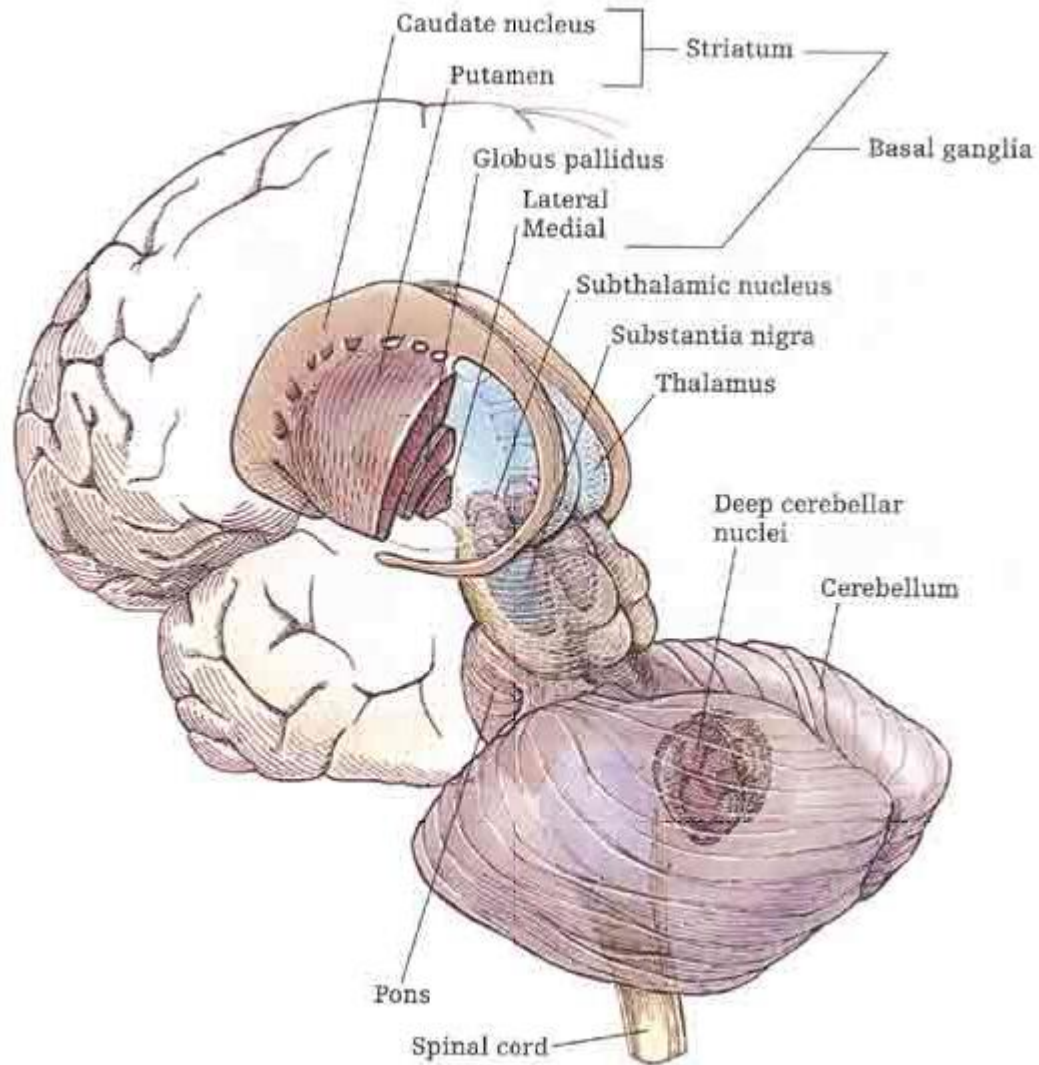
