**ANATOMY**

- almond-shaped structure.
- average size in humans 1.24–1.63 cm³
- one portion is a ventromedial extension of the striatum, a second part comprising the caudal olfactory cortex, and a third region representing the ventromedial extension of the claustrum.
- amygdala has been subdivided based on its histological characteristics into 2 major areas (anterior amygdaloid area and corticoamygdaloid transition area), 6 nuclei (central, medial, cortical, accessory basal, basal, and lateral), and 1 intercalated cell group.
The brain as viewed from the underside and front. The thalamus and Corpus Striatum (Putamen, caudate and amygdala) have been splayed out to show detail.

**Corpus Striatum**

- Lenticular nucleus (globus pallidus and putamen)
- Amygdala

**Hippocampus**

- Hippocampus: Learning and Memory
- Amygdala: Emotions and Aggression
- Hypothalamus: Hunger, Thirst, Temperature Control
- Thalamus: Relay Center for Sensory Information
A137 (3)

Schematic representation of the main connections of the central, medial, basolateral, and basomedial amygdala nuclei. Acb: nucleus accumbens; AH: anterior hypothalamic area; AMY: anterior hypothalamic nucleus; AI: agranular insular cortex; AOB: accessory olfactory bulb; Arc: arcuate nucleus of the hypothalamus; BNST: bed nucleus of the stria terminalis; CT: claustrum; CM: central medial thalamic nucleus; CSF: cuneiform nucleus; DR: nucleus of the diagonal band; DM: dorsomedial hypothalamic nucleus; DR: dorsal raphe nucleus; En: entorhinal cortex; GP: globus pallidus; IL: infralimbic cortex; IMD: intermediodorsal thalamic nucleus; LC: locus coeruleus; LDTg: laterodorsal tegmental nucleus; LH: lateral hypothalamic area; LPO: lateral preoptic area; MD: mediodorsal thalamic nucleus; MPO: medial preoptic area; OB: olfactory bulb; Pa: paraventricular hypothalamic nucleus; PAG: periaqueductal gray; PaS: parasubiculum; PB: parabrachial nucleus; Pe: paraventricular hypothalamic nucleus; PFC: prefrontal cortex; Pir: piriform cortex; PM: premammillary nucleus; PP: peripeduncular nucleus; PTH: parietothalamic nucleus; PrL: prelimbic cortex; Pb: periaqueductal gray; PrL: prelimbic cortex; PT: paratrigeminal nucleus; R: reuniens thalamic nucleus; SGI: suprageniculate thalamic nucleus; Si: substantia innominata; SN: substantia nigra; SP: substantia nigra; Sol: nucleus of the solitary tract; SF: subparafascicular thalamic nucleus; Su: subiculum; SuM: supramammillary nucleus; Te: temporal cortex; TuLH: tuberal region of lateral hypothalamus; VTA: ventral tegmental area.
**FUNCTION**

- amygdala plays a critical role in processing threatening stimuli and mediating autonomic, neuroendocrine, and behavioral responses that enable an organism to adapt to social and environmental challenges.

**LESIONS**

**Etiology of lesions:**
1. trauma to temporal lobes
2. herpes simplex encephalitis
3. bilateral temporal lobe epileptic surgery
4. CNS degenerative disorders (e.g. Alzheimer disease, Pick disease).

**Clinically - behavioral changes - Klüver-Bucy syndrome**
1. visual, tactile, and auditory agnosia → hypermetamorphosis (intense desire to explore immediate environment) → hyperorality
1) hyperphagia or other dietary manifestations
2) placidity
3) hypersexuality (in form of comments, suggestions, and attempts to make sexual contact (e.g. touching) rather than in actual intercourse or masturbation).

BIBLIOGRAPHY for ch. “Limbic System” → follow this LINK >>

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