# Pneumococcal Vaccine, 13-valent Conjugate (Pneu-C 13)

**Revision Date: February 10, 2015**

Please consult the Product Monograph\(^1\) for further information about the vaccine.

<table>
<thead>
<tr>
<th><strong>Indications for use of provincially funded vaccine</strong></th>
<th><strong>Prevnar® 13</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>All children two months up to and including 59 months of age. Catch-up: children up to and including 59 months of age who have completed pneumococcal conjugate immunization with a conjugate vaccine other than Prevnar®. 13. Children five years up to and including 17 years of age with conditions resulting in high risk for invasive pneumococcal disease (IPD) as listed below:</td>
<td><strong>Prevnar® 13</strong></td>
</tr>
<tr>
<td>Asplenia/hyposplenism (functional or anatomic)(^2) See <a href="#">Special Situations for Immunization – Immunization of Specific Populations</a></td>
<td><strong>Prevnar® 13</strong></td>
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<td>Chronic cardiac disease.(^2)</td>
<td><strong>Prevnar® 13</strong></td>
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<tr>
<td>Chronic cerebral spinal fluid (CSF) leak.(^2)</td>
<td><strong>Prevnar® 13</strong></td>
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<tr>
<td>Chronic liver disease (including hepatitis B and C and hepatic cirrhosis due to any cause).(^2)</td>
<td><strong>Prevnar® 13</strong></td>
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<tr>
<td>Chronic neurologic condition that may impair clearance of oral secretions.(^2)</td>
<td><strong>Prevnar® 13</strong></td>
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<tr>
<td>Chronic pulmonary disease(^2) (excluding asthma unless treated with high-dose oral corticosteroid therapy).</td>
<td><strong>Prevnar® 13</strong></td>
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<tr>
<td>Chronic renal disease, including nephrotic syndrome.(^2)</td>
<td><strong>Prevnar® 13</strong></td>
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<tr>
<td>Cochlear implants (candidates and recipients).(^2)</td>
<td><strong>Prevnar® 13</strong></td>
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<tr>
<td>Congenital immunodeficiencies involving any part of the immune system, including B-lymphocyte (humoral) immunity, T-lymphocyte (cell mediated immunity, complement system (properdin or factor D deficiencies) or phagocytic funtions).(^2)</td>
<td><strong>Prevnar® 13</strong></td>
</tr>
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<td>Diabetes mellitus (poorly controlled).</td>
<td><strong>Prevnar® 13</strong></td>
</tr>
<tr>
<td>Hematopoietic stem cell transplant (HSCT) recipients.(^2) See <a href="#">Immunization for Child Hematopoietic Stem Cell Transplant Recipients</a></td>
<td><strong>Prevnar® 13</strong></td>
</tr>
<tr>
<td>HIV infection.(^2)</td>
<td><strong>Prevnar® 13</strong></td>
</tr>
<tr>
<td>Immunosuppressive therapy including use of long term corticosteroids, chemotherapy, radiation therapy, post-organ transplant therapy and certain anti-rheumatic drugs.(^2)</td>
<td><strong>Prevnar® 13</strong></td>
</tr>
</tbody>
</table>

**Note:** Individuals prescribed eculizumab (Soliris\(^®\)) are at increased risk of serious infections, especially with encapsulated bacteria, such as *Streptococcus pneumoniae*;\(^3\) therefore, they should receive Prevnar® 13 at least two weeks before receiving the first doses of Solaris\(^®\) if possible. See scheduling for spacing between Prevnar® 13 and Pneumovax® 23.

