



## Daily Article (Bharath's Reading list) - Answers and Explanations 12.02.2024

### Article link : [Link](#) (Gene Therapy's Promise Meets Nigeria's Sickle Cell Reality)

1. Which of the following actions does the author advocate to immediately tackle sickle cell disease in Africa?

- A. Social changes aimed at reducing stigma and enhancing accommodations for those who bear sickle cell disease
- B. Genotype testing and counseling to allow couples to make informed decisions about their genetic risks
- C. Subsidization of state-of-the-art medical treatments by the government
- D. All the above

#### Explanation : A

Option A is clearly stated in the article. Note that option B is not an action advocated by the author, but one that she observes is already being taken up by many in Nigeria. Option C is not mentioned in the article.

2. All the following help explain the link between the sickle cell genetic mutation and resistance to malaria except:

- A. Sickle cell hemoglobin carries less oxygen, and low oxygen impairs Plasmodium growth in red blood cells
- B. Compared to normal red blood cells, sickle cells die earlier and get removed from the bloodstream faster, along with the parasites
- C. Malaria is a deadly killer that is only associated with tropical and subtropical regions where sickle cell disease is common
- D. Natural selection favors the sickle cell trait because it protects people from malaria

**Explanation: C**

Option C is not true: 'While malaria is often associated with tropical and subtropical regions, it can affect anyone in contact with infected mosquitoes.'

3. Based on the article, which of the following is true?

- A. Herbs such as garlic bulbs, cloves and West African black pepper cause more harm than help in managing sickle cell anemia
- B. The only available cure for sickle cell disease involves pricey gene therapy, which is out of the reach of the less privileged
- C. In Nigeria, an estimated 1 in 4 individuals is affected by the sickle cell disease
- D. None of the above

**Explanation: D**

None of the given statements is true. The 'more harm than help' part in A is not true. Gene therapy is not the only cure; stem cell transplant is also a cure. The article says 1 in 4 individuals in Nigeria bear the sickle cell trait, not the disease.