

Influenza for high-risk and special groups

Everyone from the age of 6 months is recommended to receive an annual influenza vaccine to reduce the spread of the virus, and for direct protection against severe illness.

Some individuals are at increased risk of complications from influenza and may be eligible to receive a funded influenza vaccine. Vaccinators are advised to regularly check the Pharmaceutical Schedule and any online updates for changes to funding decisions for special groups.

It has recently been recognised that acute influenza illness can lead to ongoing health issues. In the year following acute influenza hospitalisation, people require more health care and have increased adverse health outcomes.¹

Severe acute respiratory hospitalisations in 2025

Of those hospitalised for severe acute respiratory illness (SARI) in Auckland during 2025, influenza-associated hospitalisation rates were higher in young children (0–4 years) and the elderly (≥65 years) than other age groups. Influenza hospitalisation was also higher in Pacific, Māori, and Middle Eastern, Latin Americana and African ethnic groups than European, Asian and other ethnic groups. Influenza can lead to serious complications, such as heart or lung conditions, particularly within these high-risk groups.²

High-risk groups

Those at risk of severe disease from influenza:

- older people
- pregnant women
- people with underlying medical conditions
- infants and children under 5 years
- Māori and Pacific ethnicities
- people with Down syndrome (trisomy 21)
- people with chronic conditions, such as heart or lung disease, diabetes or chronic renal disease
- people who are immunocompromised
- people who smoke

People with the following medical conditions have a higher risk of severe influenza:

- immunocompromising conditions, such as HIV, malignancy, functional or anatomical asplenia
- receiving immunosuppressive or oncology therapy
- received a haematopoietic stem cell, solid organ transplant or CAR-T therapy
- have cardiovascular disease, such as ischaemic heart disease, congestive heart failure, cerebrovascular disease or atherosclerosis
- diabetes
- obesity
- chronic respiratory conditions
- chronic liver disease

- chronic renal disease
- other chronic illnesses that need medical follow-up or hospitalisation

Some, but not all, of these high-risk groups are eligible to receive a funded influenza vaccine. **Vaccinators are advised to regularly check the Pharmaceutical Schedule and any online updates for changes to funding decisions for special groups.**

Cardiac disease - funded*

**Funded for: ischaemic heart disease, or congestive heart failure, or rheumatic heart disease, or congenital heart disease, or cerebro-vascular disease.*

People with heart disease have a higher risk of infection when exposed to a respiratory virus and a higher risk of severe outcomes, including hospitalisation and death. Studies have shown that vaccines are highly effective in reducing these risks. In addition, influenza vaccination has been shown to reduce the risk of major adverse cardiovascular events.

Infections such as influenza can affect cardiovascular health in a number of ways – they can increase myocardial oxygen consumption and predispose to ischaemic events in predisposed people, stimulate inflammatory pathways potentially triggering plaque rupture, and potentially suppress cardiac function and thus exacerbate heart failure. Influenza may directly infect coronary endothelial cells and smooth muscle cells.³

In a meta-analysis of over 9000 individuals, influenza was associated with a 5.4% risk of death in patients with history of acute coronary syndromes (ACS), while vaccine against influenza was associated with a lower risk of death by 45%.⁴

A study found that administering influenza vaccine shortly after a heart attack, or in patients with a high-risk coronary heart disease, led to a lower risk of a combined outcome of death, heart attack or stent thrombosis at 12 months, along with reduced risks of all-cause death and cardiovascular death compared to a placebo.⁵

Down Syndrome – funded

People with trisomy 21 are particularly susceptible to influenza infection and have considerably increased risk of hospitalisation and death from influenza.

Obesity – not funded*

*Check for funded co-morbidities

Obesity increases the risk from respiratory infections and reduces vaccine efficacy due to immune dysfunction and proinflammatory immune responses and response to vaccines.⁷ Many countries recommend influenza vaccination for those with BMI ≥ 40 kg/m². While it is not funded for this group in New Zealand, many in this group will have other health problems such as diabetes and heart disease which will make them eligible for funded influenza vaccine.

