Japanese encephalitis virus vaccination

Information for immunisation providers – Version 4.1

OFFICIAL

Vaccination

Who JE vaccine is recommended for?

In Victoria, JE vaccine is available free-of-charge and recommended for:

High-risk local government areas

People aged 2 months or older who live or routinely work in any of the following local government areas of Campaspe, Gannawarra, Greater Shepparton, Indigo, Loddon, Mildura, Moira, Swan Hill, Wodonga, Towong, Benalla, Wangaratta and Strathbogie AND:

- Spend significant time outdoors (four hours per day), for unavoidable work, recreational, educational or other essential activities; OR
• Living in temporary or flood damaged accommodation (e.g. camps, tents, dwellings exposed to the external environment) that place them at increased risk of exposure to mosquitoes; OR
• Are engaged in the prolonged outdoor recovery efforts (clean up) of stagnant waters following floods.*

*Vaccination can be administered after arrival in flood affected areas to those from other regions deployed for prolonged recovery efforts

The risk of exposure to mosquitoes is low at an elevation of greater than 500 metres. Therefore, JE vaccination is only recommended for individuals who spend significant time outdoors below this elevation in these LGAs.

No restriction to local government areas

• People who work at, reside at, or have a planned non-deferable visit to a:
  o piggery, including but not limited to farm workers and their families (including children aged 2 months and older) living at the piggery, transport workers, veterinarians and others involved in the care of pigs
  o property that has been confirmed to be infected with JE virus
  o property suspected to be infected with JE virus
  o pork abattoir or pork rendering plant.

• Personnel who work directly with mosquitoes through their surveillance (field or laboratory based) or control and management, and indirectly through management of vertebrate mosquito-borne disease surveillance systems (e.g., sentinel animals) such as:
  o environmental health officers and workers (urban and remote)
  o entomologists.

• All diagnostic and research laboratory workers who may be exposed to the virus, such as persons working with JE virus cultures or mosquitoes with the potential to transmit JE virus; as per the Australian Immunisation Handbook.

Vaccine information

The [Australian Immunisation Handbook Japanese Encephalitis section](#) provides specific guidance on the use of JE vaccines, including booster doses, precautions and contraindications. Please refer to the handbook when determining JE vaccine requirements for clients.

There are two types of JE vaccines are available for use in Australia:

• Imojev® - live attenuated Japanese encephalitis vaccine
• JEspect® inactivated Japanese encephalitis vaccine.

Both are recommended for the current JE outbreak in Victoria. However, Imojev®, which requires only a single dose, will be prioritised during this outbreak and is suitable for people from 9 months of age.

Infants aged from 2-9 months, pregnant and breastfeeding women, people who have recently received immunoglobulin or blood products or people who are immunosuppressed must be vaccinated with JEspect® which requires 2 doses of vaccine (see Table 2).
Adults receiving JEspect® are recommended to receive a primary course of 2 doses x 0.5ml (0,28 days) (see Table 1).

**Vaccine dose and route**

*Table 1. JE vaccine dose and route*

<table>
<thead>
<tr>
<th>Age at vaccination</th>
<th>Vaccine</th>
<th>Number of doses</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥2 months to &lt;18 years</td>
<td>JEspect® - IM injection</td>
<td>2 doses (0,28 days)</td>
<td>Each dose of JEspect® in infants and children aged ≥2 months to &lt;3 years is 0.25 mL.</td>
</tr>
<tr>
<td>≥9 months to &lt;18 years</td>
<td>Imojev® - SC injection</td>
<td>1 dose</td>
<td>Live vaccine. Check contraindications prior to administration.</td>
</tr>
<tr>
<td>≥18 years</td>
<td>Imojev® - SC injection</td>
<td>1 dose</td>
<td>Live vaccine. Check contraindications prior to administration.</td>
</tr>
<tr>
<td></td>
<td>JEspect® - IM injection</td>
<td>2 doses (0,28 days)</td>
<td>Adults are recommended to receive a primary course of JEspect® (2 x 0.5 mL doses 0, 28 days)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 doses (0,7 days)</td>
<td>An accelerated primary course of JEspect® (2 x 0.5 mL doses 0,7 days) may be considered for clinical reasons as a case by case scenario for persons who are at high risk of immediate exposure</td>
</tr>
</tbody>
</table>

For specific vaccine product information, please refer to The Therapeutic Goods Administration website which provides product information for each vaccine - [Therapeutic Goods Administration (TGA)](https://www.tga.gov.au). The Australian Technical Advisory Group on Immunisation (ATAGI) have also prepared [clinical guidance on Japanese encephalitis virus vaccines](https://www.catda.gov.au/).

