

Vaccines

1

What vaccine is given to girls to protect their future unborn babies?

- 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

Which is not a type of licensed and recommended vaccine used in the United States?

- A. Recombinant vaccine
- B. Live, "weakened" viral vaccine
- C. RNA vaccine
- D. Conjugate vaccine

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 is often thought of as a travel vaccine, but is actually recommended for anyone who wants to be protected?

- 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

Vaccines ANSWERS

1

The correct answer is **A**

Congenital rubella syndrome (CRS) can occur if a woman 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 the rubella vaccine is given to girls.

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 **C**

Recombinant vaccines are made using DNA technology to produce a surface protein, which is then used in the vaccine. Live, “weakened” viral vaccines are made by growing the virus in cells in the laboratory so that it is less efficient at reproducing in humans. A conjugate vaccine is made by taking the sugar coating (polysaccharide) of a bacteria and attaching it to a harmless protein. This allows the body to produce a stronger immune response compared to use of just the polysaccharide.

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 is recommended for people traveling to countries where there is a great risk of becoming infected with hepatitis A. However, anyone who wants to be protected from hepatitis A can receive the vaccine. 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.

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, so, 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 young men and women becoming sexually active, vaccination affords protection.

