

CNS-2 Cerebral hemisphere

OBJECTIVES OF THE CLASS:
THEORETICAL
1. to know a septum of the telencephalon and its elements;
THEORETICAL and PRACTICAL
2. to know cerebral gyri and sulci; 3. to know cerebral lobes and their boundaries; 4. to know the elements of the middle telencephalon.

A student should be prepared theoretically for the lab class.

The information may be found in the chapters 7 and 8 (*Clinical neuroanatomy* by Snell) and in the lecture 2.

DURING THE SEMINAR:
<ul style="list-style-type: none">– a detailed description of the cerebral hemisphere is presented;– a practical information about the cerebral sulci and gyri is given;– the cerebral lobes and their boundaries are presented;– the elements of the middle telencephalon are identified.

DURING THE PRACTICAL CLASS A STUDENT SHOULD RECOGNIZE AND IDENTIFY:
<ul style="list-style-type: none">– the sulci and gyri of the cerebral hemisphere;– the lobes of the cerebral hemisphere and their boundaries;– the structures of the middle telencephalon. <p>The student may use the list attached below as a reference of demanded structures.</p>

AFTER THE CLASS A STUDENT:
<ul style="list-style-type: none">– should be able to give a general description of the cerebral hemisphere;– should be able to recognize and give names of cerebral gyri and sulci;– should be able to recognize and describe cerebral lobes and their boundaries;– should be able to recognize and give names of the elements of the middle telencephalon;– should be able to give a theoretical description of the septum of the telencephalon.

At the end of the class a student should participate in the credit consisting of 6 MCQ and 4 pins in order to confirm the presence at the class and collect the points if successful.

EXAMPLE QUESTIONS (choose <u>one</u> correct answer):	
What is the location of the paracentral lobule? A. frontal lobe B. parietal lobe C. temporal lobe D. frontal and parietal lobes E. parietal and temporal lobes	Frontal lobe contains all the following structures, except: A. precentral sulcus B. ascending ramus of the lateral sulcus C. orbital gyri D. gyrus rectus E. cuneus

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List of the structures to be practically identified and recognized by the student:

CEREBRAL HEMISPHERE

Supero-lateral surface

- Superiomedial border
- Lateral cerebral fossa
- Central sulcus (Rolandic sulcus)
- Lateral sulcus (Sylvian sulcus)
 - anterior ramus
 - ascending ramus
 - posterior ramus

Medial surface

- Inferomedial border

Inferior surface

- Inferolateral border

Pre-occipital notch

Longitudinal cerebral fissure

FRONTAL LOBE

- Frontal pole
- Precentral sulcus
- Precentral gyrus
- Superior frontal gyrus
- Superior frontal sulcus
- Middle frontal gyrus
- Inferior frontal sulcus
- Inferior frontal gyrus
 - opercular portion
 - triangular portion
 - orbital portion

PARIETAL LOBE

- Postcentral sulcus
- Postcentral gyrus
- Superior parietal lobule
- Intraparietal sulcus
- Inferior parietal lobule
- Supramarginal gyrus
- Angular gyrus

TEMPORAL LOBE

- Temporal pole
- Superior temporal gyrus
- Superior temporal sulcus
- Middle temporal gyrus
- Inferior temporal sulcus
- Inferior temporal gyrus
- Transverse temporal gyri

OCCIPITAL LOBE

- Occipital pole
- Occipital gyri
- Transverse occipital sulci

INSULA

- Insular gyri
 - short insular gyri
 - long insular gyrus
- Limen insulae
- Central sulcus of insula

Circular sulcus of insula

Opercula

- frontal operculum
- parietofrontal operculum
- temporal operculum

MEDIAL SURFACE OF THE HEMISPHERE

Callosal sulcus

Cingulate gyrus

- isthmus of cingulate gyrus

Cingulate sulcus

- subfrontal part
- marginal part

Subparietal sulcus

Paracentral lobule

Paracentral sulcus

Precuneus

Parieto-occipital sulcus

Cuneus

Calcarine sulcus

Dentate gyrus

Hippocampal sulcus

Parahippocampal gyrus

Uncus

INFERIOR SURFACE OF THE HEMISPHERE

Lingual gyrus

Collateral sulcus

Medial occipito-temporal gyrus

Occipito-temporal sulcus

Lateral occipito-temporal gyrus

Straight gyrus = Gyrus rectus

Olfactory sulcus = Olfactory groove

Olfactory bulb

Olfactory tract

Olfactory trigone

Anterior perforating substance

Orbital gyri

Orbital sulci

MIDDLE TELENCEPHALON = = TELENCEPHALON IMPAR

Corpus callosum

splenium

trunk

genu

rostrum

lamina rostralis

radiatio corporis callosi

Fornix

crus

body

column

commissure of fornix

Anterior commissure

Lamina terminalis

Septum pellucidum

lamina septi pellucidi

cavum septi pellucidi