

Meningococcal Vaccine - Menactra®

Under the *Immunization of School Pupils Act*, all students must be vaccinated against meningococcal disease or have a valid exemption. Students who are not up-to-date may be suspended from school.

Meningococcal Infection

Meningococcal disease is caused by the bacteria *Neisseria meningitidis*. The disease spreads through saliva by close person to person contact, usually by kissing or sharing food, drink, musical instruments, water bottles, or other things that have been in the mouth of a person with the disease. Meningococcal disease is very rare, however, when it strikes, the disease can progress rapidly.

The bacteria can cause an infection in the lining of the brain and spinal cord called *meningococcal meningitis* leading to strokes, hearing loss and seizures. It can also infect the lungs, joints, bone, heart or skin. A blood infection called *meningococemia* can lead to organ failure, shock and amputations. One in 10 severe cases can lead to death.

Vaccine Benefits

There are five main strains of the *Neisseria meningitidis* bacteria that cause illness (A, B, C, Y and W-135). The meningococcal vaccine, Menactra® is given in grade 7. It protects against four strains (A, C, Y, and W-135) and is 80% to 85% effective for teenagers.

The vaccine can be given on the same day as other vaccines. Only one dose is required for teens. Students who received the Menactra® vaccine as an infant/child can still get a free dose in Grade 7.

This vaccine is different from the meningococcal-C vaccine given at one year of age, which protects against only one strain of the bacteria (C).

Vaccine Side Effects and Risks

The vaccine is safe, effective and well tolerated. Reactions are usually mild and go away within a few days. Common side effects include pain and redness where the vaccine was given, headache, and feeling tired or unwell for a short time after receiving the vaccine.

In some rare cases, serious reactions such as trouble breathing, rash, swelling in the throat and face may occur and can be treated. These rare occurrences are usually

temporary. Public health nurses observe students for 15 minutes following vaccination to monitor for any reactions.

People Who Should Not Get the Vaccine

The vaccine is not recommended if your child has had a serious reaction to diphtheria toxoid protein. If your child has had a severe allergic reaction to any vaccine in the past, Toronto Public Health can arrange to have the vaccine delivered to your child's health care provider. As a precaution, if your child has a fever, delay getting the vaccine until your child is feeling better.

If your child has received the meningococcal-ACYW vaccine (Menactra[®]/ Menveo[™]/ Nimenrix[®]) from your health care provider, please update your child's vaccinations on the consent form and return it to the school. If it has been more than five years since your child was vaccinated, a booster dose is recommended.

Human Papillomavirus Vaccine

This new expanded vaccination program will protect more youth from human papillomavirus infection and related cancers. The human papillomavirus vaccine is now available to all students in Grade 7.

Human Papillomavirus Infection

Human papillomavirus infection is very common. There are over 100 different types of human papillomavirus (HPV). Some strains of infection can lead to cancer of the cervix and other cancers of the genitals or head and neck; other strains can cause genital warts. The infection is spread by intimate skin to skin contact. It can also spread from an infected mother to her baby during birth.

Three out of four Canadians will have an infection in their lifetime. Most people will not have symptoms and may clear the infection on their own. However, every year in Ontario, 1,090 new cases of cancer and 14,666 new cases of genital warts are attributable to human papillomavirus infection.

Vaccine Benefits

The Gardasil[®] vaccine is highly effective in preventing against infection caused by strains 6, 11, 16 and 18 of the human papillomavirus.

Gardasil[®] has been licensed by Health Canada since 2006. In 2015, a two-dose schedule was approved for youth 9 to 13 years of age. The vaccine is most effective in this age group. Two doses for this age group, given at least 6 months apart, provide the same protection as a three-dose series. This vaccine can be given on the same day as other vaccines.

Three doses are still needed for individuals who receive their first dose on or after their 14th birthday and for persons with a weakened immune system.

Vaccine Side Effects and Risks

The vaccine is safe, effective and well tolerated. Reactions are usually mild and go away within a few days. Common side effects include pain and redness where the vaccine was given, headache, fever, dizziness, nausea or feeling faint shortly after receiving the vaccine.

In rare cases, serious reactions such as trouble breathing, rash, swelling in the throat and face may occur and can be treated. These rare occurrences are usually temporary. Public health nurses observe students for 15 minutes following vaccination to monitor for any reactions.

