

Your Health

by Dr. Paul Roumeliotis

Influenza Vaccine: Protection From the Flu

Most people are aware of the flu (also known as influenza) and how dangerous it can be. This is why each year there is a large campaign to vaccinate against the flu. During the 2008 flu season, there have been reports about a flu vaccine “mismatch”. Many people think that this means that the flu vaccine is not useful. I would like to clarify what this means and reassure everyone that the flu vaccine is still effective, even if mismatched.

Every year, different strains of the flu virus arrive in North America. They are considered to be the cause of that particular year’s influenza cases. The challenge that experts have is to predict which strains will hit the following season so that a specific vaccine can be prepared in advance that will protect against the suspected strains. This is why a flu shot is needed every year. Last year’s flu vaccine will not protect against this year’s strains.

The virus contained in the flu vaccine is dead but looks like a real virus, so our body makes antibodies against this vaccine virus and is ready whenever the real living virus infects. In other words, our body is prepared by the vaccine to fight the virus as soon as it enters our system. These viruses, however, often change their appearance through a process called mutation. Mutation results in a virus that looks different as compared to its previous version. Because the virus cover or coat makes the virus look different, the antibodies against the original form may not be as effective against the new changed or mutated form. This is what vaccine mismatch means. The virus that is actually causing infection has changed from what was predicted. However, it does not completely change and there is still some protection from the vaccine even if there is mismatch. Even though the virus may cause infection in a vaccinated person, the infection will be milder than if that person were not vaccinated at all. So, in cases where at-risk people are involved, the vaccine can still reduce the severity and length of infection. Most importantly, the vaccine can still prevent flu-related hospitalization and even deaths.

It is a bit complicated, but I think the message is that partial protection against the flu virus from a mismatched vaccine is better than no protection at all. This is especially true for the elderly, young children and people with chronic illnesses.

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