

Global Perspectives on Human Biology

Human Biology · Answer Key · 10 Questions

1. Which population group is historically associated with the genetic adaptation of high-altitude tolerance, such as increased lung capacity, found in the Andean regions of South America?

- A) The Sherpas
- B) The Quechua people**
- C) The Bedouin tribes
- D) The Inuit people

2. The prevalence of sickle cell trait is historically highest in regions where which disease is or was endemic, most notably in parts of Sub-Saharan Africa?

- A) Malaria**
- B) Tuberculosis
- C) Cholera
- D) Dengue fever

3. Lactase persistence, the ability to digest milk into adulthood, is most common among populations with a long history of cattle pastoralism, particularly in which geographical region?

- A) East Asia
- B) Northern Europe**
- C) The Amazon Basin
- D) Oceania

4. In the context of human skin pigmentation evolution, populations native to regions near the equator traditionally evolved higher levels of melanin to protect against high exposure to which form of radiation?

- A) Infrared radiation
- B) Microwave radiation
- C) Ultraviolet radiation**
- D) Gamma radiation

5. The 'Bajau' people, known as 'sea nomads' in the Sulu Archipelago, possess a genetic adaptation that results in a significantly larger average size of which organ, aiding in prolonged underwater breath-holding?

- A) Lungs
- B) Heart
- C) Spleen**
- D) Liver

6. Which vitamin is primarily synthesized in human skin through exposure to sunlight, leading to lower levels in populations living at high latitudes, such as Scandinavia, during winter months?

- A) Vitamin C
- B) Vitamin D**
- C) Vitamin K
- D) Vitamin B12

7. The CCR5-delta 32 genetic mutation, which provides some resistance to HIV, is found at its highest frequency in populations originating from which continent?

- A) Africa
- B) South America
- C) Europe**
- D) Australia

8. What is the primary biological reason for the lower average basal metabolic rate in populations living in hot, tropical climates compared to those in arctic regions, according to Bergmann's rule?

- A) Reduced thyroid activity
- B) Decreased body surface area**
- C) Increased sweat production
- D) Higher dietary fat intake

9. The 'Blue Fugates' of Kentucky, USA, were a localized population historically noted for a rare genetic condition causing blue-tinted skin, known as which of the following?

- A) Methemoglobinemia**
- B) Hemochromatosis
- C) Albinism
- D) Cyanosis

10. Which geographical region is noted for the highest global prevalence of Type 2 Diabetes, partially linked to the 'thrifty gene' hypothesis regarding rapid dietary changes in island populations?

- A) Scandinavia
- B) The Pacific Islands**
- C) Western Europe
- D) The Andes