

# XC-308 MODEL OF THE BRAIN AND ARTERIAL SUPPLY

## USES:

This model is designed as an aid for teaching physiology and hygiene courses. It facilitates the students to get a correct understanding of the external features of the brain and its arterial supply as a whole, as well as the relations between their component portions.

## DEMONSTRATIONS:

### A. External features of the brain

1. **Cerebral hemisphere.** On its dorsolateral surface the central sulcus, lateral and parieto-occipital fissures, the frontal, parietal, temporal and occipital lobes are shown. On its median and basal surfaces the corpus callosum (cutting surface), the parieto-occipital and calcarine fissures, the olfactory bulb and tract are shown.
2. **Brain stem.** On its dorsal aspect the thalamus, pulvinar corpora quadrigemina and the rhomboid fossa are shown; On its ventral side, the optic chiasma, mammillary bodies, crura pedunculi and pons etc. are depicted.
3. **Cerebellum.** Special features of cerebellar hemispheres and vermis are marked.

### B. The arterial supply of the brain

1. **Sources:** 2 vertebral, 2 internal carotid arteries.
2. **Right and left vertebral arteries** passing forwards on the ventral surface of medulla oblongata, unite at lower border of pons to form the unpaired basilar artery. At upper-border of pons, basilar artery after giving off a pair of superior cerebellar arteries divides into posterior cerebral arteries. Posterior cerebral connected with internal right and left carotid arteries by posterior communicating branches. The internal carotid gives off the middle and anterior cerebral arteries.
3. **Arterial supply of the cerebellum and cerebrum**
  - 1). The cerebellum supplied by 3 pairs of cerebellar arteries.
    - a. Posterior cerebellar arteries arising from vertebral arteries.
    - b. Anterior inferior cerebellar arteries originating from basilar artery at lower border of pons.
    - c. Superior cerebellar arteries arising from basilar artery at superior border of pons. The cerebellum, supplied mainly by 3 pairs of cerebellar arteries.
  - 2). The posterior cerebral arteries, terminal branches of the basilar artery.
    - a. The middle cerebral arteries to stem of lateral fissure, supplying main part of dorsal lateral surface of brain. The anterior cerebral arteries are terminal branches of internal carotid arteries to medial surface of the cerebral hemispheres. (The vessel passing along the groove between dorsal surface of thalamus and caudate nucleus is a vein, vena terminalis).
    - b.
    - c.

## CONSTRUCTION:

This model is made of plastic and can be dissected into eight parts and set on a base.

**DIMENSIONS:** Natural size.