

Polio Vaccine Information

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The Summary of Product Characteristics (SPC) for the individual vaccine should be consulted for specific information relating to the product (1 2 3 4 & 5).

Indications for use of vaccine (6)

Polio vaccine is recommended for:

- All infants from two months of age
- Travellers to areas or countries where poliomyelitis is epidemic or endemic and their last dose of polio vaccine has been 10 or more years ago (7 & 8). See Clinical Update. www.nathnac.org/healthprofessionals/clinical/Nathnac-HealthProfessionals-ClinicalUpdate-PolioVaccine.html
- Individuals not previously immunised

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Availability of vaccine

Beginning late September, 2004, oral polio vaccine is being eliminated from UK vaccine schedules. This change has been made recognizing the decreased risk of imported wild type polio following the global efforts at polio eradication. The change reflects efforts to simplify paediatric vaccine schedules and to eliminate the small risk of vaccine associate paralytic poliomyelitis from OPV. See the CMO letter, 10th August 2004. <http://www.dh.gov.uk/assetRoot/04/08/73/47/04087347.pdf>

Changes to the UK vaccine schedules also affect the vaccines offered for foreign travel. Deliveries of the new vaccines will begin on the 27th September 2004 and all GP practices and pharmacies should have received supplies by the 8th October. Details of the vaccines can be found in the summary table below.

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Vaccine schedules (1 2 3 4 & 5)

Vaccine	Manufacturer/ distributor	Schedule	Length of protection	Age range
Inactivated Polio Vaccine (Salk) IPOL® (Will continue to be available, but not widely recommended.)	Aventis Pasteur MSD	Infants: 3 doses, one month apart, booster age 4 - 6 years Adults: 2 nd dose 1-2 months after 1 st . 3 rd dose after a further 6-12 months.	Adults and Children: 10 years (In adults 1 booster dose is sufficient for life ⁽⁷⁾)	Adults & children from 6 weeks of age
Pediacel® (diphtheria, tetanus, 5 component acellular pertussis, inactivated polio vaccine and Haemophilus influenzae type b vaccine – DTaP/IPV/Hib)	Aventis Pasteur MSD	Primary immunisation at 2, 3 and 4 months	Three years DTaP/IPV and life for Hib	2 months – 10 years
Repevax® (low dose diphtheria, tetanus 5 component acellular pertussis and inactivated polio vaccine – dTaP/IPV)	Aventis Pasteur MSD	Pre-school booster; single dose	Seven years for the dT/IPV. No data on aP.	3 years, 4 months – 5 years
Revaxis® (low dose diphtheria, tetanus and inactivated polio vaccine Td/IPV)	Aventis Pasteur MSD	Single dose booster.	10 years.	10 years and over
Oral Polio Vaccine (Sabin) (Will be discontinued by October 2004)	GlaxoSmith Kline	Infants: 3 doses, one month apart, booster age 4 - 6 years Adults: 3 doses one month apart.	Adults and children: 10 years	Adults & children from 2 months of age

A course started with OPV can be completed or reinforced with IPV and vice versa (6).

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Interrupted courses

OPV: (1)

Resume course to complete a primary course of 3 doses, no matter the time interval that has elapsed.

IPV: (2)

Children: time intervals between doses longer than those recommended for routine primary immunization do not necessitate additional doses as long as a final total of four doses is reached.

Adults: those who have had 1 or 2 doses in the past should receive the remaining 1 or 2 doses. It does not matter how long the interval is from the earlier doses.

Pediacel (3)

There is no data regarding the administration of Pediacel® for one or two doses and use of different vaccines for other doses. Therefore it is recommended that infants who receive Pediacel® for the first dose should also receive this vaccine for the second and third doses of the primary immunisation series.

Repevax® (2) & **Revaxis**® (3)

Not applicable, single dose.

