

**DRAFT 2-- Article for Vaccine Watch Issue 3**

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**Section: PREVENTIVE POLICY UPDATE**

**Meningitis…Teens at risk [working title]**

Bacterial meningitis is severe, usually resulting in serious illness and a rapid deterioration. It can cause serious complications such as brain damage, hearing loss, or learning disabilities. In the United States, about 4,100 cases of bacterial meningitis occurred each year between 2003 and 2007. Within those cases, nearly 12% died from the disease. [CDC Ref] Adolescents and young adults have an increased incidence, accounting for 15 percent of all cases [NMA Ref]. Within the adolescent group, those ages 16 through 21 years have the highest rates of the disease. [CDC ref 2]

In study groups tested, at least 98% of children achieved a higher titer following a booster immunization for meningitis. Based on this and other compelling data, ACIP decided to recommend a booster dose for persons who remain at increased risk for meningococcal disease and for adolescents at age 16 years. [CDC MMWR report]

In addition to age, some groups are at particular risk:

1. College students living in dormitories, personnel on military bases and children in boarding schools and childcare facilities are at increased risk of meningococcal meningitis, likely because the bacterium is spread by the respiratory route.
2. Pregnant women are at an increased risk of contracting listeriosis, which may also cause meningitis.
3. Those with a compromised immune system or removal of the spleen are also more susceptible to meningitis.
4. Children and adults who have not completed the recommended vaccination schedule.

According to the CDC, all 11 to 12 year olds should be vaccinated with meningococcal conjugate vaccine (MCV4) and a booster dose should be given at age 16 years. For adolescents who receive the first dose at ages 13 through 15 years, a one-time booster dose should be administered, preferably at age 16 through 18 years, before the peak in increased risk. See the full CDC recommended guidelines in the table below:

**Recommended meningococcal vaccines for use in children and adults—Advisory Committee on Immunization Practices (ACIP), United States, 2012**

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| --- | --- | --- |
| Age group | Vaccine | Status |
| 2 mos-10 years | MenACWY-D (Menactra, Sanofi)\* | Not routinely recommended |
|  | MenACWY-CRM (Meneveo, Novartis) | Not routinely recommended |
|  | HibMenCY-TT (MenHibrix, GSK) | Not routinely recommended |
| 11 – 21 years | MenACWY-D or MenACWY-CRM | Primary:* Age 11-12 years, 1 dose
* Age 13-18 years, 1 dose if not vaccinated previously
* Age 19-21 years, not routinely recommended but may be administered as catch-up vaccination for those who have not received a dose after their 16th birthday

Booster:\* 1 dose recommended if first dose administered before 16th birthday |
| 22-55 years | MenACWY-D or MenACWY-CRM | Not routinely recommended |
| 56 years and older | MPSV4, MenACWY-D, or MenACWY-CRM | Not routinely recommended |
|  |  |  |

It is important for parents and children to know what can mitigate the spread of this potentially deadly disease. Bacterial meningitis presents symptoms very similar to the common cold, influenza, and mononucleosis, diseases very common in adolescents. Because of this, it can be difficult to diagnose properly.

Symptoms of meningitis, flu, cold or mono could present with the following symptoms: [*MayoClinic.com Ref*]

* Fever
* Headache
* Sleepiness/fatigue/weakness
* Stiff neck/aching muscles
* Vomiting/nausea

One of the biggest risk factors regarding meningitis is skipping recommended immunizations. The CDC states, “The most effective way to protect you and your child against certain types of bacterial meningitis is to complete the recommended vaccine schedule.” Meningococcal vaccination is required to attend many colleges. Thirty-six states and the District of Columbia have mandates requiring education of college students about meningococcal vaccines or proof of meningococcal vaccination for attendance. [CDC MMWR rep]

Vaccines can lower the risk of contracting or spreading meningococcal disease, as well as reduce the chance of dying or having severe after-effects, such as deafness, mental retardation, nervous system disorders and seizures or strokes. [*Meningitis Center Ref*]