VACCINE TRIVIA

JUST THE VAX | VACCINES

1. What vaccine is given to children to protect their unborn babies in the future?
   - **A.** Rubella vaccine
   - **B.** Measles vaccine
   - **C.** Varicella (chickenpox) vaccine
   - **D.** Hepatitis A vaccine

2. Development of which vaccine slowed after the invention of antibiotics?
   - **A.** Influenza vaccine
   - **B.** Meningococcal vaccine
   - **C.** Pneumococcal vaccine
   - **D.** Rotavirus vaccine

3. What daily cellular function do mRNA vaccines use to protect people against COVID-19?
   - **A.** DNA production
   - **B.** Protein production
   - **C.** mRNA production
   - **D.** Antibody production

4. What is the only oral vaccine currently used in the United States?
   - **A.** Influenza vaccine
   - **B.** Polio vaccine
   - **C.** Rotavirus vaccine
   - **D.** MMR vaccine

5. What was the first vaccine to prevent a known cause of cancer?
   - **A.** Shingles vaccine
   - **B.** Hepatitis B vaccine
   - **C.** MMR vaccine
   - **D.** Chickenpox vaccine

6. What vaccine was made using virus isolated from a little boy in Japan in the 1970s?
   - **A.** Rotavirus vaccine
   - **B.** Chickenpox vaccine
   - **C.** Mumps vaccine
   - **D.** Measles vaccine

7. What vaccine used to be thought of as a travel vaccine but is now part of the routine childhood immunization schedule?
   - **A.** HPV vaccine
   - **B.** Hepatitis B vaccine
   - **C.** Hepatitis A vaccine
   - **D.** Chickenpox vaccine

8. What vaccine used to be made using virus isolated from human blood but with advanced technology is now made using a viral surface protein grown in yeast cells?
   - **A.** Measles vaccine
   - **B.** Pertussis vaccine
   - **C.** Hepatitis B vaccine
   - **D.** Shingles vaccine

9. What type of vaccine is the MMR vaccine?
   - **A.** Conjugate vaccine
   - **B.** Live, "weakened" viral vaccine
   - **C.** Toxoid vaccine
   - **D.** Inactivated viral vaccine

10. Which is not a reason why adults need vaccines?
    - **A.** To boost immunity
    - **B.** To protect against diseases that haven't been encountered
    - **C.** To protect against viruses that change
    - **D.** To boost energy levels in cells

Children's Hospital of Philadelphia®
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1. The correct answer is **A**

Congenital rubella syndrome (CRS) can occur if a pregnant person becomes infected with rubella before 20 weeks gestation. CRS can cause miscarriage, fetal death, premature delivery or other birth defects. Preventing CRS is the main reason to ensure women of childbearing age are vaccinated against rubella.

2. The correct answer is **C**

Antibiotics to treat pneumococcal infections were discovered in the 1940s and caused interest in vaccine development to decline. However, when *Streptococcus pneumoniae* started to become antibiotic resistant, the importance of continuing to develop a vaccine for pneumococcal disease became apparent.

3. The correct answer is **B**

mRNA serves as a blueprint for protein production in our cells, so by delivering mRNA for the spike protein on SARS-CoV-2, the virus that causes COVID-19, our cells produce the spike protein. Realizing that it is not a protein that is normally present, our immune system then responds to remove it and generate immunologic memory to recognize the virus during future encounters. Since mRNA contains features to limit how much protein is produced, a few days after vaccination, the mRNA is gone and spike protein production ceases. The only thing that remains are the trained cells of our immune system.

4. The correct answer is **C**

Rotavirus vaccine is the only oral vaccine used in the United States. Although oral and injectable forms of polio vaccine have been created, the oral version is not used in the United States.

5. The correct answer is **B**

Hepatitis B can cause liver cancer. Therefore, when the hepatitis B vaccine was developed, it was the first vaccine to prevent a known cause of cancer in people. Today, two routinely administered vaccines prevent cancer — the hepatitis B vaccine and the HPV vaccine.

6. The correct answer is **B**

The chickenpox vaccine was made by isolating chickenpox virus from a young boy in Japan who was sick with chickenpox. This strain of chickenpox virus is known as the "Oka strain" because the child's last name was Oka.

7. The correct answer is **C**

The hepatitis A vaccine used to be mainly recommended for people traveling to countries where there was an increased risk of becoming infected with hepatitis A. However, since hepatitis A can spread through contaminated food and water, such as in restaurants, getting a hepatitis A vaccine can protect non-travelers as well. Hepatitis A vaccine is now recommended for all children beginning at 12 months of age.

8. The correct answer is **C**

The hepatitis B vaccine was originally made using virus isolated from the blood of people infected with hepatitis B, and because of this, was known as the "plasma-derived" version. However, because human blood was used, people were concerned that the vaccine was not safe. As newer technologies became available, the process for making the vaccine was changed.

9. The correct answer is **B**

The MMR vaccine is a live, "weakened" viral vaccine that contains three vaccines (measles vaccine, mumps vaccine and rubella vaccine) combined into one shot. All three vaccines are made by weakening the viruses so that they do not replicate enough to cause disease but still reproduce enough to provide protective immunity.

10. The correct answer is **D**

As adults age, immunity to diseases they were previously vaccinated for may decrease. Likewise, some viruses change so that previous immunity may no longer be sufficient. If adults have never encountered a disease before, such as during international travel or when young adults become sexually active, vaccination affords protection.

More trivia:
vaccine.chop.edu/trivia

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