

MenACWY vaccine (Ireland)



Fast facts

MenACWY vaccine was introduced in Ireland in September 2019 for all first year secondary school students

It offers protection against four strains of meningococcal bacteria (A, C, W, & Y).

Meningococcal bacteria are the leading cause of bacterial meningitis in Ireland

Why do we need to vaccinate adolescents with MenACWY vaccine?

Ireland has one of the highest rates of meningococcal disease in Europe, with around 90 cases occurring each year.

MenACWY vaccine directly protects vaccinated people from four different types of meningococcal meningitis and septicaemia (groups A, C, W & Y) and also stops them from carrying the bacteria in the back of the nose and throat

It is particularly important to protect teenagers because as well as being at increased risk of developing the disease, they are also the most likely to carry and spread the bacteria to others. Vaccinating teenagers is therefore essential to prevent the spread of infection amongst the wider population.

Importance of protection against MenW and MenY disease:

Since 2015, cases of MenW and MenY disease have been rising in Ireland. Between 2015 and 2018 there was an

annual average of 9 cases of MenW and 5 cases of MenY disease compared to an average of 2 cases per year prior to this.¹ The rise in MenW cases has been caused by a particularly virulent (harmful) strain of bacteria known to cause severe disease in previously healthy people, with a high death rate.

The strain (ST-11) was identified using the MRF Meningococcal Genome Library to be the same strain responsible for high disease rates and very high fatality rates in South America. The strain has spread to multiple European countries in addition to Ireland, including the UK, France, the Netherlands, Sweden.

Vaccinating adolescents against MenACWY will protect them and stop the spread of this virulent strain.

Importance of maintaining protection against MenC disease:

Since routine introduction of the MenC vaccine, MenC has been nearly eliminated in Ireland. The reason for this success was not just because the vaccine directly protected babies from disease, but because it was introduced with a catch up campaign, which extended to teenagers and young adults, preventing people in this age group from carrying the bacteria in their throats and transmitting it to others.

Research has since shown that the direct protection young children get from MenC vaccination is relatively short-lived.^{2,3,4} Therefore teenagers who were vaccinated as babies will no longer be directly protected. Boosting teenagers with MenACWY, will renew their protection, which is important as this age group are more likely to carry they are entering a higher risk age group for this disease. It also keeps disease levels amongst the population at low levels by stopping the spread of bacteria.

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Who is entitled to receive the vaccine, and where should they get it?

First year secondary school students in Ireland are routinely offered the vaccine. HSE school vaccination teams will visit the school and administer the MenACWY vaccine alongside the second dose of HPV vaccine during the academic year. Age equivalent home schooled students will also be eligible for vaccination and can be vaccinated at HSE clinics.

Who else can get the vaccine free from the HSE?

People with asplenia or hyposplenia (including haemoglobinopathies and coeliac disease), defects in or deficiency of complement components, including factor H, factor D and properdin, Haematopoietic Stem Cell Transplant recipients, those who are HIV positive, and those with immunodeficiency due to disease or treatment, particularly Eculizumab (Soliris) are all entitled to the MenACWY vaccine and other meningitis vaccines free of charge.

What vaccine will be provided?

There are two MenACWY vaccines currently licensed in Ireland, Menveo® and Nimenrix®. Both vaccines have been widely used for several years: Menveo® since 2010 and Nimenrix® since 2012. Nimenrix® is currently used to routinely immunise young people in Ireland.

Are the vaccines safe?

Both vaccines have a good safety profile. As with all drugs, vaccines can cause side effects. Side effects of MenACWY vaccines are similar to other routine vaccines and may include

soreness/redness/swelling or hardness of skin at the injection site, fever, headache, nausea, muscle aches, tiredness/fatigue, loss of appetite, generally feeling unwell.

Globally, the vaccines have been used extensively amongst pilgrims attending Hajj to combat meningitis outbreaks that have occurred among Hajj pilgrims in the past. MenACWY vaccine is compulsory for people attending Hajj, and since 2010, there have been 2-3 million Hajj pilgrims each year worldwide. The vaccines have also been used as part of the routine immunisation programme in several countries worldwide including the UK.

Is it a risk to other people once someone has had the vaccine?