- Malignant neoplasms including leukemia, lymphoma,\(^2\) Hodgkin’s disease and multiple myeloma.
- Sickle-cell disease and other hemoglobinopathies.\(^2\)
- Solid organ or islet transplant (SOT) candidates and recipients.\(^2\) See:  
  - [Immunization for Children Expecting Solid Organ Transplant before 18 Months of Age (Accelerated)](#)
  - [Immunization for Children Expecting Solid Organ Transplant at 18 Months of Age or Older (Catch-up Schedule)](#)
Adults 18 years of age and older with conditions resulting in high risk for IPD as listed below:

- Asplenia (anatomical or functional).\(^4\)
- Chronic CSF leak.\(^5\)
- Cochlear implants (candidates and recipients).\(^5\)
- Congenital immunodeficiencies involving any part of the immune system, including B-lymphocyte (humoral) immunity, T-lymphocyte (cell-mediated immunity, complement system (properdin or factor D deficiencies) or phagocytic functions.\(^4\)
- HIV infection.\(^4\)
- HSCT recipients.\(^4\) See Immunization for Adult Hematopoietic Stem Cell Transplant Recipients.
- Immunosuppressive therapy including use of long term corticosteroids, chemotherapy, radiation therapy, post-organ transplant therapy, biologic and non-biologic immunosuppressive therapies for rheumatologic and other inflammatory diseases.\(^4\)

**Note:** Individuals prescribed eculizumab (Soliris\(^®\)) are at increased risk of serious infections, especially with encapsulated bacteria, such as *Streptococcus pneumoniae*,\(^3\) therefore, they should receive Prevnar\(^®\) 13 at least two weeks before receiving the first dose of Soliris\(^®\) if possible. See scheduling for spacing between Prevnar\(^®\) 13 and Pneumovax\(^®\) 23.

- Malignant neoplasms including leukemia and lymphoma.\(^4\)
- Sickle cell disease and other hemoglobinopathies.\(^4\)
- Solid organ or islet cell transplant candidates and recipients.\(^4\) See Immunization for Adult Solid Organ Transplant Candidates and Recipients.

**Post-exposure**

Previous IPD does not confer immunity or preclude immunization with pneumococcal conjugate vaccine. If a series is interrupted due to IPD, the series should be continued once the individual has recovered.

For disease investigation and reporting requirements, refer to *Public Health Notifiable Disease Management Guidelines – Invasive Pneumococcal Disease*\(^6\)

<table>
<thead>
<tr>
<th>Dose</th>
<th>0.5 mL</th>
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<tbody>
<tr>
<td>Route</td>
<td>Intramuscular injection</td>
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<tr>
<td>Schedule</td>
<td>Prevnar(^®) scheduling for high-risk children younger than two years of age differs from the routine schedule for healthy children of the same age. See schedules below.</td>
</tr>
</tbody>
</table>
### Pneumococcal Conjugate Vaccine

#### 12 months up to and including 23 months of age (2 doses):
- Dose 1: primary dose - day 0
- Dose 2: reinforcing dose - eight weeks after 1st dose

#### 24 months up to and including 59 months of age:
- One dose

### Notes:
- Aboriginal children (defined as having at least one parent who is aboriginal includes First Nations, Inuit and Metis) beginning immunization at younger than seven months of age should receive four doses of vaccine at 2, 4, 6 and 12 months of age as for children younger than seven months of age at high risk.
- When immunization is delayed, see [Pneumococcal Conjugate Vaccine Schedules](#): Pneumococcal 13-valent Conjugate Vaccine Interrupted Schedule for Healthy Children.
- **Catch-up**: All children up to and including 59 months age and children at high risk for IPD who have completed pneumococcal conjugate immunization with a conjugate vaccine other than PREVNAR® 13 should be offered a single dose of PREVNAR® 13 vaccine. The catch-up dose must be at least eight weeks after the last dose of pneumococcal conjugate vaccine and for those at high risk for IPD at least eight weeks after any dose of pneumococcal polysaccharide vaccine.

### High-risk children starting immunization at the following ages:

#### Two months up to and including six months of age (4 doses):
- Dose 1: two months of age
- Dose 2: four months of age (for delayed immunization schedules the interval between the 1st and 2nd dose may be shortened to four weeks).
- Dose 3: six months of age (for delayed immunization schedules the interval between the 2nd and 3rd dose may be shortened to four weeks).
- Dose 4: 12 months of age and a minimum of eight weeks after the previous dose.

