

The Human Brain

(Encephalon)

The brain, a mass of soft nerve tissue, rich in blood-vessels, which fills the entire skull cavity, is divided into the following parts:

- A **Cerebrum**, *Cerebrum*
- B **Cerebellum**, *Cerebellum*
- *C **Mid-brain**, *Mesencephalon*
- *D **Pons**, *Pons*
- *E **Medulla oblongata**, *Medulla oblongata*

The latter is continuous with the spinal cord through the foramen magnum.

The brain as well as the spinal cord is enclosed by three membranes:

Dura mater, *Dura mater encephali*
Arachnoid membrane, *Arachnoidea encephali*

Pia mater encephali, *Pia mater encephali*
 The cerebrum as well as the cerebellum is divided into two halves, the hemispheres, by a plane through the level of the sagittal suture. Between these hemispheres extends a continuation of the dura mater, the **falx cerebri**; between the cerebrum and ce-

rellum is the **tentorium cerebelli**.

Within the brain are four cavities.

The **cerebrum** is divided into two symmetrical halves by a deep longitudinal cleft. These halves are connected by the

1. **Corpus callosum**, *Corpus callosum*.
 The surface of the cerebrum shows **winding rounded ridges**, *Gyri cerebri*, which are covered by the greyish-red cortical substance of about 5 mm in thickness. They are often separated from one another by deep furrows. The grey substance consists of nerve cells while the white inner substance merely serves for conduction.
 (BS 20/1: see no. o)

The cerebrum is subdivided into the following four lobes:

- F **Frontal lobe**, *Lobus frontalis*
- G **Parietal lobe**, *Lobus parietalis*
- H **Temporal lobe**, *Lobus temporalis*
- I **Occipital lobe**, *Lobus occipitalis*
- K **Lateral sulcus**, *Sulcus lateralis*, separates H from G.

Lateral ventricle opened:

2. **Anterior horn of the lateral ventricle**, *Cornu laterale* (not concerning BS 21 and BS 20/1)

- *36. **Gesichtsnerv**, *N. facialis*.
- *37. **Gehörnerv**, *N. vestibulocochlearis* [*N. octavus*].
- *38. **Zungenschlundkopfnerv**, *N. glossopharyngeus*.
- *39. **Lungenmagennerv**, *N. vagus*.
- *40. **Bei-Nerv**, *N. accessorius*.
- *41. **Zungenfleischnerv**, *N. hypoglossus*.

Ferner:

- *42. **1. und 2. Halsnerven**, *Nn. cervicales I und II*
- *43. **Schnervenstrang**, *Tractus opticus* (entfällt bei BS 21).
- *44. **Innerer Kniehöcker**, *Corpus geniculatum mediale* (entfällt bei BS 21).
- *45. **Sehhügel**, *Thalamus*.
- *46. **Hirnanhang**, *Hypophysis* [*Gl. pituitaria*]
- *47. **Grauer Höcker**, *Tuber cinereum*.
- *48. **Weißer Höcker**, *Corpus mamillare*. (BS 20/1: siehe Nr. m)
- *49. **Äußerer Kniehöcker**, *Corpus geniculatum laterale* (entfällt bei BS 21).

Die mit * gekennzeichneten Begriffe gelten nur für BS 23/2.

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Lateral ventricle opened:

2. **Anterior horn of the lateral ventricle**, *Cornu laterale* (not concerning BS 21 and BS 20/1)

3. **Posterior horn**, *Cornu posterius* (not concerning BS 21)
4. **Inferior horn**, *Cornu inferius* (not concerning BS 21 and BS 20/1)
5. **Hippocampus major**, *Hippocampus* (not concerning BS 21)
- *6. **Interventricular foramen**, *Foramen interventriculare* = communication between the third ventricle and the lateral ventricles.

The **cerebellum** lies under the occipital lobe of the cerebrum. On its surface are regular narrow almost parallel folds consisting of grey substance, part of which extends within the cerebellum in numerous lateral indentations. The white medullary substance is arranged tree-like and forms the so-called

7. **Arbor vitae**, *Arbor vitae cerebelli*. (BS 20/1: see no. c)

In the cerebellum are distinguished a middle part, the

8. **Vermis**, Vermis and two vaulted lateral portions the
9. **Hemispheres**, *Hemisphaerium cerebelli*
10. **Horizontal fissure**, *Fissura horizontalis*, separates the upper surface of the cerebellum from the lower. These two

surfaces are divided again into smaller lobes.

On the inferior side of the cerebellum are seen:

11. **the tonsil**, *Tonsilla cerebelli*
12. **the flocculus**, *Flocculus*
13. **the peduncle of the flocculus**, *Pedunculus flocculi* (not concerning BS 21).

