

MENINGOCOCCAL B VACCINES: WHAT PARENTS NEED TO KNOW

WHAT IS MENINGOCOCCAL DISEASE?

- **Meningococcal disease is a serious bacterial infection that is difficult to diagnose and treat.**

Meningococcal disease starts like many other infections with headache, nausea, vomiting and fever. This infection can quickly spread into the protective membranes of the brain and spinal cord (meningococcal meningitis) and into the bloodstream (meningococcal septicemia) causing bleeding into the skin and organs. The infection causes death within 24-48 hours in 10-15% of cases. Lifelong disabilities like amputations, permanent brain injury, deafness, and skin scarring occur in 20-30 % of cases.

HOW COMMON IS MENINGOCOCCAL B DISEASE?

- **Meningococcal disease is a rare but life threatening illness. In Canada, meningococcal groups B, C, Y and W cause disease.¹**

Meningococcal group B causes most of the invasive meningococcal disease (IMD) in Canada²:

- 80% in infants under 1 year of age
- 65% in children 1-4 years of age
- 60% in 15-19 year olds

There have been recent outbreaks of group B meningococcal disease in university settings.³

On average there are 3 cases of group B infection every month in children under 2 years old in Canada. The risk of getting meningococcal B disease in childhood is 1 in 6200 and the lifetime risk is 1 in 3200.⁴

There are two vaccines that help protect against meningococcal B disease, Trumenba[®] (MenB-fHBP)⁵ and Bexsero[®] (4CMenB)⁶.

WHO SHOULD GET THE VACCINE?

- **Bexsero[®] (4CMenB) vaccine is approved for use in infants from 2 months up to 25 years of age in Canada.⁶**
- **Trumenba[®] (MenB-fHBP) vaccine is approved for use in persons 10 to 25 years of age.⁵**

The highest risk age group for meningococcal B disease is healthy infants under 1 year, next is toddlers 1-4, followed by teenagers and young adults 15-24 years old.²

Some immune system disorders can make people more susceptible to getting sick from meningococcal infection.

The meningococcal C vaccine that is part of the routine infant program and the meningococcal ACWY vaccine that is part of the grade 9 routine schedule do not protect against meningococcal B disease.

HOW DO THE VACCINES WORK?

- **They help the immune system make antibodies against meningococcal B disease.**

Meningococcal B vaccines are made from inactivated meningococcal B protein particles (antigens) that help the immune system to make specific antibodies that recognize and kill meningococcal B bacteria. The vaccines are made by using only inactivated parts of the bacteria and cannot cause infection.

The vaccines are predicted to prevent about 2/3 of meningococcal B disease cases in Canada.^{7,8}

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ARE THE VACCINES SAFE?

- **Studies before and after approvals for use have found the vaccines to be safe.**

Meningococcal B vaccines were carefully studied for safety before they were approved for use. Vaccine safety continues to be monitored after vaccines are approved for use. In Canada there are reporting systems in place to record and investigate unusual vaccine reactions. As with any vaccine, medicine or food, there is a very small chance of a severe allergic reaction.

Bexsero[®] (4CMenB) is licensed in over 37 countries with more than 1 million doses distributed.⁹ In Quebec almost 60,000 individuals 2 months to 20 years of age safely received Bexsero[®] (4CMenB) during an immunization campaign in an area where Meningococcal B disease was high. The vaccine has also been used to control Meningococcal B outbreaks in 1 Canadian University and 2 in the US.³ The vaccine was safely given to more than 7000 babies and children¹⁰ and nearly 3000 teens and young adults¹⁰ before this meningococcal B vaccine was approved in Canada. No significant safety concerns were found after 3 million doses were given as part of a routine infant vaccine program began in the UK in 2015.¹

Trumenba[®] (MenB-fHBP) was safely given to nearly 21,000 children, teens and young adults from 10 to 25 years of age before this meningococcal B vaccine was approved in Canada.⁵

WHAT ARE THE VACCINE'S SIDE EFFECTS?

- **In babies and toddlers common side effects of meningococcal B vaccines include soreness at the place where the shot is given, fever, sleepiness and fussiness for a day or two.**
- **In adolescents soreness and redness at the injection site, an increase in headache, muscle aches, and feeling tired for 1 – 3 days has been reported.**^{9,10}

Fever is very common about 6 hours after the shot is given and lasts a day or two in children under 2 years old. Fever is more frequent when other infant vaccines are given at the same time as meningococcal B vaccine.¹²

Acetaminophen (Tylenol[®], Tempra[®]) reduces the fever and can safely be given at the same time as the vaccine and repeated every 4-6 hours as needed for the first 24 hours after vaccination.¹³ Give the acetaminophen dose according to the package instructions.

If you notice any unexpected or serious side effects, call your doctor, nurse or pharmacist.

HOW ARE THE VACCINES GIVEN?

- **The vaccines are given by injection (a shot) in the leg or arm, depending on your child's age.**
- **Your child will need 2-4 doses depending on their age when they get the vaccine.**⁶

Bexsero[®] (4CMenB): Infants aged 2 months through 5 months can receive a series with 2 primary doses or 3 primary doses and a booster dose in the second year of life. Infants aged 6 months through 11 months need 3 doses. Children older than 12 months of age need 2 doses.⁶

Trumenba[®] (MenB-fHBP): Two doses for children over 10 years of age and young adults.⁵

Meningococcal B vaccines can be given at the same time as other shots, or any time before or after.

It is not known how long these vaccines protect against disease. Similar to our other meningitis vaccines, it is likely that if a child is vaccinated as an infant or toddler a booster dose will be needed to protect them as a teenager.

WHERE CAN I GET MENINGOCOCCAL B VACCINES?

- **Meningococcal B vaccines are not paid for by the government in B.C.**

Your doctor may have the vaccines in the office, or may give you a prescription to take to a pharmacy. Travel clinics also give the meningococcal B vaccines.

Meningococcal B vaccines are about \$100 - \$130 a dose. Extended health care plans may cover the cost.

Contact your health care plan and give them the Drug Identification Number to find out about your child's coverage.

Bexsero[®] (4CMenB) Drug Identification Number 02417030

Trumenba[®] (MenB-fHBP) Drug Identification Number 02468751

Vaccines help protect your child from infections, just as car seats or bicycle helmets help protect your child from injuries.

Reference list available on the BC Pediatric Society website; http://www.bcpeds.ca/wp-content/uploads/2020/07/Meningococcal_Parents_Reference_List_2020_v1.pdf

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