



# Updated Recommendation from the Advisory Committee on Immunization Practices (ACIP) for Revaccination of Persons at Prolonged Increased Risk for Meningococcal Disease

The Advisory Committee on Immunization Practices (ACIP) recommends quadrivalent meningococcal conjugate vaccine, (MCV4) (Menactra, Sanofi Pasteur, Swiftwater, Pennsylvania) for all persons aged 11--18 years and for persons aged 2--55 years at increased risk for meningococcal disease (1--[3](#)). MCV4 is licensed as a single dose. Because of the high risk for meningococcal disease among certain groups and limited data on duration of protection, at its June 2009 meeting ACIP recommended that persons previously vaccinated with either MCV4 or MPSV4 (Menomune, Sanofi Pasteur) who are at prolonged increased risk for meningococcal disease should be revaccinated with MCV4. Persons who previously were vaccinated at age  $\geq 7$  years and are at prolonged increased risk should be revaccinated 5 years after their previous meningococcal vaccine, and persons who previously were vaccinated at ages 2--6 years and are at prolonged increased risk should be revaccinated 3 years after their previous meningococcal vaccine. Persons at prolonged increased risk for meningococcal disease include 1) persons with increased susceptibility such as persistent complement component deficiencies (e.g., C3, properdin, Factor D, and late complement component deficiencies), 2) persons with anatomic or functional asplenia, and 3) persons who have prolonged exposure (e.g., microbiologists routinely working with *Neisseria meningitidis*, or travelers to or residents of countries where meningococcal disease is hyperendemic or epidemic). This report provides the rationale for the new recommendation and updates and replaces previous recommendations for revaccination with MCV4.

ACIP's Meningococcal Vaccine Work Group reviewed data on the risk for meningococcal disease, antibody titer decline, and the safety and immunogenicity of revaccination with MCV4 at 3 years and 5 years after the first dose of MCV4 or MPSV4 ([2,3](#)). Persons with prolonged increased risk for meningococcal disease have increased susceptibility to the disease or ongoing increased risk for exposure to *N. meningitidis*, higher levels of serum bactericidal antibody (SBA) against *N. meningitidis* can provide these groups increased protection against disease. SBA is a measure of the ability of sera to kill a strain of *N. meningitidis* in the presence of complement. In clinical trials, a baby rabbit SBA titer of 1:128 was used as a conservative correlate of protection (1). Small subsets of subjects from the MCV4 prelicensure clinical trial were revaccinated 3 years ( $n = 76$ ) and 5 years ( $n = 134$ ) after receiving MCV4. Of 71 persons aged 11--18 years at primary vaccination who had been vaccinated with MCV4 3 years previously, 75% and 86% had SBA titers greater than 1:128 for serogroups C and Y, respectively, before revaccination. Of 108 persons aged 2--10 years at primary vaccination who had been vaccinated with MCV4 5 years previously, 55% and 94% had SBA titers greater than 1:128 for serogroups C and Y, respectively, before revaccination. All persons revaccinated with MCV4 in these studies achieved SBA titers greater than 1:128

for serogroups C and Y. Approximately 50%--70% of persons in both the previously vaccinated (n = 210) and vaccine naive groups (n = 323) reported mild to moderate local and systemic adverse events after revaccination (or initial vaccination) with MCV4. However, no serious adverse events were reported in either group (Sanofi Pasteur, unpublished data, 2009).

On the basis of these data, expert opinion of the workgroup members, and feedback from partner organizations, the workgroup proposed that persons at prolonged increased risk for meningococcal disease be revaccinated with MCV4. ACIP approved this proposal at its June 24, 2009, meeting. Persons who previously were vaccinated at age  $\geq 7$  years and are at prolonged increased risk should be revaccinated 5 years after their previous meningococcal vaccine. Persons who previously were vaccinated at ages 2--6 years and are at prolonged increased risk should be revaccinated 3 years after their previous meningococcal vaccine. Persons who remain in one of these increased risk groups indefinitely should continue to be revaccinated at 5-year intervals.

Although the duration of protection from MCV4 is unknown, most entering college students will have received MCV4 within the preceding 4 years. Because of the limited period of increased risk, ACIP currently does not recommend that college freshmen living in dormitories who were previously vaccinated with MCV4 be revaccinated. However, college freshmen living in dormitories who were vaccinated with MPSV4  $\geq 5$  years previously are recommended to be vaccinated with MCV4. Information regarding MCV4 and other recommendations for persons aged 2--55 years (2,3), including a routine recommendation for vaccination with MCV4 in persons aged 11--18 years (4), has been published previously.

## References

1. Food and Drug Administration. Product approval information-licensing action, package insert: Meningococcal (groups A, C, Y, W-135) polysaccharide diphtheria toxoid conjugate vaccine Menactra. Rockville, MD: US Department of Health and Human Services, Food and Drug Administration; 2005.
2. [CDC. Prevention and control of meningococcal disease: recommendations of the Advisory Committee on Immunization Practices \(ACIP\). MMWR 2005;54\(No. RR-7\).](#)
3. [CDC. Recommendation from the Advisory Committee on Immunization Practices \(ACIP\) for use of quadrivalent meningococcal conjugate vaccine \(MCV4\) in children aged 2--10 years at increased risk for invasive meningococcal disease. MMWR 2007;56:1265--6.](#)
4. [CDC. Revised recommendations of the Advisory Committee on Immunization Practices to vaccinate all persons aged 11--18 years with meningococcal conjugate vaccine. MMWR 2007;56:794--5.](#)

Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

References to non-CDC sites on the Internet are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites. URL addresses listed in *MMWR* were current as of the date of publication.

All *MMWR* HTML versions of articles are electronic conversions from typeset documents. This conversion might result in character translation or format errors in the HTML version. Users are referred to the electronic PDF version (<http://www.cdc.gov/mmwr>) and/or the original *MMWR* paper copy for printable versions of official text, figures, and tables. An original paper copy of this issue can be obtained from the Superintendent of Documents, U.S. Government Printing Office (GPO), Washington, DC 20402-9371; telephone: (202) 512-1800. Contact GPO for current prices.

\*\*Questions or messages regarding errors in formatting should be addressed to [mmwrq@cdc.gov](mailto:mmwrq@cdc.gov).

Date last reviewed: 9/24/2009

[HOME](#) | [ABOUT MMWR](#) | [MMWR SEARCH](#) | [DOWNLOADS](#) | [RSS](#) | [CONTACT](#)  
[POLICY](#) | [DISCLAIMER](#) | [ACCESSIBILITY](#)

**SAFER • HEALTHIER • PEOPLE™**



Morbidity and Mortality Weekly Report  
Centers for Disease Control and Prevention  
1600 Clifton Rd, MailStop E-90, Atlanta, GA 30333,  
U.S.A



[Department of Health  
and Human Services](#)