

# Immunisation

## Frequently asked questions

### Who is recommended to have the meningococcal vaccines and what types are available?

From 1 July 2018, a single dose of quadrivalent meningococcal (MenACWY) conjugate vaccine (Nimenrix®) is available for free under the National Immunisation Program (NIP) to be given at 12 months of age. This vaccine protects against meningococcal disease caused by serogroups A, C, W and Y. This dose of MenACWY vaccine replaces the combined Haemophilus influenzae type b–meningococcal C conjugate (Hib-MenC) vaccine (Menitorix®) given at 12 months of age.

WA also provides an ongoing Meningococcal ACYW catch up program from 13 months to 4 years of age, funded until December the 31<sup>st</sup> 2019. For Aboriginal and Torres Strait Islander (ATSI) children, in recognition of the greatly increased risk in this population, the Meningococcal ACYW vaccine is funded and available from 6 weeks of age till less than 5 years and 15-19 year old ATSI in Western Australia, see the [WA health website](#). Most state-based immunisation programs also provide Meningococcal ACYW vaccine free for school aged children in Year 10 including (Vic, ACT, NSW, QLD, WA). In addition South Australia are commencing a state based Meningococcal B vaccination program in Oct 1<sup>st</sup> 2018 for children aged 6 weeks to 4 years see [SA health website](#) for more details.

See the [National immunisation program website](#) for further information, which includes information on individual state and territory immunisation schedules, which may vary slightly.

Meningococcal vaccines can be purchased privately (if not eligible under the national immunisation program), discuss with your local GP immunisation provider. See the [National Centre for Immunisation and Research Surveillance Meningococcal vaccines fact sheet](#) for further information.

Specific high-risk groups that are recommended for meningococcal (Men ACYW and Men B) vaccines include: all children aged from 6 weeks to less than 2 years of age, adolescents 15-19 years, Aboriginal and Torres Strait Islanders 2 months to 19 years of age, people with specific medical conditions at increased risk, laboratory personnel, adolescents in close living conditions or those who are smokers aged 15-24 years.

Influenza is a risk factor for Meningococcal disease and is also a vaccine preventable disease. The flu vaccine is available freely on state-based immunisation schedules (except the Northern territory) for children aged >6 months to 5 years and for those medically at risk.

## What immunisations do you suggest parents consider paying for that are not part of the immunisation schedule currently?

Immunisations freely available on the [National immunisation program](#) are a priority and on-time immunisation is an important and effective way to protect your family against vaccine preventable diseases. This includes the influenza vaccine (the most common vaccine preventable disease in the developed world) which is available freely on state-based immunisation schedules (except the Northern Territory) for children aged 6 months to 5 years and for those medically at risk.

In addition, children now have access nationally to the Meningococcal ACYW vaccine, which is freely available on the schedule at 12 months of age. WA also provides an ongoing Meningococcal ACYW catch up program from 13 months to 4 years of age, funded until December the 31<sup>st</sup> 2019. Most state-based immunisation programs also provide Meningococcal ACYW vaccine free for school aged children around Year 10 including (Vic, ACT, NSW, QLD, WA). In addition, South Australia are commencing a state based Meningococcal B vaccination program in Oct 1<sup>st</sup> 2018 for children aged 6 weeks to 4 years see [SA health website](#) for more details.

Parents may wish to still consider some additional vaccines through private purchase, such as the [meningococcal vaccines](#) or some travel vaccines if they are travelling to high-risk countries, discuss with your local GP immunisation provider for further specific advice.

## What immunisations should women have who are pregnant or considering pregnancy?

For more information on vaccination for women who are planning pregnancy, pregnant or breastfeeding – See the Department of Health information sheet, [here](#).

## How effective is the whooping cough (pertussis) vaccine in pregnancy?

The most effective way to protect a newborn in the first months of life (who is too young to have the first whooping cough vaccine, which can be given from 6 weeks of age) is through maternal immunisation during pregnancy; ideally between 28-32 weeks gestation.

Large studies from the UK and the United States shows that infants whose mothers received the whooping cough vaccine during the third trimester of pregnancy prevented 78% - 85% of pertussis cases in infants younger than 2 months of age. Maternal vaccination is also 90% effective at preventing infant hospitalization from pertussis and demonstrated that **no infants** born to vaccinated mothers required intubation (assistance with breathing in an intensive care unit) or died of whooping cough.

## How can I protect my family from whooping cough (pertussis) and how contagious is it?

A safe and effective way to reduce your risk of infection against whooping cough is through immunisation, freely available on the National Immunisation Program (NIP) for children at 2, 4, 6, 18 months and 4 years of age. An adolescent booster dose is also recommended via school-based programs at 12–17 years of age (the age of delivery for school-based immunisation programs varies by state and territory). Vaccination of



pregnant women is recommended to protect the mother and baby through the first months of life, during the third trimester of each pregnancy and is free under state and territory initiatives. Adult household contacts and carers (e.g. fathers and grandparents) of infants aged less than 6 months should ideally receive

a whooping cough booster vaccine at least 2 weeks before beginning close contact with the infant. A booster dose of whooping cough vaccine is recommended every ten years. For further information see the NCIRS [Pertussis fact sheet](#).

People living in the same household as someone with whooping cough are at the highest risk of catching whooping cough. It is spread to other people by droplets from coughing or sneezing. Untreated, a person with pertussis can spread it to other people for up to three weeks after the onset of cough.