The **mid-brain**, *Mesencephalon*, lies on the inferior side of the cerebrum and is made up of:

- *14. the dorsal **tectum** of mid-brain, *Lamina tecti* and
- *15. the ventral **cerebral peduncles**, *Pedunculus cerebri*.

The **pons** lies on the clivus of the occipital bone. Within the pons the tracts of the cerebrum and cerebellum cross.

The convex lower surface of the pons shows

- *16. a **median longitudinal groove**, *Sulcus basilaris*.

On the both sides of the pons

- *17. **the middle cerebellar peduncles**, *Pedunculus cerebellaris medius* are visible. (not concerning BS 21)

The medulla oblongata extends from the posterior border of the pons to the point of exit of the first cervical nerve from the spinal cord. In the medulla oblongata the central canal widens to

*18. the **fourth ventricle**, *Ventriculus quartus*, with the **rhomboid fossa**, *Fossa rhomboidea*

On the lower side of the medulla oblongata are seen

*19. a **median longitudinal fissure**, *Fissura mediana [anterior]* on each side of this

*20. the **pyramids**, *Pyramis [Medulla oblongatae]*

On each side of the pyramids there is an elongated prominence,

*21. the **olive**.

The longitudinal groove is interrupted by the

*22. **Decussation of pyramids**, *Decussatio pyramidum [D. motoria]*

On the posterior surface of the medulla oblongata are seen

*23. the **posterior longitudinal fissure**, *Sulcus medianus [posterior]*

On each side lie

*24. the **fasciculus gracilis**, *Fasciculus gra-*

cilis, which ends in the

*25. **Tuberculum nuclei gracilis**. (not concerning BS 21) The

*26. **posterior intermediate sulcus**, *Sulcus intermedius posterior*, (not concerning BS 21) separates the fasciculus gracilis from the

*27. **Fasciculus cuneatus** (not concerning BS 21) which ends in the tuberculum nuclei cuneati.

On the sagittal section are seen:

*a) **Grey substance of the pons**, *Substantia grisea*

*b) **Central canal of the spinal cord**, *Sulcus medianus [posterior]*

c) **Arbor vitae**, *Arbor vitae cerebelli*

*d) **Fourth ventricle**, *Ventriculus quartus* or *Fossa rhomboidea*

*e) **Aqueduct of mid-brain**, *Aqueductus cerebri*

f) **Anterior medullary velum**, *Velum medullare anterius*

*g) **Third ventricle**, *Ventriculus tertius*

*h) **Anterior commissure**, *Commissura anterior*

*i) **Tectum of mid-brain**, *Lamina tecti*

*k) **Posterior commissure**, *Commissura posterior*

*l) **Fornix**, *Fornix*

*m) **Mammillary body**, *Corpus mamillare*

*n) **Interventricular foramen**, *Foramen interventriculare*

o) **Corpus callosum**, *Corpus callosum*

p) **Knee of the corpus callosum**, *Genu corporis callosi*

q) **Rostrum of the corpus callosum**, *Rostrum corporis callosi*

r) **Septum lucidum**, *Septum pellucidum*

s) **Splenium of the corpus callosum**, *Splenium corporis callosi*

On the lower surface of the brain are visible:

28. **Olfactory nerves**, *Nn. olfactorii*

*29. **Anterior perforated substance**, *Substantia perforata anterior*

*30. **Optic nerve**, *N. opticus*

*31. **Optic chiasm**, *Chiasma opticum*

*32. **Oculomotor nerve**, *N. oculomotorius*

*33. **Trochlear nerve**, *N. trochlearis*

*34. **Trigeminal nerve**, *N. trigeminus*

*35. **Abducens nerve**, *N. abducens*

*36. **Facial nerve**, *N. facialis*

*37. **Auditory nerve**, *N. vestibulocochlearis* [*N. octavus*]

*38. **Glossopharyngeal nerve**, *N. glossopharyngeus*

*39. **Vagus nerve**, *N. vagus*

*40. **Accessory nerve**, *N. accessorius*

*41. **Hypoglossal nerve**, *N. hypoglossus*

Furthermore:

*42. **1st and 2nd cervical nerves**, *Nn. cervicales I and II*

*43. **Optic tract**, *Tractus opticus* (not concerning BS 21)

44. **Internal geniculate body**, *Corpus geniculatum mediale* (not concerning BS 21)

*45. **Thalamus**, *Thalamus*

*46. **Hypophysis**, *Hypophysis* [*Gl. pituitaria*]

*47. **Tuber cinereum**

*48. **Mammillary body**, *Corpus mamillare* (BS 20/1: see no. m)

*49. **External geniculate body**, *Corpus geniculatum laterale* (not concerning BS 21)

The terms marked with * apply to BS 23/2 only.

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