**Physiological Psychology**

**Neurotransmitter Scramble**

**Purpose:** The purpose of this activity is to have students identify the keywords and responsibilities of different neurotransmitters

**Directions:** Hang a sign representing each of the following neurotransmitters at different points around the classroom

Acetylcholine

Dopamine

Endorphins

Norepinephrine

Epinephrine

Serotonin

Glutamate

GABA

Distribute one of the following statements to each student in class. The student should come to the front of the class and read their respective statement. The class can (either collectively or individually) determine to which neurotransmitter each of the statements belongs. Note: As many neurotransmitters work together in the body some statements may be associated with more than one neurotransmitter.

**Statements:**

1. I am generally associated with Pain relief.

2. A lack of this neurotransmitter may be linked to Alzheimer’s disease.

3. This activates the reward pathway.

4. Associated with a “runner’s high”.

5. Venom of the black widow spider interferes with this neurotransmitter.

6. SSRI’s generally interact with this neurotransmitter.

7. This is the primary excitatory neurotransmitter.

8. Also known as adrenaline.

9. Drugs such as heroin increase the release of this neurotransmitter.

10. This is the primary inhibitory neurotransmitter.

11. This neurotransmitter is generally associated with learning and memory.

12. Produced in the brain and by the adrenal glands.

13. This is produced when experiencing the “fight or flight” response.

14. Lack of this neurotransmitter may be associated with Parkinson’s.

15. Drugs such as Zoloft and Paxil would be associated with this neurotransmitter.

16. This neurotransmitter is associated with alertness and arousal.

17. Too much of this neurotransmitter can be associated with Schizophrenia.

18. This neurotransmitter is associated with voluntary muscle movements.

19. Too much of this neurotransmitter may be associated with mania.

20. This neurotransmitter is associated with mood.

21. Lack of this neurotransmitter may be treated with L-DOPA.

22. Associated with appetite.

23. Has a morphine-like effect on the body.

24. Low levels of this neurotransmitter may be associated with aggressive behavior.

25. Associated with feeling of pleasure.

26. Malfunctions of this neurotransmitter may result in Huntington’s disease.

27. Alerts the body to dangers.

28. Valium would impact this neurotransmitter.

29. Blocks substance P receptors, which carry messages for pain.

30. Low levels may be associated with ADHD.

**Answer Key:**

**Statements:**

1. I am generally associated with Pain relief: **Endorphins**

2. A lack of this neurotransmitter may be linked to Alzheimer’s disease: **Acetylcholine**

3. This activates the reward pathway: **Dopamine**

4. Associated with a “runner’s high”: **Endorphins**

5. Venom of the black widow spider interferes with this neurotransmitter: **Acetylcholine**

6. SSRI’s generally interact with this neurotransmitter: **Serotonin**

7. This is the primary excitatory neurotransmitter: **Glutamate**

8. Also known as adrenaline: **Epinephrine**

9. Drugs such as heroin increase the release of this neurotransmitter: **Dopamine**

10. This is the primary inhibitory neurotransmitter: **GABA**

11. This neurotransmitter is generally associated with learning and memory: **Acetylcholine; Glutamate**

12. Produced in the brain and by the adrenal glands: **Norepinephrine and Epinephrine**

13. This is produced when experiencing the “fight or flight” response: **Epinephrine**

14. Lack of this neurotransmitter may be associated with Parkinson’s: **Dopamine**

15. Drugs such as Zoloft and Paxil would be associated with this neurotransmitter: **Serotonin**

16. This neurotransmitter is associated with alertness and arousal: **Norepinephrine**

17. Too much of this neurotransmitter can be associated with Schizophrenia: **Dopamine**

18. This neurotransmitter is associated with voluntary muscle movements: **Dopamine**

19. Too much of this neurotransmitter may be associated with mania: **Serotonin**

20. This neurotransmitter is associated with mood: **Serotonin**

21. Lack of this neurotransmitter may be treated with L-DOPA: **Dopamine**

22. Associated with appetite: **Serotonin**

23. Has a morphine-like effect on the body: **Endorphins**

24. Low levels of this neurotransmitter may be associated with aggressive behavior: **Serotonin**

25. Associated with feeling of pleasure: **Dopamine**

26. Malfunctions of this neurotransmitter may result in Huntington’s disease: **GABA**

27. Alerts the body to dangers: **Norepinephrine**

28. Valium would impact this neurotransmitter: **GABA**

29. Blocks substance P receptors, which carry messages for pain: **Endorphins**

30. Low levels may be associated with ADHD: **Norepinephrine**