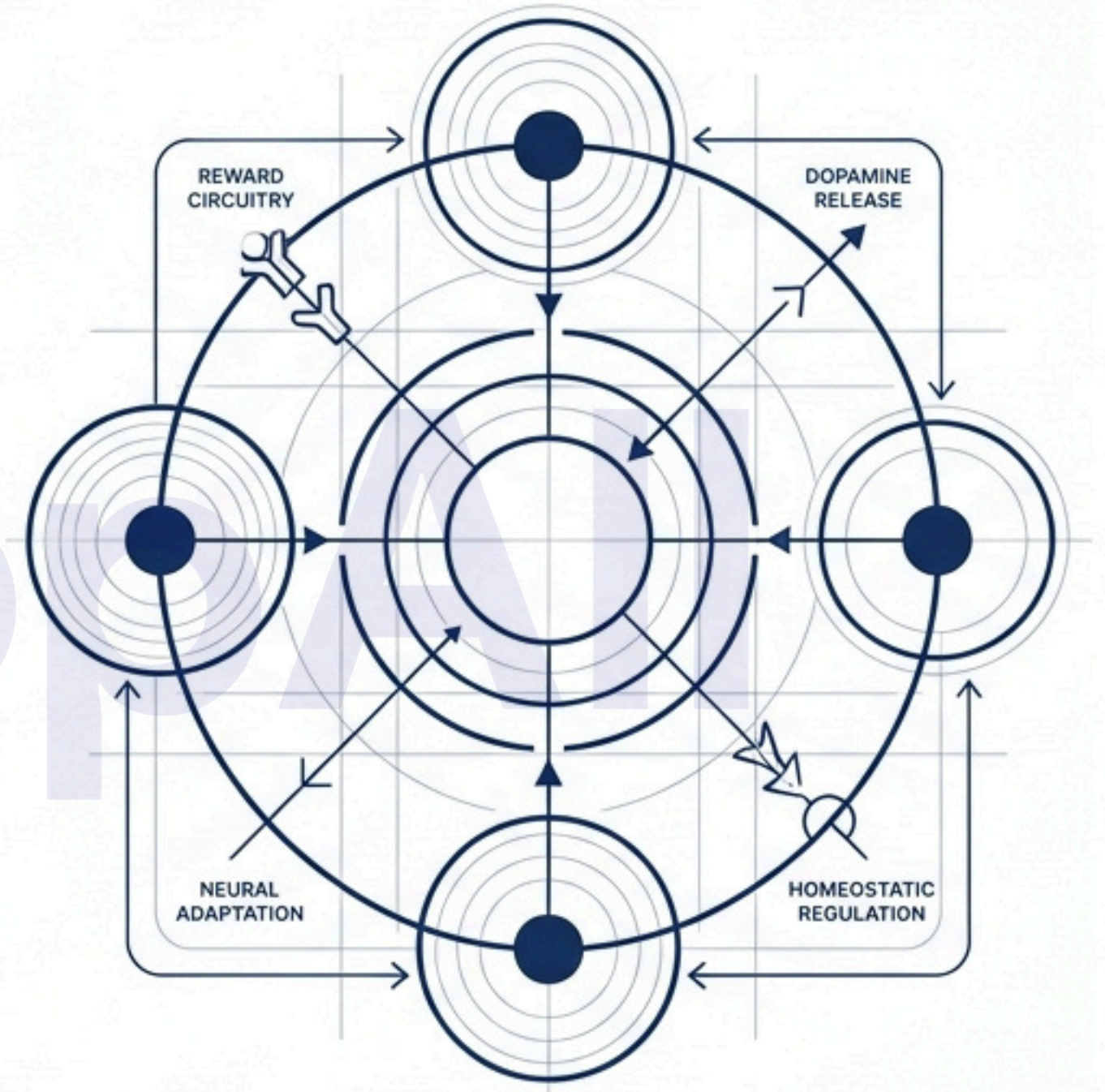


BIOLOGY IN HUMAN WELFARE

Addiction and Dependence

Understanding the biological and psychological mechanisms of substance abuse.

Section 7.5.2 | Exam Prep Module



Addiction vs. Dependence

Psychological

Core Definition

An attachment to specific effects, such as euphoria and a temporary feeling of well-being.

Behavioral Impact

Drives individuals to consume substances even when they are not needed, or when their use becomes actively self-destructive.

Physiological

Core Definition

The body's tendency to manifest a characteristic, unpleasant withdrawal syndrome if a drug is abruptly discontinued.

Behavioral Impact

Forces individuals to ignore all social norms in order to get sufficient funds to satiate physical needs, causing severe social adjustment problems.

The Escalation of Tolerance

Initial Use



Receptors in the body respond normally to standard doses, producing the expected psychological effects (e.g., euphoria).

Repeated Exposure



With continuous use, the baseline tolerance level of the body's receptors artificially increases.

Increased Need



Receptors now only respond to much higher doses. This biological shift directly drives greater intake and deepens addiction.