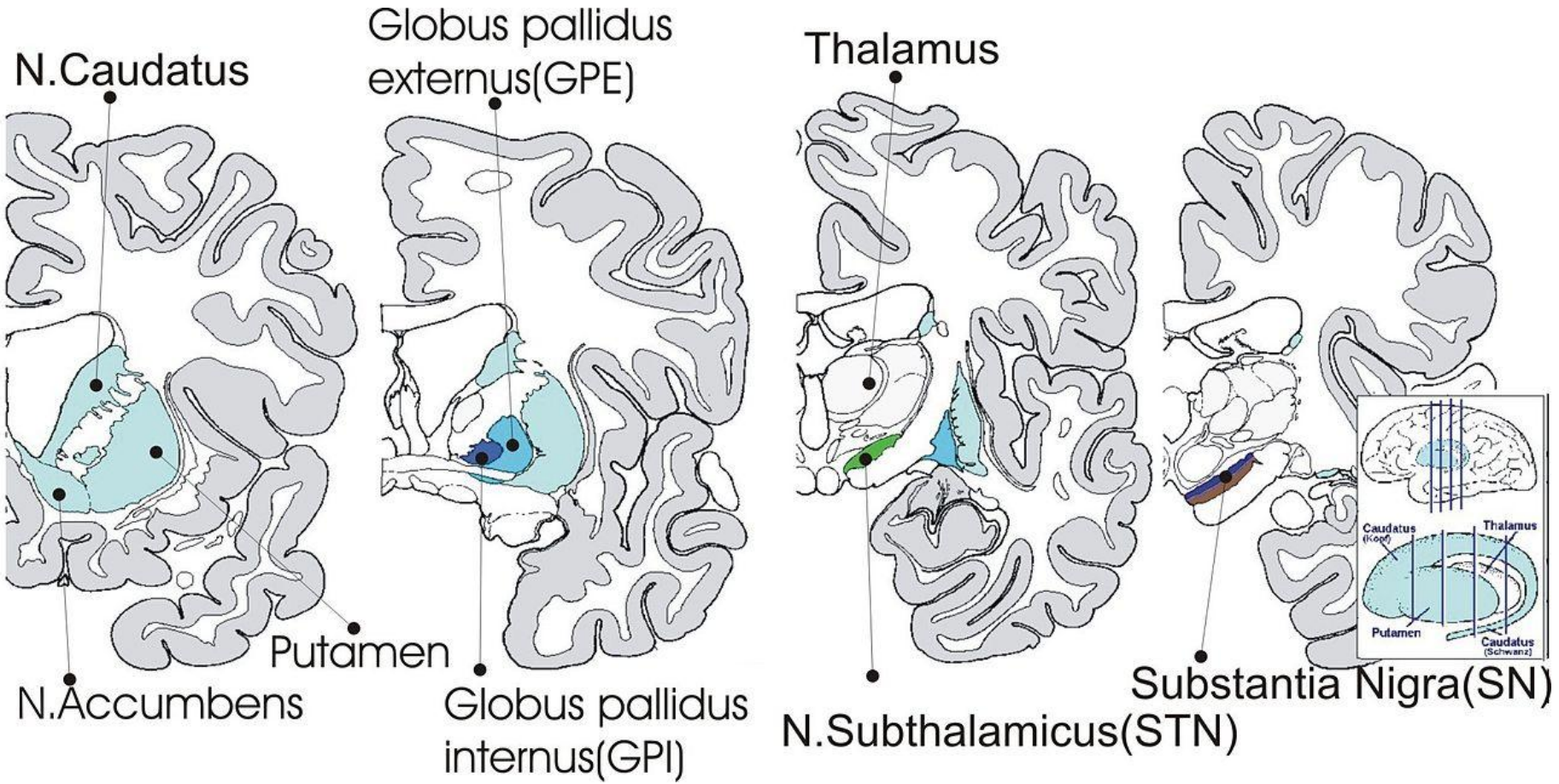
