



Childhood Pneumococcal Vaccination 2005

Why should my child be vaccinated against pneumococcal disease?

Pneumococcal disease is a bacterial infection that can cause serious illnesses including pneumonia, meningitis, and septicaemia. From 1 January 2005, 7-valent Pneumococcal Conjugate Vaccine, or **Prevenar™**, is funded (free) for all children at 2, 4, and 6 months of age. Also, children born from 1 January 2003 to 31 December 2004 are eligible for free **Prevenar™** (for catch-up immunisation) from 1 January 2005 until 31 December 2005.

How common is pneumococcal disease in children?

In 2003, there were 40 cases of pneumococcal disease in WA children less than 5 years of age (26 male, 14 female, 1 death) notified to the Department of Health. About 80% of these cases occurred in the metropolitan area. About 10% of cases occurred in indigenous children.

Table 1 Notifications (cases) of Pneumococcal Disease by Age Group and Prevenar™ Serotype Coverage, Western Australia, 2003.

	AGE GROUP		
	0 – < 1 year	1 – < 2 years	2 – < 5 years
Number of cases	10	16	14
Incidence of cases	1 in 2,500	1 in 1,600	1 in 5,500
Number of indigenous cases	1	0	3
Number of cases with unknown serotypes (strains)	2 (20%)	1 (6%)	2 (14%)
Number of cases with Prevenar™ serotypes	7 (70%)	14 (88%)	8 (57%)
Number of cases with Pneumovax23™ serotypes	Not applicable (too young)		11 (79%)

How effective are the pneumococcal vaccines?

Currently there are two different pneumococcal vaccines available in Australia, **Prevenar™** and **Pneumovax23™**. **Prevenar™** is a new vaccine that contains 7 common serotypes (strains) of pneumococcal bacteria and stimulates a strong immune response in children from 6 weeks of age. **Pneumovax23™** contains 23 common serotypes of pneumococcal bacteria, but doesn't stimulate a strong immune response (by itself) until 2 years of age or older. See **Table 1** for the number of cases of pneumococcal disease by age group by vaccine serotype.

Should children have Prevenar™ and Pneumovax™ vaccinations?

Pneumovax23™ is currently only recommended after **Prevenar™** immunisation for children at higher risk of pneumococcal disease (see Page 2). **Pneumovax23™** does not stimulate as strong an immune response as **Prevenar™** and does not provide much additional protection to **Prevenar™**.

What is the vaccination schedule for Prevenar™?

The **Prevenar™** vaccination schedule for most non-indigenous children* is:

Prevenar™ Vaccination Schedule	AGE GROUP		
	2 – 6 months	7 – 17 months	≥ 18 months
Doses	3	2	1
Interval between doses	2 months	2 months	

*For the complete childhood pneumococcal vaccination schedules, see Page 3.

What is the vaccination schedule for Pneumovax™?

One dose of **Pneumovax23™** is recommended for indigenous children (or for non-indigenous children living in the Ngaanyatjarra region) at 18 months of age and for children with a predisposing medical condition at 4 years of age (or at 18 months of age for children living in the Ngaanyatjarra region). **Pneumovax23™** should be given at least 2 months after the last dose of **Prevenar™** was given.

Is Prevenar™ effective against middle ear infections (otitis media)?

Although pneumococcal bacteria cause about 30-40% of otitis media in children less than 5 years of age, **Prevenar™** only reduces the incidence of otitis media by 5-10%, which means that **Prevenar™** is less protective against otitis media than it is against pneumonia, meningitis, or septicaemia.

Where can I get my child vaccinated against pneumococcal disease?

From 1 January 2005, parents of eligible children can get free pneumococcal vaccines from their vaccination provider (e.g. GP, local immunisation clinic). If your child is not eligible for free pneumococcal vaccine, then your GP can prescribe the vaccine for your child. **Prevenar™** is expensive, so ask your GP or compare pharmacies for the lowest price. Some health insurance companies subsidise the cost of **Prevenar™**.

Which children are eligible for free Pneumovax23™?

Children at higher risk of pneumococcal disease who are eligible for free **Pneumovax23™** vaccine include:

1. Indigenous children up to 2 years of age.
2. Non-indigenous children living in the Ngaanyatjarra region up to 2 years of age.
3. Children with the following predisposing medical conditions up to 5 years of age:
 - ___ Congenital immune deficiency (including symptomatic IgG subclass or isolated IgA deficiency but excluding children who have monthly immunoglobulin infusions),
 - ___ Diseases associated with immunosuppressive therapy or radiation therapy (including corticosteroid treatment equivalent to more than 2mg/kg/day of prednisone for more than 4 weeks),
 - ___ Compromised splenic function due to sickle haemoglobinopathies or congenital or acquired asplenia,
 - ___ HIV infection, before or after development of AIDS,
 - ___ Renal failure or relapsing or persistent nephrotic syndrome,
 - ___ Down Syndrome,
 - ___ Cardiac disease associated with cyanosis or cardiac failure,
 - ___ Premature infants with chronic lung disease,
 - ___ Infants born less than 28 weeks gestation,
 - ___ Cystic fibrosis,
 - ___ Insulin-dependent diabetes,
 - ___ Intracranial shunts,
 - ___ Cochlear implants.

Which children should not be vaccinated against pneumococcal disease?

