

Immunization Protocol

Meningococcal ACWY Vaccine (MenQuadfi[®], Menveo[®]) and Meningococcal B Vaccine (Bexsero[®], Trumenba[®])	
Last Reviewed	23 Aug 2023
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Table of contents

1. What's new	1
2. Oregon model immunization protocol	2
3. Vaccine schedule for meningococcal vaccines	3
4. Licensed meningococcal vaccines.....	3
5. Recommendations for use of meningococcal vaccines.....	3
6. Contraindications.....	6
7. Warnings and precautions	6
8. Other considerations	6
9. Side effects and adverse reactions.....	7
10. Storage and handling	7
11. Adverse events reporting.....	8
12. References	8

1. What's new

Added guidance for meningococcal B vaccine shared clinical decision-making in patients 16–23 years of age.⁵

2. Oregon model immunization protocol

- A. Check the ALERT Immunization Information System (IIS) to determine whether the patient needs this vaccine and any other vaccines.
- B. Screen clients for contraindications and precautions.
- C. Provide a current Vaccine Information Statement (VIS), answering any questions.
- D. Record all required data elements in the client's permanent health record.
- E. Verify needle length for IM injection.
- F. To avoid shoulder injury related to vaccine administration, make sure staff who administer vaccines recognize the anatomic landmarks for identifying the deltoid muscle and use proper intramuscular administration technique.
- G. Administer a 0.5-mL dose of meningococcal vaccine according to ACIP recommendations, age-appropriate schedules, and high-risk conditions.
- H. Meningococcal B vaccines are not interchangeable. All doses of Meningococcal B must be of the same brand of vaccine.⁵
- I. Meningococcal conjugate quadrivalent vaccine and Meningococcal B vaccine may be given simultaneously at different sites if indicated.⁵
- J. Meningococcal ACWY vaccines are generally interchangeable, however MenACWY-D (Menactra) should not be given at the same time as PCV13 vaccine.¹⁰
- K. MenACWY-D (Menactra) may be given at any time in relation to Tdap.⁵
- L. Ask client to remain seated in the clinic for 15 minutes after vaccination to decrease the risk of injury should they faint.

Health Officer Signature

Date

Health Officer Signature

Date

3. Vaccine schedule for meningococcal vaccines

Vaccine Schedule: Meningococcal ACWY (MenQuadfi ⁴ , Menveo ¹)			
Age Group	Dose	No. of Doses	Route
≥2 months	0.5 mL	Varies by age	Intramuscular
11–15 years		2	
16 years		1 or 2*	
Vaccine Schedule: Meningococcal B (Bexsero ² , Trumenba ³)			
Age	Dose	No. of Doses	Route
≥10 years	0.5 mL	2 or 3	Intramuscular

* See high-risk schedule.

4. Licensed meningococcal vaccines

Meningococcal ACWY Conjugate Vaccines		
Trade Name	Presentation	Acceptable Age Range
MenACWY-TT ⁴ (MenQuadfi)	0.5-mL single-dose vials	≥2 years
MenACWY-CRM ¹ (Menveo)	2 vials that must be combined to form a single 0.5-mL dose	≥2 months
MenACWY-CRM ¹ (Menveo)	0.5-mL single-dose vials	≥10 years
Meningococcal B Vaccines		
Trade Name	Presentation	Acceptable Age Range
Bexsero (MenB-4C ³)	0.5-mL prefilled syringes	≥10 years
Trumenba (MenB-FHbp ⁴)	0.5-mL prefilled syringes	≥10 years

5. Recommendations for use of meningococcal vaccines

A. Routine use of **Meningococcal ACWY** vaccine⁵

- All adolescents 11–18 years of age without contraindications.
- First-year college students living in dorms should receive 1 dose of quadrivalent meningococcal vaccine within the five years before college

entry.

- May be administered to adults 19–21 years of age if required for attendance at institution of higher education.

B. Use of **Meningococcal ACWY** vaccine in high-risk persons

- Persons aged ≥ 2 years with anatomical or functional asplenia, HIV or complement component deficiency or who are taking complement inhibitor medications.⁵
- Microbiologists routinely exposed to isolates of *Neisseria meningitidis*.⁵
- Persons at increased risk during an outbreak (e.g., in community or organizational settings, and among men who have sex with men [MSM]).⁵
- Persons aged ≥ 9 months traveling to Saudi Arabia for the Hajj and Umrah or to the meningitis belt in sub-Saharan Africa.⁵

C. Schedule for **Meningococcal B** vaccine in high-risk persons⁵

- Persons with persistent complement component deficiencies or who are taking complement inhibitor medications.
- Persons with anatomic or functional asplenia.
- Microbiologists routinely exposed to isolates of *Neisseria meningitidis*.

