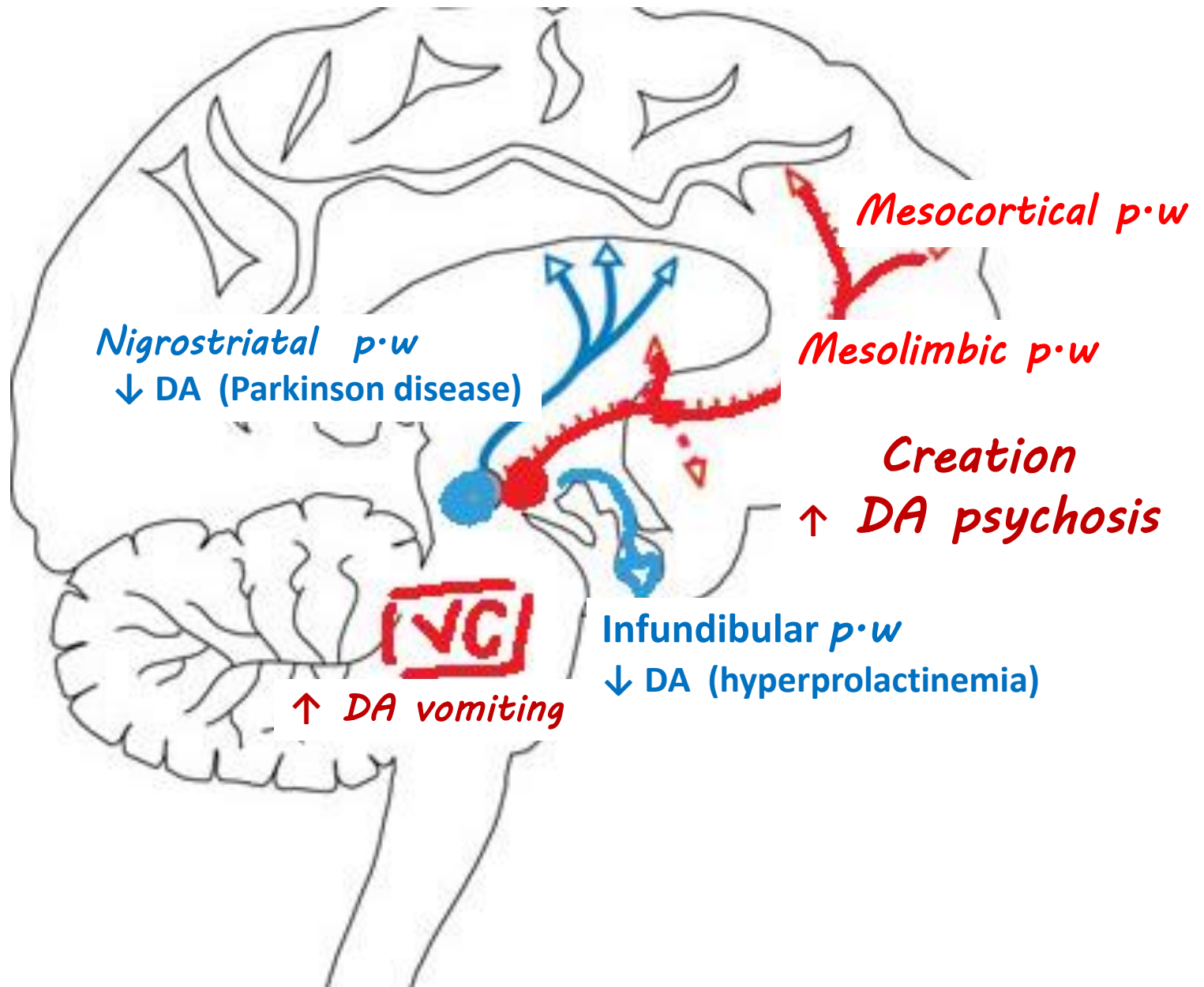


Antipsychotics



Psychosis

- *“Loss of reality” because it makes you experience or believe things that aren’t real.*
- *Most common form of psychosis is **Schizophrenia***
- *Schizophrenia is cc by **+** and **-** symptoms*



Schizophrenia

Symptoms



Delusions

Hallucinations



Social withdrawal

Flattened effect

No motivation



Sticker placed on a bathroom mirror that simulates a visual hallucination of a person, one of the most common symptoms of schizophrenia.