Children who have had a severe allergic reaction to a previous dose of the pneumococcal vaccine or to any component of the pneumococcal vaccine (e.g. **Prevenar™** - diphtheria toxin CRM₁₉₇, aluminium phosphate; **Pneumovax23™** – phenol).

What are the side effects from pneumococcal vaccination?

For **Prevenar™**, about 1 in 4 infants develop redness, tenderness, or swelling at the injection site; about 1 in 4 infants develop a fever over 38 degrees Celsius, and about 1 in 50 infants develop a fever over 39 degrees Celsius. Some children also become irritable or drowsy, or lose their appetite. For **Pneumovax23™**, about 1 in 2 children develop redness, tenderness, or swelling at the injection site and about 1 in 100 develop a fever, muscle aches, or more severe local reactions. The risk of **Prevenar™** or **Pneumovax23™**, causing serious harm is extremely small.

What is the treatment for the side effects from vaccinations?

Paracetamol is recommended to help reduce fever and pain (DO NOT OVERDOSE). Extra fluids (e.g. breast milk or water) and cooling (e.g. by fan, tepid sponging or bathing) may help to reduce fever. If any reaction is severe or if you are worried about any symptoms, immediately contact your doctor, community nurse, or local hospital.

Where can I get more information about pneumococcal vaccination?

Ask your GP, local Population Health Unit, community nurse, health worker, the Central Immunisation Clinic (Phone: 93211312), the Wyeth vaccine consultant (Phone: 94750333), or use the Internet, e.g. www.immunise.health.gov.au , www.cdc.gov/nip, www.immunisation.nhs.uk.

1. Pneumococcal Vaccination: Medical-risk children <5 years of age

DELAYED-START SCHEDULE (when start of 7vPCV has been delayed after 2 months of age)

Age at first dose of 7vPCV	Primary 7vPCV schedule	Booster schedule
3-6 months	3 doses, 1-2 months apart	7vPCV at 12 months of age; 23vPPV at 4-5 years of age
7-11 months	2 doses, 1-2 months apart	7vPCV either 2 months after second dose or at 12 months of age (whichever is later); 23vPPV at 4-5 years of age
15-59 months	2 doses, 2 months apart	23vPPV at 4-5 years of age

NB: Delayed-start and catch-up doses can be given a minimum of one month apart for children less than 12 months of age.

CATCH-UP SCHEDULE (when one or more doses of 7vPCV have been missed)

Age when child first presents for catch-up	Number of previous doses of 7vPCV	Catch-up schedule
5-6 months	1 dose	Second dose 7vCV now; third dose 1-2 months later; booster dose at 12 months of age; 23vPPV at 4-5 years of age
7-11 months	1 or 2 doses	A dose 7vPCV now; booster dose 7vPCV either 2 months after previous dose or at 12 months of age (whichever is later); 23vPPV at 4-5 years of age
12-59 months	Any incomplete schedule	A dose 7vPCV now; 23vPPV at 4-5 years of age

NB: Delayed-start and catch-up doses can be given a minimum of one month apart for children less than 12 months of age.

2. Pneumococcal Vaccination: Indigenous children <2 years of age in NT, QLD, SA and WA

DELAYED-START SCHEDULE (when start of 7vPCV has been delayed after 2 months of age)

Age at first dose of 7vPCV	Primary 7vPCV schedule	Booster Schedule
3-6 months	3 doses, 1-2 months apart	23vPPV at 18 months or 2 years of age
7-17 months	2 doses, 1-2 months apart	23vPPV at 18 months or
18-23 months	1 dose	23vPPV either 2 months after dose of 7vPCV or at 18 months or 2 years of age (whichever is later)

NB: Delayed and catch-up doses can be given a minimum of one month apart for children less than 12 months of age

CATCH-UP SCHEDULE (when one or more doses of 7vPCV have been missed)

Age when child first presents for catch-up	Number of previous doses of 7vPCV	Catch-up schedule
5-11months	1 dose	Second dose 7vPCV now; third dose 7vPCV 1-2 months later; 23vPPV at 18 months or 2 years of age
7-11months	2 doses	Third dose 7vPCV now; 23vPPV at 18 months or 2 years of age
12-23 months	1 dose	Second dose 7vPCV now; 23vPPV at 18 months of or 2 years of age
12-23 months	2 doses	23vPPV at months or 2 years of age

NB: Delayed and catch-up doses can be given a minimum of one month apart for children less than 12 months of age

3. Pneumococcal Vaccination: Low-risk children <2 years of age (including Indigenous children in ACT, NSW, Tas and Vic)

DELAYED-START SCHEDULE (when start of 7vPCV has been delayed after 2 months of age)

Age at first dose of 7vPCV	Primary 7vPCV schedule	Booster Schedule
3-6 months	3 doses, 1-2 months apart	None
7-17 months	2 doses, 1-2 months apart	None
18-23 months	1 dose	none

NB: Delayed and catch-up doses can be given a minimum of one month apart for children less than 12 months of age

CATCH-UP SCHEDULE (when one or more doses of 7vPCV have been missed)

Age when child first presents for catch-up	Number of previous doses of 7vPCV	Catch-up schedule
5-11months	1 dose	Second dose 7vPCV now; third dose 7v PCV 1-2 months later
7-11months	2 doses	Third dose 7vPCV now
12-23 months	1 dose	Second dose 7vPCV now
12-23 months	2 doses	No further doses required

NB: Delayed and catch-up doses can be given a minimum of one month apart for children less than 12 months of age