

Flu shots play an important role in protecting against bird flu—but not for the reason you might think

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A current strain of highly pathogenic avian influenza, commonly known as bird flu, has become a global problem. The virus has affected [many](#)

[millions](#) of birds, some other [animal species](#), and a [small number of people](#).

Last week, the Australian government [issued a warning](#) to residents traveling to Europe, North America, South America and Asia about the risk of bird flu.

The alert, published on the [Smartraveller website](#), included advice to ensure your flu vaccine is up to date. If you are about to go traveling, this generally means if you've had a flu jab this year, although if it has been 3–6 months since your vaccine you should discuss this with your doctor.

But the seasonal flu vaccine we get each year doesn't actually prevent bird flu in humans. So why is it being recommended in this context?

Some bird flu background

Smartraveller notes [several strains](#) of bird flu are currently circulating.

The most concerning strain, called the [2.3.4.4b clade](#), emerged a few years ago from a type of [influenza A](#) (H5, or A/H5) that has been circulating for several decades.

Clade 2.3.4.4b primarily affects birds, including wild birds and poultry. It has had devastating effects on bird populations, as well as farmers and others involved in the poultry industry.

In recent years, clade 2.3.4.4b has adapted to [infect some mammals](#). Unfortunately, it seems to cause severe disease in [certain animals](#). Some marine mammals have been hit particularly hard, with mass mortality events [reported](#) in elephant seals and sea lions. In the United States, bird flu has also spread [among dairy cows](#).

Compared to the huge number of animal cases, there have been a relatively small number of [humans infected with bird flu](#). Since 2003, [878 cases](#) of A/H5N1 influenza have been reported in humans, with a small proportion of these reported since 2020 when [clade 2.3.4.4b first emerged](#). The reported cases have been people who have had close contact with infected animals. It does not appear to spread from person to person.

As such, the [risk to travelers is low](#). There are some situations where the risk may be greater, such as for people visiting live markets, or those who are traveling specifically to work with wildlife or animals in food production.

[Infections in humans](#) with H5 influenza can vary significantly in severity, from mild conjunctivitis up to fatal pneumonia. H5 influenza strains appear to be [sensitive to antivirals](#) (oseltamivir, also known as Tamiflu) and they are generally [recommended](#) as treatment for human infection, but it's [not clear](#) whether they reduce the risk of death in those with severe disease.

To date, one case of A/H5 influenza (not 2.3.4.4b) has been [reported in Australia](#), in a child who had recently returned from overseas.

While [clade 2.3.4.4b has been detected](#) in all continents [except Australia](#), other avian influenza strains (A/H7) [have been reported here](#) earlier this year.

Seasonal flu vaccines are not effective against bird flu

Seasonal influenza refers to the flu strains that circulate each year. Since the COVID pandemic, three different strains have circulated in various proportions—influenza A H1N1 (descended from the [2009 swine flu strain](#)), influenza A H3N2 (which has [circulated since 1968](#)) and an

influenza B strain. Interestingly, a second influenza B strain (the Yamagata lineage) [appears to have vanished](#) during the COVID pandemic.

Seasonal influenza vaccines contain up-to-date variants of these types (A/H1N1, A/H3N2 and B) that are recommended by the World Health Organization each year. They are [moderately effective](#), reducing the risk of hospitalization by about 40%–60%.

Influenza vaccines are quite specific in the protection that they provide. For seasonal vaccines, even the very small changes that occur in the virus from year to year are enough to allow them to "escape" vaccine-induced immunity. Therefore, seasonal flu vaccines [do not provide any protection](#) against A/H5 influenza.

Preventing a hybrid bird-human strain

The rationale for recommending travelers have a flu shot in the context of the current bird flu outbreak is that seasonal flu vaccines may help reduce the risk of simultaneous infection with both A/H5 and a seasonal influenza strain.

When this occurs, there is potential for a "recombination" of the genetic code from both viral strains. This could have the transmissibility of a seasonal human virus with the severity of an avian influenza virus. The 2009 swine flu strain [arose from the recombination](#) of several strains over years to become more transmissible in humans.

Obviously a more effective vaccine would include a H5 strain, to generate immune responses specific to the H5 flu strain. Vaccine manufacturers have [developed H5 vaccines](#) over the years, but to date [only Finland](#) has deployed a H5 vaccine in a small group of people who work closely with potentially infected animals.

Currently the [level of risk](#) posed by H5 to humans is not thought to be sufficient to require a specific vaccine program, as the potential benefits are small compared to the costs and the potential risks associated with any new [vaccine](#) program.

The value of a flu shot for travelers

Seasonal flu vaccines protect against influenza infection, and may also reduce the risk of simultaneous infection with human and [bird flu](#) strains. Bird flu aside, for most travelers who haven't received a flu shot this year, reducing the risk of illness disrupting travel plans should be enough of a reason to get one.

For those who have already received a flu shot this season, similar to COVID jabs, protection after vaccination appears to [wane over time](#). So if you're traveling to the [northern hemisphere](#) during the winter months, and it's been more than 3–6 months since you received a [flu vaccine](#), your doctor may recommend you have another.

Bird flu is only a small risk to most travelers, but people may want to take sensible precautions, such as avoiding close contact with birds at markets.

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