

# Adult vaccination

This fact sheet gives an overview of the vaccines provided for Australian adults under the National Immunisation Program and those recommended in the [Australian Immunisation Handbook](#).

## Overview

- More vaccines are becoming available and recommended in the Australian Immunisation Handbook for use during adulthood.
- Adults may be recommended to receive certain vaccinations if they are at increased risk of disease due to factors such as age, occupation, personal behaviours or medical conditions. Some recommended vaccines are funded through the National Immunisation Program (NIP), state and territory programs or through the workplace for certain groups, while other vaccines can be purchased privately by prescription.
- Immunisation providers play an important role in promoting vaccination during adulthood and should seize every opportunity to identify and offer vaccination to eligible individuals.
- Currently, seasonal influenza, pneumococcal and zoster (shingles) vaccines are funded for eligible adults under the NIP.
- Zoster vaccine was introduced to the NIP in November 2016 for adults aged 70 years, with a catch-up program for those aged 71–79 years funded until October 2021. As it is a live attenuated vaccine, zoster vaccine is generally contraindicated in people who are immunocompromised.
- Influenza and pertussis vaccines are recommended for pregnant women.
- It is important that Aboriginal and Torres Strait Islander status is noted during consultation as the indications and eligibility for NIP-funded vaccines for Aboriginal and Torres Strait Islander people are different from those for non-Indigenous people.

## Recording and reporting

- The Australian Immunisation Register (AIR) aims to capture all NIP-funded and most privately purchased vaccines given to Australians of all ages. There is a separate register for Q fever vaccination.
- Adverse events following immunisation should be reported to the Therapeutic Goods Administration via the established mechanism in each state or territory. AusVaxSafety, a sentinel surveillance system, also actively monitors the safety of vaccines using SMS-feedback from recently vaccinated children and adults.

## What vaccines are recommended for adults?

### Influenza

Yearly seasonal influenza vaccinations are recommended for any person  $\geq 6$  months of age who would like to be protected against influenza.

Among adults, influenza vaccination is funded under the NIP for:

- older adults ( $\geq 65$  years of age)
- pregnant women

- people with certain medical conditions that increase their risk to severe influenza
- Aboriginal and Torres Strait Islander people ≥6 months of age, regardless of medical risk factors.

Details of the current national seasonal influenza vaccination program are available on the [Australian Government Department of Health website](#).

Refer also to the NCIRS fact sheets [Influenza vaccines for Australians](#) and [Influenza – frequently asked questions](#).

## Pneumococcal disease

Two types of pneumococcal vaccine are available in Australia: a 13-valent pneumococcal conjugate vaccine (13vPCV) and a 23-valent pneumococcal polysaccharide vaccine (23vPPV).

Aboriginal and Torres Strait Islander adults aged ≥50 years are recommended to receive a single dose of 13vPCV followed by 2 doses of 23vPPV, 5 years apart (refer to [NCIRS Pneumococcal vaccines for Australians fact sheet](#) and the [Australian Immunisation Handbook](#) for details). All pneumococcal vaccine doses for Aboriginal and Torres Strait Islander adults are funded under the NIP.

All adults with risk conditions for pneumococcal disease (refer to the [Australian Immunisation Handbook](#) for the list of risk conditions), regardless of their age, are recommended to receive a single dose of 13vPCV followed by a maximum of 2 lifetime doses of 23vPPV. Adult haematopoietic stem cell transplant (HSCT) recipients are recommended to receive 3 doses of 13vPCV followed by 2 doses of 23vPPV. Refer to the [Australian Immunisation Handbook](#) for information on risk groups that are eligible for NIP-funded pneumococcal vaccines.

Non-Indigenous adults who are healthy (i.e. without any risk condition for pneumococcal disease – refer to the [Australian Immunisation Handbook](#)) are recommended to receive a single dose of 13vPCV at age ≥70 years. This dose is funded under the NIP. These adults should not receive any further doses of pneumococcal vaccine if they remain healthy.

## Zoster

A single dose of the live attenuated zoster vaccine (Zostavax<sup>®</sup>) is recommended for all adults aged ≥60 years who have not previously received a dose. This is because of the high disease burden<sup>1</sup> of herpes zoster and post-herpetic neuralgia, and demonstrated vaccine efficacy,<sup>2</sup> in this age group.

