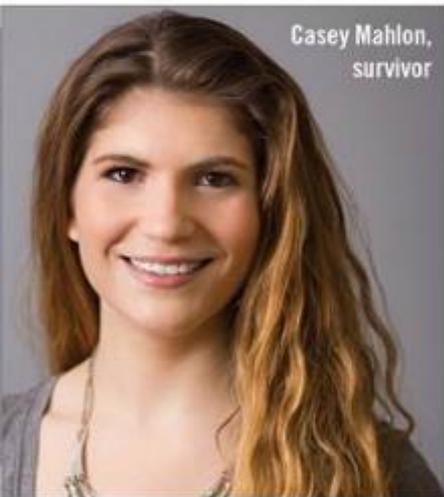
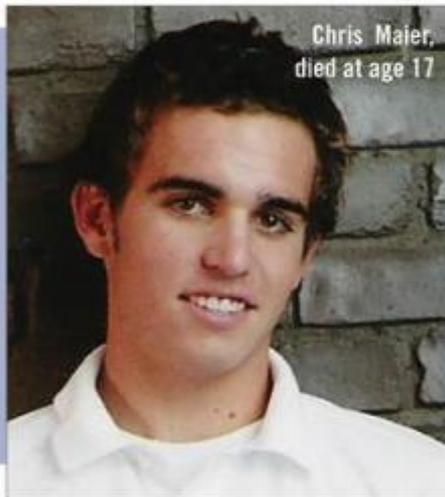


THE NATIONAL MENINGITIS ASSOCIATION

The ABCs of Meningococcal Disease



Casey Mahlon,
survivor



Chris Maier,
died at age 17



Cherise Cochran,
died at age 19



Jonathan Deguzman,
survivor

My Story



About NMA

Dedicated to educating families, medical professionals and others about meningococcal disease and prevention

Instill

- An understanding of disease impact and value of vaccination

Advocate

- In support of directives/mandates for meningococcal vaccination

Support

- Families and survivors who have been affected by meningococcal disease

Build

- Awareness for all adolescent vaccine-preventable diseases

NMA Advocates

More than 125 advocates across the country,
each with a powerful story



Mothers who lost children
or whose children's lives
were drastically affected by
meningococcal disease

Meningococcal disease
survivors, siblings and
other family members of
those who have been
affected.

