- Vaccination

Why are flu-vaccinated people more resistant to COVID-19?

People who have been vaccinated against influenza contract COVID-19 less often and tend to have less severe cases. Is this because vaccinated people are more cautious, or are there medical reasons?

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Does a flu vaccination protect against COVID-19? And if so, why? These are the questions medical professionals are asking after a team of doctors led by Anna Conlon from the University of Michigan came to some startling conclusions in a recent study published in the American Journal of Infection Control.

The physicians had looked at patient data from 27,201 Michigan residents who had taken a COVID-19 test before July 15, 2020. Of those, 12,997 had previously been vaccinated against the flu.

The study found that the proportion of flu- vaccinated people who contracted the coro navirus was slightly lower than among those who had not been vaccinated: 4% instead of 4.9%. That may not look like much at first glance, but it means that people who'd had a flu shot had a 24% lower chance of con
tracting COVID-19.

In addition, the flu-vaccinated patients were also less likely to require hospitalization or ventilation for coronavirus infection, and their hospital stays were shorter on average.

However, there were no significant differences in mortality between the two comparison groups.

Does our innate immune defense have an influence?

The crucial question for the experts: Is there a medical and a microbiological explanation for these results? This could be, for example, the innate immune defense, which is possibly activated by the flu vaccination. The immune defense functions independently of specific learned antibody immunity, which primarily targets the characteristic spike protein when fighting COVID-19, thus rendering the virus harmless.

In contrast, the innate immune defense, which may be stimulated by vaccination, consists of a number of different elements that react to infections in general, not specific viruses.

This standing army of our immune defenses includes, for example, phagocytes and dendritic cells (cells that ingest harmful foreign particles), but also various cytokines (proteins that play a role in immune reactions and inflam
matory processes).

Some vaccinations are generally good for the immune defense, as can be seen in people vaccinated against measles, for example. Epidemiological studies showed years ago that vaccinated children still had a higher immunity to a variety of pathogens than non-vaccinated children, even a very long time after the vaccination took place.

Or is it just correlation?

It is also conceivable, however, that fewer people who had been vaccinated against the flu contracted COVID-19 simply because they were more cautious than non-vaccinated people. More people from highrisk groups, like seniors and people with preexisting conditions, typically get vaccinated against influenza than young and healthy people.

In the United States, for example, many seniors and retirees had already voluntarily isolated themselves early last year while others were still out in public.

However, there are two indications against such a correlation: Seniors typically show more severe courses of COVID-19, which was not the case with those who got flu shots in the Michigan study.

A non peer-reviewed preprint study from last year points more to an immunologic explanation: Among Dutch hospital workers who had received the influenza vaccination ahead of the the 2019/2020 flu season, COVID-19 occurred significantly less often than among those who had not been vaccinated.

And there were no seniors over 70 years of age in either of these groups. All of those studied were of working age and had a correspondingly high number of contact encounters.

Does that mean you should get a flu shot now?

The studies show that more research into the role of the innate immune system is necessary. And there is still some uncertainty about the studies' results. Protecting yourself against COVID-19 should not be the driving force behind getting a flu shot, but it's always recommended because influenza can also be life-threatening.

The best time to get the shot is usually in autumn, just before the new flu season.

More importantly, if you really want to strengthen your immune system, you should check your entire vaccination status with your doctor and devise a comprehensive vaccination plan.

Make sure you have all the recommended immunizations and boosters against the most dangerous diseases, including, but not limited to mumps, measles, rubella, tetanus, polio, diphtheria, pertussis, tuberculosis, smallpox, hepatitis A and B, shingles and, where applicable, tick-borne encephalitis and human papillomavirus.