

ANTIPSYCHOTICS

→ 1° MOA : Anti Dopaminergic.

→ Other MOA : Serotonergic blocker.
SHT_{2A} SHT_{2c}

Anticholinergic property.

Typical Antipsychotics

D₂ blocker

Take care of +ve Symptoms only

More EPSE
(Extra pyramidal Side Effects)

less metabolic Side effects

Atypical Antipsychotics

D₂ + SHT_{2A} blockers.

Take care of +ve & -ve Symptoms

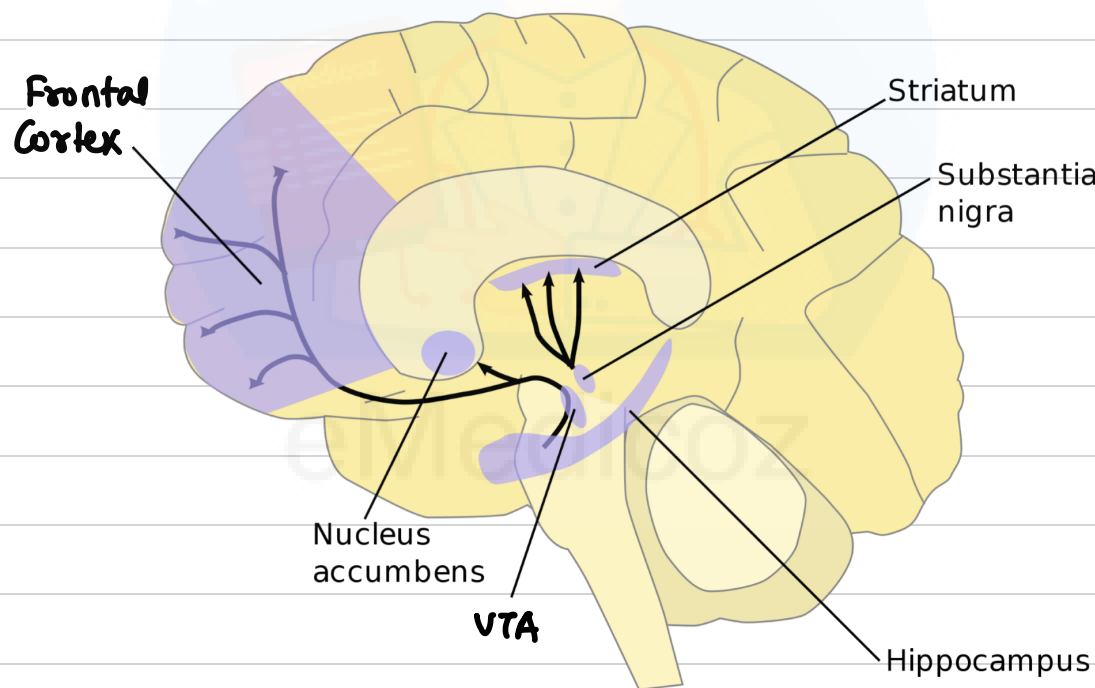
less EPSE

More metabolic side effects
(due to SHT_{2c} blockage) ^Q

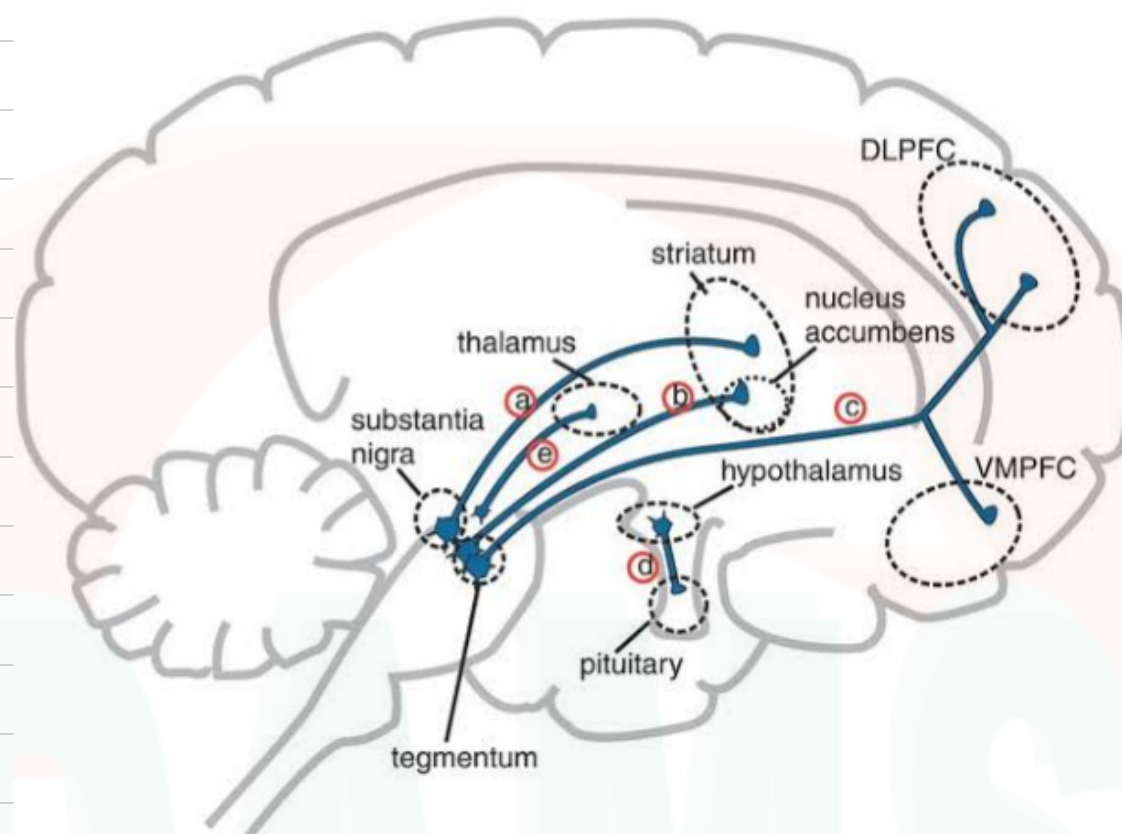
DOPAMINE PATHWAYS

Dopamine Pathways	Dopamine Action	Typical Antipsychotics	Atypical Antipsychotics
1) Mesolimbic pathway ↓ Midbrain ———→ Limbic System VTA ———→ Nucleus Accumbens (ventral Tegmental Area)	↑ Dopamine ↓ +ve Symptoms	↓ Dopamine ↓ improve +ve Symptoms	↓ Dopamine ↓ improve +ve Symptoms.

2) Meso Cortical Pathway			
↓ ↓ Midbrain Cortex			
VTA $\xrightarrow{+}$ Prefrontal Cortex			
	↓ Dopamine ↓ -ve Symptoms	↓ Dopamine ↓ Worsen -ve Symptoms	↑ Dopamine ↓ Improves -ve Symptoms
3) Nigrostriatal pathway			
Substantia Nigra $\xrightarrow{+}$ Striatum			
Responsible for movement			
	↓ Dopamine ↓ Hypokinesia	↓↓ (More EPS)	↓ (less EPS)
4) Tuberoinfundibular Pathway			
Hypothalamus to Ant. pituitary.			
	Prolactin	↑↑ Prolactin	↑ Prolactin



Dopamine Pathways and Key Brain Regions



Typical Antipsychotics

- Chlorpromazine
- Prochlorperazine
- Trifluoperazine
- Thioridazine
- Haloperidol
- Penfluridol