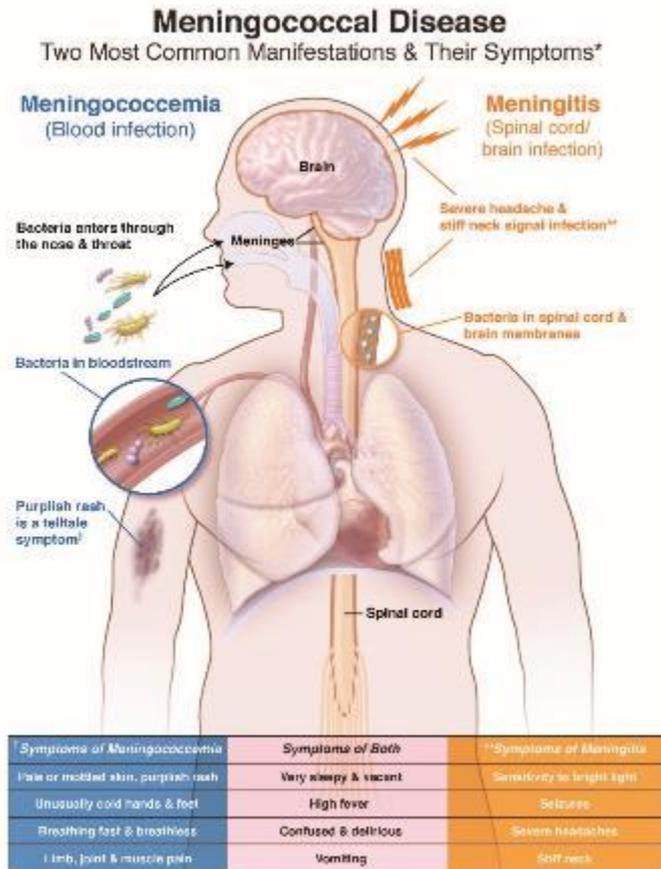


Together Educating About Meningitis



Meningococcal Disease and its Prevention

Meningococcal Disease: The Basics



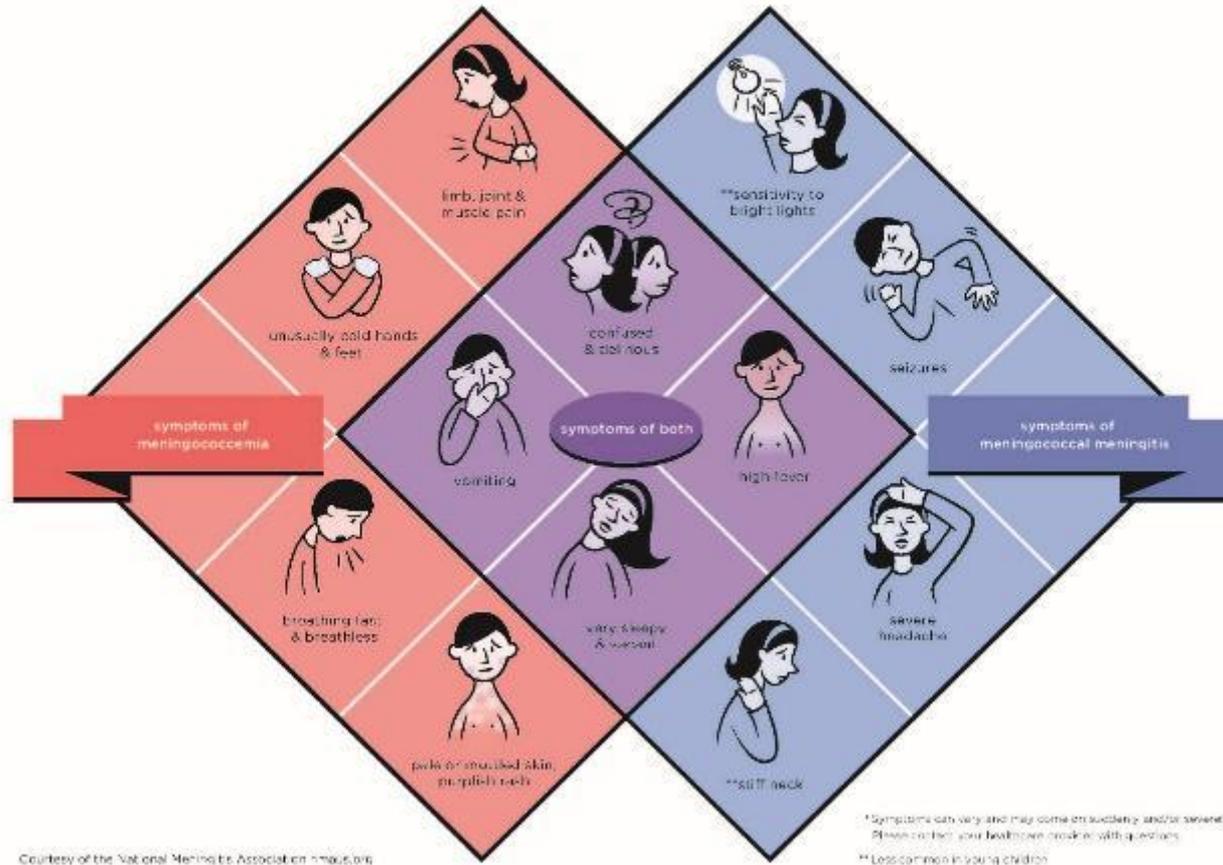
Courtesy of the National Meningitis Association
nmaus.org

*Symptoms can vary and may come on suddenly or over several days. **Some contact your health care provider with questions.