Schizophrenia

pathophysiology

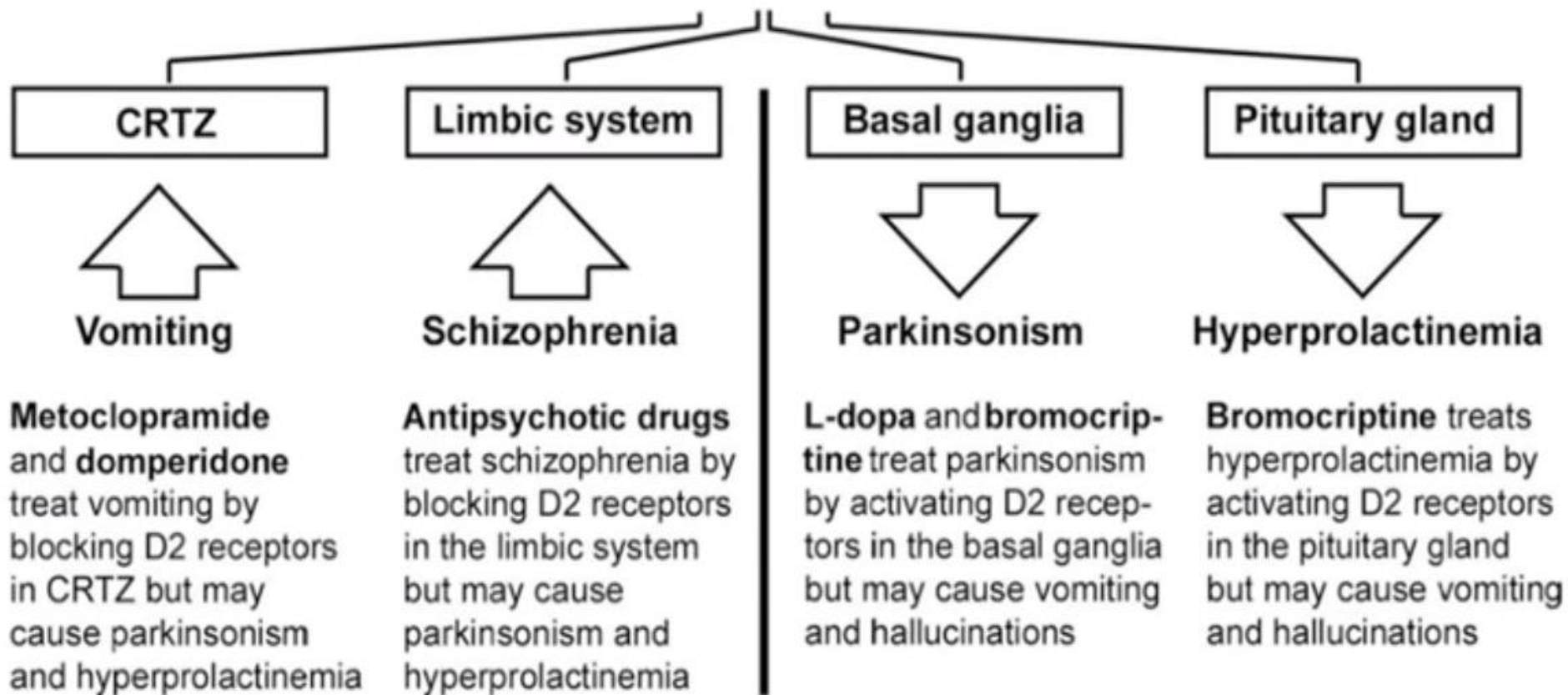
↑ *DA*
(*Mesolimbic*)



↑ *DA*, ↑ *5HT2A*
(*Mesocortical*)



Dopamine in the CNS



Antipsychotics drugs

Typical (old) drugs



Atypical (new) drugs



Antipsychotics drugs

Typical antipsychotics

Haloperidol
Chlorpromazine
Fluphenazine

A Typical antipsychotics

Risperidone
Olanzapine
Clozapine (resistance)
Quetiapine

MOA D₂-antagonist

D₂-antagonist
5-HT_{2A} antagonist

More on



↑↑ Extrapyramidal

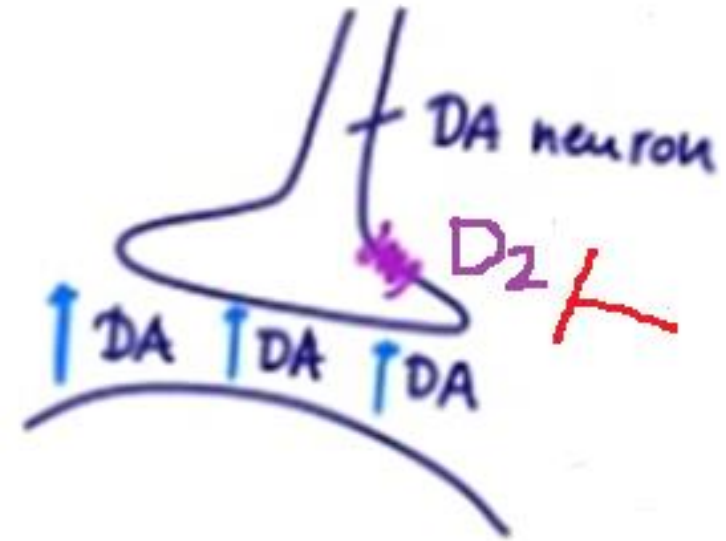


less Extrapyramidal

s/e

Onset of action of Antipsychotic

Antipsychotic effects delay **several weeks** to appear due to blockade of Auto regulatory D2 >> increase DA release >> counteract antipsychotic effect until **tolerance** develop to this Auto regulatory receptors and postsynaptic blockade becomes more effective.



