What's up with FluMist? [1]

Dear Alice,

I have heard numerous reports in the media where they make mention of the "live flu virus" in the flu vaccine, specifically "flu-mist." This is mentioned in conjunction with a warning to avoid contact with this and that (yadda, yadda) for a certain time period. This confuses me. I was under the impression that the flu vaccines contain dead viruses and that it was not possible to catch the flu from the vaccine. Which is it?

Answer

Dear Reader,

To clear the air ? you?re mostly correct; the majority of flu vaccines contain viruses which are already dead, so you can?t get the flu from them. Unlike these vaccines, FluMist, contains a live, albeit drastically weakened, virus. But this virus is so weakened that it's unlikely to cause the flu in the average healthy person. However, it may cause the flu in certain immunocompromised individuals, by reproducing and creating stronger live viruses in their bodies. Thus, if a person receives the FluMist vaccine and comes into close contact with a severely immunocompromised individual, that person could catch the flu virus. It?s for that reason why the reports you mentioned advise against going around certain areas or crowds after receiving the vaccine. However, as your interest centers on FluMist, it?s crucial to note that it's no longer recommended as a viable flu vaccine. As it turns out, many researchers have found that it has been largely ineffective at guarding all individuals against the influenza virus. As a result, the Center for Disease Control (CDC) no longer endorse FluMist, but highly recommend people receive other flu vaccines which have shown to be effective (more on those in a bit!).

As you may have noticed, a great deal of resources are poured into awareness efforts and health campaigns that encourage individuals to shield themselves against the influenza virus ? but why? As it turns out, influenza affects one in ten Americans each year. And if you?ve had it, you know it can be a dreadful experience! The typical flu can leave a person with a burning fever, congestion, fatigue, throbbing headache, sore muscles, and a scratchy sore throat. So, to avoid this experience, people are often inclined to seek available flu vaccines. This is particularly true of, and useful for, people who work or socialize in high-risk environments for catching and spreading the flu (e.g., schools, hospitals). In the past, people could choose from two options: a live attenuated influenza vaccine (LAIV a.k.a FluMist?), or an inactive influenza vaccine (IIV), a shot which has a completely dead virus. However, the CDC?s Advisory Committee on Immunization Practices
now advises against FluMist after discovering that it hadn’t been effective during the 2015 to 2016 flu season.

So, what caused FluMist to be rendered ineffective? Unfortunately, the answer remains unclear, but there’s speculation that it was due to a component that was later added into the vaccine. To understand what happened, it could be helpful to quickly compare it to existing successful vaccines. Many vaccines are trivalent, which protect against three flu viruses: two influenza A viruses (H1N1 and H3N2) and an influenza B virus. But, in 2013, a fourth component was added to FluMist with the intention of upgrading it to a quadrivalent vaccine (i.e., a vaccine which protects against four types of flu viruses). By adding this fourth component researchers were confident that FluMist would be as or more effective than the IIV flu shot. The anticipated increased protection, plus the ease of administration (a simple nasal spray versus an uncomfortable injection), led many to believe FluMist would rapidly become the more popular vaccine option. Instead, FluMist unexpectedly had a meager success rate of three percent amongst individuals 2 to 17 years old. To put this into perspective, the IIV flu shot garnered a 63 percent success rate for the same flu season. This led researchers to believe that the fourth component may have impained the vaccine. However, as this is only speculation, research is presently underway to understand, and ideally address, the issue with FluMist.

It’s imperative to emphasize that there are still other successful flu vaccines, primarily in the form of flu shots. While the effectiveness rates of all vaccines can vary depending on the person’s demographic factors (including their age and health status) and how closely the vaccine virus matches the year’s flu virus, the vaccine is still worth getting! To continually decrease the likelihood of getting the flu, receiving the new flu vaccines as they are released, typically in October of each year, is highly recommended (though it can be administered year-round). However, keep in mind that it takes roughly two weeks for the body to respond to the vaccine and create the necessary antibodies to fight the flu virus. Additionally, influenza tends to peak in January, so getting the vaccine before then will help provide immunity before peak season!

Hopefully this cleared up some of the mist enshrouding FluMist. As you can see, there are other options that you can explore when considering the flu vaccine. If you’re interested in further reading on flu vaccines, check out the CDC’s Advisory Committee for Immunization Practices (ACIP) [3]. Finally, if you still have questions about how to best vaccinate and protect yourself against flu this year, you can make an appointment with your health care provider to discuss your particular situation.

Kudos to you for asking questions about vaccines? calling the shots on your personal health is always in season!

Alice!
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