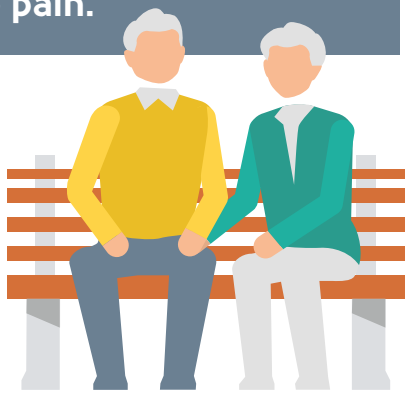
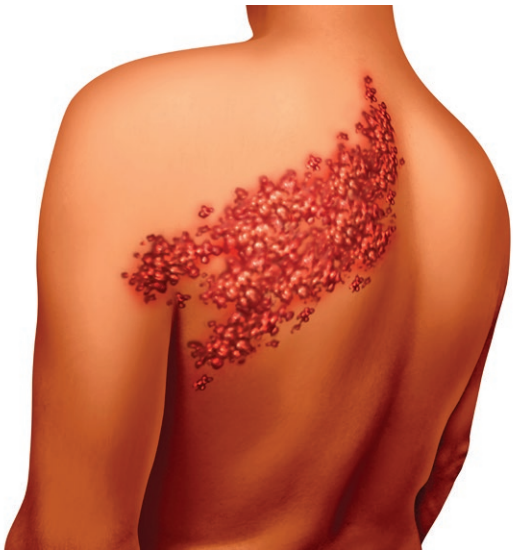
shingles herpes zoster
guide for healthcare professionals

Shingles occurs most commonly in older age groups, and can cause severe pain.

IMMUNISATION COALITION





Cause

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

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.

EARLY PHASE: 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.

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.[7]
- Serious complications involving the eye called herpes zoster ophthalmicus (in about 10–20% of shingles patients)[10]
- Very rarely, shingles can lead to pneumonia, hearing problems, blindness, encephalitis or death.

Transmission

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.[4]

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. Counsel patients to avoid contact with people who have a weakened immune system, newborns and pregnant women while contagious.

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.[5] 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.[6]

INCREASING TREND

A study published in 2015 looking at general practice data from October 2006 to 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 to 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.[11] The factors underpinning the increase of herpes zoster burden remain unclear.

The role of the 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.

- ADVISE PATIENTS about the importance and safety of vaccination, obtain medical history prior to vaccination with zoster vaccine, and check contraindications of zoster vaccine in IMMUNOCOMPROMISED individuals.[6,10]
- Be on the lookout for DIAGNOSIS, and provide early MANAGEMENT of pain and antiviral treatment when indicated.[10]

PREVENTION

Preventing herpes zoster is the best way to avoid post-herpetic neuralgia and other complications.

Vaccines

Although 2 vaccines are registered in Australia — Zostavax, Merck Sharp & Dohme-Seqirus and Shingrix, GlaxoSmithKline — only Zostavax, the live zoster vaccine, is currently available*.

*Shingrix has been registered in Australia since December 2018. However, due to the high demand worldwide, it is not yet available. It is an adjuvanted recombinant vaccine which requires 2 doses to be administered intramuscularly 2 to 6 months apart. Shingrix demonstrated a high efficacy against herpes zoster of about 97% in adults 50 years and older and importantly a high efficacy against herpes zoster of about 91% in those aged 70 years and older.[12] NOTE: the vaccine has high reactogenicity with local injection site reactions and general symptoms such fatigue, headache and myalgia.

Who should be vaccinated with Zostavax?

- Zostavax is registered for use in people aged 50 years and over. It is recommended for adults aged 60 years and over who are not immunocompromised.[1]
- Household contacts (≥ 50 years of age) of a person who is, or who is expected to become immunocompromised.[1]
- Persons with chronic conditions, such as splenectomy, diabetes, rheumatoid arthritis, inflammatory bowel disease, dermatologic conditions (e.g. psoriasis), cardio-respiratory disease or renal disease (e.g. glomerulo-nephritis or reduced renal function), **if they are not immunocompromised** since they may have a higher risk of morbidity and mortality due to shingles.[2]

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.[8]

Zostavax is **FREE FOR ALL ADULTS AGED 70 YEARS** through the National Immunisation Program (NIP). A single catch up dose will be funded under the NIP for adults 71–79 years of age until October 2021. People in this age group have a high likelihood of developing shingles and will develop PHN after shingles in 25% of the cases.

Vaccination of other age groups (e.g. those aged 50–69 or 80 years and over) is available on prescription and can be purchased by patients.

Vaccine safety

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?

Yes, all inactivated or live vaccines (including any of the available pneumococcal vaccines) may be co-administered with zoster vaccine (using separate injections and injection sites). If zoster vaccine is not given on the same day as other live viral vaccines (e.g. MMR, yellow fever) separate administration by 4 weeks.[5]

Who should NOT receive the live zoster vaccine?

- **Pregnant women**
- Previous **anaphylaxis** to the vaccine (either Zostavax or varicella vaccine) or its components.[5]
- People who are **severely immunocompromised** through:
  - Primary or acquired immunodeficiency (haematologic neoplasms, post-transplant; HIV/AIDS; other significantly immunocompromising conditions)
  - Immunosuppressive therapy: current or recent (chemotherapy, radiotherapy, high-dose corticosteroids >= 20mg prednisolone per day, or equivalent for 14 days, biologics and most disease-modifying anti-rheumatic drugs DMARDs).

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 Zoster vaccine.[2,6]

In persons who are or have recently been immuno-compromised, the safety of administering zoster vaccine 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.

TREATMENT

Antiviral treatment (famciclovir, valaciclovir or aciclovir#)[9] 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).

#There is evidence that famciclovir and valaciclovir are more effective than aciclovir in reducing acute pain and may be associated with greater patient compliance due to their more convenient dosing.

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