- Rare, potentially deadly bacterial infection
 - Sometimes called bacterial meningitis or meningitis
- Two common forms of infection
 - Brain and spinal cord (meningitis)
 - Blood (meningococemia)
- Spread through respiratory droplets (e.g., coughing, kissing)
- Often confused with flu
- Fast moving

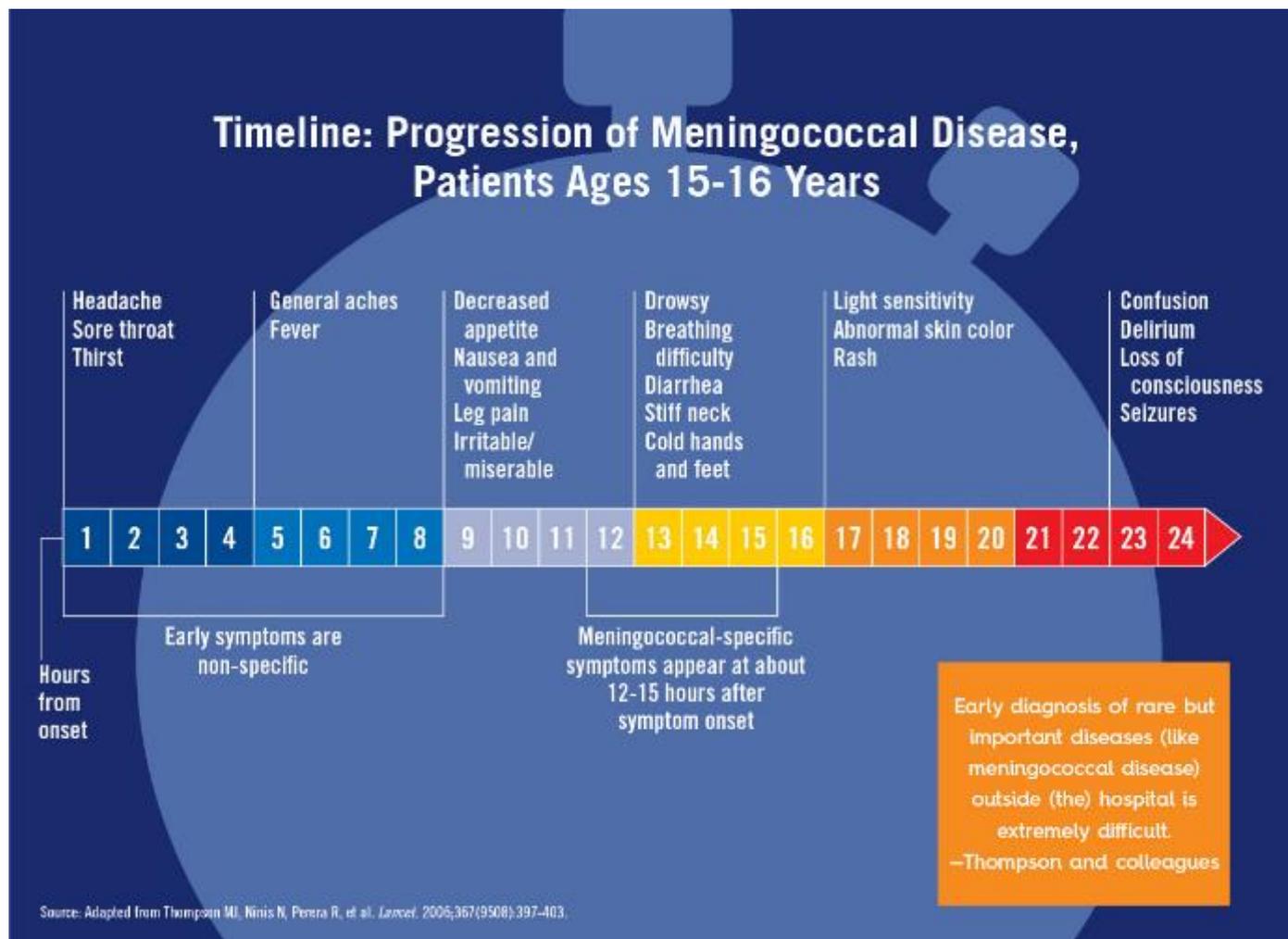
What are the symptoms?*

MENINGOCOCCAL DISEASE SYMPTOMS* Symptoms of the Two Most Common Manifestations



*Only some of these symptoms may be present. If any of these symptoms are present and unusually sudden or severe, call a doctor. **Don't wait, it could be the difference between life and death.**

