

Meningococcal B Vaccine – Bexsero

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Meningococcus is a bacteria that is like the shark attack of the infectious world. It strikes with very little warning, death can occur and there is risk of losing a limb or two. Penicillin can fix it, but detecting it early is impossible. There are a 13 serotypes designated letters such as A, B, and C. Type B causes 80% of disease in Australia is responsible for nearly all the deaths. Type C has had an effective vaccine since 2003. But type B has a large number of strains which has made vaccine development difficult until now. Bexsero is the name given to the new vaccine and it covers around 80% of Meningococcus B strains in Australia and other parts of the World. It is not yet on the standard schedule but is recommended and can be obtained privately.

How common is it ?

Meningococcal disease involves not only meningitis, but also invasive diseases such as septicaemia (blood poisoning). At present there are around 200 cases of meningococcal disease each year in Australia and 10% will die. The highest incidence are those under 5 years (about 50 – 60 cases per year) and those under 12 months have a higher incidence of death. Once it hits the bloodstream the infection spreads and the calamitous cascade of chemicals and toxins released causes systems mayhem resulting in shock, septicaemia, meningitis and destruction of blood vessels. This can happen so fast – a few hours that early detection is virtually impossible.

Interestingly this bacteria actually lives happily in the throat of about 10% of adults. It causes no problems and is impossible to eradicate. (Time will tell whether the vaccination lowers the carriage rate). However when the right conditions occur, and the bacteria has a portal of entry, such as when there is a cold and there is inflamed mucousal tissue it can strike quickly.



Who is susceptible ?

Infants, teenagers and those in their early 20s are the highest risk age groups. Infants because until the age of two they cannot cope with certain bacteria such as meningococcus. The immune system struggles with the outer capsule, evading the early detection that occurs in older children. The adolescents tend to be vulnerable due to lifestyle.

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The vaccine works similar to the other vaccines for bacteria like this. Bits of meningococcal proteins are attached to carriers that introduce the proteins to immunological cells which analyse and then produce antibodies against these proteins. These antibodies are then added to the bank of memory antibodies to be activated when there is contact with this protein in the future.

These meningococcal proteins – though inactive – are still potent and so this vaccine will cause side effects as the immune system fires up the antibodies. These typical side effects include fever, localised soreness at the sight of the injection and irritability for a day or two. This vaccine is therefore recommended to be given with panadol.

Frequently Asked Questions about the vaccine

How many Vaccinations are needed?

- For infants aged <6 months, 3 primary doses of 4CMenB plus a booster at age 12 months are recommended.

- aged 6-11 months 2 primary doses 2 months apart and a third dose at 12 months or 2 months after the second.
- 12months to 23 months two doses 2 months apart
- 2yrs to 10 years two doses 2 months apart
- 11yrs and older – two doses one month apart

At this stage the need for a booster dose is unclear.

Can they be given with other Vaccinations?

Yes, they can be given with the 6 weeks vaccination. But they can also be given in-between the standard vaccinations. Many parents are having the vaccine at 3,5, and 7 months, hence alternating with the standard vaccines given at 2,4 and 6 months. This is to lessen the fevers that can occur when given with other vaccines. The only risk for doing this at these dates is the 4 week delay in coverage.

The product information mentions Kawasaki as a rare side effect. What does that mean?

In the original population cohort there were a very small number of cases of Kawasaki disease. This was felt to be coincidental and not related to the vaccine. Following the release of Bexsero there has been no increase incidence of Kawasaki disease confirming this. Kawasaki disease is a nasty inflammation of the blood vessels that if untreated can be quite serious. it is an immune mediated disease that occurs in genetically susceptible children (particularly of Asian background) and is probably associated with as yet unknown virus.

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