Chronic respiratory conditions – funded*

*Funded for: asthma, if on a regular preventative therapy, or other chronic respiratory disease with impaired lung function

Influenza viruses are known to be associated with acute exacerbations of chronic lung diseases in both adults and children. Even when chronic respiratory infections are well managed, influenza may lead to worsening symptoms and progressive loss of function. Influenza vaccinations have been shown to reduce exacerbations in those with COPD.⁸

Chronic kidney/renal disease – funded

People living with chronic kidney/renal disease (CKD) are at increased risk of contracting influenza and developing more severe complications. Their immune system is compromised and outcomes after hospitalisation for infection are 3-4 times worse in people with CKD than in those without the condition.⁹ Additionally, many patients with CKD have co-morbidities such as diabetes or heart disease that further increase the risk for influenza associated complications. Although immune responses may be reduced, annual influenza vaccination is recommended and funded. Studies have shown

benefits including: reduced influenza complications, hospitalisations for influenza, pneumonia and kidney-related complications and deaths.¹⁰ Also, by preventing influenza infection, vaccination may potentially slow the progression of chronic renal disease.¹¹

Chronic liver disease – not funded

People with chronic liver disease, especially cirrhosis, have increased risks of complications with influenza infection including the risk of liver decompensation or failure. Vaccinated patients with liver disease are less likely to be hospitalised than those who are unvaccinated.^{12,13} While influenza vaccine is not funded for this group, it is recommended.

Diabetes – funded

Patients with diabetes mellitus are at increased risk of complications following influenza infection. One study found that people with diabetes had a 5.6-fold higher rate of influenza related events than people without diabetes.¹⁴

A systematic review and meta-analysis showed that among people with diabetes aged 18 to 64 years, influenza vaccination reduced all cause hospitalisation by 58% and hospitalisation due to influenza or pneumonia by 43%.¹⁵

Immunocompromised – funded

Individuals who are immunocompromised are at high risk of severe influenza and complications and should receive the influenza vaccine. It is important to offer vaccination prior to the initiation of chemotherapy or immune suppressant medication. When this is not possible, influenza vaccination is recommended and can be given while an individual is receiving most treatments. **See Table 1 below for specific timing recommendations for immunocompromised groups.** Household members and close contacts should also receive seasonal influenza vaccine to reduce transmission risk (not funded).

Table 1: Specific timing recommendations for immunocompromised adults**

Indication	Optimal timing	Schedule
Haematologic malignancy	≥ 2 weeks before starting treatment and ≥ 3 months after the last infusion. For B cell depletion, consider $\geq 3-6$ months after last infusion but can be given earlier, although blunted immune response is possible.	Administer one dose annually.
Solid tumour chemotherapy	≥ 2 weeks before starting therapy, but can be given at any time during or after a chemotherapy cycle.	Administer one dose annually.
Immunosuppressive medications	≥ 2 weeks before starting treatment, or ≥ 3 months after last treatment. For B-cell depletion, consider 3-6 months after last infusion. Earlier administration is reasonable in season, acknowledging that while the response may be blunted, some response is better than none.	Administer one dose annually.
Solid organ transplant	≥ 2 weeks or more before transplant, or at least 1 month post-transplant - avoiding periods of pulse immunosuppression and active rejection.	Administer two doses 4 weeks apart in the first-year post-transplant (second dose requires a prescription). In subsequent years, only one dose is required annually.
HSCT or CAR-T	≥ 3 months post-HSCT/CAR-T.	Administer two doses 4 weeks apart in the first year post-HSCT (second dose requires a prescription). In subsequent years, only one dose is required annually.

** Patients in these groups who are 50 years of age and over should be offered the option to purchase adjuvanted influenza vaccine.