



Understanding Addiction: What, Why and When?

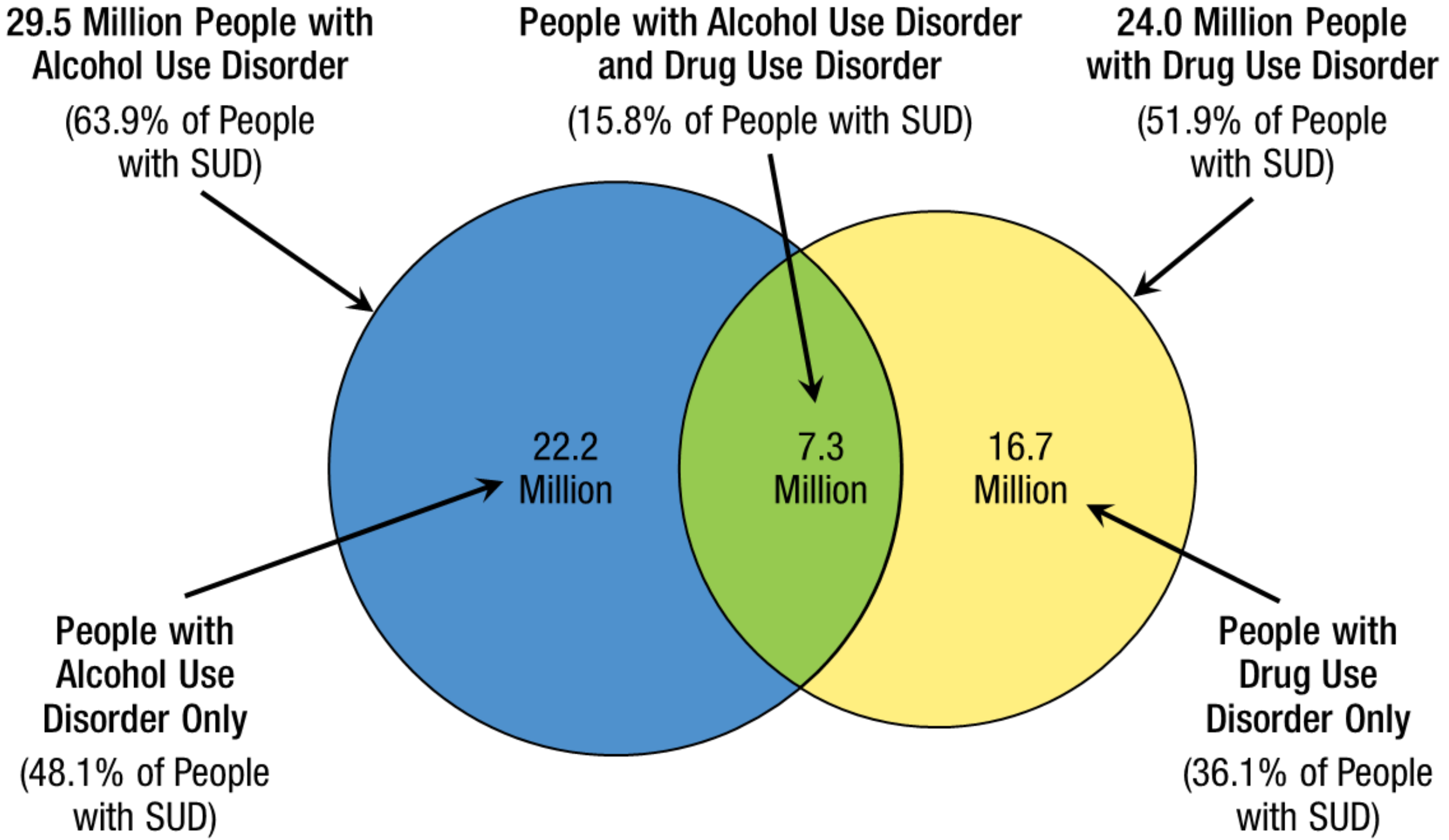
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Objectives

- **What is addiction?** Review and discuss epidemiology & definitions of substance misuse.
- **Why (how) and when do people get addicted?** Illustrate the development of addiction.
- **Review potential interventions** (high level).

