

Flu season started early in Australia—countries in the northern hemisphere took note

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Influenza is a seasonal virus that emerges and peaks in winter, so with evenings shortening in the UK, it's time to think about flu again.

Countries in the northern hemisphere closely monitor [flu trends](#) in Australia, because this helps predict how winter flu season might play out there. Flu viruses are monitored to keep track of what's circulating, the [age groups](#) most affected and how well the vaccines are working.

In 2020 and 2021, at the height of the COVID pandemic, flu rates [fell dramatically around the world](#). This is probably because of the unprecedented change in human behavior, with social distancing, hand hygiene, mask-wearing and travel restrictions. This changed in 2022, with Australia having an earlier-than-usual flu season, which peaked in June instead of August.

Based on their experience, countries in the northern hemisphere expected something similar. The 2022-23 flu season did indeed peak in the northern hemisphere in December 2022, [two months earlier](#) than the usual (pre-pandemic) peak of flu activity.

This year, Australia experienced a peak of flu at the end of June, about two weeks later than [last year](#). When flu season will peak in the northern hemisphere, though, is hard to predict, and can't be extrapolated from what happened in Australia. Human interactions and behavior, including how many people opt to have the flu jab, can influence how flu spreads.

The scale of the Australian flu season, so far, looks similar to last year though cases are declining slower. Indicators such as [hospital admission rates](#), admissions to intensive care units (ICU) and deaths are recognized markers of severity. Up to August 20 2023, the data looked similar to 2022. Among those hospitalized to date about [7% were admitted to an ICU](#).

The death toll so far is just under 0.1% compared with 0.14% in 2022. Based on these figures, flu severity appears low overall, but it's still too early to say for sure.

Australian surveillance reports also show that, similar to previous years, the highest number of cases are in children aged five to nine years, followed by younger and older children.

Among those hospitalized, those under 16 were the largest group (72%) based on reported data from key hospitals. This is concerning if this trend continues in 2023-24. However, it should be noted that the age distribution of hospital admissions in the Australian surveillance system may not reflect the age distribution of all flu admissions nationally.

Get vaccinated

The World Health Organization (WHO) recommends vaccination ahead of each flu season for certain groups, including [older adults, children and health care workers](#). The [vaccine](#) is safe and effective in preventing the flu and reducing hospitalization or life-threatening complications like pneumonia.

One difficulty, and the reason why virus tracking is important, is that vaccine components must be updated so they're well matched to the strains causing illness in a given year.

From surveillance data so far, [59% of Australia's circulating strains are type A and about 39% are type B](#). Influenza A viruses are further divided into subtypes based on two proteins on their surface: haemagglutinin (H) and neuraminidase (N). These proteins are recognized by the immune system and can trigger an immune response. Several H and N subtypes exist, but A(H1N1) and A(H3N2) are most commonly responsible for seasonal flu in humans.

Influenza B is divided by lineages, with two lineages usually circulating (B-Victoria and B-Yamagata).

Circulating [influenza viruses](#) change regularly because mutations in the virus genes happen over time. These make the H and N proteins highly variable, which may affect our immune response to the virus. These changes or "[antigenic drift](#)" are why new vaccines are needed each year.

For the body to make the right antibodies to protect people during the influenza season, the vaccines should contain H and N proteins (antigens) that match well to the circulating virus.

Preparing vaccines for the coming season

It takes several months to produce vaccines in the amounts needed for global distribution. That means the circulating strains are anticipated based on the previous season's trends. For countries in the [northern hemisphere](#), the WHO began consultations in February to recommend viruses for inclusion in flu vaccines for the 2023-24 flu season.

Tracking the effectiveness of vaccines during flu seasons can tell if recommendations for a given region were correct. Vaccine effectiveness turned out to be quite low (15%) [in 2017-18](#), and this resulted in a flu season with higher than usual levels of infection.

While it's still too early to assess vaccine match and effectiveness, in Australia of the 2,678 flu virus samples sent to the WHO to date, 98% of influenza A(H1N1) isolates (samples taken from one person), 84% of influenza A(H3N2) isolates and 99% of influenza B/Victoria isolates [had similar antigens to the corresponding vaccine components](#)

Apart from vaccination, good habits and respiratory etiquette—learned during the COVID pandemic—can help us to avoid the flu and other respiratory illnesses. These include actions like covering coughs and sneezes, regularly washing hands and avoiding people who have symptoms.

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