



Chapter 7

States of Consciousness

I. Waking Consciousness

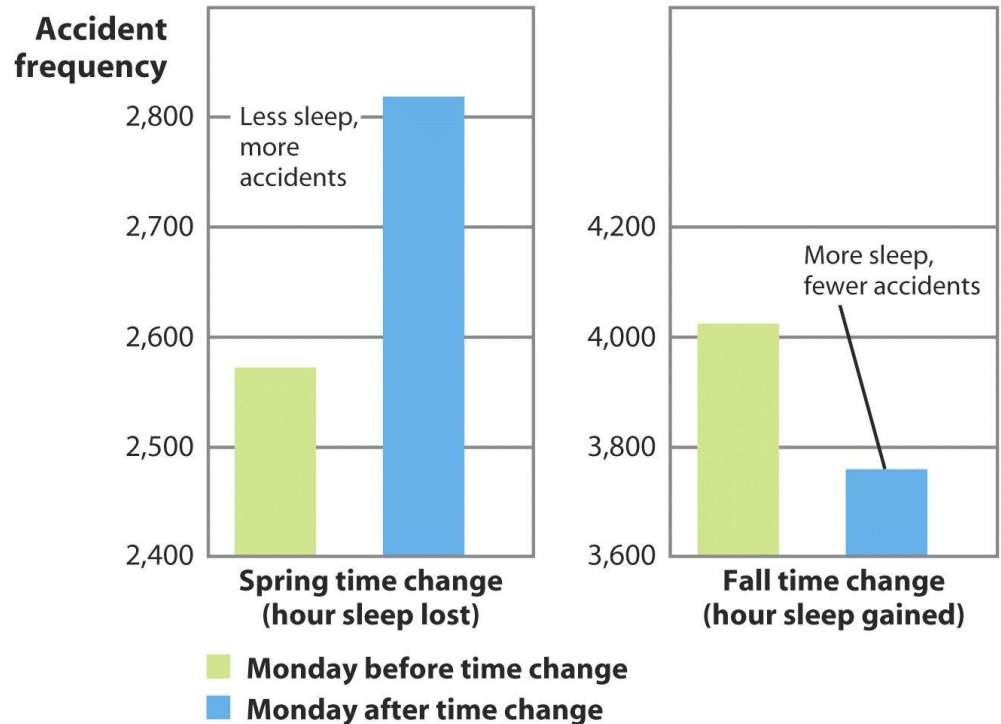
- Consciousness – Our awareness of ourselves and our environment.
- Levels of consciousness
 - Subconscious – Parallel processing (A lot happening at once)
 - Conscious information – Sequence processing (One thing at a time)

II. Sleep and Dreams

- Biological rhythms – Periodic physiological fluctuations
 - Annual cycle – Bears hibernate
 - 28-day cycle – Average menstrual cycle
 - 24-hour cycle – Sleep/wake cycle for humans
 - 90-minute cycle – Various stages of sleep

II. Sleep and Dreams

- Compare the frequency of accidents on the Mondays before and after we lose an hour to daylight saving time in the spring. In the fall, the opposite trend appeared (National Transportation Safety Board, 1995).