Meningococcal Progression



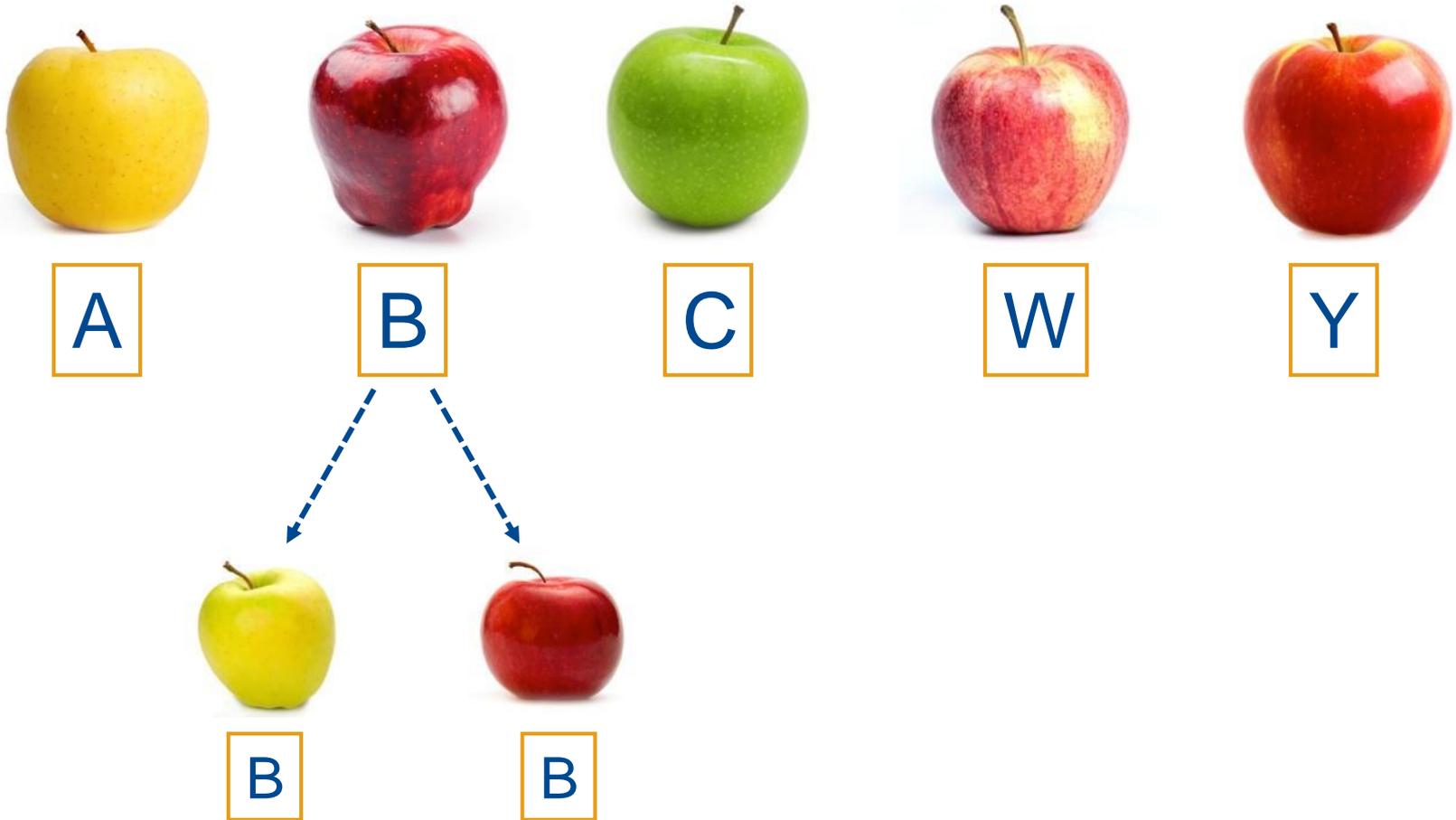
Meningococcal Disease: Statistics & Facts

