Basal Ganglia

➲ ***Definition:*** ***Masses of grey matter deep to the floor of the lateral ventricle & are involved in motor control and cognition***

Corpus Striatum

PARTS

A. Caudate: (C-shaped nucleus.) WTN?

Head	- It forms the **lateral wall** of anterior horn of **lateral ventricle** - It is separated from lentiform nucleus by anterior limb of **internal capsule.**
Body	- It lies in the **floor** of the body of **lateral ventricle** - It is separated from thalamus by **thalamo-striate vein and the stria terminalis** (fibers connecting the amygdaloid nucleus with hypothalamus and septal area).
Tail	- Extends into temporal lobe in the **roof** of inferior horn of **lateral ventricle**. - Ends anteriorly at **amygdaloid nucleus**

B. Lentiform:

Shape	- Wedge-shaped - Its apex is directed medially.
Parts	1) **Putamen:** lateral part. 2) **Globus pallidus:** medial part.
Relations	
Medial	- **Related to internal capsule.** a. **Anterior** limb separates it from **caudate** nucleus. b. **Posterior** limb separates it from the **thalamus.**
Lateral	- Related to the **external capsule**, which separates it from the claustrum.
Inferior	- Related to the **amygdaloid nucleus** & **anterior commissure**.

Claustrum

RELATIONS

- Deep to the insula
- **External capsule:** separating it from **lentiform nucleus.**
- **Extreme capsule:** separating it from **insula**

FUNCTION

Controversial function
"Unknown"

Amygdaloid

RELATIONS

- It lies in the anterior part of the temporal lobe in the roof and in front of the tip of the inferior horn of **lateral ventricle.**

FUNCTION

It is a part of the ❶**limbic** & ❷**olfactory** systems.

BLOOD SUPPLY ➲ Internal carotid artery

1) **Anterior part of corpus striatum:** by the **anterior cerebral artery** (medial striate artery) from the ICA.
2) **Remaining parts of corpus striatum except tail of the caudate nucleus:** by the **middle cerebral artery** (lateral striate arteries) from the ICA.
3) **Tail of the caudate nucleus & amygdaloid nucleus: anterior choroidal** artery from the ICA

MALFUNCTION OR LESION

- Damage to the basal ganglia cells may cause problems controlling ❶**speech,** ❷**movement,** & ❸**posture** ➲ This combination of symptoms is called **parkinsonism**.
- A person with basal ganglia dysfunction may have trouble ❶**Starting,** ❷**Stopping,** or ❸**Sustaining movement**

Internal nucleus

DEFINITION	
- It is a ***band of projection fibers***	
DIVISIONS	**BLOOD SUPPLY "mainly In Carotid "**
❶ **Anterior limb:** between the **lentiform nucleus** & **head of caudate** nucleus	➲ ACA, MCA
❷ **Genu:** opposite the **apex of the lentiform nucleus**.	
❸ **Posterior limb:** between **lentiform nucleus** & **thalamus** - divided into:	
↳ **Lenticulothalamic part:** between lentiform nucleus & thalamus.	➲ MCA, Ant choroidal
↳ **Sublenticular part:** below the lentiform nucleus.	➲ PCA, Ant Choroidal
↳ **Retolenticular part:** behind the lentiform nucleus	➲ PCA

Relation between lateral ventricle & caudate nucleus

Lateral Ventricle		Caudate Nucleus	
Medial	Anterior horn	Head	Lateral
Roof "sup"	Body	Body	Floor "inf"
Floor "inf"	Inferior horn	Tail	Roof "sup"