Behavioural Economics and Human Health

Behavioural Economics · Answer Key · 17 Questions

1. Which neurotransmitter, often associated with reward and motivation, plays a significant role in how humans respond to immediate versus delayed health benefits, influencing behaviours like exercise adherence?

A) Serotonin
B) Dopamine
C) Adrenaline
D) GABA

2. The 'present bias' in behavioural economics, where individuals disproportionately favour immediate rewards over future ones, is physiologically linked to which brain region's strong influence on impulsivity and reward processing?

A) Cerebellum
B) Prefrontal Cortex
C) Amygdala
D) Hippocampus

3. The 'scarcity heuristic' suggests that perceived scarcity increases desirability. In a health context, this can manifest as increased demand for limited treatments. Physiologically, this might relate to the activation of which stress-related hormone system?

A) Oxytocin
B) Cortisol
C) Melatonin
D) Thyroid Hormones

4. Loss aversion, a core behavioural economics concept, describes the tendency to prefer avoiding losses to acquiring equivalent gains. In health, this can motivate preventative behaviours, and is thought to be processed by brain areas involved in:

A) Sensory perception
B) Emotional regulation
C) Motor control
D) Visual processing

5. The 'framing effect' highlights how the way information is presented influences decisions. In health messaging, framing the choice to get vaccinated as 'preventing a serious illness' versus 'not getting a mild symptom' engages different emotional and cognitive pathways. This relies on the brain's ability to process:

A) Olfactory stimuli
B) Auditory signals
C) Emotional valence
D) Proprioception

6. Defaults play a crucial role in behavioural economics. For health interventions, setting a default option (e.g., automatic enrollment in a wellness program) leverages the brain's tendency to conserve cognitive energy by avoiding the need for active decision-making, which is managed by the:

A) Reticular Activating System
B) Basal Ganglia
C) Prefrontal Cortex
D) Brainstem

7. The 'endowment effect' describes overvaluing something simply because one owns it. In health, this can make individuals reluctant to give up unhealthy habits they perceive as 'theirs'. This phenomenon is linked to the brain's processing of:

A) Pain signals
B) Personal identity and self-perception
C) Auditory memory
D) Olfactory cues

8. Availability heuristic influences health decisions based on how easily examples come to mind. A vivid news report about a rare disease can increase perceived risk, triggering the body's 'fight or flight' response, mediated by the:

A) Parasympathetic Nervous System
B) Sympathetic Nervous System
C) Enteric Nervous System
D) Autonomic Nervous System (general)

9. The 'mere-exposure effect' suggests that familiarity breeds liking. In health, repeated, positive exposure to healthy foods or exercise can increase preference. This is linked to how the brain's neural pathways strengthen with:

A) Synaptic pruning
B) Neurogenesis
C) Long-term potentiation
D) Myelination

10. Social norms, a key behavioural economics concept, influence health behaviours. When individuals observe others engaging in healthy practices, it can trigger the release of which hormone, associated with social bonding and trust, potentially encouraging conformity?

A) Cortisol
B) Oxytocin
C) Adrenaline
D) Vasopressin

11. Commitment devices, used to enforce future behaviour, can help overcome procrastination in health. The effectiveness of these devices relies on the brain's capacity for 'future self' projection, a function primarily associated with the:

A) Cerebellum
B) Temporal Lobe
C) Prefrontal Cortex
D) Brainstem

12. Salience, making information or choices noticeable, is crucial in behavioural interventions. In health, making the healthy choice more salient (e.g., placing fruit at eye level) influences decision-making by:

A) Increasing glucose metabolism
B) Directing attentional resources
C) Stimulating growth hormone
D) Reducing serotonin levels

13. The 'hot-cold empathy gap' describes how our current physiological and emotional state (hot) affects our perception of future states (cold). When feeling hungry (hot state), individuals often underestimate their future desire for healthy food, a cognitive bias linked to:

A) Somatosensory cortex
B) Insula (interoception)
C) Auditory cortex
D) Olfactory bulb

14. Anchoring bias, where individuals rely too heavily on the first piece of information offered, impacts health decisions. For example, a high initial price for a health product might make subsequent lower prices seem more attractive, influencing the brain's:

A) Pain processing
B) Value assessment
C) Motor planning
D) Auditory discrimination

15. The 'halo effect' can extend to health perceptions. If a person is perceived as generally attractive or successful, their unhealthy habits might be overlooked. This cognitive bias is rooted in how the brain forms:

A) Auditory memories
B) Overall impressions and generalizations
C) Motor skills
D) Olfactory associations

16. Temporal discounting, a key concept in behavioural economics, describes how future rewards are devalued relative to immediate ones. This is physiologically related to the way the brain processes:

A) Spatial navigation
B) Time perception and reward valuation
C) Motor coordination
D) Visual acuity

17. The 'bandwagon effect' or 'herding' influences health choices, where individuals adopt behaviours because many others are doing so. This social conformity is partly mediated by the brain's reward circuitry, activated by:

A) Serotonin
B) Dopamine
C) Endorphins
D) Melatonin