- Approximately **600-1,000 people contract meningococcal disease** in the U.S. each year.
- **21 percent** of all meningococcal disease cases occur in **preteens, teens and young adults** ages 11–24.
- Of those who get meningococcal disease, **10-15 percent die**.
- Among those who survive, approximately **20 percent live with permanent disabilities**, such as brain damage, hearing loss, loss of kidney function or limb amputations.

Meningococcal Serogroups

- Five major meningococcal disease serogroups: A, B, C, W and Y
- Three serogroups most common in the United States: **B, C and Y**
 - Each accounts for approximately **one-third of U.S. cases**
- Serogroup B vaccines recently became available
 - Cause of recent college outbreaks
 - Most common cause of the disease in adolescents

Meningococcal Serogroups (cont'd)



Serogroup B College Outbreaks

From 2013 to 2016, five college campuses experienced outbreaks of serogroup B meningococcal disease:

- **Santa Clara University:** Three cases occurred from January to February 2016.
- **University of Oregon:** Seven cases occurred from January to June 2015. One student died.
- **Providence College:** Two cases occurred within a week in early February 2015.
- **Princeton University:** Nine cases occurred from March 2013 through March 2014. One Drexel University student who was in contact with Princeton students died.
- **University of California, Santa Barbara:** Four cases occurred in one month in late 2013. All of the students survived. One, a male lacrosse player, had both feet amputated.

All universities held emergency clinics to administer serogroup B vaccines to the campus community to help stop the outbreaks.

Santa Clara University Outbreak

- Three cases of serogroup B meningococcal disease occurred at SCU from late-January to early-February 2016.
 - All three students were from the same fraternity.
 - Two students had meningitis and one had meningococemia.
 - They survived and were released from the hospital.
- SCU partnered with CDC to hold free serogroup B vaccine clinics on campus.
 - Pharmacies (Walgreens, CVS) began offering the B vaccine to Santa Clara County residents.

Why isn't new meningitis vaccine universally recommended?

By Tracy Seipel and Emily Benson | Staff writers

POSTED: 02/05/2016 09:05

SANTA CLARA – son, Gregory, was meningitis -- before September.

But like thousands to discover this was for the strain of the infected three students more to wait hours