**Precautions and contraindications**

Always use the [pre-immunisation checklist](https://www.catda.gov.au/) and the [Japanese Encephalitis (JE) vaccination consent form](https://www.catda.gov.au/) prior to administering vaccines. Assess each client against the following precautions and contraindications before giving a JE vaccine.

*Table 2: Vaccine specific contraindications*

<table>
<thead>
<tr>
<th>Imojev®</th>
<th>JEspect®</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Imojev® is contraindicated in people who are:</em></td>
<td><em>JEspect® is an inactivated vaccine, so it is not expected to cause any safety concerns in people who are immunocompromised.</em></td>
</tr>
<tr>
<td><strong>Immunocompromised</strong></td>
<td><strong>Women who are pregnant or breastfeeding</strong></td>
</tr>
<tr>
<td><em><em>Pregnant women (Women should avoid pregnancy for 28 days after vaccination</em>)</em>*</td>
<td><strong>Women who are pregnant or breastfeeding</strong></td>
</tr>
<tr>
<td></td>
<td>- JE vaccine is not routinely recommended for pregnant or breastfeeding women. However,</td>
</tr>
</tbody>
</table>
**Table 3. Precautions and contraindications of JE vaccine**

<table>
<thead>
<tr>
<th>Precautions</th>
<th>Contraindications</th>
</tr>
</thead>
<tbody>
<tr>
<td>People with an acute febrile illness should not receive JE vaccines.</td>
<td>JE vaccines are contraindicated in people who have had:</td>
</tr>
<tr>
<td></td>
<td>• anaphylaxis after a previous dose of any JE vaccine</td>
</tr>
<tr>
<td></td>
<td>• anaphylaxis after any component of a JE vaccine</td>
</tr>
</tbody>
</table>

**Co-administration of JE vaccine with other vaccines**

**Table 2. Co-administration of JE vaccine and other vaccines**

<table>
<thead>
<tr>
<th>Imojev®</th>
<th>JEspect®</th>
</tr>
</thead>
<tbody>
<tr>
<td>People can receive Imojev® at the same time as:</td>
<td>People can receive JEspect® at the same time as:</td>
</tr>
<tr>
<td>• yellow fever vaccine</td>
<td>• hepatitis A vaccine</td>
</tr>
<tr>
<td>• MMR (measles-mumps-rubella) vaccine</td>
<td>• quadrivalent (ACWY) meningococcal conjugate vaccine</td>
</tr>
<tr>
<td>Use separate syringes and inject in separate limbs.</td>
<td>• rabies vaccine</td>
</tr>
<tr>
<td>If a person does not receive Imojev® and yellow fever vaccine (or other live vaccines) at the same time, they should receive them at least 4 weeks apart.</td>
<td>Use separate syringes and inject in separate limbs.</td>
</tr>
</tbody>
</table>

**Can JE vaccines be co-administered with COVID-19 and influenza vaccines?**

ATAGI have made recommendations for healthcare providers administering Japanese encephalitis virus (JEV) vaccines. ATAGI advises that either Imojev or JEspect can be co-administered with other vaccines if required. For more information see the [Australian Immunisation Handbook](https://www2.health.gov.au/immunise).

**What are the JE vaccine side effects?**

Injection site reactions and minor systemic reactions are common after JE vaccination. Report serious adverse reactions to Surveillance of Adverse Events Following Vaccination In the Community (SAEFVIC), the vaccine safety surveillance service in Victoria.

**Table 5. Common reactions to JE vaccines**

<table>
<thead>
<tr>
<th>Imojev®</th>
<th>JEspect®</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Most commonly reported adverse reactions included headache and myalgia. They usually occur within the first three days after vaccination, are usually mild and disappear within a few days.