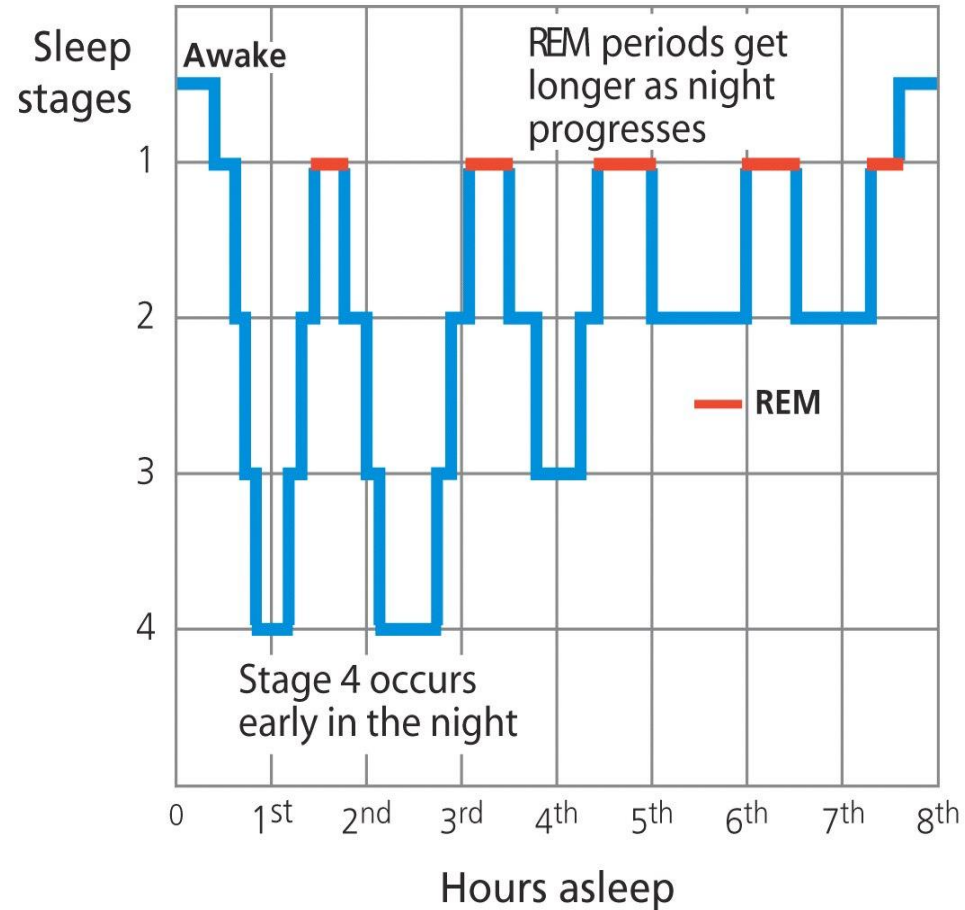


II. Sleep and Dreams

- The Rhythm of Sleep
 - Circadian rhythm – Regular body rhythms that occur on a 24-hour cycle.
 - Sleep stages
 - Stage 1 – Quick sleep stage with gradual loss of responsiveness to the outside; EEG shows theta waves.
 - Stage 2 – About 50% of sleep time; EEG shows high frequency sleep spindles.
 - Stage 3 – Deep sleep stage; EEG shows delta waves.
 - Stage 4 – Deepest sleep stage; EEG shows delta waves; Growth hormone secreted.
 - REM (Rapid Eye Movement) – About 80% dreaming; 5-6 times each night; EEG similar to stage 1 and wakefulness but skeletal muscles paralyzed.
 - Process: 1-2-3-4-3-2-REM-2-3-4-3-2-REM...

II. Sleep and Dreams

- We cycle through sleep stages all night. The graph below shows that as we sleep, we cycle down into deeper stages of sleep and back up, where we enter REM sleep.



II. Sleep and Dreams

- Why do we sleep?
 - Effects of sleep loss: suppressed immune system, impaired concentration, greater risk of accidents, irritability
 - Evolution of sleep
 - Protection from predators
 - Restore body tissue
 - Role in growth process

II. Sleep and Dreams

- Insomnia – Problems in falling or staying asleep (10-15% of adults)
- Narcolepsy – Uncontrollable sleep attacks (usually right into REM)
- Sleep apnea – Temporary cessation of breathing that awakens the sufferer during the night.
- Night terror – Sleep disruption characterized by screams and intense fears in children during stage 4 sleep.
- Sleep-walking and sleep-talking run in families and diminish with age due to less stage 4 sleep as we age.

II. Sleep and Dreams

- Dreams – Theories of what they mean
 - Freudian view – Review unconscious desires
 - Manifest content – Remembered storyline of a dream.
 - Latent content – Underlying meaning of a dream.
 - Activation-synthesis theory – During REM sleep the brainstem stimulates the forebrain with random neural activity (a dream)
 - Information processing theory – Dreams help sort the day's experiences

III. Hypnosis

- Hypnosis – State with deep relaxation and heightened suggestibility.
 - Post hypnotic amnesia – Temporary memory loss of events during hypnosis.
 - People who respond to suggestions un-hypnotized are the people who respond to hypnosis.
 - Post hypnotic suggestion – Suggestion to be carried out after a hypnosis session.
 - Hypnosis is both a social phenomenon and a state of divided consciousness.

