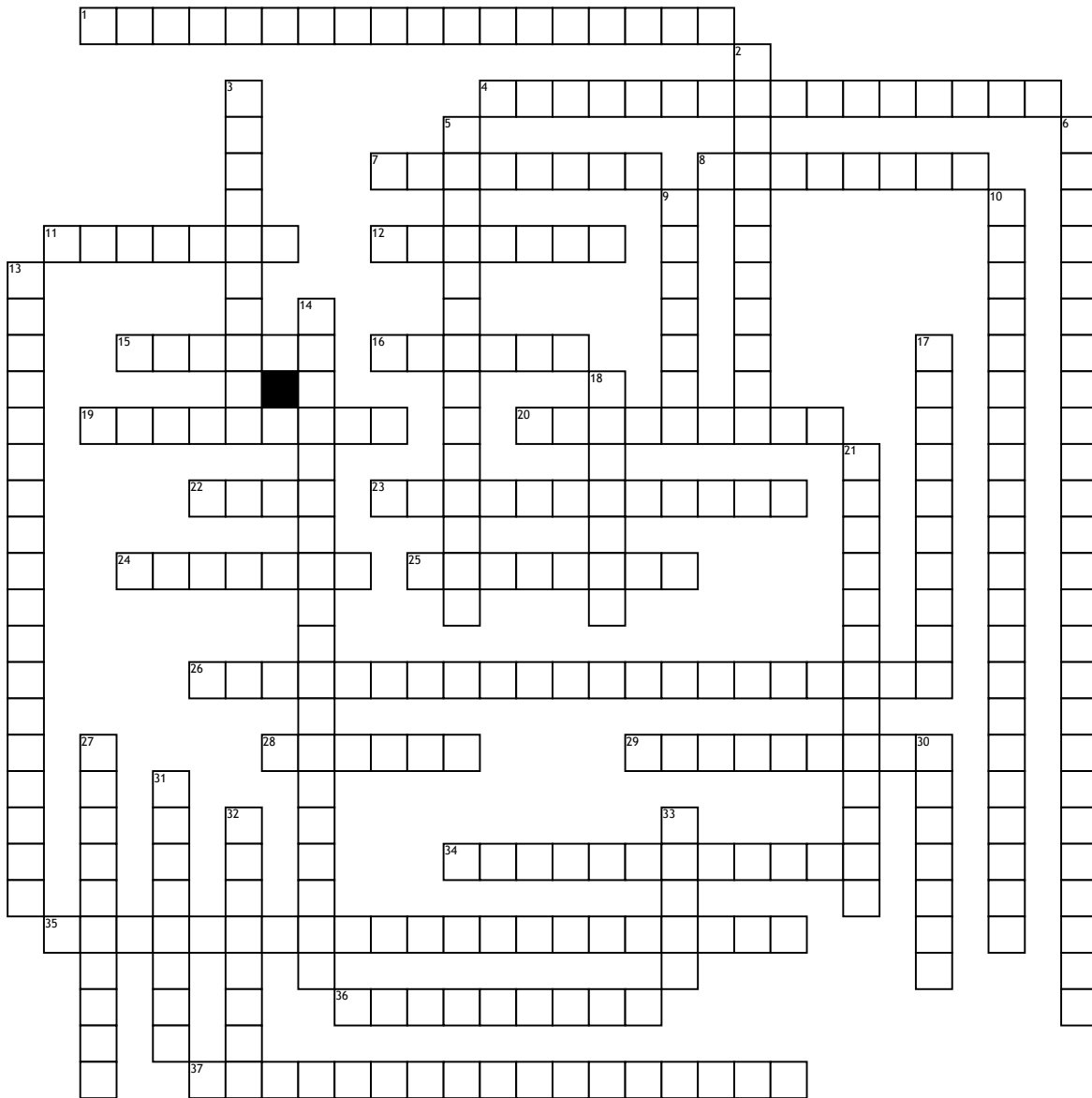


# Factors That Influence Brain Function



**Across**

- 1. What is it called when a neurotransmitter and drug compete for the same location but have the same goal?
- 4. What do we call chemical released into target cells when action potentials reach axon terminals? Examples include: epinephrine and acetylcholine.
- 7. Which system releases product, such as hormones or other, to the external environment? Example: found in sweat, tears and milk.
- 8. Which neurotransmitter has two pathways? One pathway is for motor function and the other for reward. Also involved in motivation, emotion, learning, and fine movement.
- 11. This process is initiated when the hypothalamus secretes GnRH. GnRH then activates the secretion of gonadotropic hormones such as luteinizing hormone and follicle-stimulating hormone by the anterior pituitary glands. Examples: enlargement of testes, weight gain, increase in height, and budding breasts.
- 12. What is the inability to recognize objects, most commonly caused by damage to posterior parietal areas of the brain?
- 15. Hormones that travel through the bloodstream and regulate endocrine glands throughout the body. Examples: prolactin, gonadotropic hormones such as follicle-stimulating hormones and luteinizing hormones, thyroid-stimulating hormone and growth hormone.
- 16. Substance that binds to a receptor, also known as "The Key". Examples: Neurotransmitter, Drug.
- 19. Which system releases product, specifically hormones, directly into the blood, signalling molecules?
- 20. Another name for this neurotransmitter is 5HT. It is involved primarily in sleep, emotion, temperature, appetite, learning, memory and sex.
- 22. What is the main inhibitory neurotransmitter in the brain? It also shapes the information we have.

- 23. The receptor that is coupled to a G-protein and causes a chain of chemical reactions and indirectly alters ion movement. Examples: olfactory, sweet, bitter, umami.
  - 24. A partial or complete loss of language abilities following brain damage. It can happen in the Broca's or Wernicke's area.
  - 25. The system with embryonic precursors of the male internal sex organs.
  - 26. Hormonal effects on tissue differentiation and development. Example: determination of whether the brain and body will develop male or female characteristics.
  - 28. Which sex is the default sex?
  - 29. \_\_\_\_\_ substances, like drugs, are molecules that enter our bodies from the outside environment by inhalation, ingestion, or injection.
  - 34. What is the cells response to an antagonist that blocks effects of neurotransmitter? The brain adds more receptors because the brain thinks there is not enough transmitter.
