
List 4.13.1: Conditions associated with an increased risk of invasive pneumococcal disease (IPD) in children and adults, by severity of risk^{*†}

Category A: Conditions associated with the *highest* increased risk of IPD

- functional or anatomical asplenia, including:
 - » sickle cell disease or other haemoglobinopathies
 - » congenital or acquired asplenia (e.g. splenectomy), splenic dysfunction
- immunocompromising conditions, including:
 - » congenital or acquired immune deficiency, including symptomatic IgG subclass or isolated IgA deficiency (*Note:* children who require monthly immunoglobulin infusion are unlikely to benefit from vaccination)
 - » immunosuppressive therapy (including corticosteroid therapy ≥ 2 mg/kg per day of prednisolone or equivalent for more than 1 week) or radiation therapy, where there is sufficient immune reconstitution for vaccine response to be expected
 - » haematological and other malignancies
 - » solid organ transplant
 - » haemopoietic stem cell transplant (HSCT)[‡]
 - » HIV infection (including AIDS)
 - » chronic renal failure, or relapsing or persistent nephrotic syndrome
- proven or presumptive cerebrospinal fluid (CSF) leak
- cochlear implants
- intracranial shunts

Category B: Conditions associated with an increased risk of IPD

- chronic cardiac disease
 - » particularly cyanotic heart disease or cardiac failure in children
 - » excluding hypertension only (in adults)
- chronic lung disease, including:
 - » chronic lung disease in preterm infants
 - » cystic fibrosis
 - » severe asthma in adults (requiring frequent hospital visits and use of multiple medications)
- diabetes mellitus
- Down syndrome
- alcoholism
- chronic liver disease
- preterm birth at <28 weeks gestation[§]
- tobacco smoking[¶]

* See also 3.3.3 *Vaccination of immunocompromised persons* for more recommendations for immunocompromised persons, including more specific revaccination recommendations for haematopoietic stem cell transplant recipients.

† Recommendations for pneumococcal vaccination differ for those aged >5 years (but not for those aged <5 years) between categories in this table, i.e. depending on whether the person is in 'Category A: Conditions associated with the highest increased risk of IPD' or 'Category B: Conditions associated with an increased risk of IPD'. See also relevant sections below.

‡ HSCT recipients require 3 doses of 13vPCV post transplantation, followed by 23vPPV, irrespective of previous vaccine doses received (see Table 3.3.3 *Recommendations for revaccination following HSCT in children and adults, irrespective of previous immunisation history*).

§ All infants born at <28 weeks gestation should receive vaccines recommended for those up to age 5 years with a medical condition(s) associated with an increased risk of IPD, according to Table 4.13.1. Thereafter, they only require further pneumococcal vaccine doses if they have chronic lung disease, and/or other chronic medical conditions as specified above.

¶ Tobacco smoking is not a medical condition, but is associated with an increased risk of IPD.