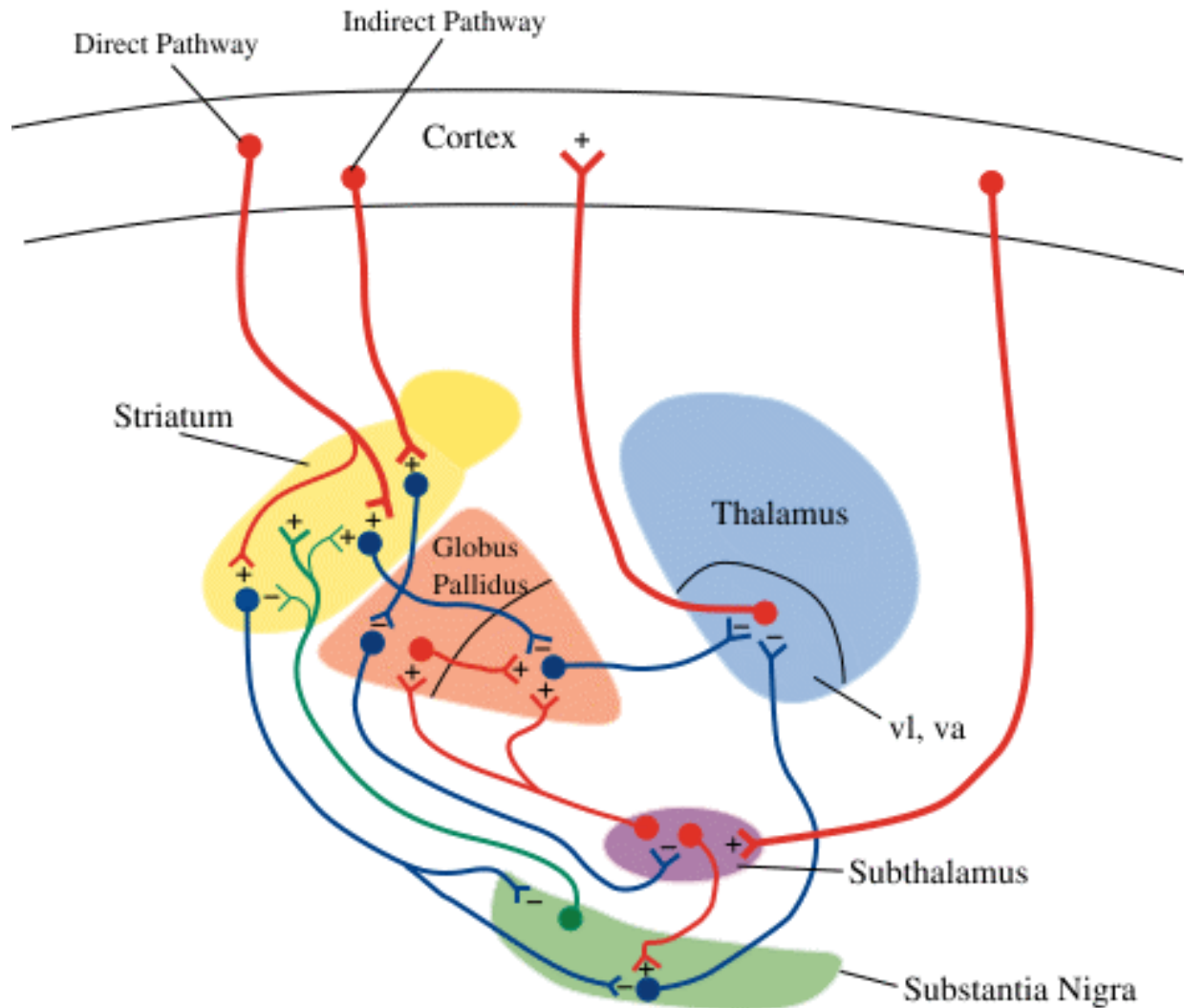