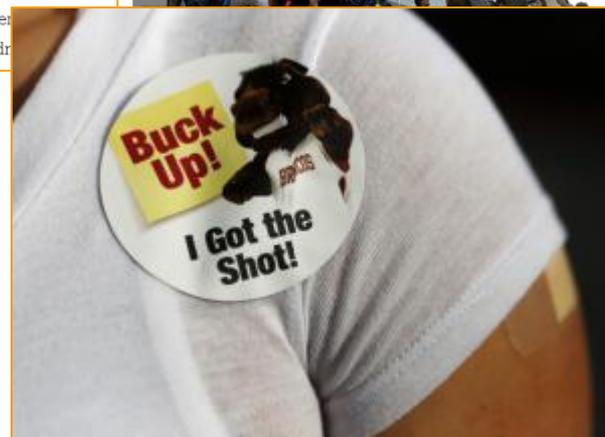
"It freaks me out ages didn't

Third Santa Clara University student comes down with meningococcal infection

By Tracy Seipel and David E. Barry | Staff writers

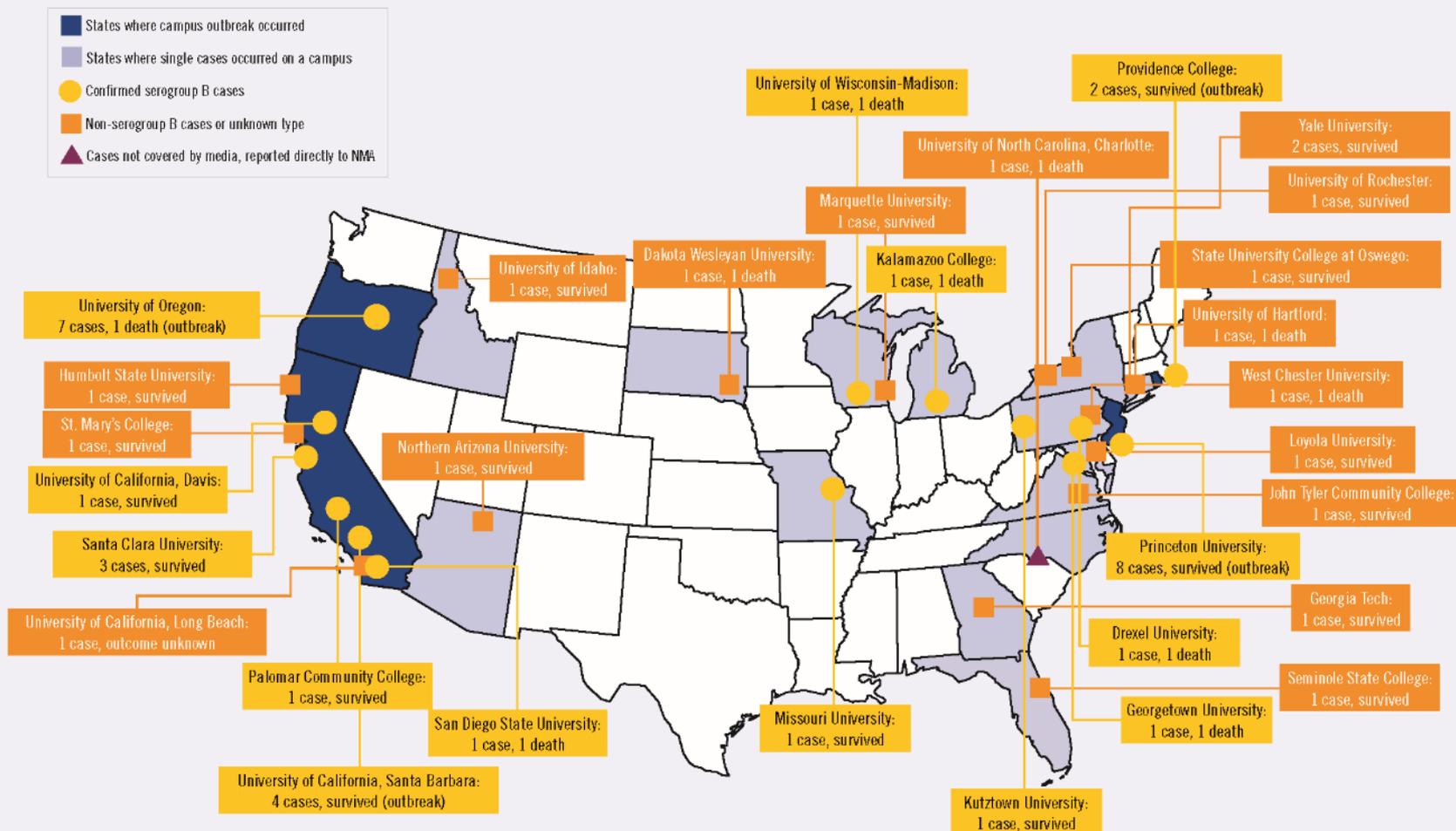
POSTED: 02/04/2016 11:24:51 AM PST | UPDATED: 14 DAYS AGO

6 COMMENTS



Meningococcal Disease on U.S. College Campuses, 2013-2016

While this graph only includes college students, all young adults ages 16-21 years old are at increased risk of getting meningococcal disease.



