

1. **consciousness**: our awareness of ourselves and our environment.
2. **dissociation**: a split in consciousness, which allows some thoughts and behaviors to occur simultaneously with others.
3. **circadian rhythm**: the biological clock; regular bodily rhythms (for example, of temperature and wakefulness) that occur on a 24-hour cycle.
4. **REM sleep**: rapid eye movement sleep; a recurring sleep stage during which vivid dreams commonly occur. Also known as paradoxical sleep, because the muscles are relaxed (except for minor twitches) but other body systems are active.
5. **alpha waves**: the relatively slow brain waves of a relaxed, awake state.
6. **sleep**: periodic, natural loss of consciousness—as distinct from unconsciousness resulting from a coma, general anesthesia, or hibernation. (Adapted from Dement, 1999.)
7. **hallucinations**: false sensory experiences, such as seeing something in the absence of an external visual stimulus.
8. **delta waves**: the large, slow brain waves associated with deep sleep.
9. **NREM sleep**: nonrapid eye movement sleep; encompasses all sleep stages except for REM sleep.
10. **suprachiasmatic nucleus (SCN)**: a pair of cell clusters in the hypothalamus that controls circadian rhythm. In response to light, the SCN causes the pineal gland to adjust melatonin production, thus modifying our feelings of sleepiness.
11. **insomnia**: recurring problems in falling or staying asleep.
12. **narcolepsy**: a sleep disorder characterized by uncontrollable sleep attacks. The sufferer may lapse directly into REM sleep, often at inopportune times.
13. **sleep apnea**: a sleep disorder characterized by temporary cessations of breathing during sleep and repeated momentary awakenings.
14. **night terrors**: a sleep disorder characterized by high arousal and an appearance of being terrified; unlike nightmares, night terrors occur during NREM-3 sleep, within two or three hours of falling asleep, and are seldom remembered.
15. **dream**: a sequence of images, emotions, and thoughts passing through a sleeping person's mind. Dreams are notable for their hallucinatory imagery, discontinuities, and incongruities, and for the dreamer's delusional acceptance of the content and later difficulties remembering it.
16. **manifest content**: according to Freud, the remembered story line of a dream (as distinct from its latent, or hidden, content).

17. **latent content:** according to Freud, the underlying meaning of a dream (as distinct from its manifest content).
18. **REM rebound:** the tendency for REM sleep to increase following REM sleep deprivation (created by repeated awakenings during REM sleep).
19. **substance use disorder:** continued substance craving and use despite significant life disruption and/or physical risk.
20. **psychoactive drug:** a chemical substance that alters perceptions and moods.
21. **tolerance:** the diminishing effect with regular use of the same dose of a drug, requiring the user to take larger and larger doses before experiencing the drug's effect.
22. **addiction:** compulsive craving of drugs or certain behaviors (such as gambling) despite known adverse consequences.
23. **withdrawal:** the discomfort and distress that follow discontinuing an addictive drug or behavior.
24. **depressants:** drugs (such as alcohol, barbiturates, and opiates) that reduce neural activity and slow body functions.
25. **alcohol use disorder:** (popularly known as alcoholism). Alcohol use marked by tolerance, withdrawal, and a drive to continue problematic use.
26. **barbiturates:** drugs that depress central nervous system activity, reducing anxiety but impairing memory and judgment.
27. **opiates:** opium and its derivatives, such as morphine and heroin; they depress neural activity, temporarily lessening pain and anxiety.
28. **stimulants:** drugs (such as caffeine, nicotine, and the more powerful amphetamines, cocaine, Ecstasy, and methamphetamine) that excite neural activity and speed up body functions.
29. **amphetamines:** drugs that stimulate neural activity, causing speeded-up body functions and associated energy and mood changes.
30. **nicotine:** a stimulating and highly addictive psychoactive drug in tobacco.
31. **cocaine:** a powerful and addictive stimulant, derived from the coca plant, producing temporarily increased alertness and euphoria.
32. **methamphetamine:** a powerfully addictive drug that stimulates the central nervous system, with speeded-up body functions and associated energy and mood changes; over time, appears to reduce baseline dopamine levels.