IV. Drugs and consciousness

- Psychoactive Drug – A chemical substance that alters perceptions, moods or behavior.
- Most commonly used psychoactive drugs

- Caffeine



- Alcohol



- Nicotine



IV. Drugs and consciousness

- Dependence
 - Physical dependence – A physiological need for a drug, marked by unpleasant withdrawal symptoms when the drug is discontinued.
 - Psychological dependence – Intense desire to achieve a drugged state.
- Withdrawal – The discomfort and distress that follow discontinuing the use of an addictive drug.
- Tolerance – Need more of a drug to get the same results.

IV. Drugs and consciousness

- Depressants – Drugs that reduce neural activity and slow body functions.
 - Alcohol (ethyl alcohol)
 - 2nd most used psychoactive drug
 - Slows thinking and impairs activity
 - Largely a “recreation” drug
 - Effects women and men differently
 - Shuts down the part of the brain responsible for controlling inhibitions
 - Impairs memory and suppresses REM

One 12-ounce can of beer has about the same amount of alcohol as 4 ounces of wine or 1 ounce of whiskey.



TABLE 22.1 DO YOU HAVE AN ALCOHOL PROBLEM?

If you can answer yes to even one of these questions, consider seeking advice about your use of alcohol.

1. Has someone close to you sometimes expressed concern about your drinking?
2. When faced with a problem, do you often turn to alcohol for relief?
3. Are you sometimes unable to meet home or work responsibilities because of drinking?
4. Have you ever required medical attention as a result of drinking?
5. Have you ever experienced a blackout—a total loss of memory while still awake—when drinking?
6. Have you ever come in conflict with the law in connection with your drinking?
7. Have you often failed to keep the promises you have made to yourself about controlling or cutting out your drinking?

III. Drug Classifications

- **Depressants**
 - Sedatives – Drugs prescribed by a physician to reduce anxiety or induce sleep.
 - Barbiturates – Reduce anxiety but impair memory and judgment, are lethal in overdose and interact dangerously with other drugs.
 - Benzodiazepines – Newer sedatives without the side effects of barbiturates, intended only for short term use (ex. Valium, Xanax)

III. Drug Classifications

- Opiates – Drugs that depress neural activity, temporarily lessening pain and anxiety (Deadly when used as a recreational drug)
 - Morphine – Strong sedative and pain relieving drug derived from opium.
 - Endorphins – Body's natural painkillers.
 - Heroin – Withdrawal symptoms include a week's worth of intense pain, hyperventilation, depression, high blood pressure, and explosive diarrhea.

IV. Drugs and consciousness

- Stimulants – Drugs that excite neural activity and speed up bodily functions.
 - Caffeine – Stimulant found in coffee, chocolate, tea and some soft drinks
 - Gives user a feeling of energy, mental alertness and forced awakeness.
 - Produces a tolerance, dependence, withdrawal (headache, agitation and tiredness)
 - No long-term damaging effects from small daily doses.
 - Nicotine – Stimulant found in tobacco.
 - Number three on the most used drug list
 - Extremely addictive and does not stay in body long (leading to more cigarettes smoked)

IV. Drugs and consciousness

● Stimulants

- Cocaine – Stimulant derived from leaves of the coca plant.
 - Side effects include dependence, tolerance and depression after you quit.
 - Cocaine and crack cocaine produce a strong euphoric effect and an even stronger crash.
- Amphetamine – Drugs that speed up body functions and associated energy and mood changes.
 - Mimic adrenaline
 - Effects include restlessness, high blood pressure, insomnia, agitation, loss of appetite, and hyper-alertness.
 - Methamphetamines and “ice” are more potent forms