Epidemiology



46.3 Million People Aged 12 or Older with Past Year SUD

61.2 million / 21.9 % US population

Marijuana - 52.5 million

9.2 million 12+ misused opioids

46.3 million 12+ DSM-5 for SUD

29.5 million alcohol use disorder

24 million drug use disorder.

Highest % young adults 18-25

94% with SUD – NO TREATMENT

State of Delaware

delaware online

[News] Sports Life First State Favorites Advertise Obituaries eNewspaper Legals

HEALTH

For the first time in 10 years, Delaware sees a drop in fatal overdoses. Six reasons why



Hannah Edelman

Delaware News Journal

Published 11:00 a.m. ET April 4, 2024 | Updated 5:38 p.m. ET April 4, 2024





Historic context

- Freud - hedonism
- Frequently stigmatized
- Considered choice
- Lie / manipulation

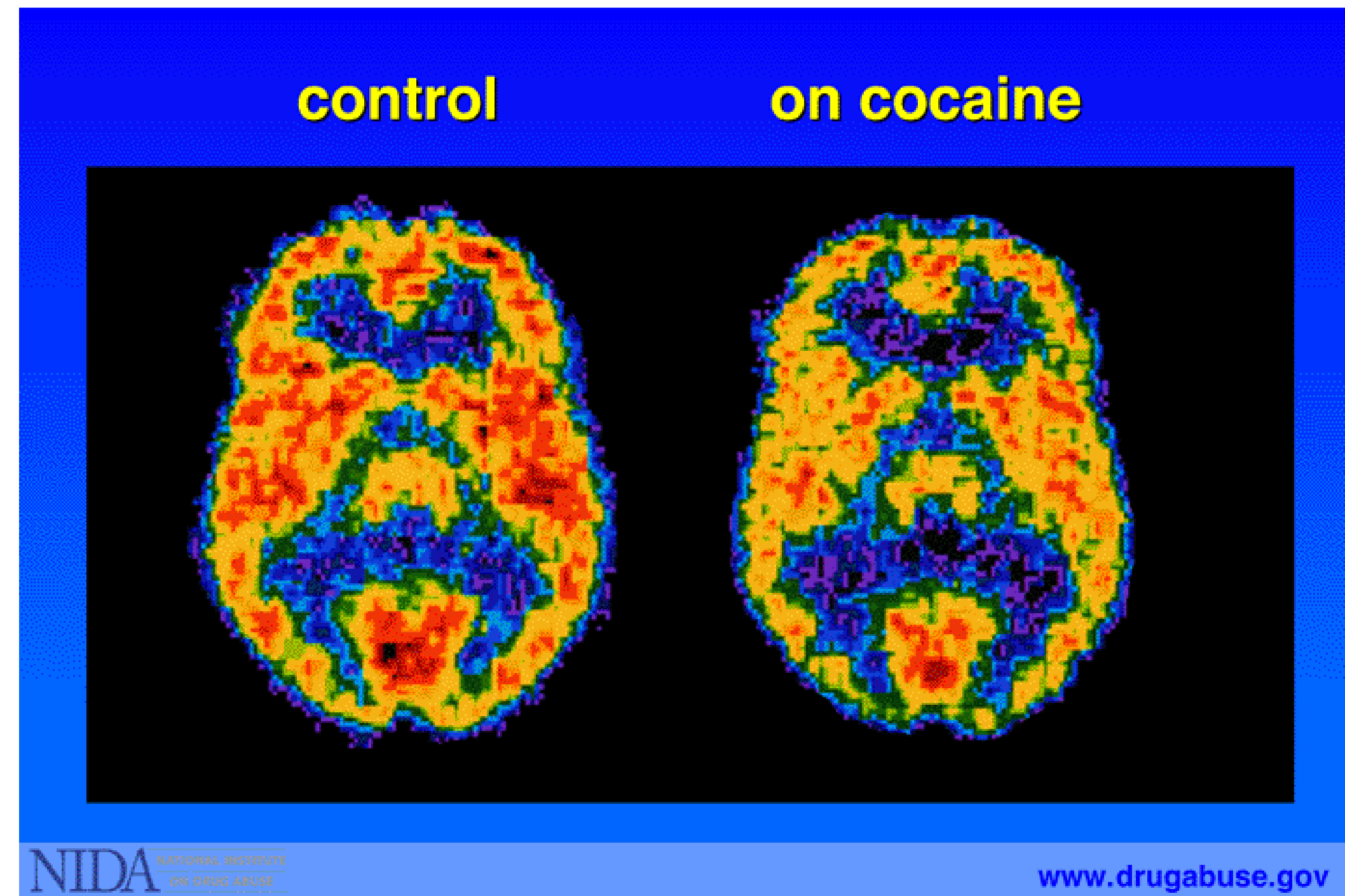
Hedonism, in [ethics](#), a general term for all theories of conduct in which the [critterion](#) is pleasure of one kind or another. The word is derived from the Greek *hedone* (“pleasure”), from *hedys* (“sweet” or “pleasant”).