33. **Ecstasy (MDMA)**: a synthetic stimulant and mild hallucinogen. Produces euphoria and social intimacy, but with short-term health risks and longer-term harm to serotonin-producing neurons and to mood and cognition.
34. **hallucinogens**: psychedelic ("mind -manifesting") drugs, such as LSD, that distort perceptions and evoke sensory images in the absence of sensory input.
35. **LSD**: a powerful hallucinogenic drug; also known as acid (lysergic acid diethylamide).
36. **near-death experience**: an altered state of consciousness reported after a close brush with death (such as through cardiac arrest); often similar to drug-induced hallucinations.
37. **THC**: the major active ingredient in marijuana; triggers a variety of effects, including mild hallucinations.
38. **biological psychology**: the scientific study of the links between biological (genetic, neural, hormonal) and psychological processes. (Some biological psychologists call themselves behavioral neuroscientists, neuropsychologists, behavior geneticists, physiological psychologists, or biopsychologists.)
39. **neuron**: a nerve cell; the basic building block of the nervous system.
40. **dendrites**: a neuron's bushy, branching extensions that receive messages and conduct impulses toward the cell body.
41. **axon**: the neuron extension that passes messages through its branches to other neurons or to muscles or glands.
42. **myelin sheath**: a fatty tissue layer segmentally encasing the axons of some neurons; enables vastly greater transmission speed as neural impulses hop from one node to the next.
43. **action potential**: a neural impulse; a brief electrical charge that travels down an axon.
44. **refractory period**: (1) a period of inactivity after a neuron has fired.
45. **threshold**: the level of stimulation required to trigger a neural impulse.
46. **all-or-none response**: a neuron's reaction of either firing (with a full-strength response) or not firing.
47. **synapse**: the junction between the axon tip of the sending neuron and the dendrite or cell body of the receiving neuron. The tiny gap at this junction is called the synaptic gap or synaptic cleft.

48. **neurotransmitters:** chemical messengers that cross the synaptic gaps between neurons. When released by the sending neuron, neurotransmitters travel across the synapse and bind to receptor sites on the receiving neuron, thereby influencing whether that neuron will generate a neural impulse.
49. **reuptake:** a neurotransmitter's reabsorption by the sending neuron.
50. **endorphins:** "morphine within"—natural, opiate-like neurotransmitters linked to pain control and to pleasure.
51. **agonist:** a molecule that, by binding to a receptor site, stimulates a response.
52. **antagonist:** a molecule that, by binding to a receptor site, inhibits or blocks a response.
53. **nervous system:** the body's speedy, electrochemical communication network, consisting of all the nerve cells of the peripheral and central nervous systems.
54. **central nervous system (CNS):** the brain and spinal cord.
55. **peripheral nervous system (PNS):** the sensory and motor neurons that connect the central nervous system (CNS) to the rest of the body.
56. **nerves:** bundled axons that form neural "cables" connecting the central nervous system with muscles, glands, and sense organs.
57. **sensory (afferent) neurons:** neurons that carry incoming information from the sensory receptors to the brain and spinal cord.
58. **motor (efferent) neurons:** neurons that carry outgoing information from the brain and spinal cord to the muscles and glands.
59. **interneurons:** neurons within the brain and spinal cord that communicate internally and intervene between the sensory inputs and motor outputs.
60. **somatic nervous system:** the division of the peripheral nervous system that controls the body's skeletal muscles. (Also called the skeletal nervous system.)
61. **autonomic nervous system (ANS):** the part of the peripheral nervous system that controls the glands and the muscles of the internal organs (such as the heart). Its sympathetic division arouses; its parasympathetic division calms.
62. **sympathetic nervous system:** the division of the autonomic nervous system that arouses the body, mobilizing its energy in stressful situations.
63. **parasympathetic nervous system:** the division of the autonomic nervous system that calms the body, conserving its energy.
64. **reflex:** a simple, automatic response to a sensory stimulus, such as the knee-jerk response.

65. **endocrine system:** the body's "slow" chemical communication system; a set of glands that secrete hormones into the bloodstream.
66. **hormones:** chemical messengers that are manufactured by the endocrine glands, travel through the bloodstream, and affect other tissues.
67. **adrenal glands:** a pair of endocrine glands that sit just above the kidneys and secrete hormones (epinephrine and norepinephrine) that help arouse the body in times of stress.
68. **pituitary gland:** the endocrine system's most influential gland. Under the influence of the hypothalamus, the pituitary regulates growth and controls other endocrine glands.
69. **lesion:** tissue destruction. A brain lesion is a naturally or experimentally caused destruction of brain tissue.
70. **electroencephalogram (EEG):** an amplified recording of the waves of electrical activity sweeping across the brain's surface. These waves are measured by electrodes placed on the scalp.
71. **CT (computed tomography):** scan a series of X-ray photographs taken from different angles and combined by computer into a composite representation of a slice of the brain's structure.
72. **PET (positron emission tomography):** scan a visual display of brain activity that detects where a radioactive form of glucose goes while the brain performs a given task.
73. **MRI (magnetic resonance imaging):** a technique that uses magnetic fields and radio waves to produce computer-generated images of soft tissue. MRI scans show brain anatomy.
74. **fMRI (functional MRI):** a technique for revealing bloodflow and, therefore, brain activity by comparing successive MRI scans. fMRI scans show brain function as well as its structure.
75. **brainstem:** the oldest part and central core of the brain, beginning where the spinal cord swells as it enters the skull; the brainstem is responsible for automatic survival functions.
76. **medulla:** the base of the brainstem; controls heart-beat and breathing.
77. **thalamus:** the brain's sensory control center, located on top of the brainstem; it directs messages to the sensory receiving areas in the cortex and transmits replies to the cerebellum and medulla.

