IMMUNISATION COALITION

2024 SHINGLES GUIDE

FOR HEALTHCARE PROFESSIONALS

ABOUT SHINGLES

Shingles (Herpes Zoster) occurs most commonly in older age groups, and can cause severe pain.

It is a reactivation of the virus which causes chickenpox (varicella-zoster virus VZV). After developing chickenpox, the virus lies dormant in the dorsal root or trigeminal ganglia and can become reactivated later in life to cause shingles.

This guide provides useful information about clinical features of the disease, as well as information on transmission, complications, and vaccination recommendations.

As a healthcare professional you play an active role in protecting thousands of older Australians who are at a higher risk of shingles and its complications, as well as providing treatment during a zoster infection.

As a healthcare professional you also advise patients about the importance and safety of vaccination, obtain medical history prior to vaccination with zoster vaccine, and check contraindications of live zoster vaccine in immunocompromised individuals.

'Always be on the lookout for shingles in adults over 50 years, and upon diagnosis provide early pain management and antiviral treatment as indicated.

CAUSE OF SHINGLES

Reactivation of the virus which causes chickenpox (varicella-zoster virus VZV) in a person who has previously had varicella (chickenpox).

After developing chickenpox, the virus lies dormant in the dorsal root or trigeminal ganglia and can become reactivated later in life to cause shingles.[1][2]

FEATURES OF SHINGLES

Generally, shingles presents as an acute, self-limiting vesicular rash which is often painful and lasts around 10–15 days.

The rash is usually unilateral, most commonly affecting the lumbar or thoracic dermatomes. The virus works down the nerves that branch out from the spinal cord.

In 80% of cases, early phase occurs 2–3 days before the rash.[3]

Early symptoms may be **severe pain** (e.g. 'burning', 'stabbing'), **itching and numbness** around the affected areas. This may be accompanied by **headache**, **photophobia** and **malaise**.

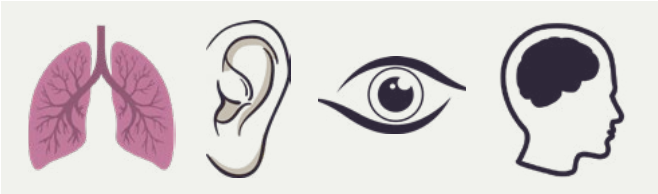
SHINGLES COMPLICATIONS

Severe pain (where the rash was) known as post-herpetic neuralgia (PHN):

- Persistent chronic neuropathic pain which persists for more than 90 days from the onset of the rash.
- Can interfere with carrying out everyday activities and can be difficult to treat.
- Increased risk of PHN with age: affects around 30% of people with shingles over 80 years of age.[4]

Serious complications involving the eye called **herpes zoster ophthalmicus** (in about 10–20% of shingles patients)[5]

Very rarely, shingles can lead to **pneumonia**, **hearing problems**, **blindness**, **encephalitis** or **death**.



TRANSMISSION OF SHINGLES

Shingles cannot be passed from one person to another. However, a person with shingles can pass the varicella zoster virus to a person who has never had chickenpox or who has not had the chickenpox vaccine. In such cases, the person exposed to the virus may develop chickenpox but not shingles.[6]

The virus is spread by direct contact with the fluid contained in the blisters, which can transfer to sheets and clothing.

Until the blisters scab over, the person is infectious. **It is important to counsel contagiuos patients to avoid contact with people who have a weakened immune system, are pregnant, or newborns.**

Shingles is less contagious than chickenpox and the risk of a person with shingles spreading the virus is low if the rash is covered.

WHO IS AT RISK?

In a national serosurvey conducted in 2007, more than 95% of the adult population in Australia had antibodies to VZV by the age 30, indicating that they had been previously infected with the virus.[7] Therefore almost the entire adult population is at risk of shingles.

Overall, 20–30% of people will develop shingles in their lifetime, most after the age of 50 years.

People who are **immunocompromised** are also at risk.[8]

INCREASING TREND

A study published in 2015 looking at general practice data from October 2006–March 2013, estimated an incidence of herpes zoster in the Australian population of 5.6 per 1,000 persons compared to 4.7 per 1,000 persons based on data recorded from April 2000 –September 2006.