The zoster vaccine is funded under the NIP for adults aged 70 years, with catch-up for those aged 71–79 years also funded until October 2021.

Zoster vaccine is generally contraindicated in people who are immunocompromised. The benefits and risks of vaccination should be considered on a case-by-case basis.

The exact duration of vaccine efficacy is not known; however, protection following a single vaccine dose wanes with time. The need for revaccination has not yet been determined.

Zostavax<sup>®</sup> can be given at the same time as influenza and pneumococcal vaccines using separate syringes and injection sites.

Zoster and varicella vaccines cannot be used interchangeably. Zoster vaccine contains approximately 14 times the concentration of live attenuated varicella-zoster virus that is in the varicella (chickenpox) vaccine.

Refer also to NCIRS fact sheets on [Zoster vaccine for Australian adults](#) and [Zoster vaccine – frequently asked questions](#).

## Diphtheria, tetanus and pertussis (dT/dTpa)

Diphtheria and tetanus vaccinations can be given as either diphtheria-tetanus (dT) formulation or, preferably, the adult formulation of the diphtheria-tetanus-acellular pertussis vaccine, dTpa (Boostrix<sup>®</sup> or Adacel<sup>®</sup>), which also provides immunity against pertussis.

A booster dose of a **tetanus-containing** vaccine is recommended, though not funded under the NIP, for adults:

- ≥50 years of age who have not received a tetanus-containing vaccine in the previous 10 years (but have previously completed a primary course)
- with tetanus-prone wounds if more than 5 years has elapsed since a previous dose (tetanus immunoglobulin may also be required as outlined in the [Australian Immunisation Handbook](#)).

A single booster dose of a **pertussis-containing** vaccine is recommended for adults:

- ≥65 years of age who have not received a dose in the previous 10 years
- in close contact with infants <6 months of age, if more than 10 years has elapsed since the previous dose.

While some adults would have received multiple dT-containing vaccines in their lifetime, others may have not received any since childhood. Multiple vaccinations with dT-containing vaccines can result in local reactions at the site of injection but are generally safe.

Refer also to the NCIRS fact sheet on [Pertussis vaccines for Australians](#).

## Measles, mumps and rubella (MMR)

For greatest protection against measles, mumps and rubella, adults who were born after 1966 should have received two doses of MMR vaccine as they may lack natural immunity to measles, mumps and rubella. Refer to [NCIRS Measles vaccination catch-up guidelines for Australian immunisation providers](#).

Some adults may not be immune or may be only partially immune to measles, mumps and rubella because they were not immunised in the Australian Measles Control Campaign in the late 1990s and the subsequent Young Adults MMR program in 2001.<sup>3,4</sup>

It is important to check the measles, mumps and rubella vaccination status of adults, especially women of child-bearing age (see [During and after pregnancy](#)).

Some states and territories fund MMR vaccine for adults.

## Specific vaccination recommendations for special risk groups

### During and after pregnancy

Except for pertussis and inactivated influenza vaccines, vaccination during pregnancy is not routinely recommended in Australia. Live viral vaccines, such as MMR and varicella, are contraindicated during pregnancy.

If a woman is planning pregnancy, it is advisable to review her vaccination history, in particular for hepatitis B, rubella and varicella. Immunity to rubella (and to varicella, if the woman has no clear history of vaccination or disease) should be established via serological screening before pregnancy, as outlined in the [Australian Immunisation Handbook](#).

### Pertussis

- Pregnant women are strongly recommended to receive a single dose of pertussis vaccine between mid-second trimester and early third trimester (between 20 and 32 weeks gestation)

of each pregnancy. This provides protection to the newborn in the first months of life due to the transfer of antibodies against pertussis in utero.

- Pertussis vaccination for pregnant women is funded under the NIP.
- If a pregnant woman does not receive pertussis-containing vaccine while pregnant, a dose should be given as soon as possible after birth to reduce the likelihood of passing pertussis to the newborn while they are most vulnerable.
- Any adult household contacts and carers (e.g. fathers, grandparents) of infants <6 months of age should receive a dTpa vaccine at least 2 weeks before beginning close contact with the infant, if more than 10 years has elapsed since a previous dose.

