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 called the live attenuated influenza virus (LAIV). 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 person, they 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. While FluMist wasn’t recommended as a flu vaccine in previous seasons, the Centers for Disease Control and Prevention (CDC) currently recommend it, along with the inactivated (IIV) and recombinant influenza vaccine (RIC). Not one of the currently available flu vaccines are recommended over the other. It’s also key to note that the success of the vaccines change from year to year due to the continuous mutation of the flu strains. Doing research and asking questions in advance each year can help ensure you’re getting the vaccine that’s most appropriate for you and is expected to be most effective that year.

As you may have noticed, a great deal of resources are poured into awareness efforts and health campaigns that encourage people 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).

For many years, FluMist wasn't recommended as a viable vaccine. It had a low effectiveness rate, and the inactivated influenza vaccines (IIV) were more effective. However, it's expected to be more effective again due to changes in one of the strains. It's a quadrivalent vaccine and protects against two influenza A strains and two influenza B strains. The nasal spray is approved for those that are between the ages of 2 and 49 who aren't pregnant. It's not recommended for those that are pregnant, that have weakened immune systems, those allergic to eggs, those with asthma or other medical conditions, or those who recently had Guillain-Barre syndrome. Just like the flu shot, the nasal spray vaccine doesn't cause someone to get the flu. The virus is too weak and has been designed so that it won't replicate in warmer parts of the body, such as the lungs. Some people may experience side effects, with symptoms such as a runny nose, headache, wheezing, vomiting, fever, cough, and sore throat. However, these effects, if they appear at all, are usually short-lived and mild. If you have more severe reactions, such as an allergic reaction, seeking care from your medical provider is advised.

For those who may not be interested in the nasal spray, 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. If you’re interested in further reading on flu vaccines, check out the CDC’s Advisory Committee for Immunization Practices (ACIP) [2]. 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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