

The importance of vaccinations for cochlear implant recipients



Bacterial meningitis is a serious infection of the brain and the fluid that surrounds the brain. Bacterial meningitis is a life-threatening infection. Individuals who have a cochlear implant are at increased risk for bacterial meningitis. Although this risk is small, it is important for children and adults with a cochlear implant to be vaccinated against the bacteria that can gain entry into the brain and commonly cause bacterial meningitis. Two types of bacteria have produced the vast majority of cases of meningitis after cochlear implantation: *Streptococcus pneumoniae* (Pneumococcus) and *Haemophilus influenzae* type b (Hib).

Cochlear implant users and their families should be aware that vaccines against pneumococcus ('pneumo' vaccine) and Hib are widely available. These vaccines strengthen the body's ability to protect against the common causes of bacterial meningitis. Some infections with pneumococcus are now not treatable with routine antibiotics. This is another reason for considering these vaccinations.

Pneumo vaccines

There are two types of pneumococcal vaccine, the Pneumococcal Conjugate vaccine (**Prevenar**[®]) is used for children being vaccinated when they are less than 2 years of age. This is given as part of the routine infant immunisation schedule in Australia and would normally be administered 2, 4, 6 months of age. A further dose at 12 months of age is given for children who are 'at medical risk', which should include children receiving a cochlear implant. It is important to verify that your child has received all doses of their Prevenar[®] series, and if not, to catch up.

The Pneumococcal Polysaccharide vaccine (**Pneumovax**[®]) is used for those being vaccinated when they are over 2 years of age.

Now that you or your child has (or are considering) a cochlear implant, you should verify which vaccines against pneumococcus you or your child has received and obtain additional doses if you are not fully immunized. Age at the time of vaccination will determine which type of pneumococcal vaccine should be administered:

- **Children under the age of 2 years:** Vaccination with the Prevenar[®] as per the immunisation schedule, including the dose at 12 months, followed by Pneumovax[®] when the child is 4 years of age. Further booster doses should be given at 15 years of age and again for those over 65 years of age.
- **Children 2 to 4 years of age:** Complete the Prevenar[®] series if not fully vaccinated. Vaccinate with Pneumovax[®] at 4 years and 15 years of age.
- **Children 5 years and older and all adults:** Initial Pneumovax[®] vaccination and booster doses at 15 years and after 65 years.



If an adult or child did not receive Pneumovax[®] before their implant surgery, it is important for them to receive this vaccination *now*. The sooner the vaccine is given the sooner you or your child will be protected. It is never 'too late' after surgery to benefit from Pneumovax[®].

Most people can receive vaccinations such as Prevenar[®] and Pneumovax[®] from primary care providers such as family doctors or paediatricians. Further information on the availability of vaccinations is available through general medical clinics and hospitals or on the Department of Health website:

www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/nips-ctn

Hib vaccine

Haemophilus influenzae type B (Hib) meningitis is most common among infants and young children. Cochlear implants may increase the risk of Hib meningitis, so it is essential that children are vaccinated against Hib disease because bacterial meningitis is life threatening whether you have a cochlear implant or not.

The Hib vaccine is part of the routine early childhood vaccination series and provides important protection against bacterial meningitis in children with cochlear implants. It is usually given at 2, 4, 6, and 12 months of age.

The Hib vaccine is critical in protecting against childhood meningitis in young children with a cochlear implant. Adults and children over the age of 2 years do not require the Hib vaccination.

Follow-up care

Cochlear implant users and their families should also be aware that vaccinations do not eliminate the risk of meningitis. Children and adults with cochlear implants who develop a middle ear infection (otitis media) or a fever of uncertain cause should seek medical treatment and monitoring until the infection resolves.

Infections in a child or an adult with a cochlear implant should be taken seriously. Untreated middle ear and other infections may spread to produce meningitis.

In addition, if a person with a cochlear implant develops a discharge from the ear canal, or produces unusual ear symptoms or a watery nasal discharge, it is important to have that ear examined by the cochlear implant surgeon or another suitably experienced ear surgeon.

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