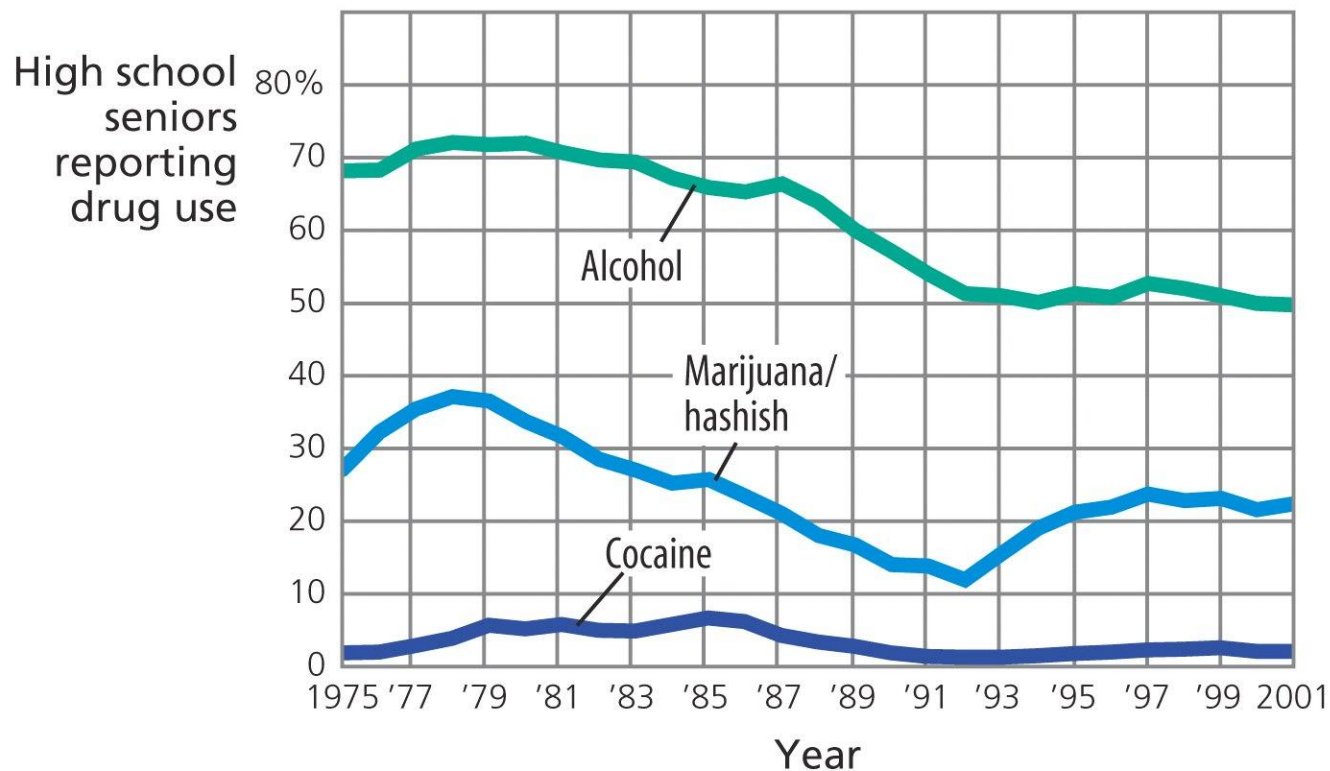
IV. Drugs and consciousness

- Hallucinogens – Psychedelic drugs that distort perceptions and evoke sensory images in the absence of sensory input.
 - LSD (Lysergic Acid Diethylamide) – aka Acid
 - Effects were discovered after accidental ingestion.
 - Visual distortions, detachment from reality and panic are common effects.
 - Ecstasy (MDMA) – Drug that produces lowered inhibitions, pleasant feelings, and greater acceptance of others.
 - High physical and mental costs
 - Even moderate use may result in permanent brain damage
 - Documentary

IV. Drugs and consciousness

- Marijuana – Leaves, stems, resin and flowers from hemp that, when smoked, lower inhibitions and produce feelings of relaxation and mild euphoria.
 - THC – active ingredient
 - Can stay in regular users body for months
 - Withdrawal symptoms include depression, insomnia, nausea, cramping and irritability
 - Worse on lungs than cigarettes, impairs memory, suppresses immune system, can be traced in hair after a single experience.

- Reported use of alcohol, marijuana, and cocaine declined among high school seniors from 1979 to 1992. Since then, alcohol and cocaine use have declined slightly or held steady, but marijuana use has increased, with drug paraphernalia becoming easier to purchase in local stores.



IV. Drugs and consciousness

- Influences on drug users
 - Biological
 - Connection between heredity and alcohol use problems
 - Psychological/Cultural
 - Feeling meaningless
 - Stress/failure
 - Depression
 - Peer pressure