- **Neglects the complexity of the disease.**

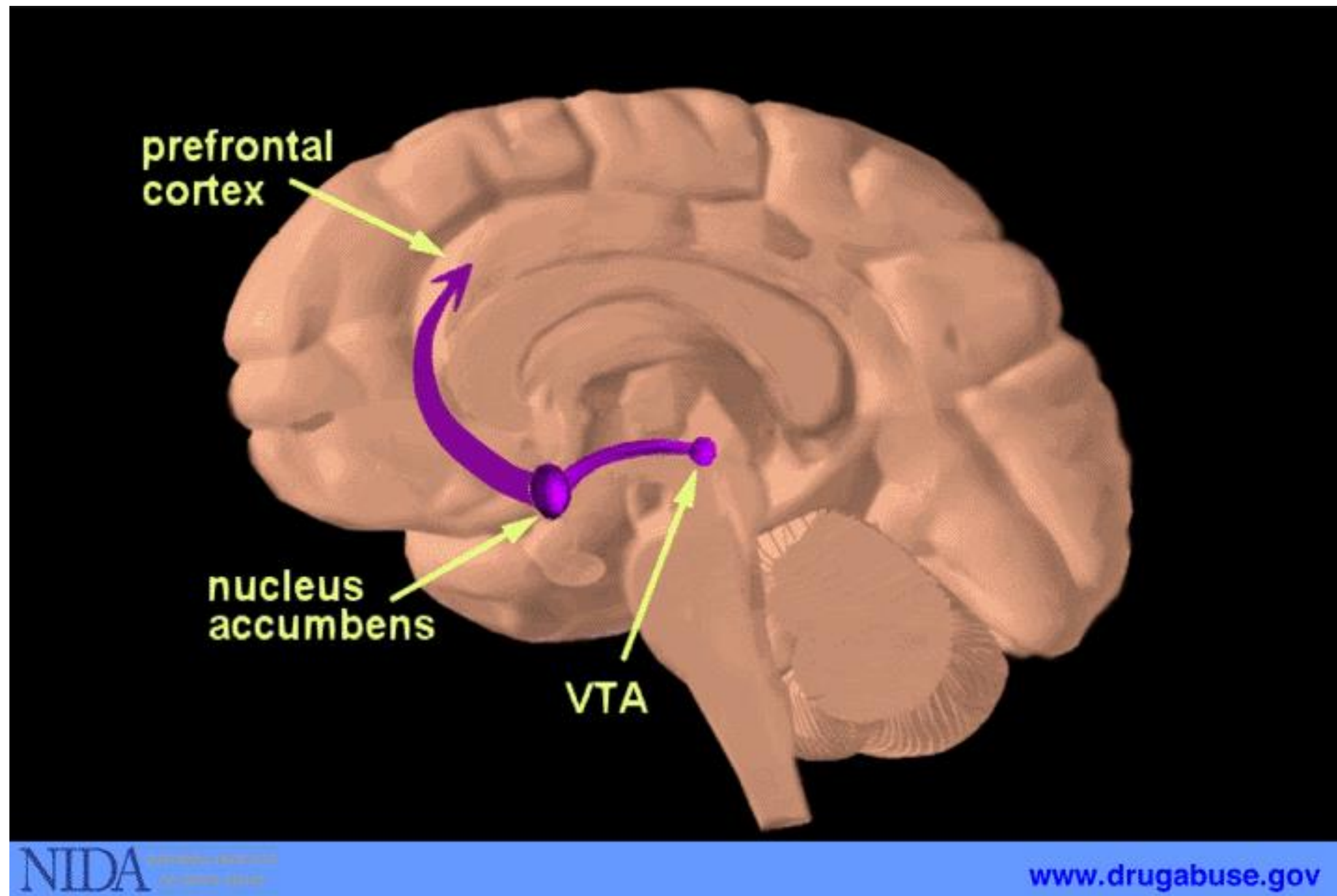
Is there a problem?