78. **reticular formation:** a nerve network that travels through the brainstem and thalamus and plays an important role in controlling arousal.
79. **cerebellum:** the "little brain" at the rear of the brainstem; functions include processing sensory input, coordinating movement output and balance, and enabling nonverbal learning and memory.
80. **limbic system:** neural system (including the hippocampus, amygdala, and hypothalamus) located below the cerebral hemispheres; associated with emotions and drives.
81. **amygdala:** two lima-bean-sized neural clusters in the limbic system; linked to emotion.
82. **hypothalamus:** a neural structure lying below (hypo) the thalamus; it directs several maintenance activities (eating, drinking, body temperature), helps govern the endocrine system via the pituitary gland, and is linked to emotion and reward.
83. **cerebral cortex:** the intricate fabric of interconnected neural cells covering the cerebral hemispheres; the body's ultimate control and information-processing center.
84. **glial cells (glia):** cells in the nervous system that support, nourish, and protect neurons; they may also play a role in learning and thinking.
85. **frontal lobes:** portion of the cerebral cortex lying just behind the forehead; involved in speaking and muscle movements and in making plans and judgments.
86. **parietal lobes:** portion of the cerebral cortex lying at the top of the head and toward the rear; receives sensory input for touch and body position.
87. **occipital lobes:** portion of the cerebral cortex lying at the back of the head; includes areas that receive information from the visual fields.
88. **temporal lobes:** portion of the cerebral cortex lying roughly above the ears; includes the auditory areas, each receiving information primarily from the opposite ear.
89. **motor cortex:** an area at the rear of the frontal lobes that controls voluntary movements.
90. **somatosensory cortex:** area at the front of the parietal lobes that registers and processes body touch and movement sensations.
91. **association areas:** areas of the cerebral cortex that are not involved in primary motor or sensory functions; rather, they are involved in higher mental functions such as learning, remembering, thinking, and speaking.

92. **plasticity**: the brain's ability to change, especially during childhood, by reorganizing after damage or by building new pathways based on experience.
93. **neurogenesis**: the formation of new neurons.
94. **corpus callosum**: the large band of neural fibers connecting the two brain hemispheres and carrying messages between them.
95. **split brain**: a condition resulting from surgery that isolates the brain's two hemispheres by cutting the fibers (mainly those of the corpus callosum) connecting them.
96. **cognitive neuroscience**: the interdisciplinary study of the brain activity linked with cognition (including perception, thinking, memory, and language).
97. **dual processing**: the principle that information is often simultaneously processed on separate conscious and unconscious tracks.
98. **behavior genetics**: the study of the relative power and limits of genetic and environmental influences on behavior.
99. **environment**: every external influence, from prenatal nutrition to the people and things around us.
100. **chromosomes**: threadlike structures made of DNA molecules that contain the genes.
101. **DNA (deoxyribonucleic acid)**: a complex molecule containing the genetic information that makes up the chromosomes.
102. **genes**: the biochemical units of heredity that make up the chromosomes; segments of DNA capable of synthesizing proteins.
103. **genome**: the complete instructions for making an organism, consisting of all the genetic material in that organism's chromosomes.
104. **identical twins (monozygotic twins)**: twins who develop from a single fertilized egg that splits in two, creating two genetically identical organisms.
105. **fraternal twins (dizygotic twins)**: twins who develop from separate fertilized eggs. They are genetically no closer than brothers and sisters, but they share a fetal environment.
106. **molecular genetics**: the subfield of biology that studies the molecular structure and function of genes.
107. **heritability**: the proportion of variation among individuals that we can attribute to genes. The heritability of a trait may vary, depending on the range of populations and environments studied.

108. **interaction:** the interplay that occurs when the effect of one factor (such as environment) depends on another factor (such as heredity).
109. **epigenetics:** the study of environmental influences on gene expression that occur without a DNA change.
110. **evolutionary psychology:** the study of the evolution of behavior and mind, using principles of natural selection.
111. **natural selection:** the principle that, among the range of inherited trait variations, those contributing to reproduction and survival will most likely be passed on to succeeding generations.
112. **mutation:** a random error in gene replication that leads to a change.