The Australian national public health recommendations consider individuals at high-risk of exposure are those with face-to-face exposure (within 1 metre) to an infectious case. There is no evidence-based recommendation for the minimum duration of time that is considered high-risk, but a single period of at least one hour has been formed, based on expert opinion.

## **What immunisations are recommended for healthcare workers and what about serology testing as a measure of immunity?**

The national [Australian guidance for health care workers](#) recommends all adults born during or since 1966 should have evidence of **either** receiving 2 doses of MMR vaccine **OR** having serological immunity to measles, mumps and rubella. Measuring antibody levels by commercial assays are not a perfect correlate of protection in vaccinated people.

In addition, all healthcare workers are recommended to have documented evidence of 2 doses of varicella-containing vaccine, **OR** a history of varicella infection, **OR** serological evidence of immunity to varicella. Testing for seroconversion after varicella vaccine is not routinely recommended because immunity may not be detectable using currently available serological blood tests.

All healthcare workers should also receive a dose of a pertussis vaccine (dTpa), a booster dose is recommended every 10 years. Immunisations should also be complete for hepatitis B, annual influenza and consideration for hepatitis A and BCG, depending on location of practice and exposure risk.

## **Does someone need all of the doses of a particular vaccination before it is effective, or does some protection begin with the first dose of a vaccination and increase with each subsequent dose?**

The immune response to a vaccine and the need for further vaccines depends on a number of factors including 1) the age of the person 2) the vaccine in question (including if it is a live vaccine or not) 3) whether the person has any underlying health conditions that results in immunosuppression 4) and time since vaccination. In general a degree of immune protection may be provided two weeks after receiving the first vaccination and further doses are recommended to a) optimise immune protection and b) provide longer lasting immune protection and boost the immune memory cells – as immune protection



can wane overtime. Children and adults should follow the national immunisation scheduled recommendations on timing and number of immunisations to ensure they have optimised protection from vaccinations received.

Examples include the *Haemophilus influenzae B* vaccine that has 55% vaccine effectiveness after one dose, yet this is increased to over 90% after further doses. The childhood tetanus immunisation schedule induces protective levels throughout childhood and into adulthood. But, by middle age, approximately 50% of vaccinated people have low or undetectable levels of antitoxin and therefore adults aged  $\geq 50$  years are recommended to receive a booster dose of tetanus-containing vaccine if their last dose was more than 10 years ago.

### How is vaccine safety surveillance performed in Australia?

In Australia, monitoring of adverse events following immunisation (AEFI) is done by national surveillance through public health departments and the Therapeutic Goods Administration. Reports of adverse events can be made by immunisation providers, parents, the community, pharmaceutical companies or other parties. The vast majority of reported events are non-serious in nature and overall, in Australia, injection-site reaction, fever and rash are the most commonly reported reactions. Further information including reports on adverse events following immunisation made available to the public can be found at <http://www.ncirs.edu.au/vaccine-safety/adverse-events/> and <http://www.ncirs.edu.au/vaccine-safety/ausvaxsafety/> and further discussion can be found here: <https://www.science.org.au/learning/general-audience/science-booklets/science-immunisation/4-are-vaccines-safe>.

### What are the side effects of vaccines?

Vaccines, like other medicines, can have side effects. However, vaccines in use in Australia provide benefits that greatly outweigh their risks. The vast majority of side effects that follow vaccination are minor and short-lived. The most common side effects for all vaccine types are 'local' reactions at the injection site, such as redness or swelling, which occur within hours and are clearly caused by the vaccine. See the information sheet on [common adverse events following immunisation sheet for further information](#). Potentially serious side effects, such as transient febrile seizures, have rarely been reported after vaccination, however, these occur much less often with the vaccine than they would if a person caught the disease itself. See the information sheet comparing [side effects of the vaccine compared to side effects of the disease](#).

### What proportion of children are immunised in Australia?

Immunisation provides a safe and effective way to prevent the spread of many diseases that cause hospitalisation, serious ongoing health conditions and sometimes death. Australia has an internationally recognised National Immunisation Program, with childhood vaccination rates for one year olds nationally at 94.1% and immunisation coverage for 5 years olds at 94.2%. This high rate of immunisation helps to maintain community immunity, especially for those who are too young to be immunised or those that are not able to be immunised for medical reasons.



## Can any vaccines on the national immunisation schedule be given earlier?

The national immunisation schedule is designed to optimise protection received from immunisations according to age and other risk factors. Immunisations that can be done earlier are the 2-month immunisations that can be safely given from 6 weeks of age. Other immunisations on the schedule are generally not recommended to be given earlier as they are not accepted on the Australian Immunisation Registry and may impact on the recording of the vaccines and child care benefits.

## What are some good resources for healthcare providers and the public to address vaccine hesitancy?

There are several recommended websites that provide useful information to healthcare providers and the public to assist with answering questions that may arise surrounding immunisation. These include:

National Centre for Immunisation Research & Surveillance

<http://www.ncirs.edu.au/consumer-resources/>

Immunise Australia website:

<https://beta.health.gov.au/health-topics/immunisation/getting-started/are-vaccines-safe>

Australian Academy of Science

<http://www.science.org.au/immunisation>

There are also some resources on [common adverse events following immunisation](#) and information comparing [side effects of the vaccine compared to side effects of the disease](#).

**This document can be made available in alternative formats on request for a person with a disability.**

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The Stan Perron Immunisation Service at Perth Children's Hospital regularly updates immunisation resources as new information and vaccines become available. Information in this document should not be considered definitive and should be checked with up to date online resources available and professional medical advice should be sought, when required.

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