

# Vaccines Work

A NEWSLETTER BY POPULATION & PUBLIC HEALTH SERVICES  
REGINA QU'APPELLE HEALTH REGION



Fourth Edition

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## Pneumococcal Disease and Vaccines

- Pneumococcal disease is caused by the gram positive *Streptococcus Pneumoniae*.
- There are currently 92 serotypes recognized worldwide, 15 of which cause the majority of disease. In Canada, approximately 50 different serotypes are identified each year
- Humans carry *S. pneumoniae* in their nasopharynx.
- *S. pneumoniae* is transmitted by direct oral contact, respiratory droplets or indirect contact with respiratory secretions of infected or colonized persons. A person can transmit the infection when nasal and throat secretions contain pneumococci in large numbers, usually until 24 hours following appropriate antibiotic treatment. The incubation period has not been clearly defined and may be as short as 1 to 3 days.
- *Streptococcus pneumoniae* is a common cause of invasive disease, such as bacteremia and meningitis.
- Invasive pneumococcal disease (IPD) is most common in the very young, the elderly and persons at high risk due to underlying medical conditions or lifestyle factors.
- IPD is more common in the winter and spring in temperate climates
- The case fatality rate of bacteremic pneumococcal pneumonia is 5% to 7% and is higher among elderly persons Pneumococcal polysaccharide 23-valent (Pneu-P-23) vaccine efficacy against IPD is estimated to be 50% to 80% among the elderly and in high-risk groups.



**ACCESS** • **RELATIONSHIPS** • **TEAMWORK** • **KNOWLEDGE**

**a. Pneumococcal-polysaccharide- 23**

The following people are able to receive the above vaccine at no cost:

- **All persons  $\geq$  65 years of age.**
- **All residents of Extended or Intermediate Care Facilities.**
- **All persons  $\geq$  2 years of age with:**
  - o alcoholism
  - o asplenia – congenital, acquired or functional
  - o renal disease
  - o liver disease including cirrhosis, hepatitis B, hepatitis C
  - o CSF disorders
  - o cardiac or lung disease (except asthma, unless management involves high dose oral corticosteroid therapy)
  - o cochlear implant recipient or candidate
  - o congenital immunodeficiency or acquired complement deficiency
  - o cystic fibrosis
  - o diabetes mellitus
  - o immunosuppressive medical treatment<sup>2</sup> (e.g., lymphoma, Hodgkin's, multiple myeloma, high dose steroids, chemotherapy radiation therapy, post-solid organ transplant therapy)
  - o HIV<sup>2</sup>
  - o malignancies/cancer
  - o neurological conditions that impeded the clearance of oral/respiratory secretions
  - o sickle cell disease and other hemoglobinopathies
  - o solid organ or islet transplant recipient or candidate
  - o hematopoietic stem cell transplant (HSCT) recipient
  - o residents of group homes, LTC facilities
  - o homelessness and/or illicit drug use

For an update to this list please see the appropriate section in the Saskatchewan Immunization Manual (SIM):

