A Blood Test or a Vaccine?

Sometimes, people contact us to ask about whether it would be better to get a blood test to see if a vaccine is necessary. The thought being that by getting one’s blood tested, a person may not need to get as many doses of a vaccine.

Recently, some people have even proposed creating laws that would require the opportunity for titer testing before receipt of a vaccine. For example, such a bill has been proposed in Arizona in 2019.

But this idea is not as straightforward as it may seem:

1. Blood tests require getting a needle; so for those who resist vaccines because of needle-phobia, this approach could actually increase the number of shots a person needs to get.
2. No test is perfect, so some people might appear to be immune when they are not and vice versa.
3. The majority of the time, an extra dose of vaccine is not harmful. If a person is immune, the extra dose of vaccine will strengthen existing immunity. Likewise, in most cases, if a person’s immune system has previously “seen” the potential pathogen, either through natural infection or vaccination, they are less likely to experience untoward events following vaccination.
4. Blood tests cost money (often as much money as the vaccine). For these reasons, testing large numbers of people, some of whom will still need to be vaccinated, does not make a lot of sense.

“Can a Blood Test Replace a Vaccine Dose?” is a new video in the Science Made Easy series in which Dr. Offit discusses some of the considerations and limitations related to testing blood for antibodies against vaccine-preventable diseases.

Reminder:

Don’t forget to check out the other Science Made Easy videos:

- The Stages of Viral Infection: How HPV and Shingles Play a Long Game
- How are Strains of Influenza Chosen for the Annual Vaccine?
- Are Maternal Antibodies Considered When the Vaccine Schedule is Made?

You can access Science Made Easy and other VEC videos at vaccine.chop.edu/videos.

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Trivia Answer:
The correct answer is C. Measles and chickenpox viruses spread through respiratory droplets that hang in the air. Infections with either virus are typically more severe in adults than children. Smallpox and pertussis are spread by larger droplets.

News and Notes

Do you have a student in grades 6 to 12?
The Vaccine Makers Project of the Vaccine Education Center at Children’s Hospital of Philadelphia (VEC) is holding an essay contest for students in grades 6 to 12 to celebrate the centennial of the birth of Maurice R. Hilleman, one of the world’s most accomplished vaccine scientists. The national contest will award three students with the best 500- to 600-word essays that answer the question, “How would the world be different if Dr. Hilleman had not lived the life he did?”

In addition to a $1,000 cash award, each student winner will receive a trip to Philadelphia with a parent this fall. Winners and their parents will tour labs at Children’s Hospital of Philadelphia (CHOP), have breakfast with a scientist, dinner with the film team that created Hilleman: A Perilous Quest to Save the World’s Children, and attend an event remembering Dr. Hilleman during which winners will present their essays.

Find out more at hillemanfilm.com/contest.

Entries are due by June 7, 2019.

Did you know . . . ?

. . . that “Every spoonful of seawater is filled with millions of viruses?”

Scientists recently published their findings of a survey of microbes in the world’s oceans. They identified more than 200,000 different species of viruses! Find out more in the article by Erin Garcia de Jesus, published by Nature News on April 25, 2019.

Link:
https://www.nature.com/articles/d41586-019-01329-w

Solid organ transplants and vaccines

The VEC recently collaborated with experts from teams in the Divisions of Infectious Diseases and Organ Transplantation at CHOP to create a new Q&A sheet that answers common questions about vaccines in people who have received solid organ transplants.

Check out the sheet by going to vaccine.chop.edu/resources and clicking on “Special Topics’ Online Series Q&A Sheets.”

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