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Contraindications

- History of hypersensitivity to the vaccine or its components
- Acute febrile illness / intercurrent infection

Contraindication specific to OPV (1)

- Current GI upset
- Individuals with impaired immune response
- Siblings and other household contacts of immunosuppressed individuals
- Pregnancy

Contraindication to Pediacel® (3) **Repevax**® (4) & **Revaxis**® (5)

- Neurological complications of unknown origin within 7 days of previous vaccination.

Adverse Events

OPV (1)

- Non-specific signs and symptoms such as fever, malaise, headache, vomiting and diarrhoea have been described (1).
- Paralysis temporally associated with vaccination, termed Vaccine Associated Paralytic Poliomyelitis (VAPP) has been reported rarely in vaccine recipients or contacts of vaccine recipients. The risk of VAPP is higher after the first dose of OPV than after subsequent doses, ranging from 1 case per 1.4 million to 1 case per 2.4 million first doses administered. Among immunocompetent persons, 83% of cases among vaccine recipients and 63% of cases among contacts occur following administration of the first dose (9).
- Anaphylaxis has been reported extremely rarely. As polio vaccine is usually given with other vaccines a causal relationship may be difficult to establish (1).

IPV (2)

- A mild erythematous reaction at the site of injection and moderate fever occasionally occur (3).

Pediacel® (3)

- Clinical trials have shown that adverse reactions following polio vaccine tend to be mild and transient. They can include soreness, erythema and induration at the injection site.
- More serious reactions e.g. febrile convulsions, gastrointestinal problems and irritability have been rarely reported.
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Repevax® (4)

- Clinical trials have shown that adverse reactions following polio vaccine tend to be mild and transient. They can include soreness, erythema and induration at the injection site.
- More serious reactions e.g. gastrointestinal problems, dermatitis and arthralgia have been rarely reported.

Revaxis® (5)

- Clinical trials have shown that adverse reactions following polio vaccine tend to be mild and transient. They can include soreness, erythema and induration at the injection site.
- More serious reactions e.g. gastrointestinal problems, vertigo and malaise have been rarely reported.

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References

1. Summary of Product Characteristics: *Polio Vaccine Live (Oral) PhEur (Monodose)*. GlaxoSmithKline; 10 March 2003 www.medicines.org.uk/
2. Summary of Product Characteristics: *Polio Vaccine (Inactivated.)* Maidenhead: Aventis Pasteur; 2004
3. Summary of Product Characteristics: *Pediacel* Maidenhead: Aventis Pasteur MSD 3 December 2003
4. Summary of Product Characteristics: *Repevax* Maidenhead: Aventis Pasteur MSD 28 November 2003
5. Summary of Product Characteristics: *Revaxis* Maidenhead: Aventis Pasteur MSD January 2004
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(The link shows the 2004 updated chapters).
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www.who.int/ith/index.html
8. Lea G, Leese J, editors. *Health Information for Overseas Travel*. 2nd ed. London: The Stationery Office; 2001 <http://www.archive.official-documents.co.uk/document/doh/hinfo/travel02.htm>
9. Centers for Disease Control. *Poliomyelitis Prevention in the United States; Updated Recommendations of the Advisory Committee on Immunization Practices (ACIP)*. Mortality and Morbidity Weekly Report; Atlanta: CDC; 19 May 2000 49 (RR05): 1-22 www.cdc.gov/mmwr/preview/mmwrhtml/rr4905a1.htm

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Reading List

Plotkin S, Orenstein W, editors. *Vaccines*. 4th ed. London: WB Saunders Co Ltd; 2004

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Links



Centers for Disease Control (CDC) www.cdc.gov/travel/diseases/polio.htm

Committee to Advise on Tropical Medicine and Travel (CATMAT) www.hc-sc.gc.ca/pphb-dgspssp/tmp-pmv/info/polio_e.html

The Merck Manual of Medical Information 2004 online
http://www.merck.com/mrkshared/mmanual_home2/home.jsp

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