D. **Meningococcal B** vaccination is not routinely recommended for all patients who are 16-23 years of age. Instead, a Meningococcal B series is recommended based on Shared Clinical Decision-Making between the health care provider and patient or parent/guardian. Considerations for administration and timing may include:⁵

- the serious nature of meningococcal infections, with high rates of death and permanent sequelae in those who develop invasive disease;
- the low number of serogroup B meningococcal disease cases (average of 34 serogroup B cases annually among persons aged 16–23 years in the United States during 2015–2018);
- the increased risk among college students, especially those who are freshmen, attend a 4-year university, live in on-campus housing, or participate in sororities and fraternities;
- the protection provided by Meningococcal B vaccines against most strains of serogroup B *N. meningitidis*;
- the estimated relatively short duration of Meningococcal B protection (antibody waning within 1–2 years post completion of the primary series); and

- the evidence to date suggesting that Meningococcal B vaccination has no effect on meningococcal carriage (i.e., Meningococcal B vaccines might provide individual protection against serogroup B disease but herd protection is unlikely).

MenACWY Vaccine Routine Schedule⁵

Dose	Preferred Age	Minimum Acceptable Age	Minimum Acceptable Spacing
1	11 years	10 years	
Booster	16 years		8 weeks

MenACWY Vaccine Schedule for High-Risk Persons⁵

Age at Initial Dose*	Vaccine	Doses in Series	Schedule	Booster
2 months	MenACWY-CRM (Menveo)	4	2, 4, 6, 12 months	≤7 years of age at last dose, 1 st booster at 3 years, then every 5 years. ≥7 years of age at last dose, boosters every 5 years.
3-6 months		3-4	Doses 8 weeks apart, followed by a dose at ≥7 months of age, and a final dose 12 weeks later and after 12 months of age.	
7-23 months		2	12 weeks apart, 2 nd dose ≥12 months of age.	
≥2 years	Menveo or MenQuadfi	2	At least 8 weeks apart	

Meningococcal B Vaccine for Healthy* Persons⁵

Vaccine	Dose	Recommended Spacing	Minimum Spacing	Recommended Age
MenB-4C (Bexsero)	1			16-23 years ^o
	2	1 month	28 days	
MenB-FHbp (Trumenba)	1			
	2	6 months	6 months	

^oThe preferred age for MenB vaccination is 16-18 years.

Meningococcal B Vaccine for High-Risk Persons⁵					
Vaccine	Dose	Recommended Spacing	Minimum Spacing	Recommended Age	Booster Doses
MenB-4C (Bexsero)	1			≥10 years	1 year after completion of the series, then every 2–3 years as long as risk factors remain.
	2	1 month	28 days		
MenB-FHbp (Trumenba)	1				
	2	1 month	28 days		
	3	5 months after dose 2 and 6 months after dose 1	4 months after dose 2		

6. Contraindications¹⁻⁴

- A. Severe allergic reaction to a previous dose or to a vaccine component, including latex³ (Bexsero[®]).

Vaccine	Vaccine Excipient Summary⁷
MenACWY-TT (MenQuadfi)	sodium chloride, sodium acetate, formaldehyde, tetanus toxoid ¹⁴
MenACWY-CRM (Menveo)	formaldehyde, CRM197 protein
MenB-4C (Bexsero)	aluminum hydroxide, sodium chloride, histidine, sucrose, kanamycin
MenB-FHbp (Trumenba)	polysorbate 80, aluminum phosphate, histidine buffered saline

7. Warnings and precautions¹⁻⁴

- A. Immunization should be deferred during the course of moderate or severe acute illness.
- B. Apnea following intramuscular vaccination has been observed in some infants born prematurely. Decisions about when to administer an intramuscular vaccine, including Menveo, to infants born prematurely should be based on consideration of the individual infant's medical status, and the potential benefits and possible risks of vaccination.