People Who Should Not Get the Vaccine

The vaccine is not recommended if your child has had a serious reaction to any of the contents in the vaccine: alum or yeast protein. If your child has had a severe allergic reaction to any vaccine in the past, Toronto Public Health can arrange to have the vaccine delivered to your child's health care provider. As a precaution, if your child has a fever, delay getting the vaccine until your child is feeling better.

If your child has already received the full series of Gardasil® or Cervarix® vaccine, there is no need to get the vaccine again. Fill in your child's previous vaccination dates on the consent form and return it to the school.

Hepatitis B Vaccine

This vaccine is recommended before travel, for some career choices and for cancer prevention. Hepatitis B vaccine is given as a two-dose series to Grade 7 students at the school clinics.

Hepatitis B Infection

Hepatitis B is a highly infectious liver disease caused by the hepatitis B virus. It can spread through contact with infected blood and body fluids. The virus can also survive on dry surfaces for up to 7 days. It can be spread by:

- a needle stick injury, with a contaminated needle
- being splashed in the mouth, nose or eyes with infected blood
- being bitten by an infected person
- sharing infected personal items such as a toothbrush, nail clipper, razor or needles
- getting a tattoo or piercing with unsterilized equipment
- sexual contact with an infected person
- an infected mother to her child during pregnancy or childbirth

Hepatitis B can cause serious complications including permanent liver damage like cirrhosis, liver cancer or death. The infection can take up to nine months to appear. Symptoms include yellowing of skin and eyes (jaundice), loss of appetite, stomach pain, nausea, tiredness, fever, and joint pain. Some people, especially young children, will not have symptoms. Some people will carry the virus in their body for the rest of their lives.

Vaccine Benefits (Recombivax HB[®] or Engerix[®]-B)

The vaccine is 95 to 100% effective in preventing hepatitis B infection. This vaccine is recommended before travel, for some career choices and for cancer prevention.

Hepatitis B vaccine can be given on the same day as other vaccines. Two doses are needed for youth ages 11 to 15 years of age and are given at least six months apart. This vaccine can be given on the same day as other vaccines.

Vaccine Side Effects and Risks

The vaccine is safe, effective and well tolerated. Reactions are usually mild and go away within a few days. Common side effects include pain and redness where the vaccine was given, headache, fever, dizziness, nausea or feeling faint shortly after receiving the vaccine.

In rare cases, serious reactions such as trouble breathing, rash, swelling in the throat and face may occur and can be treated. These rare occurrences are usually temporary.

Public health nurses observe students for 15 minutes following vaccination to monitor for any reactions.

People Who Should Not get the Vaccine

The vaccine is not recommended if your child has had a serious reaction to any of the contents in the vaccine: alum, yeast protein and (latex in Recombivax[®] vaccine). If your child has had a severe allergic reaction to any vaccine in the past, Toronto Public Health can arrange to have the vaccine delivered to your child's health care provider. As a precaution, if your child has a fever, delay getting the vaccine until your child is feeling better.

If your child has already received the full series of hepatitis B vaccine or combination vaccine, there is no need to get vaccinated again. Example of combination vaccines include Twinrix[®] / Twinrix[®] Jr., INFANRIX hexa[®]. Fill out your child's vaccination dates on the consent form and return it to the school.

Multiple Injections

At the school clinic, you child may receive up to three needles in one day.

- it is safe to give all at once
- children tolerate multiple injections well
- best protection is ensured at the earliest age possible
- it is more convenient than making additional medical appointments for missed doses
- the vaccines are only free at the school clinic; you may have to pay when filling the prescription for the vaccines at the doctor's office

For More Information

- talk to your health care provider
- call our Immunization Information Line at 416-392-1250

Resources

1. Canadian Immunization Guide, Evergreen Edition. Part 4 Active Vaccines: Ottawa: Public Health Agency of Canada. <http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-eng.php>
2. Canadian Paediatric Society. Caring for Kids. Vaccination and your child. http://www.caringforkids.cps.ca/handouts/vaccination_and_your_child
3. Immunize Canada. Information for parents. <http://immunize.ca/en/parents.aspx>