Criteria Type	Description			
Impaired control	↑ Dose and Duration	Persistent desire to ↓	Time spent	Craving
Social Impairment	Obligations	Continued use	↓ Recreational / Social	
Risky Use	Unsafe environments	Use despite medical sequelae		
Pharmacologic	Tolerance		Withdrawal	

Addiction – Brain disease?



Reward Pathway



Normal

vs

Disrupted

Stimuli → Food, water, sex, nurturing

Stimuli → Supraphysiologic reward

Dopamine → Pleasure

Pathway hijacked → Use Disorder

Motivation → Engagement → Survival

Impulsivity / Reinforcement +

Stress → Amygdala → Fight / flight → Survival

Compulsivity / Reinforcement -

Stages of Addiction

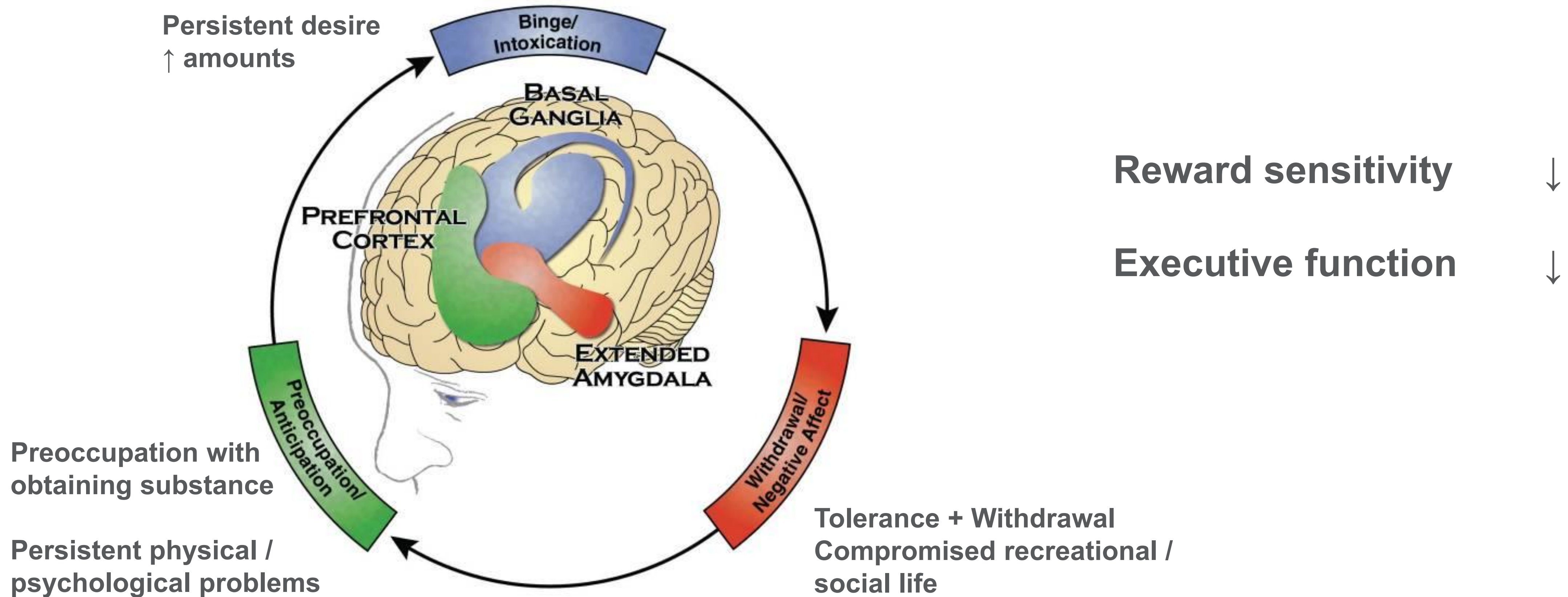
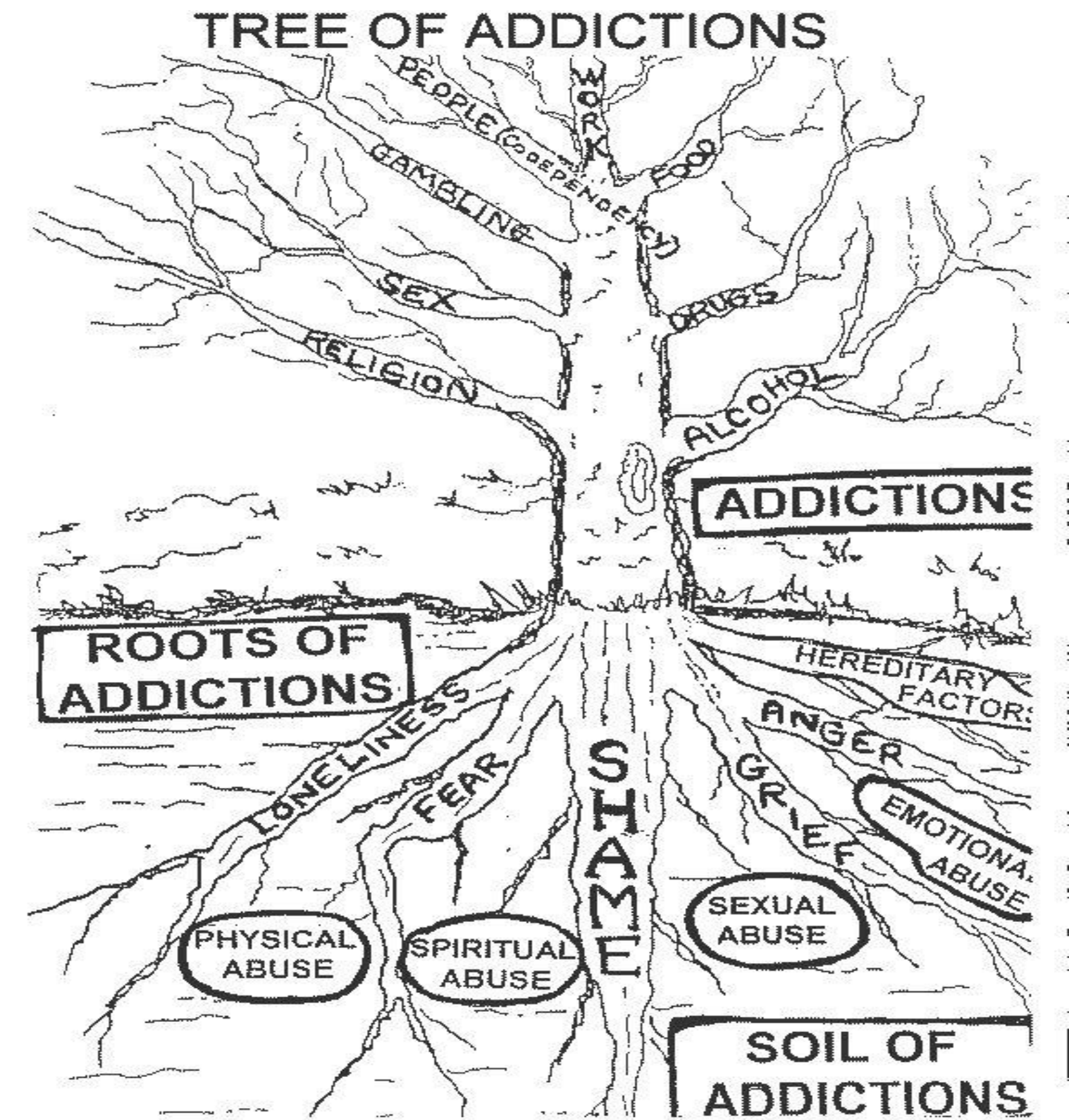
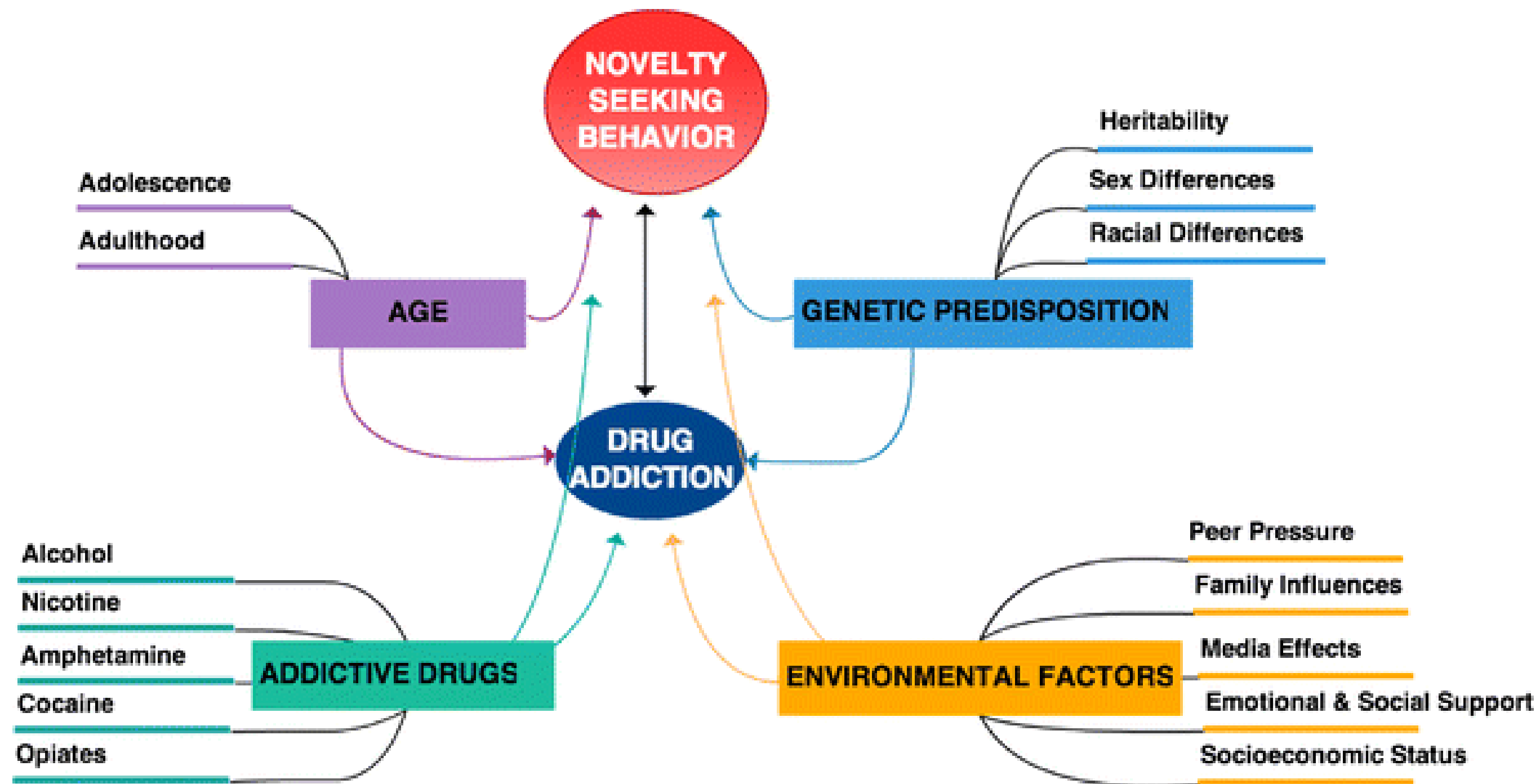


Figure 2.3, The Three Stages of the Addiction Cycle and the Brain Regions Associated with Them. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK424849/figure/ch2.f3/>

Bio-psycho-social model





What can we do?

Community

- Education
- Stigma reduction
- Prevention / Early detection
- Effective and timely treatment

Legislation

- Increase funding / parity
- Remove barriers
- Harm reduction / saving lives
- Address illicit drug trafficking



Questions – after next talk