As seen for the earlier period, the updated analysis demonstrated that zoster incidence increased with age, from 1.8 per 1,000 persons aged 0–24 years, to 19.9 per 1,000 for those aged 80 years and over.[9] The factors underpinning the increase of herpes zoster burden remain unclear.

HIGHER RISK OF SHINGLES FROM ACUTE COVID-19

In 2022 a study, published in Open Forum Infectious Diseases, measuring the risk of developing shingles in adults 50 years and over with COVID-19, found that where was a 15% higher herpes zoster risk than those without COVID-19.

For those hospitalised following SARS-CoV-2 infection there was a 21% increased risk of developing shingles.[10]

TREATMENT

Antiviral treatment (*Famciclovir*, *Valaciclovir* or *Aciclovir*[*1]) may help to reduce pain and shorten the duration of shingles. The treatment is best taken within 72 hours of the onset of the rash but may still be helpful if taken after this time. These antiviral treatments are all considered safe with limited side effects (nausea, headache).

*[*1] There is evidence that Famciclovir and Vlaciclovir are more effective than Aciclovir in reducing acute pain[13] and may be associated with greater patient compliance due to their more convenient dosing.*

PREVENTION AND VACCINATION

Preventing herpes zoster is the best way to avoid post-herpetic neuralgia and other complications.
There are two zoster vaccines available in Australia; *Zostavax* and *Shingrix*.

WHO SHOULD BE VACCINATED WITH THE ZOSTER VACCINE?

- Zoster vaccines are registered for use in people aged 50 years and over. *Shingrix (NIP listed as of 1 November 2023)* is more efficacious than *Zostavax (no longer listed on the NIP as of 1 November 2023 - see below)* particularly in the elderly, and will likely offer longer-lasting protection against herpes zoster than Zostavax[8]
- People aged ›18 years who are immunocompromised or shortly expected to be immunocompromised are recommended to receive a 2-dose schedule of Shingrix.[8]
- Household contacts (50 years of age and older) of a person who is, or who is expected to become immunocompromised[8]
- People who have previously received Zostavax can receive Shingrix to increase their protection against herpes zoster since protection using Zostavax wanes significantly from around 5 years after vaccination
- People who have had a previous episode of herpes zoster can receive zoster vaccine at the recommended age

The Shingles Prevention Study (SPS) was conducted among **38,546 adults** aged ›60 years and showed that compared to placebo, vaccination with *Zostavax* reduced:

- Herpes zoster (HZ) by **51.3%**
- Post-herpetic neuralgia by **66.5%**

Burden of illness associated with HZ by **61.1%** over a median of more than three years follow-up[12]

WHO SHOULD NOT RECEIVE THE LIVE ZOSTER VACCINE?

- While pregnant
- Previous anaphylaxis to the vaccine (either *Zostavax* or varicella vaccine) or its components
- People who are severely immunocompromised:

Primary or acquired immunodeficiency

- Haematologic neoplasms: leukaemias, lymphomas myelodysplastic syndromes
- Post-transplant: solid organ (on immunosuppressive therapy), haematopoietic stem cell transplant (within 24 months)
- Immunocompromised due to primary or acquired (HIV/AIDS) immunodeficiency
- Other significantly immunocompromising conditions

Immunosuppressive therapy: current or recent

- Chemotherapy, radiotherapy
- High-dose corticosteroids >= 20mg prednisolone per day, or equivalent for 14 days
- All biologics and most disease- modifying anti-rheumatic drugs DMARDs

BEFORE VACCINATING PEOPLE WITH ZOSTAVAX

Obtain medical history prior to vaccination with Zostavax, check contraindications of Zostavax in immunocompromised individuals. *Please note: Zostavax is no longer NIP listed but is still available on a private script.*

In persons who are or have recently been immunocompromised, the safety of administering *Zostavax* should always be considered on a case-by-case basis. If there is uncertainty around the level of immunocompromise and when vaccine administration may be safe, vaccination should be withheld and expert advice sought from the treating physician and/or an immunisation specialist.