Basal ganglia



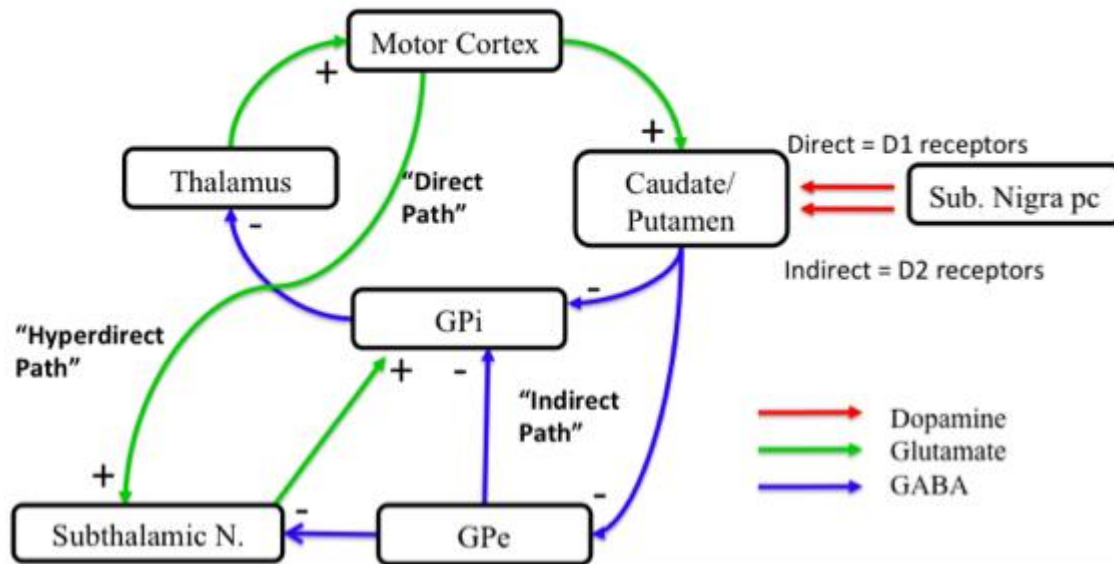


Connections of the basal ganglia

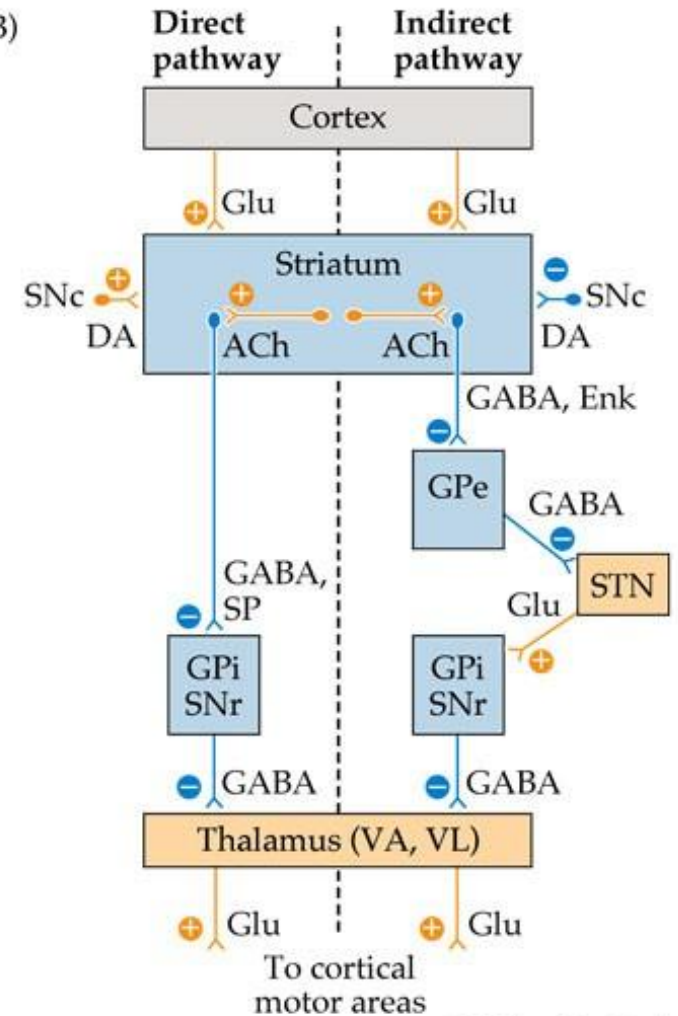


Connections of the basal ganglia

Basal Ganglia Pathways



(B)