- Flupenthixol
- Zuclopenthixol

Atypical Antipsychotics

- Clozapine (most effective)
 - Risperidone : long acting depot inj.
 - Aripiprazole : D₂ Partial Agonist
 - Ziprasidone : QTc Prolongation
 - Amisulpride : Renal Excretion
 - Blonanserin
 - Asenapine : Sublingual Tabs
 - Olanzapine : High metabolic S/E.
 - Quetiapine
 - Lurasidone
 - Iloperidone
 - Pimavanserin
 - Brexpiprazole
 - Cariprazine
- DOC : Psychosis in Parkinson's Disease
- New drugs

EPSE CHART

(EPSE = Extra pyramidal Side effects)

History [Patient on Antipsychotics]	Diagnosis	Treatment
+ Hypokinesia Rigidity Tremors	Pseudo - Parkinsonism	centrally acting Anticholinergics eg. Trihexphenidyl Benzhexol Procyclidine
+ Bending of neck to one side (Torticollis) + uprolling of eye balls (oculogyric crisis)	Dystonia ^Q (FAQ)	iv Promethazine (PHENARGAN) (Antihistaminic with Anticholinergic Properties)
Subjective Restlessness (urge to move, can't sit @ 1 place)	Akathisia ↓ MC EPSE	Propranolol.
orofacial tongue movements	Tardive Dyskinesia - F > M (Elderly ♀) - Seen with long term anti D ₂	clozapine valbenazine Tetrabenazine ↓ D ₂ Depletor Agents.

Fever Rigidity ↑CPK (Creatinine Phospho kinase) Autonomic instability (fluctuating BP) Altered sensorium	Neuroleptic Malignant Syndrome (lethal) ↓ Death ↓ due to Renal failure	Stop Antipsychotics ↓ iv Dantrolene (DOC) or oral Bromocriptine
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