Zostavax is **not recommended** for people who have already received a zoster vaccine. Vaccination of a person with *Zostavax* if they have previously received *Shingrix* should be assessed on a case-by case basis.[8]

UPDATE: *Denosumab* has been removed from the list of immunosuppressive medications contraindicated with *Zostavax* as there is currently not enough evidence to suggest it is a contraindication to *Zostavax*.[2][8]

SHINGRIX

From 1 November 2023, the shingles vaccine *Shingrix*® replaced *Zostavax*® on the National Immunisation Program (NIP) schedule for the prevention of shingles and post-herpetic neuralgia. It is available for eligible people most at risk of complications from shingles.

A 2-dose course of *Shingrix*® will be available **free** for:

- People aged 65 years and older
- First Nations peoples aged 50 years and older
- Immunocompromised people aged 18 years and older with medical conditions including: haemopoietic stem cell transplant, solid organ transplant, haematological malignancy, advanced or untreated HIV.

Unlike *Zostavax*®, *Shingrix*® **does not contain any live virus** so it can be given to people aged 18 years and over who are immunocompromised.[11]

WHO SHOULD NOT RECEIVE SHINGRIX?

Previous anaphylaxis to the vaccine.

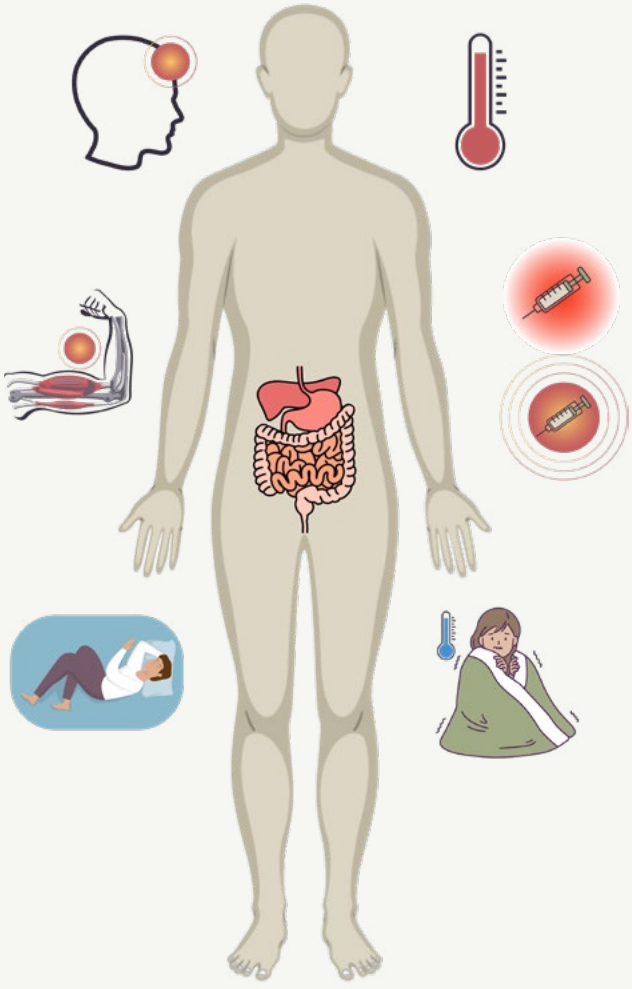
There is currently no data on the use of Shingrix during pregnancy (Category B2).

VACCINE SAFETY

Shingrix causes moderately high rates of local and systemic infections.

Common reactions include:

- **Injection-site pain** (up to 79%)
- **Redness** (up to 39%) and **swelling** (up to 26%)
- Systemic symptoms such as:
  - **Fatigue**
  - **Myalgia** (up to 46%)
- **Headache** (up to 39%)
- **Shivering** (up to 28%)
- **Fever** (up to 22%)
- **Gastrointestinal symptoms** (up to 18%)



Zostavax contains live attenuated varicella-zoster virus. It is safe and well tolerated.

Some people may experience a **headache**, **fatigue** or **soreness** around the site where the shot was given. The reaction is typically mild and resolves within a few days.

CAN I GIVE ZOSTER VACCINE ON THE SAME DAY AS OTHER VACCINES?

Both *Shingrix* and *Zostavax* can be given with most inactivated or live vaccines (including any of the available pneumococcal vaccines) using separate injections and injection sites.

Refer to the AIH for the most recent information.