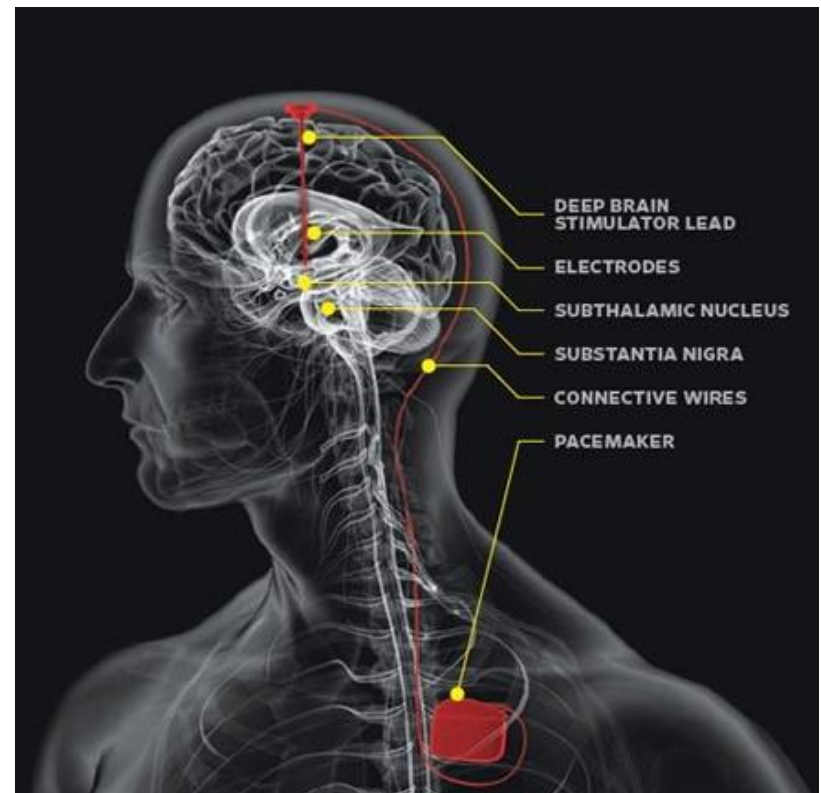
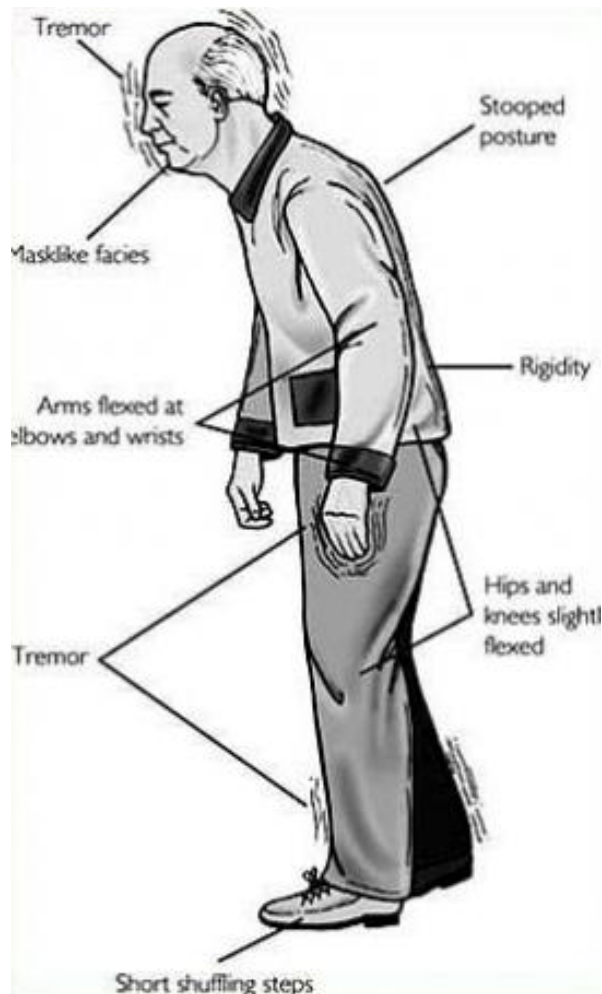