No, quite the contrary. Vaccinating adolescents not only protects them, but reduces their risk of acquiring the bacteria, which commonly live in the nose and throat. By getting vaccinated, adolescents are also protecting younger and older people who are vulnerable to the infections.

What are the ingredients in the vaccine?

Each different group (A,C,W and Y) of meningococcal bacteria has a different type of sugar capsule surrounding the bug. The MenACWY vaccines contain fragments of the sugar capsules of all four groups. The sugar fragments are linked to a protein which makes the vaccine stronger and longer lasting.

All of the vaccine components have been processed and inactivated and are not part of any living bacteria, but can still stimulate the immune system.

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Once you are vaccinated with MenACWY, your immune system can recognise and kill bacteria with the same sugar capsule that is contained in the vaccine, so if you are exposed to these types of bacteria you do not become ill.

Other ingredients in the vaccines are used to ensure it has the same level of acidity and salt concentration as your body.

In Nimenrix® the other ingredients include⁵:

- Sucrose
- Trometamol
- Sodium chloride
- Water for injections

Are there any safety reasons not to have the vaccine? What about allergies?

People who have previously had an anaphylactic reaction to any of the vaccine components listed above should not get the vaccine.

Anaphylaxis to current vaccines is very rare and is estimated to occur in one in a million doses given, although another study⁶ found no reports of anaphylaxis following more than 5 million preschool and infant immunisations over an entire year in the UK and Ireland.

People with severe immune system problems cannot have live vaccines, but the MenACWY vaccines are not live. Food allergies are not a reason to avoid vaccination.

People often worry that eczema, asthma, epilepsy and a family history of reactions to vaccinations are a reason to avoid vaccinations, but this is not true⁷.

Is there a separate MenW vaccine like MenC?

No. There is currently no licensed vaccine that just protects against MenW.

Is it safe (or necessary) for people who have had meningococcal disease?

Yes. The vaccine is safe for people who have previously had meningococcal disease, and the vaccine cannot give them the disease. There are very few safety reasons for not vaccinating and these are outlined above.

There are many different types of meningococcal disease. Although someone who has been ill in the past may have some immunity against the strain that caused disease, they would not be protected against other types. Vaccination is necessary for broader protection and to boost any existing immunity generated from a previous infection.

Is it safe if you are pregnant?

Yes. Meningococcal vaccines may be given to pregnant women. There is no evidence of risk from vaccinating pregnant women or those who are breast-feeding.

What about those who are too young/old to freely qualify for the MenACWY vaccine. Should they get the vaccine privately?

Babies are at the highest risk of contracting meningococcal disease with peak incidence at around 5 months of age, but there is no current recommendation for babies to be vaccinated with MenACWY. The MenB vaccine Bexsero,

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which is given to children at 2, 4 and 12 months, should provide some protection against the particular ST-11 MenW strain that is causing severe disease⁸.

The risk of becoming unwell is relatively low. In Ireland, in 2018, the incidence of meningococcal disease amongst the under ones was 17.7 per 100,000 (one baby in 5,645), reducing to 7.1 per 100,000 in Ireland for children aged 1-4 (1 child in 14,085).⁹ The incidence of disease amongst people older than five is substantially less.

Vaccinating adolescents should also stop the bacteria from being passed on to others. This means that even unvaccinated people including babies should eventually also be indirectly protected from catching the disease – an effect known as population protection (or herd protection).

However, meningococcal disease is such a deadly and disabling disease that some may wish to be protected however small the risk of them contracting disease. The vaccine is available privately for those who wish purchase it.

How much will the vaccine cost if I want to get it privately?

As a guideline, the purchase price of the MenACWY vaccines for vaccine providers is €42 per dose excluding VAT.

A fee is also charged for administering the vaccine and this can be different according to clinic, so overall prices vary.

Once my teenager has had their MenACWY vaccine, can they still get meningitis?

Unfortunately yes, although it is much less likely. Meningitis vaccines are excellent but they do not protect against all strains.

For example, MenB has been the most common kind of meningitis for decades and while babies are now routinely vaccinated against MenB, there is currently no recommendation for this vaccine to be offered to teenagers, and there are still some kinds of meningitis that cannot be prevented so it is important to know the symptoms, see: <https://www.meningitis.org/meningitis/check-symptoms>.

References

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