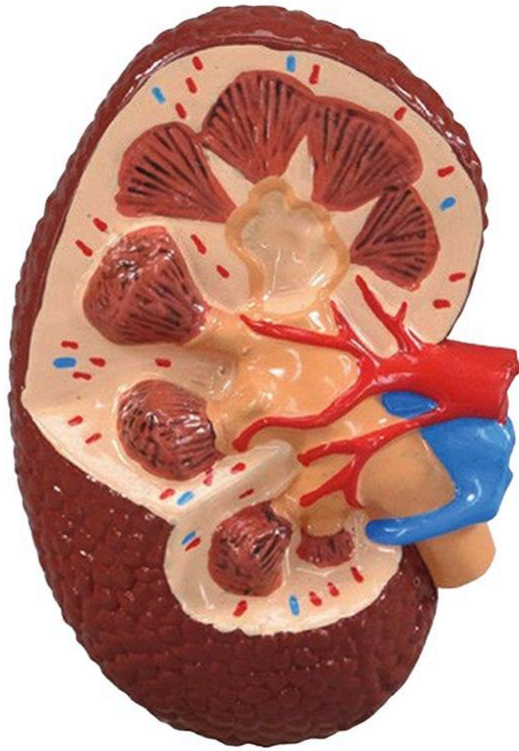


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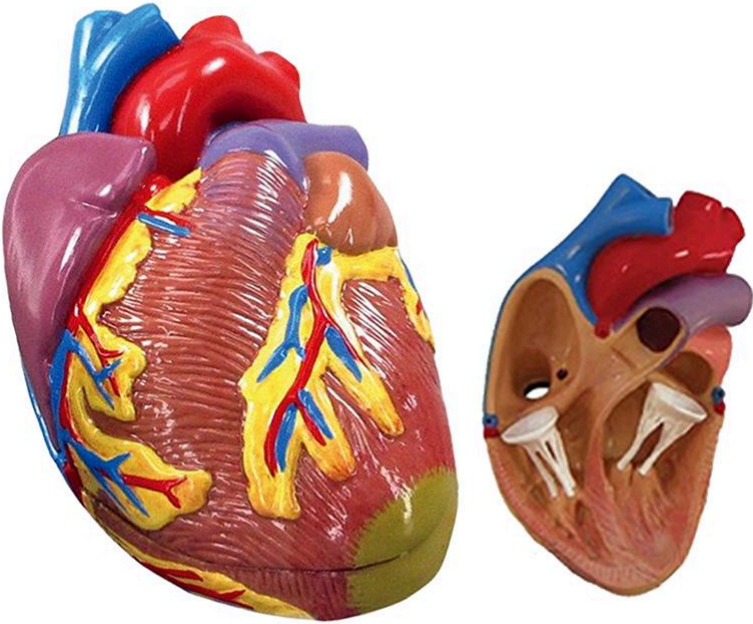
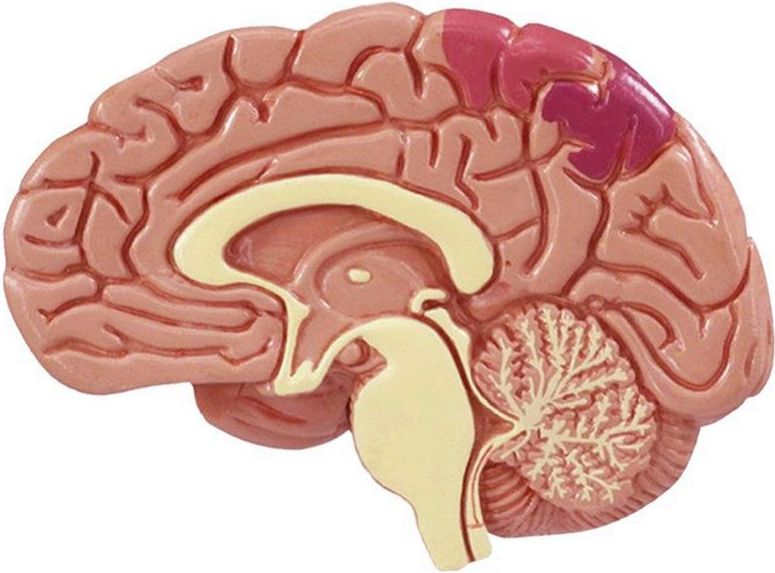


