

Article-Based Observation: Q

Directions: Read the article "[Genes foretell flu shot response](#)" and then answer these questions:

1. Summarize the article in one sentence.

2. Explain what the author means by a genetic "crystal ball." How does the crystal ball work and what group of people does it work for?

3. What research question did computational immunologist Purvesh Khatri and his colleagues explore? How did they go about answering it in their study?

4. What result did researchers find when they tried to identify a similar set of genes in people age 60 and older? Why is it more difficult to predict the response of older people to the flu vaccine? How could the design of a new study solve this difficulty?

5. Why has it been difficult to predict the success of a flu vaccination?

6. Were all nine genes previously linked to immune function? What other roles do these genes play in the body?

7. In what ways can the results of this study benefit future studies in immunology?

8. Approximately how many flu illnesses did vaccination prevent during the 2015–2016 season?

9. Did particular flu strains that were vaccinated for affect the results of the study? Would the approach used in this study work for vaccines for other viruses?

10. Article-based opinion question: Are you planning to get the flu vaccination this year? Why or why not?