Diseases associated with the basal ganglia I.

Parkinson's disease— tremor, akinesia/bradykinesia, disturbances in postural control

Degeneration of the dopaminergic neurons of the substantia nigra

Therapy: L-DOPA, DBS (deep brain stimulation)



Diseases associated with the basal ganglia II.

Huntington's disease – involuntary movements, mood swings, dementia
Degeneration of the basal ganglia
inherited disorder - genetic reasons (dominant mutation)



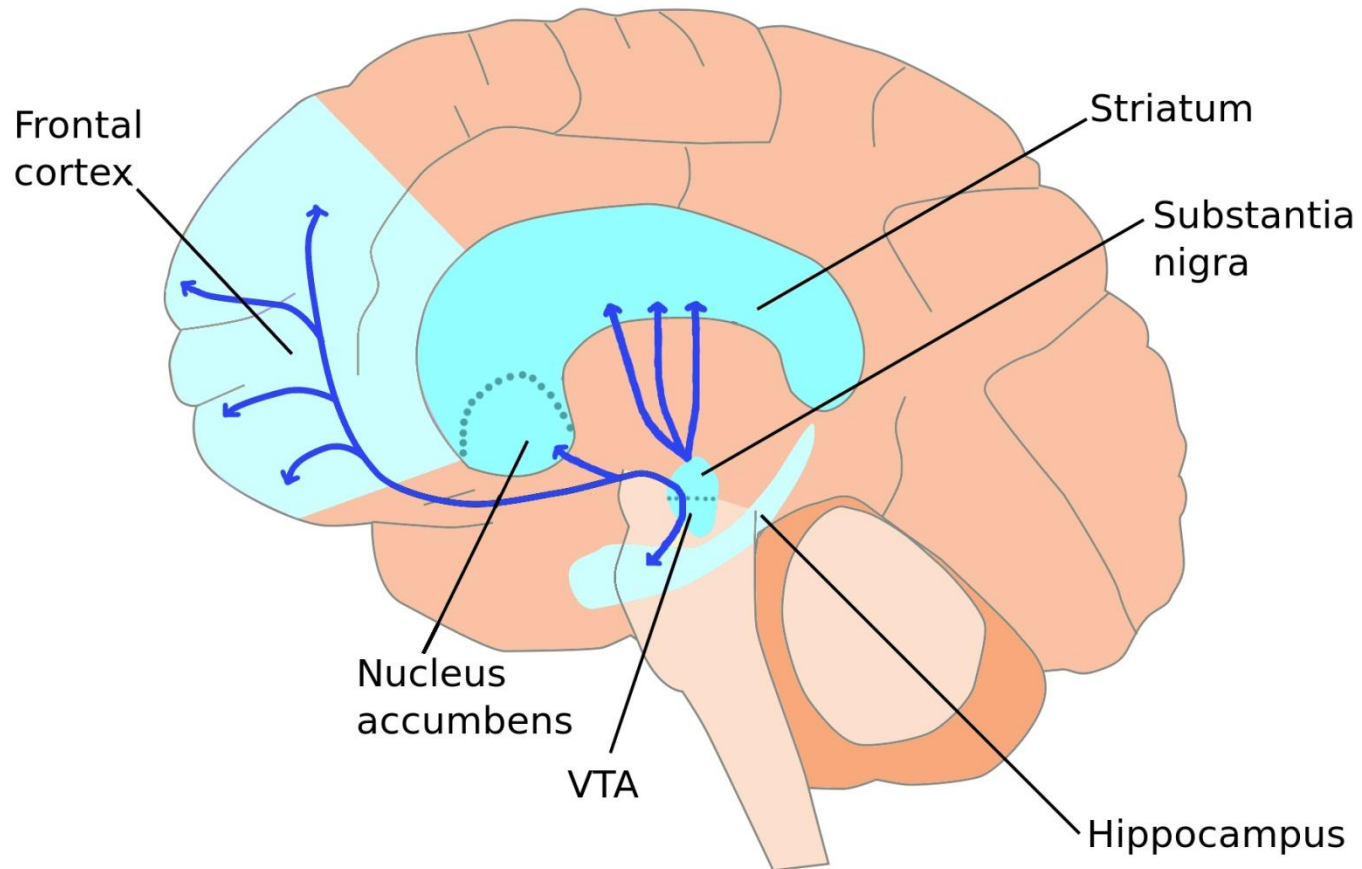
Diseases associated with the basal ganglia III.