Refer also to the NCIRS fact sheet on [Vaccinations during pregnancy](#).

## Influenza

- Seasonal influenza vaccination is funded under the NIP for pregnant women and can be given at any stage during pregnancy. It is particularly important for women who will be in their second or third trimester during the influenza season to receive influenza vaccination.
- Influenza vaccines have a good safety profile in pregnant women and have been demonstrated to prevent influenza complications in the women themselves and in their infants.<sup>5-7</sup>

Refer also to the NCIRS fact sheet on [Vaccinations during pregnancy](#).

## Aboriginal and Torres Strait Islander people

Because of the higher rates of influenza and invasive pneumococcal disease in Aboriginal and Torres Strait Islander adults than in non-Indigenous adults, the eligibility criteria for NIP-funded vaccinations against these diseases differ for Aboriginal and Torres Strait Islander adults (refer to [Influenza and Pneumococcal disease](#) above). Every effort should be made to identify Aboriginal and Torres Strait Islander people in all immunisation clinic and primary care settings to ensure appropriate vaccines are given at the correct age.

## At-risk medical conditions

Pre-existing chronic diseases or comorbid conditions can increase a person's risk of acquiring some vaccine-preventable diseases and developing serious complications of these diseases.

- Influenza vaccination is recommended for people with certain underlying medical conditions that increase their risk of serious influenza disease and complications, including, but not restricted to, chronic respiratory conditions, cardiac disease, neurological conditions, obesity (BMI  $\geq 40$ ), chronic liver disease and diabetes mellitus, as outlined in the [Australian Immunisation Handbook](#).
- People with specific medical conditions should also receive pneumococcal, hepatitis A, hepatitis B, human papillomavirus (HPV) and meningococcal vaccination, described in more detail in the [Australian Immunisation Handbook](#).
- Certain vaccinations are recommended for immunocompromised adults, including (but not limited to):
  - oncology patients
  - solid organ and bone marrow transplant recipients
  - haematopoietic stem cell transplant recipients
  - HIV-infected people
  - people with functional or anatomical asplenia
  - people with auto-immune diseases and other chronic conditions.
- Live vaccines, including MMR, varicella, zoster, yellow fever and BCG vaccines, are generally (but with exceptions – see the [Australian Immunisation Handbook](#)) contraindicated in adult

patients who are immunocompromised. In some instances, vaccination of household contacts is recommended to prevent transmission to the vulnerable individual.

Immunisation of adults who are immunocompromised can be complex and may involve alternative schedules to those recommended for immunocompetent adults. Vaccination is best considered in consultation with the patient's specialist healthcare provider or an immunisation expert.

If immunity following vaccination is uncertain, serological testing of antibody levels may be useful in some circumstances. For detailed information on vaccinating immunocompromised adults, refer to the [Australian Immunisation Handbook](#).

## At-risk personal behaviours

Some personal behaviours such as sexual practices, drug use and smoking are indications for certain vaccinations.

- Hepatitis A and hepatitis B vaccines are recommended for men who have sex with men (MSM) and people who inject drugs.
- HPV vaccination should be considered for MSM who have not previously been vaccinated, after taking into account their likelihood of previous exposure to HPV and their future risk of HPV exposure.
- People who smoke tobacco have an increased risk of IPD and vaccination with 23vPPV is recommended.
- Meningococcal vaccines against serogroup B (Bexsero<sup>®</sup>) and serogroups A, C, W and Y (Menactra<sup>®</sup>, Menveo<sup>®</sup> or Nimenrix<sup>®</sup>) are recommended for young adults living in high-risk settings (such as new military recruits and students living in residential accommodation), prior to or as soon as possible after entry.

## At-risk occupations

People in certain occupations are at greater risk of acquiring and/or transmitting a vaccine-preventable disease than the general population. These include:

- healthcare workers, including trainees and students
- those who care for children
- carers of people with intellectual disabilities or the elderly
- students in healthcare-related fields
- laboratory personnel
- those who work with or are in contact with animals
- anyone exposed to human tissue, blood, body fluids or sewage
- emergency and essential service workers.

