

LEARNING OBJECTIVES *Ch. 4*

When your students finish studying this chapter, they should be able to:

Introduction: Consciousness: Experiencing the “Private I”

1. Define *consciousness*, and discuss the history of psychological research on consciousness.
2. Define *attention*, describe how attention is limited in capacity and how attention is selective, and indicate how selectivity can lead to inattentional blindness and change blindness.

Biological and Environmental “Clocks” That Regulate Consciousness

3. Define *circadian rhythms*, and explain the roles of melatonin and the suprachiasmatic nucleus (SCN) on sleep and wakefulness patterns.
4. Explain the role of sunlight and darkness, clocks, and other environmental time cues, in regulating the sleep-wake cycle.
5. Discuss the influence of environmental cues, like sunlight, on sleep patterns. Discuss what happens when these patterns are disrupted, (i.e., jet lag).

Sleep

6. Discuss the significance of the electroencephalograph on modern sleep research.
7. Distinguish between REM sleep and NREM sleep, and describe the typical sequence of sleep stages, including sleep onset.
8. (In Focus) List six of the most commonly asked questions about sleep, and discuss the answers to each.
9. Describe how sleep patterns change over the lifespan.
10. (Focus on Neuroscience) Discuss the research on the effects of sleep deprivation, including the results of fMRI scans of sleep-deprived and non-sleep-deprived participants.

Dreams and Mental Activity During Sleep

11. Compare and contrast the characteristics associated with dreams and sleep thinking.
12. (Focus on Neuroscience) Describe what neuroscientists have discovered about the nature of dreams. Identify the areas of the brain and the neurotransmitters that are active and inactive during REM sleep.
13. Explain the role of different stages of sleep in the formation and consolidation of memories.
14. Describe the role that REM and NREM sleep seem to play in memory consolidation of episodic, procedural, and spatial memories.
15. Describe common themes of dreams and nightmares.
16. Compare and contrast Freud’s theory of dreams as wish fulfillment, the activation-synthesis model of dreaming, and the neurocognitive theory of dreaming.

17. (In Focus) List six commonly asked questions about dreams, and discuss the answers to each.

Sleep Disorders

18. Define *dyssomnia*; list and describe the characteristics of the three dyssomnias discussed.
19. Define parasomnia; list and describe the characteristics of the five parasomnias discussed.

Hypnosis

20. Define *hypnosis*, describe the characteristics of the hypnotic state, and list the characteristics of people who are most responsive to hypnosis.
21. Explain the effects of hypnosis, describe post-hypnotic suggestion, and explain the relationship between hypnosis and memory.
22. Describe the applications and limitations of hypnosis.
23. (Critical Thinking) Compare and contrast state and non-state theories of hypnosis, discuss the evidence for and against the neodissociation, social-cognitive, and imaginative suggestibility theories.

Meditation

24. List and describe the most common techniques used in meditation, and explain their effects on brain functioning.
25. (Focus on Neuroscience) Describe the research on meditation and structural neuroplasticity including both correlational and experimental studies.

Psychoactive Drugs

26. Identify the common properties of psychoactive drugs, and specify the factors that influence the effects, use, and abuse of psychoactive drugs.
27. (Focus on Neuroscience) Explain the effects of addictive drugs on the brain, including the neural basis for drug tolerance, withdrawal, craving, and relapse.
28. (Focus on Neuroscience) Identify the changes in the brains of chronic methamphetamine users compared to those of healthy adults.
29. Name and describe the characteristics and effects of the most common depressants, stimulants, opiates, psychedelic drugs, and designer or “club” drugs.

Psych for Your Life: Overcoming Insomnia

30. Describe the strategies and techniques used to treat sleep problems.