Lesion of subthalamic nucleus – Hemiballismus



The mesolimbic pathway

REWARD

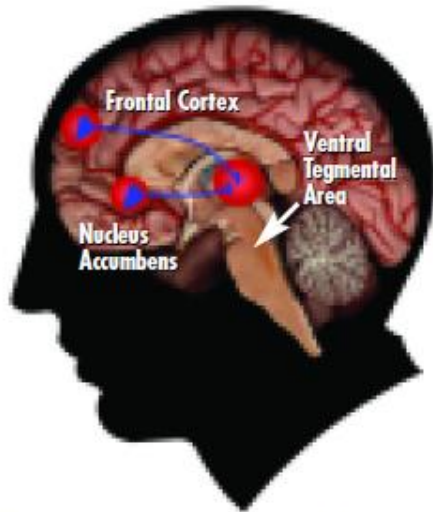


VTA: ventral tegmental area - dopamine

The mesolimbic system and addiction

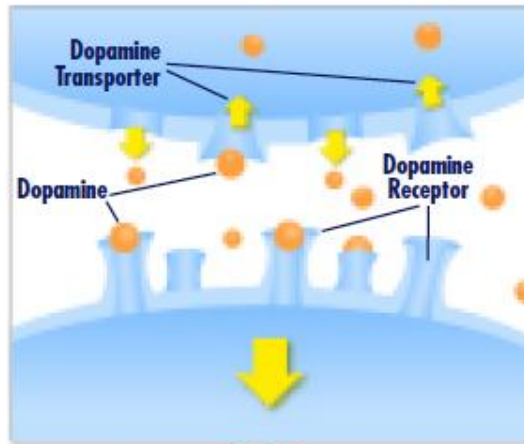
DRUGS OF ABUSE TARGET THE BRAIN'S PLEASURE CENTER

Brain reward (dopamine) pathways



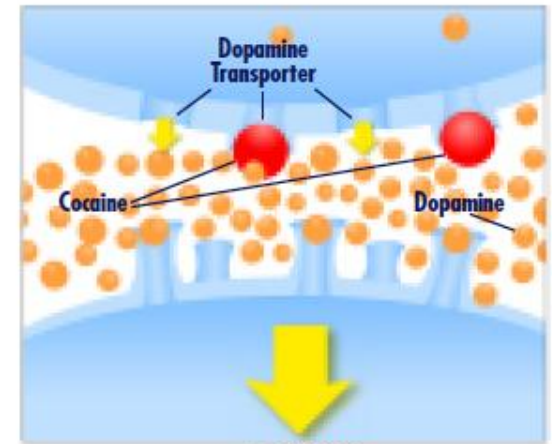
These brain circuits are important for natural rewards such as food, music, and sex.

