

HEPATITIS B VACCINE

Trade Name	Engerix-B Paediatric®
Class	Vaccine
Mechanism of Action	Engerix-B® is a vaccine produced in yeast cells by a recombinant DNA technique which has been shown to produce antibodies to Hepatitis B virus.
Indications	<p>Protection of infants whose mothers are, or are suspected to be, Hepatitis B surface antigen positive. To confer adequate protection the vaccine should be given in combination with Hepatitis B immunoglobulin as soon as possible after birth (see separate profile)</p> <p>When only Hepatitis B is to be given instead of the routine combination vaccine Infanrix-hexa. (This may occur if parents only consent to Hepatitis B vaccine and not the other vaccines.)</p>
Contraindications	Hypersensitivity to yeast or any other component of the vaccine. Severe thrombocytopenia or other coagulation disorder where im injection may not be feasible.
Supplied As	<p>A white turbid solution containing either:</p> <p>10 microgram / 0.5 mL or 20 microgram / 1 mL</p> <p>Hepatitis B surface antigen (without preservative) in a prefilled syringe.</p>
Dilution	None – shake well before use
Dosage	<p>10 microgram (0.5 mL) is the preferred dose but depending on availability* the 20 microgram (1mL) may need to be used</p> <p>This first dose should be given at the same time as, but, at a different site from, Hepatitis B immunoglobulin 110IU/0.5mL in HBsAg positive mothers.</p> <p>To complete the immunisation schedule further doses are required at 6 weeks, 3 months and 5 months and would usually be given as the Infanrix-hexa vaccine.</p> <p>*See comments box</p>
Interval	See above
Administration	<p>Intramuscular injection into the anterior-lateral thigh is the preferred route of administration.</p> <p>Subcutaneous injection may be used if there is risk of haemorrhage</p> <p>Engerix-B must not be given intravenously or intradermally.</p> <p>Administer into a different site from other immunisations.</p> <p>See comments section below for further information.</p>

Compatible With	Engerix- B can be given at the same time as other immunisations
Incompatible With	Preservative, antiseptics and detergents
Interactions	Immunosuppressants may reduce the effectiveness of hepatitis vaccination.
Monitoring	Close observation for 20 minutes post vaccination Some infants may benefit from apnoea monitoring post vaccination. Respiratory monitoring for 48hrs should be considered when administering immunisations to very premature infants (born \leq 28 weeks of gestation) and particularly for those with a previous history of respiratory immaturity
Stability	Single use only – once drawn up use immediately
Storage	Keep refrigerated between 2-8 °C Do Not Freeze. To protect the “cold chain” vaccines are no longer kept as stock in ward fridges and should be ordered from pharmacy as required. They will be delivered in a chilly bin and if not used within 60 minutes need to be taken to the Delivery Suite fridge, taken out of the chilly bin and put into the fridge until required.
Adverse Reactions	Hepatitis B vaccine is usually well tolerated. Side effects may include - erythema and swelling, irritability, fever $>38^{\circ}\text{C}$, crying, diarrhoea, vomiting
Metabolism	N/A
Comments	Communication from Ministry of Health November 2020 HBvaxPro (our usual brand of Hepatitis B vaccine with a 5mcg in 0.5mL dose is out of stock due to COVID19 supply chain issues ETA unknown.) Engerix-B can be used in the same way as HBvaxPro 5mcg +10mcg. Engerix-B is supplied in a prefilled syringe. There are no concerns about vaccine responses following administration of either a dose of 10 microgram / 0.5 mL or a full 20 microgram / 1 mL vaccine dose. Neonates and infants can safely receive intramuscular injection of Engerix B into the vastus lateralis. It is not recommended to decant the contents of the prefilled syringe and administer half or a quarter of the volume.
References	<ol style="list-style-type: none"> 1. https://www.health.govt.nz/our-work/preventative-health-wellness/immunisation 2. MIMS New Ethicals Issue 10 2009. 3. www.moh.govt/immunisation 4. www.medsafe.govt.nz/profs/datasheet/Engerix-Binj.pdf
Updated By	A Lynn, B Robertshawe May 2010 A Lynn, B Robertshawe October 2012 (re-order profile) A Lynn, B Robertshawe March 2015 (Cold Chain process) A Lynn, B Robertshawe February 2018 (HBvaxPro stock outage) A Lynn, B Robertshawe November 2020 (further outage of HBvaxPro) A Lynn, B Robertshawe May 2021