

Nature and Animal-Assisted Mental Health Science

Mental Health · Answer Key · 25 Questions

1. What physiological change is commonly observed in humans after observing natural aquatic environments, such as oceans or lakes?

- A) Increased cortisol production
- B) Decreased heart rate**
- C) Heightened adrenaline response
- D) Increased blood pressure

2. The 'Biophilia Hypothesis,' popularized by E.O. Wilson, suggests that humans possess an innate tendency to:

- A) Fear all wild animals
- B) Seek connections with nature and other forms of life**
- C) Prefer artificial environments over natural ones
- D) Avoid open green spaces

3. Which hormone, often called the 'love hormone,' is significantly elevated in humans during positive physical interactions with domesticated dogs?

- A) Adrenaline
- B) Oxytocin**
- C) Insulin
- D) Thyroxine

4. Spending time in forest environments to improve mental well-being is a practice originating from Japan known as:

- A) Forest bathing (Shinrin-yoku)**
- B) Tundra trekking
- C) Desert meditation
- D) Urban gardening

5. Research suggests that 'fractal patterns,' which are complex geometric shapes found in nature like ferns and clouds, help the human brain to:

- A) Increase mental fatigue
- B) Enhance cognitive stress reduction**
- C) Stimulate aggressive behavior
- D) Induce insomnia

6. Studies on 'Blue Spaces' indicate that proximity to which of the following is most strongly correlated with lower psychological distress?

- A) Industrial warehouses
- B) High-traffic motorways
- C) Coastal areas**
- D) Deserts

7. What is the primary psychological benefit attributed to 'pet therapy' in clinical hospital settings?

- A) Improved athletic performance
- B) Reduction in patient anxiety and loneliness**
- C) Cure for viral infections
- D) Increased metabolic rate

8. Exposure to sunlight increases the body's synthesis of Vitamin D, which is linked to the regulation of which neurotransmitter associated with mood?

- A) Serotonin**
- B) Adrenaline
- C) Glucagon
- D) Gastrin

9. What is the 'Attention Restoration Theory' (ART) regarding natural environments?

- A) Nature causes sensory overload
- B) Nature allows the brain to recover from directed-attention fatigue**
- C) Nature forces the brain to work harder
- D) Nature has no effect on human focus

10. Which element of nature is most consistently linked to 'stress recovery' in psychological studies?

- A) Harsh industrial noise
- B) Vibrant urban streetlights
- C) Moving water and lush vegetation**
- D) Concrete architectural structures

11. What effect does the presence of indoor plants have on office workers according to psychological studies?

- A) Increased absenteeism
- B) Reduced productivity
- C) Lower levels of self-reported stress**
- D) Increased irritability

12. Why do researchers study 'equine-assisted therapy' for mental health?

- A) Horses are immune to human emotion
- B) Horses provide non-judgmental social feedback**
- C) Horses require no training to handle
- D) Horses are the only animals capable of empathy

13. The sound of birdsong is scientifically associated with what mental state?

- A) Heightened fight-or-flight response
- B) Increased mental exhaustion
- C) Restoration of attention and reduced stress**
- D) Aggressive social behavior

14. What is a verifiable mental health benefit of gardening?

- A) Increased exposure to dangerous bacteria
- B) Significant reduction in cortisol levels**
- C) Higher risk of seasonal depression
- D) Complete cessation of all human anxiety

15. How do 'green exercise' programs impact human participants?

- A) They always lead to physical injury
- B) They improve self-esteem and mood through physical activity in nature**
- C) They are only effective in indoor gym settings
- D) They decrease physical fitness levels

16. What is the relationship between 'wilderness exposure' and human memory?

- A) Memory performance decreases significantly
- B) Memory performance is unaffected
- C) Short-term memory performance improves**
- D) Memory is permanently erased

17. Which feature of natural landscapes is linked to the 'Stress Recovery Theory'?

- A) High-density urban housing
- B) Lack of sunlight
- C) Vegetation and water features**
- D) Loud, repetitive machinery sounds

18. Why is interaction with 'therapy animals' often successful for people with PTSD?

- A) Animals are smarter than doctors
- B) Animals provide a sense of safety and grounding**
- C) Animals can speak to patients
- D) Animals replace the need for medication entirely

19. What does the 'Savanna Hypothesis' suggest about human psychological preference for nature?

- A) Humans prefer environments that were favorable for survival, such as open grassy landscapes with scattered trees**
- B) Humans prefer dense, dark forests
- C) Humans prefer barren, rocky terrain
- D) Humans prefer extreme mountain peaks

20. Which environmental factor is most likely to contribute to 'Seasonal Affective Disorder' (SAD)?

- A) Excessive sunlight
- B) Reduced exposure to natural daylight**
- C) High humidity
- D) High oxygen levels

21. How does 'pet ownership' relate to heart rate variability (HRV), a marker of stress resilience?

- A) It has no effect on HRV
- B) It generally improves HRV in pet owners**
- C) It makes HRV highly erratic
- D) It causes HRV to decrease permanently

22. In environmental psychology, what is 'perceived restorativeness'?

- A) The ability of a place to help a person recover from mental fatigue**
- B) The physical strength required to build a park
- C) The cost of maintaining a garden
- D) The speed at which a forest grows

23. What impact do 'urban green spaces' have on community mental health?

- A) They isolate community members
- B) They contribute to social cohesion and lower stress**
- C) They increase crime rates
- D) They cause seasonal allergies only

24. Which of the following describes the 'Hormetic' effect of nature on mental health?

- A) Nature is always harmful to the mind
- B) Mild exposure to environmental stressors in nature builds psychological resilience**
- C) Nature has no impact on health
- D) Nature only benefits the elderly

25. What is a well-documented mental health impact of observing fish in an aquarium?

A) Increased blood pressure

B) Reduction in heart rate and blood pressure

C) Inducement of panic attacks

D) Increase in complex math skills