However, antipsychotics have **rapid onset** of action (**sedation and restraining**) for acute psychosis, acute mania, intractable hiccup by affecting on basal ganglia >>> generalized Dystonia

Indication of Antipsychotics

- 1) schizophrenia
- 2) Paranoid psychosis, morbid Jealousy
- 3) Aggressive people
- 4) Movement disorder (Huntington's chorea, tics)
- 5) Personality disorder (v. touchy person)
- 6) IBS (trifluoperazine)
- 7) Intractable hiccup (chlorpromazine IM)
- 8) Neuroleptanalgesia (droperidol + fentanyl)

Adverse effects of antipsychotic

1- Extra pyramidal S/E due to Bk of D Rc in
Nigrostriatal p.w. (more w Typical)

2- Neuroleptic malignant hyperthermia S/E
dangerous (20% may die) must stop the drug

3- due to α blocking \rightarrow postural hypotension &
sexual dysfunction

4- Hyperprolactinemia \rightarrow due to Bk of D Rc in
Infundibular p.w.

5- wt gain \rightarrow due to Bk of 5HT_{2A} (more w A Typical)

6- Agranulocytosis (WBC < 2000) (w Clozapine)

7- cholestatic jaundice (w chlorpromazine)

Extra pyramidal symptoms

→ Dystonia

spasm of tongue, neck, face.

→ Akathisia

compulsive, repetitive motion

→ Parkinsonism like symptom

bradykinesia, rigidity & tremor

→ Tardive dyskinesia

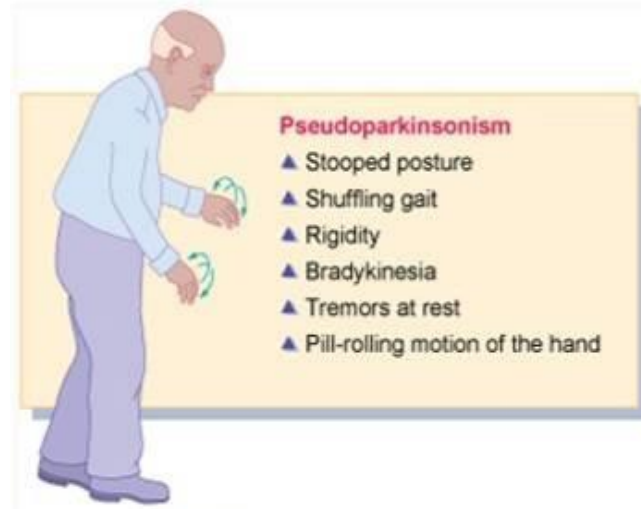
lip smacking, worm like tongue movement

Acute
EPS

D₂ blocked

chronic
EPS

Hypersensitivity
of D₂ receptors



Comparison of 1st and 2nd generation Antipsychotic

Typical
antipsychotics

A Typical
antipsychotics

MOA

D₂-antagonist

D₂-antagonist

5-HT_{2A} antagonist

S/E

EPS

Less EPS

Metabolic syndrom

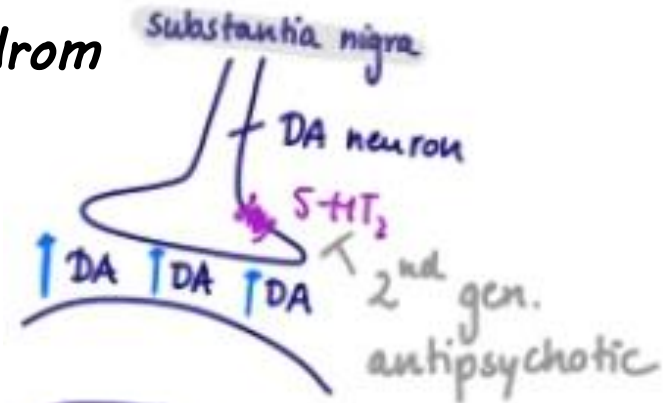
**Clinical
use**



e.g.

chlorpromazine

Risperidone



THANK YOU

FOR

ATTENTION