**Psychology – Unit 2 Review**

**Brain, Consciousness & Drugs**

**Consciousness:** our awareness of ourselves and our environment.

**Preconscious:** something that is not in our conscious, but can be easily pulled into consciousness, such as memories.

**Unconscious:** according to Sigmund Freud, it’s a reservoir of mostly unacceptable thoughts, wishes, feelings, and memories. According to contemporary psychologists, it’s information processing of which we are unaware. *\*This is different than being knocked unconscious***.**

**Nonconscious:** things happening in your body of which you are not aware, such as hormone secretion.

**Biological Rhythms:** the periodic physiological fluctuations our bodies go through.

**Annual cycles:** cycles that occur in our bodies on a yearly basis, such as SAD (Seasonal Affective Disorder – becoming depressed during the winter), or birds flying south for the winter and bears hibernating.

**28-day cycles:** cycles that occur every month. Ex. a woman’s menstrual cycle.

**Circadian rhythm:** the biological clock; regular bodily rhythms that occur on a 24-hour cycle, such as body temperature or wakefulness.

**Melatonin:** a sleep-inducing hormone. The SCN causes the brain’s pineal gland to decrease its production of melatonin in the morning or to increase it in the evening.

**Serotonin:** serotonin is involved more specifically in wakefulness

**Sleep:** a periodic, natural loss of consciousness. Throughout the night, the body experiences many sleep cycles, each one lasting around 90 minutes. Each cycle has 5 stages (1, 2, 3, REM)

**Functions of Sleep:** helps us recover, information consolidation; growth process

**Stage one:** the first stage that lasts about 5 minutes, emit theta waves, may experience hallucinations and **hypnagogic** sensations (feelings of floating or falling); **hypnic jerk** – reflex muscle contraction

**Stage two:** the second stage that lasts for about 20 minutes, clearly asleep and experience **sleep spindles** (random bursts of activity).

**Stage three:** the deepest stage of sleep that is most restorative, emission of delta waves, sleep walking, bed wetting, etc. occur during this stage.

**Delta waves:** the larger, slow brain waves associated with deep sleep.

**REM sleep:** rapid eye movement sleep; a recurring sleep stage during which vivid dreams commonly occur; one of the most basic states of sleep. Also known as **paradoxical sleep** because the muscles are relaxed (except for minor twitches) but other body systems are active.

**NREM sleep:** non-rapid eye movement sleep; encompasses all sleep stages except for REM sleep; second basic stage of sleep.

**REM rebound:** the tendency for REM sleep to increase following REM sleep deprivation (created by repeated awakenings during REM sleep).

**Sleep deprivation:** lack of sleep causing [fatigue](https://en.wikipedia.org/wiki/Fatigue_(medical)), daytime sleepiness, clumsiness and weight loss or weight gain; affects the brain and cognitive function.

**Insomnia:** a sleep disorder in which a person has recurring problems in falling or staying asleep.

**Narcolepsy:** a sleep disorder characterized by uncontrollable sleep attacks. These attacks are usually caused by excitement. The sufferer may lapse directly into REM sleep, often at inopportune times.

**Sleep apnea:** a sleep disorder characterized by temporary cessations of breathing during sleep and repeated momentary awakenings. Sleep apnea is associated with obesity. It is suggested people lose weight to help curb the sleep apnea. Wearing an air pump while sleeping helps also.

**Night terrors:** a sleep disorder characterized by high arousal and an appearance of being terrified; unlike nightmares, night terrors occur during Stage 4 sleep, within two or three hours of falling asleep, and are seldom remembered. Different than **nightmares** (remembered)

**Sleepwalking:** sleep disorder that typically occurs in prepubertal children and during deep non-REM sleep.

**Dreams:** a sequence of images, emotions, and thoughts passing through a sleeping person’s mind during REM sleep.

**Lucid dreams:** a dream in which one is aware that one is dreaming.

**Manifest content:** the remembered story line of a dream (according to Sigmund Freud).

**Latent content:** the underlying meaning of a dream (according to Sigmund Freud).

**Dream theories:**

* **Freud’s wish-fulfillment theory:** dreams provide a “psychic safety valve” – expressing otherwise unacceptable feelings; contain manifest (remembered) content and a deeper layer of latent content (hidden meaning).
* **Information-processing theory:** dreams help us sort out the day’s events and consolidate our memories.
* **Problem-Solving theory:** sort through and accept emotions associated with the day’s misfortunes; problem-solving
* **Activation-synthesis theory:** REM sleep triggers impulses that evoke random visual memories, which our sleeping brain weaves into stories.

**Psychoactive drugs:** a chemical substance that alters a perceptions and moods.

**Tolerance:** the diminishing effect of a drug after repeated use that requires the user to take larger and larger dose before experiencing the drug’s effect.

**Withdrawal:** the discomfort and distress that follow the discontinued use of a drug.

**Dependence:** a physiological need for a drug, marked by unpleasant withdrawal symptoms when the drug is no longer taken.

**Addiction:** compulsive drug craving and use, despite adverse consequences.

**Depressants:** drugs (such as alcohol, barbiturates, and opiates) that reduce neural activity and slow body functions.

**Alcohol:** In low doses relaxes drinker by slowing down the sympathetic nervous systems (lowering inhibitions and judgements); In high doses, reactions slow, speech slurs, and skilled performance deteriorates; affects long-term memory, reduces self-awareness

**Barbiturates:** a major tranquilizer that depress the activity of the CNS, reducing anxiety but impairing memory and judgment; mimic alcohol

**Opiates:** opium and its derivatives, such as morphine and heroin; they depress neural activity, temporarily lessening pain and anxiety.

**Stimulants:** drugs (such as caffeine, nicotine, and the more powerful amphetamines, cocaine, and Ecstasy) that excite neural activity and speed up body functions.

**Cocaine:** Cocaine blocks the reuptake of dopamine - the brain is flooded with dopamine-produced pleasure sensations

**Ecstasy (MDMA):**  a synthetic stimulant and mild hallucinogen that produces euphoria and social intimacy, but with short-term health risks and longer-term harm to serotonin-producing neurons and to mood and cognition.

**Amphetamines:** drugs that stimulate neural activity, causing speeded-up body functions and associated energy and mood changes; also known as speed.

**Methamphetamine:** a powerfully addictive drug that stimulates the CNS, with speeded-up body functions and associated energy and mood changes; over time, appears to reduces baseline dopamine levels.

**Hallucinogens:** psychedelic (“mind-manifesting”) drugs that distort perceptions and evoke sensory images in the absence of sensory input.

**LSD:** a powerful hallucinogenic drug; also known as acid (lysergic acid diethylamide).

**THC:** the major active ingredient in marijuana; triggers a variety of effects, including mild hallucinations.

**MOVIE: The Crash Reel -** what did you learn about TBI and changes that occurred to Kevin Pearce? How would you compare / contrast Kevin to Phineas Gage?

**Brain:** different parts of the brain control specific aspects of our behavior

**Know the location of: Frontal Lobe Parietal Lobe Temporal Lobes**

**Occipital Lobe Limbic system Cerebellum**

**Brain Stem**

**Plasticity:**  the ability of the brain to change throughout an individual's life