#### Seven months up to and including 11 months of age (3 doses):
- Dose 1: day 0
- Dose 2: eight weeks after dose 1 (for delayed immunization schedules the interval between the 1st and 2nd dose may be shortened to four weeks).
- Dose 3: 12 months of age and a minimum of eight weeks after the previous dose.

#### 12 months up to and including 59 months of age (2 doses):
- Dose 1: day 0
- Dose 2: eight weeks after 1st dose

#### Children at high risk five years of age and older
- One dose

### Notes:
- If immunization is delayed, see [Pneumococcal Conjugate Vaccine Schedules](#).
- If possible, vaccine should be administered at least 14 days before splenectomy or initiation of immunosuppressive therapy.
- Individuals two years of age and older at high risk should receive pneumococcal polysaccharide vaccine as well. See Recommended Immunization for Infants, Children and Adults – Schedules.
- When both pneumococcal conjugate vaccine and pneumococcal polysaccharide vaccine are indicated, the pneumococcal conjugate vaccine should be administered first with a minimum interval of at least eight weeks between the two vaccines. However, if pneumococcal polysaccharide vaccine has already been administered, there must be an interval of at least eight weeks before pneumococcal conjugate vaccine may be administered.
  - Children at high risk for IPD who have completed pneumococcal conjugate immunization with a conjugate vaccine other than PREVNAR® 13 should be offered a single dose of PREVNAR® 13 vaccine. The catch-up dose must be at least eight weeks after the last dose of pneumococcal conjugate vaccine and at least eight weeks after any dose of pneumococcal polysaccharide vaccine.

**Adults at high risk**
- One dose

**Note:** When both pneumococcal conjugate vaccine and pneumococcal polysaccharide vaccine are indicated, the pneumococcal conjugate vaccine should be administered first with a minimum interval of at least eight weeks between the two vaccines. However, if pneumococcal polysaccharide vaccine has already been administered, there must be an interval of at least one year before pneumococcal conjugate vaccine may be administered.

### Contraindications
- Known severe hypersensitivity to any component of PREVNAR® 13, including diphtheria toxoid.
- Anaphylaxis to a previous dose of vaccine containing pneumococcal antigen.

### Precautions
- PREVNAR 13 will not protect against *S. pneumoniae* serotypes not included in the vaccine. It will not protect against other micro-organisms that cause invasive disease, pneumonia or otitis media.
- Does not replace the use of PNEUMOVAX® 23 in high-risk children 24 months of age and older.

### Possible reactions

#### Local reactions:
- Pain/tenderness, redness, swelling at the injection site and limitation of arm movement.

#### Systemic reactions:
- Fever; decreased appetite; irritability; drowsiness/increased sleep or restless sleep/decreased sleep; diarrhea and vomiting; rash; seizures including febrile seizures; urticaria; facial edema; dyspnea; bronchospasm; hypotonic-hyporesponsive episodes; fatigue; headache; chills; generalized muscle pain; generalized joint pain.
- Additional adverse events reported through post-marketing surveillance include: lymphadenopathy localized to the region of the injection-site; anaphylactic reactions including shock; angioedema; erythema multiforme; injection-site dermatitis, urticaria and pruritus.

Refer to: *Adverse Events Following Immunization (AEFI), Policy for Alberta Immunization Providers.*
### Pregnancy

Pregnant women at high risk of IPD due to chronic medical conditions should receive pneumococcal conjugate vaccine if indicated. There is no evidence to suggest a risk to the fetus or to the pregnancy from maternal immunization with inactivated vaccines.2

### Lactation

Breastfeeding women should receive pneumococcal conjugate vaccine as indicated if at high risk due to chronic medical conditions.

### References