In children, common or expected reactions to the vaccine include pain, redness and swelling at the injection site. Appetite loss, irritability, and abnormal crying.

The most frequently reported systemic reactions include headache and myalgia.

In children aged 2 months to 17 years, common or expected reactions to the vaccine include pain, redness and swelling at the injection site, fever after the first dose, appetite loss, diarrhoea, muscle aches and fatigue.

Where do I report JE vaccines given?

JE vaccines should be reported to the Australian Immunisation Register (AIR) using your medical practice software. Reporting these vaccinations to the AIR means that the register contains a complete and reliable dataset and is able to monitor immunisation coverage and administration. It also means that individuals have a complete record of their vaccinations.

When are booster doses of JE vaccine recommended?

Booster doses are recommended if more than 1 year has passed since the last primary course dose for some cohorts, depending on the vaccine brand used for the primary dose/s and if there is an ongoing risk of JE infection.

Natural infection with JE virus is believed to confer lifelong immunity. There is no recommendation for JE vaccination following laboratory confirmed JE infection.

Note: JEspect® is also known as Ixario in some other countries (manufactured by Valneva and distributed in Australia by Seqirus/CSL)

### Table 6. Booster dose recommendations

<table>
<thead>
<tr>
<th>Imojev®</th>
<th>JEspect®</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥9 months to &lt;18 years: &gt;1 year after primary dose if ongoing risk of JE virus exposure</td>
<td>≥2 months to &lt;18 years: Not recommended. No data available to inform recommendation. Consider a booster if the child needs sustained protection.</td>
</tr>
<tr>
<td>≥18 years: not required</td>
<td>≥18 years: 1–2 years after primary dose if ongoing risk of JE virus exposure</td>
</tr>
</tbody>
</table>

For further information about JE vaccine booster doses please refer to the Australian Immunisation Handbook – Japanese encephalitis chapter.

Vaccine transport, storage and handling

JE vaccine is to be stored and transported according to National vaccine storage guidelines: Strive for 5.

- Store JE vaccine at +2°C to +8°C.
- Do not freeze.
- Protect from light.

Imojev® must be reconstituted. Add the entire contents of the diluent container to the vial and shake until the powder completely dissolves. Use the reconstituted vaccine within 1 hour.

For cold chain breach information and action please visit - Cold chain breach reporting or email the Immunisation Unit <immunisation@health.vic.gov.au>.

Vaccine ordering and supply

The Victorian Department of Health has ordered JE vaccines - Imojev® and JEspect®.

- **GPs, Community pharmacies & local councils**
  JE vaccine can be ordered online using your Onelink vaccine account.

- **Local Public Health Units**
  JE vaccine can be ordered online using your Onelink vaccine account.

Please note: due to restricted stock, JE vaccine orders will be limited. If you require vaccine exceeding orders limits please email the Immunisation Unit <immunisation@health.vic.gov.au>.

Onelink will process the order and send a confirmation to the email address registered.

JE eLearning module

The Department of Health has developed an online JE eLearning module to educate pharmacist immunisers and nurse immunisers about Japanese encephalitis (JE) immunisation before they can administer the vaccine in Victoria.

This online training supports pharmacist immunisers and nurse immunisers to:

- Identify key facts about JE, including how the virus is spread, the signs and symptoms of infection, and strategies to reduce spread.

- Identify priority cohorts eligible to receive free (government-funded) JE vaccine in Victoria.

- Identify the different JE vaccine brands, dosing schedule and route of administration for JE vaccines.

- Recognise precautions and contraindications for JE vaccines.

- Identify key resources available to support the safe use and delivery of JE vaccines.

A certificate will be issued after successful completion of this training. This certificate must be provided to your employer prior to administering vaccines.

Please refer to the Secretary Approvals for pharmacist immunisers and nurse immunisers for information about the scope and requirements of the authorisation.

Further information

- Australian Immunisation Handbook – Japanese encephalitis Section
Contact information

For JE vaccine specific queries please contact the Immunisation Unit via email
<immunisation@health.vic.gov.au>

To receive this document in another format, email the Immunisation Unit
<immunisation@health.vic.gov.au>.

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x https://www.onelinkonline.net/


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