

The Truth and the Flu

From Spanish to swine flu, uncover fascinating facts of the flu virus by taking this quiz!

Which of the following is not true about the 1918 Spanish Flu?

- a) The Spanish flu killed most people who were infected.
 - i. Much of the high death rate can be attributed to crowding in military camps and urban environments, as well as poor nutrition and sanitation, which suffered during wartime. It's now thought that many of the deaths were due to the development of bacterial pneumonias in lungs weakened by influenza.
- b) It is possible that some of the deaths from the Spanish flu could be attributed to aspirin poisoning.
- c) There was a high death rate during the Spanish flu of healthy people, including those in the 20-40 age group.

Which of the following is not true about the first flu vaccine?

- a) Jonas Salk helped develop both the first inactivated polio vaccine and the first inactivated flu vaccine.
- b) The polio vaccine was developed before the flu vaccine.
 - i. The first influenza vaccine was approved for military use in the United States in 1945 and civilian use in 1946. This whole-virus, inactivated influenza A vaccine had been tested in military recruits and college students before approval. Thomas Francis Jr., MD, and Jonas Salk, MD, who would become closely associated with the poliovirus vaccine, were key investigators on much of the influenza vaccine research. The first polio vaccine was available in the United States in 1955.
- c) The first flu vaccine only included an inactivated influenza A virus.

Which of the following is not true?

- a) The seasonal flu vaccine's effectiveness can range from 40 to 60% depending on how well the vaccine matched the active strains.
- b) A universal flu vaccine is currently being developed and is in an early stage of clinical trial, and the study is expected to be completed by mid-2023.
- c) A universal flu vaccine will not protect against any mutations of the flu virus.
 - i. The mix of strains circulating in the population tends to change every flu season, and existing flu vaccines can induce immunity against only a narrow range of recently circulating strains. Thus, current vaccines provide only partial and temporary, season-by-season protection. Nevertheless, scientists have been working toward developing a universal flu vaccine that could provide long-term protection by inducing an immune response that includes bnAbs. Over the past decade, several research groups, including Wilson's, have discovered these multi-strain neutralizing antibodies in recovering flu patients,

and have analyzed their properties. But how easily circulating flu viruses can simply mutate to escape these bnAbs has not been fully explored.

Which of the following is not true about the swine flu?

- a) The disease became known as swine flu because in the past the people who caught it had direct contact with pigs.
- b) In 2009, the swine flu spread so fast that the World Health Organization classified it as a pandemic.
- c) You can catch swine flu through eating bacon, ham or other pork products.
 - i. As astonishing as this would be, there is no way to catch swine flu from consuming pork products. Swine flu spreads in the same way as seasonal flu does, through drops of the virus from coughing or sneezing and contact with the drops.

What is not a way that swine flu is spread?

- a) Through the air via cough or sneeze droplets.
- b) Through direct contact with infected pigs.
- c) Through contact with chickens.
 - i. As its name suggests, swine flu has nothing to do with any other animals besides pigs. The disease spreads through direct contact with infected pigs, through cough and sneeze droplets from infected individuals, and through surface contact with those droplets.

Which of the following is not true?

- a) Young healthy people do not need to get the flu shot.
 - i. The flu changes every year, so everyone six months of age or older (with rare exceptions) should receive a yearly flu vaccine. A person's immune protection declines over time, so an annual vaccination is needed to get the best protection against the flu.
- b) If you get the flu virus, the vaccine is proven to reduce the severity of the illness.
- c) Only about half of Americans get their annual flu vaccine.

Which is not true about bat flu?

- a) Evidence suggests that the bat flu virus can infect and spread in humans easily.
 - i. CDC research suggests that human cells do not support the growth of the bat flu virus in the test tube. This suggests that bat flu viruses may not grow or replicate in humans and would need to undergo significant changes to become capable of infecting and spreading easily among humans. However, testing of the bat flu virus suggests that its internal genes are similar to those of human flu viruses, so CDC scientists cannot rule out the possibility of these viruses eventually becoming capable of infecting humans.
- b) The bat flu was first discovered in Guatemala around 2009.
- c) The species of bats currently known to carry bat flu are native to South and Central America.

Which is not true about dog flu (canine influenza)?

- a) Dog flu is caused by specific Type A influenza viruses.
- b) No human infection of this type of flu has ever been reported.
- c) There are three different influenza A dog flu viruses.
 - i. There are just two different influenza A dog viruses: One is an H3N8 virus and the other is an H3N2 virus.

Which of the following is not true regarding the spread of influenza?

- a) The flu can only be transmitted once symptoms start.
 - i. While people with the flu are most contagious in the first three to four days after their illness begins, most healthy adults may be able to infect others beginning one day before symptoms develop and up to seven days after becoming sick.
- b) It can take two weeks for the flu vaccine to work.
- c) You can get the flu in fall and spring.

Which of the following is not a possible complication from the flu?

- a) Congestive heart failure
- b) Gastroenteritis (illness triggered by infection and inflammation of the digestive system)
 - i. Complications that come from the flu can be quite serious, resulting in life-threatening situations and even death. Serious complications include pneumonia, inflammation of the heart (myocarditis), brain (encephalitis) or muscle tissues (myositis, rhabdomyolysis), and multi-organ failure (for example, respiratory and kidney failure). Though the flu can cause many complications, gastroenteritis is not a complication of the flu.
- c) Encephalitis (inflammation of the brain)