  - 35. What is it called when certain substances that bind to receptors but do not activate them. They block agonists from binding to endogenous ligand bonds?
  - 36. What is the primary excitatory neurotransmitter in the brain? It is the most abundant of all neurotransmitters. Hint: primarily involved in learning and memory.
  - 37. The gland that consists of releasing hormones which are produced in the hypothalamus. Also supports the pathway of releasing hormone, to tropic hormone, to hormone being secreted by target.
- Down**
- 2. Which hormone regulates blood pressure by stimulating constriction of blood vessels and increases water reabsorption by the kidneys? Hint: involved in male pair bonding.
  - 3. A protein receptor channel that automatically opens when a transmitter binds to it. Example: Salty and sour.

- 5. What is the cells response to an agonist that mimics the effects of a neurotransmitter? The body takes away some receptors because it thinks we have too much neurotransmitter.
- 6. What do we call drugs that may bind to target receptors at a site that is different from where the endogenous ligand binds?
- 9. Another name for a receptor promoter, which binds and activates receptors. Mimics or enhances the effect of a neurotransmitter.
- 10. What is it called when a substance binds to a different site on a receptor but mimics the same effect of a neurotransmitter?
- 13. The gland that consists of the hormones oxytocin and vasopressin. This gland allows hormones to go straight from the axon to the bloodstream.
- 14. Effect or a hormone that occurs in a fully developed organism. Example: Menstrual cycle for females and sexual excitement for males.
- 17. Substances that occur naturally within our body. For example, neurotransmitters.
- 18. Which hormones are lipophobic and they cannot cross the cell membrane without active transport, so they bind to membrane receptors that use a second messenger system like a G-protein? Examples of these are insulin and growth hormone.
- 21. Which neurotransmitter is involved in motor systems, sympathetic/parasympathetic systems, and in learning?
- 27. What is another name for a receptor inhibitor that either binds elsewhere but prevents activation or decreases binding affinity of a receptor ligand.
- 30. The sex-determining region on the Y-chromosome that causes gonads to be testes. Without this, gonad develops into ovaries.
- 31. Receptacle for binding. Where the "key" fits into the "lock".
- 32. Which hormone in the posterior pituitary gland can stimulate contraction of uterine muscles and can get milk out of mammary glands? Hint: synthetic form is petocin and it is involved in female pair bonding
- 33. What is the name of the tissue that that creates and secretes hormones?