PROCEDURE

varicella-zoster virus vaccine live (Oka-Merck) strain

A live-virus injection used in some countries to reduce the risk of shingles.

PURPOSE
Reduce the risk and complications of shingles

PROCEDURE TYPE
Therapeutic; subcutaneous injection in an outpatient clinic

WHERE IT IS DONE
Outpatient clinic

ANAESTHESIA
None

HOW LONG IT TAKES
About one to five minutes

PREPARATION
No fasting; review pregnancy, immunity, medicines, and allergies

RECOVERY
Same day, with no routine driving restriction

MAIN RISKS
Injection-site reaction, rash, allergy, vaccine-virus infection

RESULTS
No immediate result; protection develops over several weeks

Overview

Varicella-zoster virus vaccine live (Oka-Merck) strain is a live shingles vaccine. It is commonly known by the former brand name Zostavax. It contains a weakened form of varicella-zoster virus, the virus that causes chickenpox and shingles.

The weakened virus encourages your immune system to strengthen its response to varicella-zoster virus. This can lower your chance of developing shingles and some of its complications. It cannot guarantee that you will not get shingles.

This vaccine uses the same virus strain as some chickenpox vaccines, but the products are not interchangeable. The live shingles vaccine contains a different amount of virus and is intended for a different purpose.

Availability has changed in many countries. Some vaccination programmes have replaced it with a non-live recombinant shingles vaccine. Your options will be influenced by which products are licensed, available, and recommended where you live.

Why the procedure is performed

The injection is given to reduce the risk of shingles. Shingles is a painful, blistering rash caused when varicella-zoster virus becomes active again after an earlier chickenpox infection.

Vaccination can also reduce the chance of prolonged nerve pain after shingles, called postherpetic neuralgia. It does not treat an active shingles rash or relieve pain that has already developed.

The live vaccine may be considered for an eligible adult when it is available and a non-live vaccine is not being used. The recommended vaccine and eligible age groups differ between countries and vaccination programmes.

Who should and should not have it

The live shingles vaccine may be an option if you are within the eligible age group, have no condition that seriously weakens your immune system, and are not pregnant. A healthcare professional should confirm that the specific product is appropriate for you.

Because this is a live vaccine, it is not suitable for everyone. It is generally avoided in people with significant immune suppression. This may include immune suppression caused by:

It should not be given during pregnancy. Pregnancy should also be avoided for the period stated in the local product information after vaccination.

The vaccine should not be given if you have had a severe allergic reaction to a previous dose or to an ingredient such as gelatin or neomycin. Active, untreated tuberculosis is also listed as a reason not to receive some live zoster vaccine products.

Vaccination may be delayed if you have a moderate or severe acute illness, a fever, or active shingles. A mild illness, such as a minor cold, does not always require postponement, but the person administering the vaccine should assess you.

- Blood cancers or some other cancers
- Advanced HIV infection or another serious immune disorder
- Chemotherapy, radiotherapy, or immune-suppressing medicines

- A stem-cell or organ transplant
- Long-term or high-intensity treatment that substantially reduces immune function

How to prepare

Follow the treating facility's instructions first, because its preparation and safety procedures take priority.

You do not usually need to fast. You can generally eat, drink, and take routine medicines as normal unless the facility tells you otherwise.

Before the appointment, tell the vaccination team if you:

Antiviral medicines that act against varicella-zoster virus may interfere with a live vaccine. Do not stop prescribed medicine yourself. The vaccination team can advise whether the timing needs to change.

Wear clothing that allows easy access to your upper arm. Bring your vaccination record and an up-to-date medicine list if available.

- Could be pregnant or are planning pregnancy
- Have a weakened immune system
- Recently received or are about to start cancer treatment
- Take steroids like prednisone or hydrocortisone , immune-suppressing medicines, or antiviral medicines
- Have had shingles or a previous shingles vaccination
- Have severe allergies, particularly to gelatin or neomycin
- Are currently unwell or have a fever

What happens during the procedure

A healthcare professional first confirms your identity, the vaccine product, and whether there are reasons to delay or avoid it. You may be asked about allergies, pregnancy, immune conditions, and current medicines.

The vaccine is given as an injection, usually under the skin of the upper arm. Cleaning the skin and giving the injection takes only a few minutes. Anaesthesia and sedation are not needed.

You may be asked to remain at the clinic for a short observation period afterward. This allows

staff to help if you feel faint or have an immediate allergic reaction.

Recovery and what to expect afterward

Your arm may feel sore, tender, warm, itchy, or swollen. A cool compress can help. Ask a pharmacist or healthcare professional which pain medicine is suitable if you need it.