Drugs of abuse increase dopamine



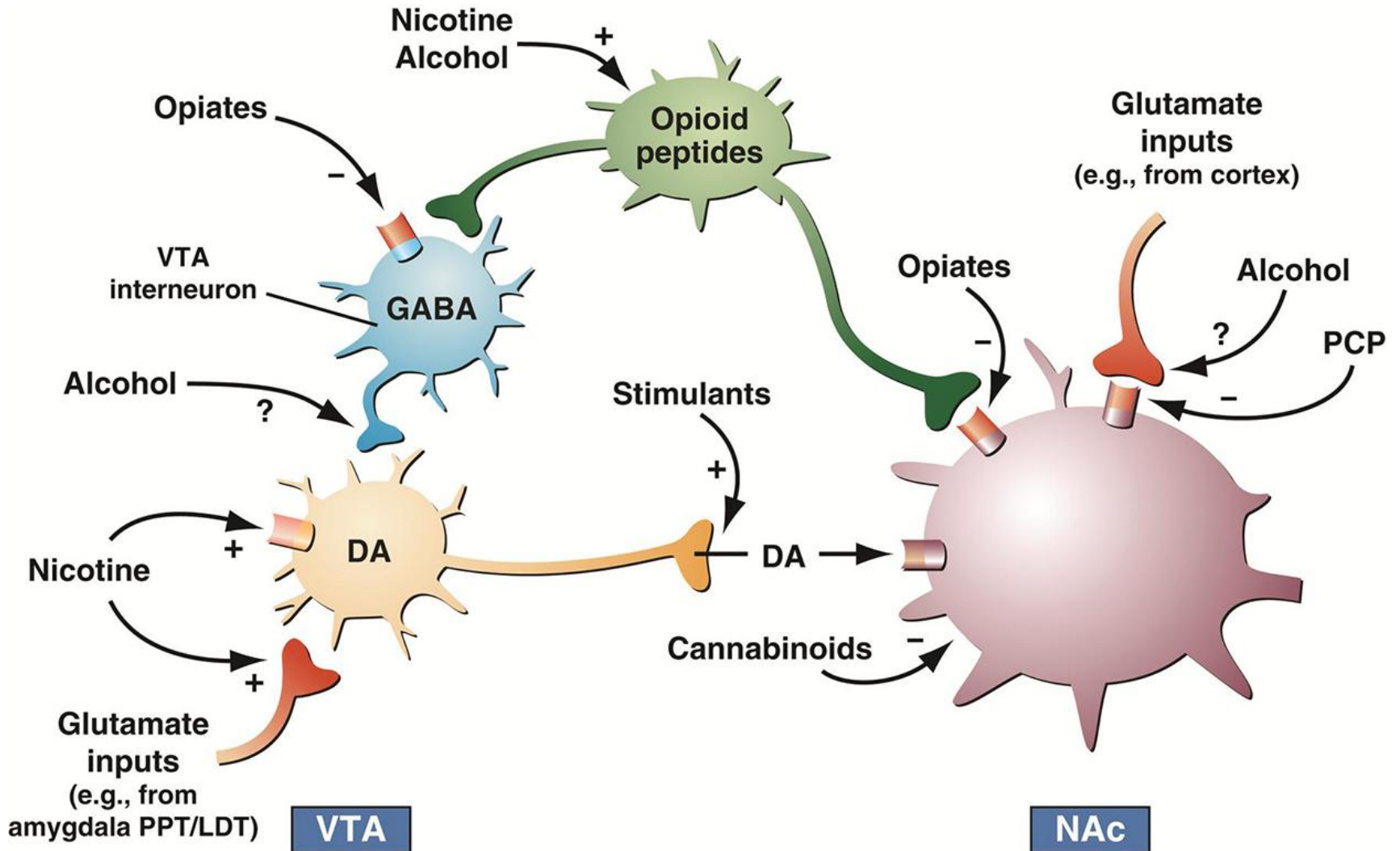
FOOD

Typically, dopamine increases in response to natural rewards such as food. When cocaine is taken, dopamine increases are exaggerated, and communication is altered.



COCAINE

The mesolimbic system and addiction



Thank you for your attention!

