

TABLE 7.1: SURFACE ANATOMY OF THE SHEEP BRAIN

REGION	STRUCTURE	DESCRIPTION
COVERINGS	Dura mater	Tough, white outermost meninx; protective function
	Arachnoid mater	Thin, delicate, avascular, middle meninx; seen covering convolutions of cerebral cortex
	Pia mater	Thin, transparent, vascularized, innermost meninx; adheres to the surface of the brain
BRAIN STEM	Medulla oblongata	Enlarged area connecting to the spinal cord
	Ventral median fissure	Narrow longitudinal, ventral groove
	Pons	Enlarged area anterior to the medulla oblongata
	Cerebral peduncles	Ventral area of midbrain, anterior to pons.
	Corpra quadrigemina	Dorsal area of midbrain; comprised of the superior and inferior colliculi
	Superior colliculus	Larger, paired rounded prominences; anterior to the inferior colliculi
	Inferior colliculus	Smaller, paired; posterior to superior colliculi
	DIENCEPALON (composed of thalamus and hypothalamus)	Hypothalamus
Mammillary body		Rounded prominence(paired in humans) posterior to the optic chiasma
Infundibulum		Tube attaching pituitary gland to hypothalamus
Pituitary gland		On ventral surface of brain; not part of the diencephalon, but connects to the hypothalamus
Pineal gland		Single, rounded structure, located dorsally, medially and anterior to superior colliculi. (pull cerebellum downward to view)

TABLE 7.1 CONTINUED: SURFACE ANATOMY OF THE SHEEP BRAIN

REGION	STRUCTURE	DESCRIPTION
CEREBRUM	Cerebral cortex	Convolutated surface gray matter
	Gyrus	Small ridge in surface of cerebral cortex
	Sulcus	Shallow groove in surface of cerebral cortex
	Longitudinal fissure	Deep groove separating cerebrum into left and right hemispheres
	Corpus callosum	White, transverse fibers connecting cerebral hemispheres (spread hemispheres apart to see at base of longitudinal fissure)
	Transverse fissure	Deep groove separating cerebrum from cerebellum
CEREBELLUM	Cerebellum	Dorsal, posterior to occipital lobe of cerebrum
NERVES AND TRACTS	Abducens nerve	Ventral, pons area, just lateral to ventral median fissure
	Trochlear nerve	Thin nerve located laterally at end of transverse fissure (pull cerebellum down to view)
	Trigeminal nerve	Large nerve located laterally in pons area (may have been cut when dura mater was removed)
	Oculomotor nerve	Ventral, cerebral peduncle area, just lateral to ventral median fissure
	Optic chiasma	Crossing of optic nerves, anterior to mammillary body
	Optic nerve	Nerve extending from retina to optic chiasma
	Optic tract	Tracts extending from optic chiasma posteriorly towards thalamus
	Olfactory tract	Tract on temporal lobe of cerebral cortex
	Olfactory bulb	Gray matter at termination of olfactory nerve; beneath frontal lobe.

TABLE 7.2: INTERNAL ANATOMY OF THE SHEEP BRAIN

REGION	STRUCTURE	DESCRIPTION
SPINAL CORD	Central canal	Tube filled with CSF; connects to 4 th ventricle
BRAIN STEM	Medulla oblongata	
	Pons	
	Cerebral peduncles	
	Superior colliculus	
	Inferior colliculus	
DIENCEPHALON	Thalamus	Round mass anterior to superior colliculus, dorsal to hypothalamus
	Hypothalamus	Area just ventral to thalamus and superior to the optic chiasma and infundibulum
	Pineal gland (or body)	
CEREBRUM	Cerebral cortex	Thin convoluted layer of surface gray matter
	Corpus callosum	Forms dorsal wall of lateral ventricle
	Fornix	White matter, forms ventral wall of lateral ventricle
CEREBELLUM	Arbor vitae	Deep white matter; resembles tree branches
VENTRICLES AND AQUADUCTS	Fourth ventricle	Cavity between the cerebellum and medulla oblongata and pons
	Cerebral aqueduct	Channel through the midbrain, ventral to inferior colliculus; connects 3 rd and 4 th ventricles
	Third ventricle	Cavity inferior to the fornix that surrounds the thalamus
	Lateral ventricle	Cavity inside each cerebral hemisphere
	Septum pellucidum	Thin wall separating the lateral ventricles