8. Other considerations

- A. Adverse Events: epinephrine hydrochloride solution (1:1,000) and other appropriate agents and equipment must be available for immediate use in case of anaphylactic or acute hypersensitivity reaction.⁶
- B. Immunocompromised: individuals with altered immunocompetence may have

reduced immune responses.¹⁻⁴

- C. Pregnant and lactating women should receive MenACWY vaccine if indicated. However, due to a lack of data, vaccination with MenB should be deferred unless the woman is at increased risk and, after consultation with her health care provider, the benefits of vaccination are considered to outweigh the potential risks.⁵
- D. Lactation: It is not known whether meningococcal vaccines are excreted in human milk. Use with caution in nursing mothers.⁵
- E. MenACWY meningococcal vaccines will stimulate protection only against infections caused by organisms from serogroups A, C, Y and W meningococci. They are not protective against serogroup B meningococci.^{1,2}
- F. Meningococcal vaccine is recommended 2 weeks before or ≥ 2 weeks after splenectomy surgery for persons ≥ 7 years of age.⁵

9. Side effects and adverse reactions¹⁻⁴

MenACWY	
Low-grade fever, headache, redness at injection site, dizziness	Up to 40%
Grade 3 - fever, headache, redness at injection site, dizziness	Up to 3%
MenB	
Headache, fatigue, redness at injection site	Up to 51%
Pain at injection site	Up to 26%
Chills, joint pain	Up to 20%
Fever	Up to 2.5%

10. Storage and handling¹⁻⁴

All clinics and pharmacies enrolled with the Vaccines for Children (VFC) Program must immediately report any storage and handling deviations to the Oregon Immunization Program at 971-673-4VFC (4823).

Vaccine	Temp	Storage Issues	Notes
MenQuadfi ⁴	Store at 2°–8°C 36°– 46°F	Protect from light. Do not use if vaccine has been frozen.	Reconstitute only with the MenACWY liquid conjugate component. It should be administered promptly after reconstituted; or stored at $\leq 77^\circ\text{F}$ (25°C) and administered within 8 hours of reconstitution
Menveo ¹ and diluent			

Vaccine	Temp	Storage Issues	Notes
Bexsero ² and Trumenba ³			

11. Adverse events reporting

Report suspected adverse events to the Vaccine Adverse Events Reporting System (VAERS) online at <https://vaers.hhs.gov/reportevent.html>. VAERS Reporting Table: <https://vaers.hhs.gov/resources/infoproviders.html>

Event and interval from vaccination
<p>A. Anaphylaxis or anaphylactic shock (7 days)</p> <p>B. Shoulder Injury Related to Vaccine Administration (7 days)</p> <p>C. Vasovagal syncope (7 days)</p> <p>D. Any acute complication or sequelae (including death) of above events (interval—not applicable)</p> <p>E. Events described in manufacturer’s package insert as contraindications to additional doses of vaccine (interval—see package insert).</p>

12. References

1. Menveo[®] package insert, October 2022. Available at: www.fda.gov/media/78514/download. Accessed 23 Aug 2023.
2. Bexsero[®] package insert, April 2023. Available at: www.fda.gov/media/90996/download. Accessed 23 Aug 2023.
3. Trumenba[®] package insert, 2021. Available at: www.fda.gov/media/89936/download. Accessed 23 Aug 2023.
4. MenQuadfi[®] package insert, 2023. Available at: www.fda.gov/media/137306/download. Accessed 23 Aug 2023.
5. Mbaeyi S, Bozio C, Duffy J, et al. Meningococcal vaccination: Recommendations of the Advisory Committee on Immunization Practices, United States, 2020. MMWR Recommendations and Reports 2020; 69:9. Available at: www.cdc.gov/mmwr/volumes/69/rr/pdfs/rr6909a1-H.pdf. Accessed 23 Aug 2023.
6. Kroger A, Bahta L, Long S, Sanchez P, Pellegrini C. General Best Practice Guidelines for Immunization. Available at: www.cdc.gov/vaccines/hcp/acip-recs/general-recs/downloads/general-recs.pdf. Accessed 23 Aug 2023.
7. Centers for Disease Control and Prevention. Vaccine Excipient Summary. November 2021. Available at: www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/b/excipient-table-

[2.pdf](#). Accessed 23 Aug 2023.

To request this material in an alternative format (e.g., Braille) or to clarify any part of the above order, contact the Oregon Health Authority Immunization Program at 971-673-0300 and 711 for TTY. For other questions, consult with the vaccine recipient's primary health care provider or a consulting physician.

Electronic copy of this pharmacy protocol is available at: [standing orders](#)