Zostavax

If *Zostavax* is not given on the same day as other live viral vaccines (e.g. MMR, yellow fever), separate administration by 4 weeks.[8]

Shingrix

People can receive *Shingrix* with other inactivated vaccines (such as tetanus-containing vaccines, pneumococcal vaccines, influenza vaccines and COVID-19 vaccines), either at the same time or any time thereafter.[14-16]

Note: There is the potential for an increase in mild to moderate adverse events when more than one vaccine is given at the same time. (quote AIH reference).

It is acceptable to co-administer *Shingrix* and *FluadQuad* (an adjuvanted influenza vaccine) on the same day if necessary.[17]

However, given the lack of co-administration data for these two adjuvanted vaccines, **it is preferred to separate their administration by a few days** and ensure that any adverse events following immunisation with the first vaccine have resolved before administration of the other vaccine.[2][8]

REFERENCES

1.Zoster vaccine for Australian adults/NCIRS Fact sheet: November 2021

2. Zoster vaccine: Frequently asked questions | NCIRS Fact sheet: July 2021

3. Dworkin RH,Johnson RW, Breuer J, et al. Recommendations for the management of herpes zoster. Clinical Infectious Diseases 2007; 44 Suppl 1: S1-26

4. Yawn BP, Saddier P, Wollan PC et al. A population based study of the incidence and complication rates of herpes zoster before zoster vaccine introduction. Mayo Clinic Proceedings 2007;82:1341-9.

5. Cunningham AL, Breuer J, Dwyer DE, et al. The prevention and management of herpes zoster. Medical Journal of Australia 2008;188:171-6.

6. Centers for Disease Control and Prevention (CDC) *https://www.cdc.gov/shingles/about/index.html* Reviewed 10 May 2024

7. Ward K, Dey A, Hull B, et al. Evaluation of Australia's varicella vaccination program for children and adolescents. Vaccine *2013;31:1413-9.*

8. Australian Technical Advisory Group on Immunisation (ATAGI) The Australian Immunisation Handbook, Australian Government Department of Health, Canberra2023, *immunisationhandbook.health.gov.au*

9. MacIntyre R, Stein A, Harrison C, Britt H, Mahimbo A, Cunningham A. Increasing trends of herpes zoster in Australia. PLoS One. 2015 Apr 30;10(4):e0125025. *doi: 10.1371/journal.pone.0125025. eCollection 2015.*

10. The Royal Australian College of General Practitioners. COVID-19 linked to higher shingles risk for over-50s. newsGP. 2023 Mar 13. Available from: *https://www1.racgp.org.au/newsgp/clinical/covid-19-linked-to-higher-shingles-risk-for-over-5*

11. National Immunisation Program – changes to shingles vaccination from 1 November 2023: October 2023

12. Oxman MN, Levin MJ, Johnson GR, et al. A vaccine to prevent herpes zoster and postherpetic neuralgia in older adults. New England Journal of Medicine *2005;352:2271-84.*

13. 2023 Therapeutic Guidelines Limited Antibiotic Shingles Published April 2019 (Amended May 2022)

14. Maréchal C, Lal H, Poder A, Oostvogels L, Borys D, David MP, et al. Immunogenicity and safety of the adjuvanted recombinant zoster vaccine co-administered with the 23-valent pneumococcal polysaccharide vaccine in adults ›50 years of age: a randomized trial. Vaccine. *2018;36(32):4278-86.*

15. Schwarz TF, Aggarwal N, Moeckesch B, Zepp F, Bailleux F, Borkowski A, et al. Immunogenicity and safety of an adjuvanted herpes zoster subunit vaccine coadministered with seasonal influenza vaccine in adults aged 50 years or older. J Infect Dis. *2017;216(11):1352-61.*

16. Strezova A, Lal H, Enweonye I, Da Silva FT, Oostvogels L, Boutriau D. The adjuvanted recombinant zoster vaccine co-administered with a tetanus, diphtheria, and pertussis vaccine in adults aged ›50 years: a randomized trial. Vaccine. *2019;37(42):5877-85.*

17. Australian Government Department of Health and Aged Care. Influenza (flu) [Internet]. Canberra: Australian Government Department of Health and Aged Care; 2023 [cited 2024 Aug 12]. Available from: *https://immunisationhandbook.health.gov.au/contents/vaccine-preventable-diseases/influenza-flu*