<https://www.ehealthsask.ca/services/Manuals/Documents/sim-chapter10.pdf>

**A one-time reinforcement dose** should be offered 5 years later to those who have:

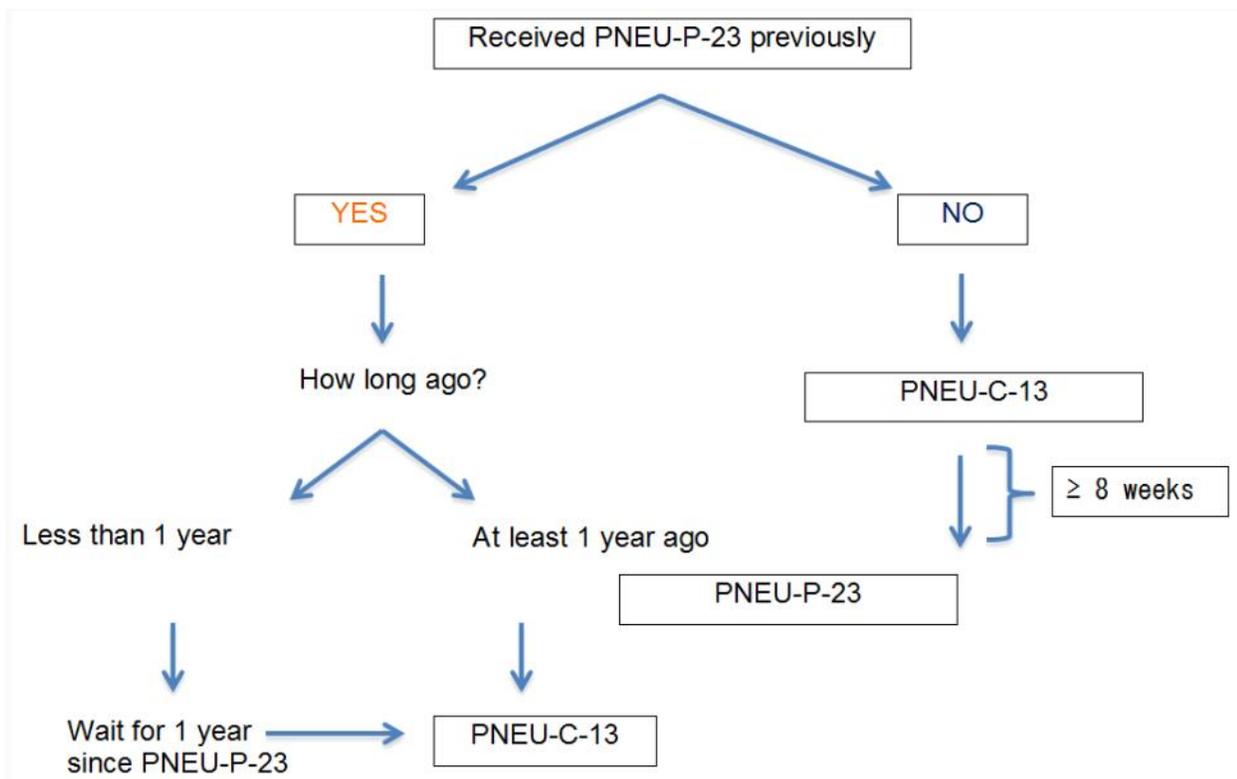
- asplenia – congenital, acquired or functional
- sickle cell disease and other hemoglobinopathies
- immunosuppressive medical treatment
- congenital immunodeficiency
- acquired complement deficiency
- renal disease
- liver disease including cirrhosis, hepatitis B, hepatitis C
- HIV
- malignancies/cancer
- hematopoietic stem cell transplant (HSCT) recipient (as per agency guidelines)

***Physician offices can contact Population and Public Health Services at 306-766-7904 to order this vaccine should they be interested in providing it to their patients that qualify.***

**b. Pneumococcal-conjugate-13 – adult immunization**

The only adults who qualify to receive publicly funded Penumo-C-13 vaccine are Post Hematopoietic Stem Cell Transplant (HSCT) Recipients. Please have them contact the Specialty Immunization Clinic at 306-766-7904 to make an appointment.

The National Advisory Committee on Immunization (NACI) concluded in an interim recommendation in October 2016 that there is good evidence, on an individual basis, to recommend in immunocompetent adults aged 65 years and older not previously immunized against pneumococcal disease, the use of PNEU-C-13 vaccine followed by PNEU-P-23, for the prevention of CAP and IPD caused by the 13 pneumococcal serotypes included in the conjugate vaccine. (NACI recommendation grade A)



<https://www.canada.ca/en/public-health/services/publications/healthy-living/update-use-of-13-valent-pneumococcal-conjugate-vaccine-pneu-c-13-in-addition-to-23-valent-pneumococcal-polysaccharide-vaccine-pneu-p-23-immunocompetent-adults-65-years-and-older-interim-recommendation.html>

### **c. Children who qualify for Pneumococcal Vaccines**

Pneumo-P-23 and Pneumo-C-13 are provided to children who qualify by Primary Health Care Public Health Nurses.

Healthy children:

- Pneu-C-13 2, 4 and 12 months of age

Children with underlying conditions

- Pneumo-C-13 2,4, 6, 12 months of age
- Pneumo-P-23 one dose after 2 years of age
- Depending on underlying condition, one booster dose might be indicated.

**A one-time reinforcement dose** should be offered 5 years later to those who have:

- asplenia – congenital, acquired or functional
- sickle cell disease and other hemoglobinopathies
- immunosuppressive medical treatment
- congenital immunodeficiency
- acquired complement deficiency
- renal disease
- liver disease including cirrhosis, hepatitis B, hepatitis C
- HIV
- malignancies/cancer
- hematopoietic stem cell transplant (HSCT) recipient (as per agency guidelines)