An update on bacterial meningitis and other important vaccine news

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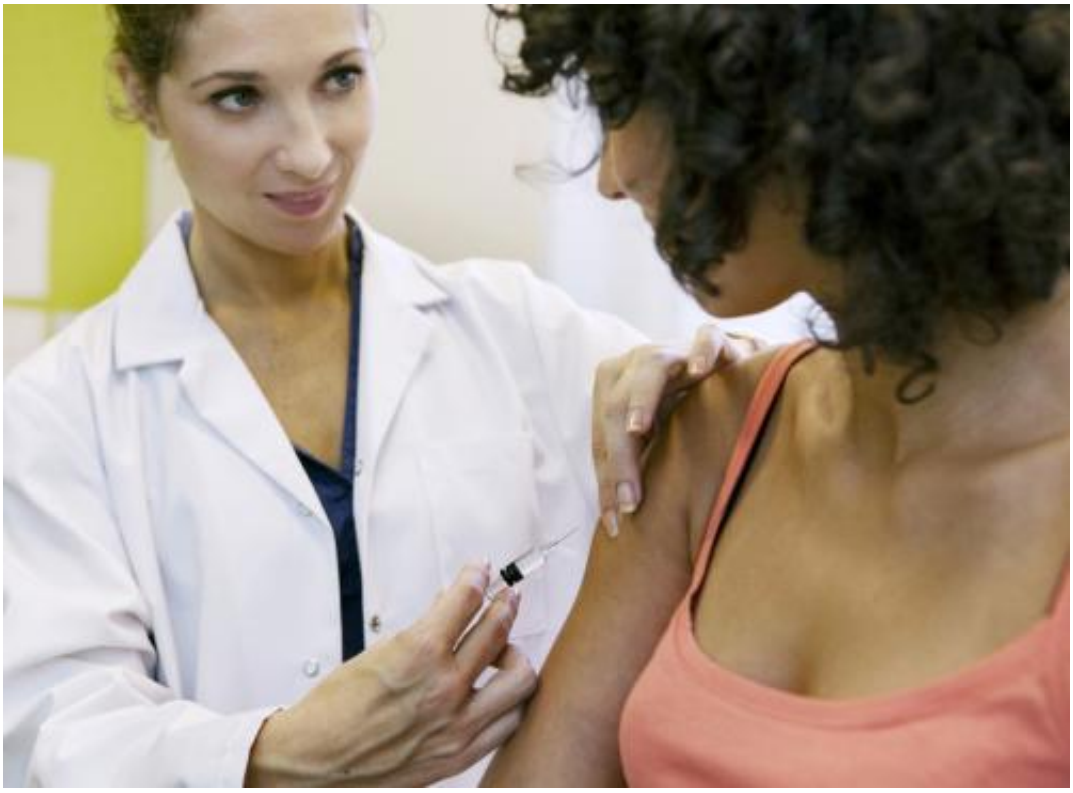

Young people who receive vaccinations are considered well protected against several common forms of bacterial meningitis.

With school underway and flu season not far behind, vaccinations are on people's minds again, or at least they should be – according to experts such as George DiFerdinando Jr. who keep track of how disease spreads and the best ways to prevent it.

DiFerdinando is an adjunct professor of epidemiology at Rutgers School of Public Health, as well as a former deputy New Jersey health commissioner and member of the federal Centers for Disease Control and Prevention's Epidemiology Intelligence Service.

Rutgers Today asked DiFerdinando what people need to know this fall about several dangerous diseases and the vaccines designed to prevent them.

Bacterial meningitis, an infectious disease that attacks the brain, was in the headlines during the past year after a strain of the bacterium triggered nine cases associated with Princeton University. Why would a disease like this break out in a group of young and apparently healthy people?

George DiFerdinando Jr: In our experience, that is the group that most commonly gets it – young people brought together in a group living arrangement such as a college dorm or a military barracks. Different strains of meningococcal bacteria frequently live in people's nasal passages. Those people tend to develop immunity, but others exposed to a particular strain for the first time may be susceptible through uncovered sneezes, sharing of drinking cups and too little hand washing, practices that students new to dormitory life should be careful to avoid.

The health department in Princeton, where you serve on the municipal board of health, was involved in obtaining an experimental vaccine to stop the outbreak at Princeton University. Is that vaccine now available as a preventive measure for the general

public?

DiFerdinando: While the vaccine has seemed to be effective in stopping the Princeton outbreak, that was a special situation. The Type B vaccine still is not approved for general use, but thanks to the positive experience we had there is now a process for requesting it through the federal Food and Drug Administration if other outbreaks occur.

There also is a standard vaccine given to many young people in their early teens – usually with a second dose when they leave for college – that is very effective against several of the other most common meningitis types. It is a vaccine that all young people should receive.

September is the unofficial start of flu season. According to the CDC, last year more than half of Americans didn't get flu shots. Why should they now?

DiFerdinando: Because influenza can kill. In the United States more than 50,000 people died from influenza or pneumonia in the latest reporting year. The vaccine not only can prevent the flu, but also can lessen its impact if you do become ill. There are always stories of people saying "I got the vaccine and I still got the flu." As an expert, I always answer, "Yes, but you may have survived to tell me that story because you were vaccinated."

The data confirm that cases of flu are often milder in people who have been vaccinated. That's in addition to the roughly 60 percent of people who are protected completely. Even if you get the flu, you have less risk of dying, and vaccination can also mean the difference between being sick for just a few days and feeling the effects for weeks. If you're vaccinated, you're also helping to protect others, especially those in the highest risk groups such as children 5 and under, adults 65 and over,

pregnant women and people with underlying illnesses. Who wouldn't want to do that? Except for infants less than 6 months old, vaccination is recommended for everyone.

But why is vaccination necessary every year?

DiFerdinando: There are several influenza viruses and they mutate rapidly, so components of the vaccine need to be modified each year to keep up. Last year's vaccine is out of date, so this year you need the new one.

With many baby boomers now in their 60s, we are hearing more about shingles, a nerve condition that can be extremely painful. Is there a vaccine for that?

DiFerdinando: Since 2006, the answer has been yes. But figuring out exactly when to get it is tricky, and requires a good conversation with a health professional. Shingles is caused by the same virus that causes chickenpox in children – and you can only get it if you've had chickenpox. When the symptoms of chickenpox go away, the virus stays in the body and hides in nerve cells. In about one third of people who've had chickenpox, the virus can re-emerge later in life.

The shingles vaccine can only be taken once, and it loses its potency within about 10 years. It's approved for use starting at age 50, but most cases of shingles don't occur until people are in their 60s, so the CDC's advisory committee recommends that most people wait until then. But two other factors can change that calculation. People with conditions such as HIV/AIDS or certain cancers that compromise the immune system are at higher risk for shingles, and so are people with conditions like rheumatoid arthritis who take medications that suppress the immune system.

So unlike getting the flu vaccine, which is an automatic decision every year – yes, you should! – the timing of shingles vaccination requires some thought and consultation.

Is it true that while baby boomers need to worry about shingles, future generations may not?

DiFerdinando: Yes it is. Far fewer children get chickenpox since a chickenpox vaccine was introduced 19 years ago. While there are occasional reports of shingles in those who only have had the chickenpox vaccine, the incidence of such events is much, much lower than in those who had chickenpox disease. That's another important reason for children to receive the chickenpox vaccine.

Provided by Rutgers University