

OUTLINE OF THE NERVOUS SYSTEM (p.1)

1. Central Nervous System

A. Brain

1.) **Forebrain** (prosencephalon)

a.) **Telencephalon**

cerebral cortex (“lissencephalic” vs. convoluted)
lobes of brain (frontal, parietal, temporal, occipital)
central fissure/sulcus, lateral fissure, longitudinal
fissure

corpus callosum (a “commissure”)
“neocortex” (6 layered in advanced mammals)
columnar organization

limbic system (hippocampus, amygdala, fornix,
cingulated gyrus, septum, mammillary bodies)

basal ganglia (caudate nucleus, putamen, globus
pallidus)

b.) **Diencephalon**

thalamus (incl. massa intermedia)

hypothalamus

controls pituitary gland
(controls autonomic nervous system, see below)

2.) **Midbrain** (mesencephalon)

tectum (superior & inferior colliculi)

tegmentum (periaqueductal gray, substantia nigra,
red nucleus)

3.) **Hindbrain** (rhombencephalon)

myelencephalon (**medulla**), incl. **reticular formation**

metencephalon (**pons, cerebellum**)

note: **cranial nerves** (12 pairs)

OUTLINE OF THE NERVOUS SYSTEM (p.2)

1. Central Nervous System (cont.)

B. Spinal Cord

gray matter, white matter (myelinated)

spinal nerves (31 pairs), dorsal & ventral branches

2. Peripheral Nervous System

A. Somatic Nervous System

Via spinal nerves that innervate skeletal muscles

B. Autonomic Nervous System

Via spinal nerves that innervate smooth muscles (in organs),
glands, and the heart muscle

1.) Sympathetic Nervous System

2.) Parasympathetic Nervous System