Meningococcal Vaccination

Meningococcal disease is an infection caused by the gram-negative bacteria *Neisseria meningitidis*. There are 12 serogroups of *N. meningitidis*. Invasive meningococcal disease (e.g., meningitis, sepsis) is usually caused by serogroups A, B, C, W, X, and Y.[1] The chart below reviews routine vaccination recommendations for available meningococcal vaccines in the U.S.

All meningococcal vaccine doses are 0.5 mL and should be given intramuscularly (IM)

<table>
<tr><th colspan="4">Meningococcal serogroup A, C, W, Y</th></tr>
<tr><th rowspan="2">Vaccine Type/
Approved Age/
Cost per Dose[c]</th><th colspan="3">DOSE FREQUENCY[1]</th></tr>
<tr><th>2 months to 10 years</th><th>11 to 23 years</th><th>24 years or older</th></tr>
<tr><td rowspan="2">MenACWY-CRM
(Menveo [~$135];
2 months to 55 years)

MenACWY-D
(Menactra [~$130];
9 months to 55 years)

MenACWY-TT*
(MenQuadfi [~$140];
≥2 years [not available at time of publication; expected to be available in 2021][4])

*MenQuadfi contains Neisseria meningitidis antigens that are individually conjugated to tetanus toxoid protein, but note MenQuadfi is NOT a substitute for routine tetanus immunizations.[1]</td><td>Not routinely recommended.

Only recommended for people at risk (see footnote a). Dosing schedule varies based on patient age, reason someone is considered at risk, and the product used.

Booster doses are recommended for anyone still at risk (see footnote a).

See the latest dosing and booster dose interval recommendations at: https://www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm.</td><td>Routine vaccination:[e]
• one dose at 11 to 12 years
• one booster dose at 16 years

A booster dose is recommended five years after the last dose if a person becomes at risk AFTER vaccination (see footnote a). Continue booster doses every five years for anyone still at risk.

For patients that become “at risk” prior to routine vaccination, see the latest dosing and booster dose interval recommendations at: https://www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm.</td><td>Not routinely recommended.

Only recommended for people at risk (see footnote a). Number of doses varies based on patient age, reason someone is considered at risk, and the product used.

Booster doses are recommended for anyone still at risk (see footnote a).

See the latest dosing and booster dose interval recommendations at: https://www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm.

Can be given to at-risk adults older than the FDA-approved upper age limit.[1,4,5]</td></tr>
<tr><td colspan="3">• All three meningococcal ACWY vaccines are interchangeable. However, when possible, use the same vaccine for all doses in the series.[4]
• No safety concerns have been identified for the mother or infant if maternal vaccination occurs during pregnancy or lactation.[4,6,7]</td></tr>
</table>

<table>
<tr><th colspan="4">Meningococcal serogroup B</th></tr>
<tr><th rowspan="2">Vaccine Type/
Approved Age/
Cost per dose[c]</th><th colspan="3">DOSE FREQUENCY</th></tr>
<tr><th>2 months to 9 years</th><th>10 to 23 years</th><th>24 years or older</th></tr>
<tr><td rowspan="3">MenB-4C
(Bexsero [~$180];
10 to 25 years)

OR

MenB-FHbp
(Trumenba [~$150];
10 to 25 years)</td><td rowspan="3">Not recommended.[1]</td><td colspan="2">Routine vaccination: previously unvaccinated people at risk (see footnote b):[1]
• Bexsero: two doses, at least one month apart
• Trumenba: three doses; at zero, one to two, and six months
• Booster doses (with the same product [products not interchangeable] one year after vaccination and then every two to three years if still at risk).[1]</td></tr>
<tr><td>Shared decision making[d] for people not at risk: two doses (between 16 and 23 years [ideally 16 to 18 years])
• at least one month apart (Bexsero)
• six months apart (Trumenba [If second dose is given earlier than six months after the first dose, give a third dose at least four months after the second dose.]).[1,3]
• Only recommend booster doses (with the same product; products are not interchangeable) if someone becomes at risk (see footnote b).[1]</td><td>Not routinely recommended.[1]

Can be given to at-risk adults older than the FDA-approved upper age limit.[4,5]</td></tr>
<tr><td colspan="2">• Use the same product for all required doses. Bexsero and Trumenba are NOT interchangeable.[2,5]
• Generally, defer vaccination during pregnancy unless benefit of protection outweighs any potential risk, as no data are available to demonstrate safety.[2,5]</td></tr>
</table>

a. **People at risk for meningococcal disease caused by serogroups A, C, W, or Y** include: people with persistent complement component deficiencies; people receiving a complement inhibitor (e.g., eculizumab, ravulizumab); people with anatomic or functional asplenia (e.g., sickle cell disease); people with human immunodeficiency virus (HIV) infection; microbiologists regularly exposed to *Neisseria meningitidis* isolates; people at increased risk because of a meningococcal disease outbreak caused by serogroups A, C, W, or Y; people who travel to or live in areas in which meningococcal disease is hyperendemic or epidemic; unvaccinated or incompletely vaccinated first-year college students living in residence halls; and military recruits.[1]

b. **People at risk for meningococcal disease caused by serogroup B** include: people with persistent complement component deficiencies; people receiving a complement inhibitor (e.g., eculizumab, ravulizumab); people with anatomic or functional asplenia (e.g., sickle cell disease); microbiologists regularly exposed *N. meningitidis* isolates; and people at increased risk because of a meningococcal disease outbreak caused by serogroup B.[1]

c. Pricing based on wholesale acquisition cost (WAC). Medication pricing by Elsevier (McKesson for *Menactra*), accessed November 2020.

d. Find information on shared clinical decision making at https://www.cdc.gov/vaccines/acip/acip-scdm-faqs.html.

e. Routine vaccination recommended for adolescents between 11 and 18 years. Catch up vaccinations can be done between 19 and 21 years.[1]

Users of this resource are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.

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References

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