

# Weather, Seasons, and Human Health

Science · Practice Test · 8 Questions

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**1. Which condition is primarily triggered by a lack of sunlight exposure during the winter months, leading to a deficiency in serotonin and vitamin D?**

- A) Seasonal Affective Disorder
- B) Raynaud's Disease
- C) Hyperthermia
- D) Asthma

**2. How does high humidity primarily affect the human body's ability to regulate temperature?**

- A) It increases the rate of shivering
- B) It slows the evaporation of sweat from the skin
- C) It causes the pores to close completely
- D) It increases the heart rate to cool the blood

**3. What is the medical term for the localized tissue damage caused by prolonged exposure to freezing temperatures, often occurring during winter?**

- A) Heat exhaustion
- B) Hypoglycemia
- C) Frostbite
- D) Anaphylaxis

**4. During hot weather, the body's primary physiological mechanism to prevent hyperthermia is:**

- A) Vasoconstriction of peripheral blood vessels
- B) Increased production of subcutaneous fat
- C) Vasodilation and sweat evaporation
- D) Decreased respiratory rate

**5. Why are humans more susceptible to certain viral respiratory infections, like the common cold, during colder months?**

- A) Viruses only survive in sub-zero temperatures
- B) Cold air weakens the mucosal immune response in the nasal cavity
- C) Increased oxygen levels in winter kill immune cells
- D) Cold temperatures accelerate viral mutation rates

**6. What happens to peripheral blood vessels when the body is exposed to extreme cold to maintain core body temperature?**

- A) Vasodilation
- B) Vasoconstriction
- C) Hyper-pigmentation
- D) Cellular dehydration

**7. Seasonal changes in the length of daylight hours affect the production of which hormone in the pineal gland?**

- A) Melatonin
- B) Adrenaline
- C) Insulin
- D) Thyroxine

**8. Extended exposure to high-intensity ultraviolet (UV) radiation during summer months is a known environmental factor for:**

- A) Vitamin B12 deficiency
- B) Increased risk of melanoma
- C) Reduction in bone density
- D) Acute respiratory distress