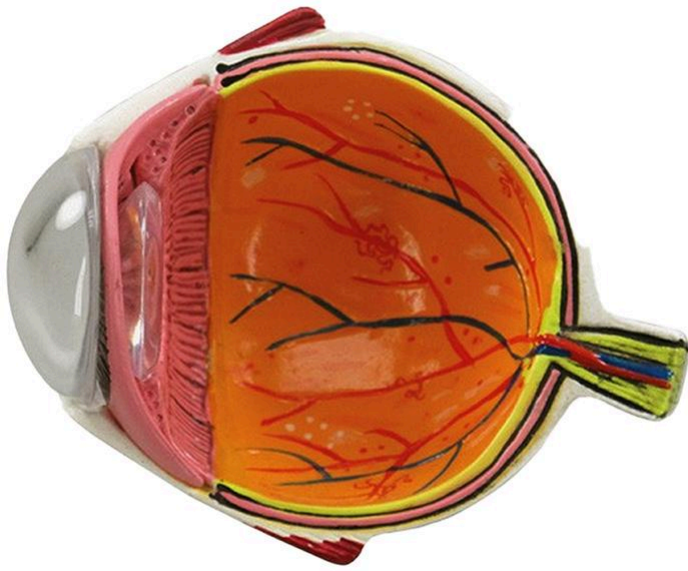


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This set of miniature anatomical models illustrates the effects of high blood pressure on the brain, eye, heart, kidney, and arteries (super-sized scale). Hand-painted with precise detail, the model demonstrates areas affected by hypertension and associated pathologies, including eye problems, arteriosclerosis, arterial plaques, kidney failure, and stroke. The set includes sectioned models of the brain, heart, eye, kidney, and a super-sized artery, facilitating visualization and understanding of the affected structures.

Applications:

Ideal for the study of the circulatory, cardiac, and renal systems; used in clinics, classrooms, and for patient education and procedure demonstration; indicated for the study of anatomy and training for surgical dissection.

Technical Advantages:

- * Detailed representation of anatomical structures affected by hypertension;
- * Precise hand painting;
- * Reduced-scale model, but with precise details;



- * Includes an information card with images and information about the structures;
- * Made of stable and durable synthetic material;
- * Mounted on a polymer base with support and metal rod.

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

Technical Specifications:

- * Material: Plastic approved in toxicological tests;
- * Molding: Natural;
- * Scale: Reduced from natural size;
- * Includes an information card with related structures.

Main Structures:

Ischemia: Ischemia represents the reduction of blood flow to a tissue or organ, leading to a deficiency of oxygen and nutrients. In the context of hypertension, ischemia can occur in various organs, such as the heart (causing angina or infarction) and the brain (causing stroke).

Infarction: Infarction is the necrosis (death) of a tissue due to prolonged lack of oxygen. In myocardial infarction (heart attack), prolonged ischemia leads to the death of heart cells. In the brain, infarction results in stroke.

Cerebral Disease (Encephalopathy): Encephalopathy encompasses a variety of conditions that affect brain function. Hypertension can lead to hypertensive encephalopathy, characterized by brain damage due to elevated blood pressure.

Coronary Artery Disease: Coronary artery disease is the narrowing of the coronary arteries, which supply blood to the heart. Hypertension contributes to the development of atherosclerosis, which is a major factor in coronary artery disease.

Arteriosclerosis: The hardening and narrowing of arterioles, small blood vessels, due to the accumulation of fat and other deposits. Arteriosclerosis is frequently associated with hypertension.



Plaque (lipid deposits and calcification): Accumulation of fat, cholesterol, and other substances in the walls of the arteries, forming plaques that narrow the lumen and can rupture, leading to the formation of thrombi.

Blood Clot: A solid mass formed from blood components, usually related to the formation of thrombi, which can obstruct blood vessels and cause ischemia or infarction.

Retina: The retina is the inner layer of the eye responsible for light detection. Hypertension can damage the blood vessels of the retina, causing hypertensive retinopathy.

Narrowed Lumen: Reduction of the internal diameter of a blood vessel, decreasing blood flow.

Tunica Intima: The innermost layer of the wall of a blood vessel, which can be affected by atherosclerosis and plaque formation.

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, supplying the scarcity of natural anatomical pieces for teaching and research. They present the essential morphological characteristics with excellent cost-benefit, good resistance, hand painting, and numbering for precise identification of structures.

List of all visible structures:

BRAIN

- * Brain disease (Encephalopathy)
- * Ischemia
- * Infarction
- * Hemorrhage

EYE (Retinopathy)

- * Noninflammatory disease of the retina (Retinopathy)
- * Hemorrhages
- * Retina
- * Retinal edema
- * Cotton wool patches (infarcted nerve fibers)
- * Narrow, tortuous arterioles with abnormal light reflexes (silver/copper wiring)



appearance)

- * Hard exudates (lipoprotein deposits)

HEART (Cardiopathy)

- * Heart disease (Cardiopathy)
- * Coronary artery disease
- * Ischemia
- * Myocardial infarction
- * Area of myocardial infarction

ARTERIES (Atherosclerosis)

- * Hardening of the arteries (Atherosclerosis)
- * Plaque (lipid deposits and calcification)
- * Fibrous plaque in artery
- * Tunica intima
- * Tunica media
- * Tunica adventitia
- * Blood clot
- * Narrowed lumen

KIDNEY (Nephrosclerosis & Other Pathologies)

- * Hardening of the kidney (Nephrosclerosis)
- * Ischemia
- * Nephron
- * Arteriosclerosis
- * Microscopic hematuria
- * Granular pitted surface
- * Fat in renal sinus
- * Urinary stones
- * Stone
- * Tumor
- * Pyelonephritis showing pus, infection, scarring and atrophy
- * Polycystic kidney
- * Effects of hypertension showing granular scarring, atrophy and hemorrhages

OTHER

- * Intestinal Adhesions