You can eat and drink normally after the injection. Staying hydrated may help if you feel mildly unwell.

Most people can continue normal daily activity. Consider lighter activity with the vaccinated arm if movement makes it more uncomfortable.

The vaccine itself does not usually prevent you from driving. Do not drive if you feel faint, dizzy, or unwell after the appointment.

Most people can return to work the same day. If you develop fever, fatigue, or a rash, you may prefer to rest and should follow advice from the vaccination service.

Risks and possible complications

Common effects include pain, redness, swelling, itching, or warmth where the injection was given. Some people develop headache, fever, tiredness, muscle pain, or a small chickenpox-like rash.

A vaccine-related rash may contain weakened vaccine virus. Transmission to another person is unusual, but it is possible. If a blistering rash appears, contact your healthcare team. Until you receive advice, keep the rash covered and avoid close contact with pregnant people without chickenpox immunity, newborn babies, and people with severely weakened immune systems.

A severe allergic reaction can occur after any vaccine. Vaccination services keep medicines and equipment available to treat this.

Rarely, the vaccine virus can cause a more widespread infection. This risk is particularly important in someone with significant immune suppression, which is why careful screening is necessary before a live vaccine is given.

The vaccine cannot cause shingles from the original virus already in your body, but shingles can still occur after vaccination because protection is not complete.

Results and follow up

There is no immediate test result. Your immune response develops over the following weeks.

Routine follow-up is not usually required. Make sure the vaccination is entered in your medical or immunisation record, including the product and date.

Protection can decrease over time. Whether you should later receive a non-live recombinant vaccine is based on your age, health, previous vaccination, and local recommendations.

Vaccination does not rule out shingles. Contact a healthcare professional promptly if you later develop one-sided burning pain, tingling, or a new band of blisters. Antiviral treatment for shingles works best when started early.

Alternatives

The main alternative is a recombinant shingles vaccine. It contains a varicella-zoster protein rather than live virus, so it cannot cause vaccine-virus infection. It is used in many current vaccination programmes and can be suitable for many people with weakened immunity. It usually requires more than one injection and commonly causes short-term arm pain, tiredness, or muscle aches.

If you are not eligible for the live vaccine, vaccination may be postponed until immune suppression has improved, when that is medically possible. This delays protection and may not be appropriate if immune suppression will continue.

You can choose not to be vaccinated. This avoids vaccine reactions but leaves you without the added protection vaccination provides against shingles and prolonged nerve pain.

A routine chickenpox vaccine is not a direct substitute. Although it may contain the same weakened virus strain, it is formulated for preventing chickenpox and is not interchangeable with a shingles vaccine.

When to call your healthcare team

Contact your healthcare team during routine hours if redness or pain is worsening rather than improving, if side effects interfere with normal activities, or if you develop a chickenpox-like rash. Also call if you learn after vaccination that you were pregnant or had an immune condition or medicine that was not discussed beforehand.

Seek urgent medical advice for a high or persistent fever, a widespread blistering rash, marked weakness, confusion, or rapidly worsening illness.

Call emergency services for difficulty breathing, swelling of the face or throat, collapse, or

widespread hives with dizziness. These can be signs of a severe allergic reaction.

Common questions

Will I be asleep?

No. This is a brief injection and does not require sedation or anaesthesia.

Can I drive home?

Usually, yes. Do not drive if you feel faint, dizzy, or otherwise unwell after the injection.

How painful is it?

You may feel a quick sting. Soreness, redness, or swelling in the upper arm can last for a few days.

When will I know if it worked?

There is no routine test to confirm protection. Your immune response develops over several weeks, but the vaccine does not prevent every case of shingles.

Can the vaccine give me shingles?

The vaccine contains weakened virus and does not reactivate the original virus in your nerves. Rare vaccine-virus infections can occur, especially if the vaccine is mistakenly given to someone with significant immune suppression.

Can I have it if I already had shingles?

Previous shingles does not always rule out vaccination because shingles can happen again. The timing and preferred vaccine should follow local recommendations, and vaccination is generally delayed until the current illness has resolved.

Sources

- Australian Government Department of Health, Disability and Ageing. Australian Immunisation Handbook: Zoster (herpes zoster)
- US Food and Drug Administration. ZOSTAVAX (Zoster Vaccine Live): Prescribing Information
- Centers for Disease Control and Prevention. Shingles Vaccination
- European Medicines Agency. Zostavax: European Public Assessment Report



- 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;352:2271-2284.