Healthcare workers are a priority group for whom a number of vaccinations, including pertussis, MMR, varicella, hepatitis B and influenza, could be relevant, because of their personal risk of acquiring vaccine-preventable diseases from patients. Vaccination of healthcare workers also reduces the likelihood of them transmitting some of these infections to their patients, who are often vulnerable to serious complications following infection.

For more details, refer to the [Australian Immunisation Handbook](#).

## Travel

Travel is an important time to ensure that patients are up to date with standard vaccinations recommended for their age, including dT, MMR, polio and influenza. These diseases can be imported to Australia by travellers who are not immune, leading to disease outbreaks as observed with measles in recent years.<sup>8,9</sup>

Travel vaccination requirements depend on the travel destination, likely risks of exposure to vaccine-preventable diseases and the individual's medical and vaccination history. In some instances, documentation of vaccinations (e.g. against yellow fever) may be required under International Health Regulations. It is recommended that patients are referred to specialist travel health clinics or GPs with extensive experience in this area.

Refer to the [Vaccination for international travellers chapter in the Australian Immunisation Handbook](#) for more details.

## Migrants to Australia

In many instances, adult migrants entering Australia do not have adequate immunity against one or more diseases for which vaccination is recommended in Australia. This may include hepatitis B, tetanus, diphtheria, polio and measles,<sup>10</sup> and catch-up schedules may be required.<sup>11</sup>

- Developing catch-up programs for migrants can be complex; advice can be found in the [Australian Immunisation Handbook](#) or by contacting the relevant state or territory health department.
- If no valid documentation of vaccination exists, a standard catch-up schedule should be commenced.
- If documentation is provided, it is important to check that the intervals between doses are appropriate.
- Serological testing is not routinely recommended but may be appropriate for hepatitis B and rubella.
- It is important to provide hand-held documentation of any vaccinations given and dates of future vaccinations.

Refugees and other humanitarian entrants are eligible for free catch-up vaccines on an ongoing basis through the NIP.<sup>12</sup>

## How are adult vaccinations recorded?

A 'whole-of-life' Australian Immunisation Register (AIR) was introduced to replace the Australian Childhood Immunisation Register (ACIR) in September 2016. AIR aims to capture all NIP-funded and most privately purchased vaccines, given to people of all ages.

There is a separate register for Q fever vaccination - The Australian Q Fever Register can assist in determining an individual's immunity to Q fever ([www.qfever.org](http://www.qfever.org)).

## How are adverse events following immunisation in adults reported?

Immunisation providers in all states and territories, except Tasmania, should report any significant or unexpected adverse event following immunisation (AEFI) directly to the relevant health authority in their state or territory, which will then forward the details of the notified adverse event to the Therapeutic Goods Administration (TGA). Direct reporting to the TGA is also accepted. Providers in Tasmania should report directly to the TGA using the '[Blue card](#)' form.

Advice on how to best manage patients who have experienced an AEFI can be obtained from state and territory health departments and/or designated clinics that are part of the AEFI–Clinical Assessment Network.

## Active surveillance of vaccine safety

AusVaxSafety is a sentinel surveillance system that actively monitors the safety of in Australia. In the days following vaccination, responses are solicited via an automated SMS or email sent using AusVaxSafety surveillance tools (SmartVax or Vaxtracker), which have been implemented in more than 300 sentinel sites across Australia, including general practices, hospitals, schools, community clinics and Aboriginal Medical Services.

Access [vaccine safety data on the AusVaxSafety website](#).

## Additional resources for immunisation providers

- [Australian Immunisation Handbook](#)
- [NCIRS fact sheets and FAQs](#)
- [Australian Government Department of Health](#) website [National Immunisation Program Schedule](#)
- [ACT Health](#)
- [NSW Health](#)
- [Northern Territory Department of Health](#)
- [Queensland Health](#)
- [SA Health](#)
- [Tasmania Department of Health and Human Services](#)
- [Victoria Health](#)
- [WA Health](#)
- [AusVaxSafety](#)

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