

# Comparison of Meningococcal Vaccines

Updated December 2024

Meningococcal disease is an infection caused by the gram-negative bacteria *Neisseria meningitidis*. Invasive meningococcal disease (e.g., meningitis, sepsis) is usually caused by serogroups A, B, C, W, X, and Y.<sup>1</sup> The chart below reviews available meningococcal vaccines in the US. See our [Meningococcal Vaccination algorithm](#) for guidance on which patients should be vaccinated.

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

Vaccine	<i>Menveo</i> (MenACWY-CRM)	<i>MenQuadfi</i> (MenACWY-TT)	<i>Bexsero</i> (MenB-4C)	<i>Trumenba</i> (MenB-fHbp)	<i>Penbraya</i> (MenACWY-TT plus MenB-fHbp)
<b>Manufacturer</b>	GSK	Sanofi Pasteur	GSK	Pfizer	Pfizer
<b>Serotypes covered<sup>c</sup></b>	4-valent: A, C, W, Y	4-valent: A, C, W, Y	B	B	5-valent: A, B, C, W, Y
<b>Approved age</b>	2 months to 55 years <sup>e</sup>	≥2 years	10 to 25 years	10 to 25 years	10 to 25 years
<b>Cost per dose<sup>c</sup></b>	\$160	~\$270	\$225	\$190	\$230
<b>Recommended for:</b>	<ul style="list-style-type: none"> <li>All adolescents 11 to 12 years old.</li> <li>Patients ≥2 months at increased risk.<sup>a</sup></li> </ul>		<ul style="list-style-type: none"> <li>Patients ≥10 years at increased risk<sup>b</sup></li> <li>Patients 16 to 23 years who are not at increased risk: shared decision making<sup>d</sup></li> </ul>		<ul style="list-style-type: none"> <li>Per MenACWY and MenB recs.</li> </ul>
<b>Dosing schedule<sup>3</sup></b>  *each dose is 0.5 mL IM	<ul style="list-style-type: none"> <li>Single dose for adolescents.</li> <li>2 to 4-dose primary series for ≥2 months at increased risk.<sup>a</sup> (meningococcal ACWY vaccines are interchangeable; however, always use an age appropriate formulation.<sup>4,e</sup>)</li> </ul>		<ul style="list-style-type: none"> <li><b>Not interchangeable. Use the same vaccine for all doses.</b></li> <li>3-dose: 1, 1 to 2, and 6 months<sup>f</sup></li> <li>If not at increased risk: <b>2-doses, 6 months apart</b> (if interval is &lt;6 months, give a 3rd dose ≥4 months after 2nd dose)</li> </ul>		If ACWY and B ( <i>Trumenba</i> only) are both needed at the same visit: 2 doses, 6 months apart
<b>Booster dose<sup>3</sup></b>	<ul style="list-style-type: none"> <li>At 16 years for adolescent vaccination.               <ul style="list-style-type: none"> <li>If initial vaccination was given from 13 to 15 years, give booster at 16 to 18 years.</li> <li>If initial vaccination was given ≥16 years, no booster is recommended.</li> </ul> </li> <li>For patients at increased risk, when primary series given at age:               <ul style="list-style-type: none"> <li>&lt;7 years: 3 years after series, then every 5 years.</li> <li>≥7 years: every 5 years.</li> </ul> </li> </ul>		After 1 year and then every 2 to 3 years (if risk continues). Can be given to <b>at-risk adults</b> older than the FDA-approved upper age limit.		n/a
<b>Booster during outbreaks</b>	Booster recommended if ≥5 years since last dose. <sup>3</sup>		Booster recommended if ≥1 year since last dose (6 months in some cases, per public health). <sup>3</sup>		n/a
<b>Comments</b>	n/a	<i>MenQuadfi</i> vaccine antigens are conjugated to tetanus toxoid protein; however, this vaccine is NOT a substitute for routine tetanus immunizations. <sup>1</sup>	n/a	2-dose schedule is preferred	Contains <i>Trumenba</i> as the MenB component. Use only in a series with <i>Trumenba</i> . <sup>3</sup>

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- a. **Patients at risk for meningococcal disease caused by serogroups A, C, W, or Y** include: persistent complement component deficiencies; receiving a complement inhibitor (e.g., eculizumab, ravulizumab); anatomic or functional asplenia (e.g., sickle cell disease); human immunodeficiency virus (HIV) infection; increased risk because of a meningococcal disease outbreak caused by serogroups A, C, W, or Y; travel to or living in areas in which meningococcal disease is hyperendemic or epidemic, unvaccinated or incompletely vaccinated first-year college students living in residence halls, military recruits, and microbiologists regularly exposed to *Neisseria meningitidis* isolates.<sup>2</sup>
- b. **Patients at risk for meningococcal disease caused by serogroup B** include: persistent complement component deficiencies, receiving a complement inhibitor (e.g., eculizumab, ravulizumab), anatomic or functional asplenia (e.g., sickle cell disease), in a community experiencing a meningococcal disease outbreak caused by serogroup B, and microbiologists regularly exposed to *N. meningitidis* isolates.<sup>2</sup>
- c. Pricing based on wholesale acquisition cost (WAC). Medication pricing by Elsevier, accessed November 2024.
- d. Find information on shared clinical decision making at [https://www.cdc.gov/acip/vaccine-recommendations/shared-clinical-decision-making.html?CDC\\_AAref\\_Val=https://www.cdc.gov/vaccines/acip/acip-scdm-faqs.html](https://www.cdc.gov/acip/vaccine-recommendations/shared-clinical-decision-making.html?CDC_AAref_Val=https://www.cdc.gov/vaccines/acip/acip-scdm-faqs.html).
- e. Menveo is available in two presentations. The one-vial, ready-to-use formulation is only for use in patients 10 years to 55 years. The two-vial formulation (must be mixed together prior to administration) is approved for use in patients 2 months to 55 years.<sup>5,6</sup>
- f. The three-dose schedule is recommended for patients at increased risk. The three-dose schedule may be preferred for more rapid protection (e.g., students with less than six months of starting college) in patients 16 to 23 years who are not at increased risk.<sup>3</sup>

## References

1. Mbaeyi SA, Bozio CH, Duffy J, et al. Meningococcal Vaccination: Recommendations of the Advisory Committee on Immunization Practices, United States, 2020. *MMWR Recomm Rep*. 2020 Sep 25;69(9):1-41.
2. CDC. Risk-based indications for meningococcal vaccination. June 26, 2024. <https://www.cdc.gov/meningococcal/hcp/vaccine-recommendations/risk-indications.html>. (Accessed November 3, 2024).
3. CDC. Meningococcal vaccine recommendations. October 24, 2024. <https://www.cdc.gov/meningococcal/hcp/vaccine-recommendations/index.html>. (Accessed November 3, 2024).
4. Immunize.org. Ask the experts: meningococcal ACWY. April 10, 2024. <https://www.immunize.org/ask-experts/topic/menacwy/>. (Accessed November 4, 2024).
5. Product information for Menveo. GlaxoSmithKline Biologicals. Durham, NC 27701. August 2024.
6. CDC. Menveo new ready-to-use single vial presentation. October 24, 2023. <https://www.cdc.gov/vaccines/vpd/mening/downloads/menveo-single-vial-presentation.pdf>. (Accessed November 7, 2024).

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