You've Learned the Theory. Let's Test Them Now.

$$E=mc^2$$



Turn theory into marks with **unlimited MCQs, smart analysis, and focused revision.**

Practice Now



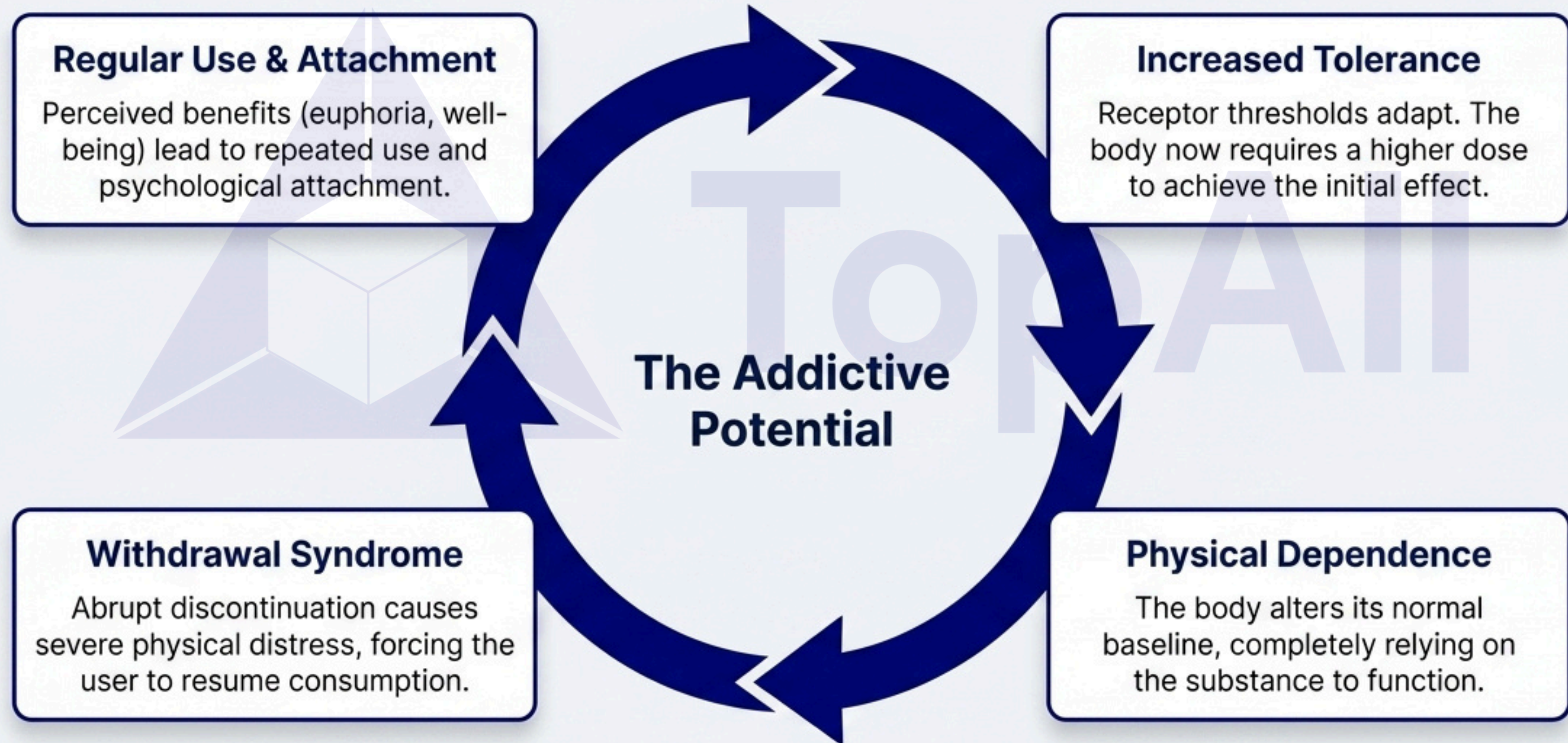
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Key Highlights

- » Free Study Material, Videos & Infographics
- » Push Your Limits with Level-Based Challenges
- » Climb the Leaderboard Among Fellow Aspirants
- » Practice Unlimited MCQs for NEET & JEE
- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



The Vicious Circle of Abuse



Understanding Withdrawal Syndrome

When regular doses are discontinued, dependent bodies experience a characteristic syndrome. Symptoms are relieved only when use resumes.



Anxiety

Severe psychological distress and chronic restlessness.



Shakiness

Physical tremors and loss of motor stability.



Nausea

Acute gastrointestinal distress and sickness.



Sweating

Severe autonomic nervous system dysregulation.

 **Clinical Note:** In severe cases, withdrawal symptoms can be life-threatening and require immediate, professional medical supervision.

Key Takeaways

1. Psychological

Addiction is an attachment. It is a psychological drive toward euphoric effects that results in self-destructive, unnecessary substance use.

2. Biological

Tolerance drives dosage. Repeated use raises receptor thresholds in the body. Higher doses are continuously required to achieve the same effect.

3. Physiological

Dependence is a physical trap. Abruptly stopping regular use triggers a severe withdrawal syndrome that locks the user in a vicious circle.