- Of those who survived, it is not known how many suffer long-term complications. In general, as many as 20 percent of survivors live with permanent disabilities, such as brain damage, hearing loss, loss of kidney function or limb amputations.
- This data is based on media reports and cases reported directly to NMA. Additional cases that were not featured in the news may be missing. If you know of any cases not reported on this map, please contact NMA.

Meningococcal Vaccines

To be **fully protected**, adolescents and young adults need **two types of vaccines**.

Quadrivalent Meningococcal Conjugate Vaccine

Meningococcal vaccines (MCV4) to prevent A, C, W and Y have been recommended since 2005.

CDC routinely recommends these vaccines for adolescents at 11-12, with a booster at 16.

Serogroup B Meningococcal Vaccine

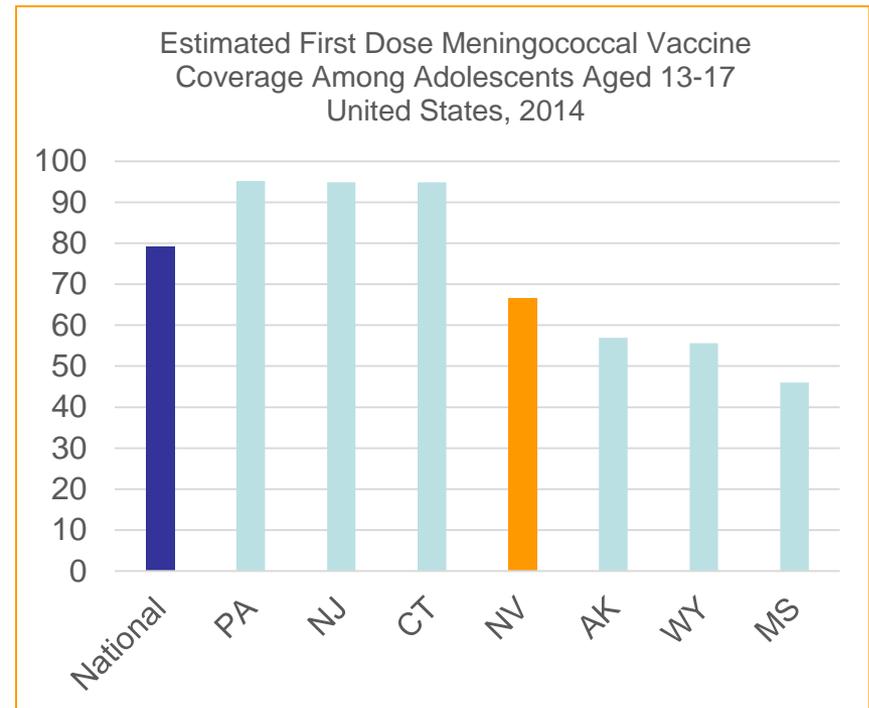
Serogroup B vaccines became available in the U.S. in 2015.

CDC recommends permissive use of meningococcal serogroup B vaccine for ages 16-23, with a preferred age of 16-18.

Note: These vaccines are also recommended for people at higher risk for meningococcal disease, including individuals with complement component deficiencies or asplenia, lab personnel who work with meningococcal bacteria and those who have been exposed to an outbreak.

Preventing Meningococcal Disease

- **One in five** U.S. teens has not yet received a first dose of meningococcal vaccination.¹
- **Less than one-third** of first-dose recipients have received the recommended booster dose.¹
- **Serogroup B vaccines** recently available; CDC recommends vaccination permissively for young adults and high-risk groups





NMA in Action

Outreach and Educational Efforts

- Emotional support and information sharing
 - M.O.M.s and survivors help families cope
- Community activities and national campaigns
 - Educate about meningococcal disease prevention
 - Encourage dialogue among public health officials, healthcare professionals, communities and families
 - Motivate people to take action



Everyday Solutions

- Understanding Meningitis
- Meningitis Risk Factors
- Diagnosing Meningitis
- Types of Meningitis
- Warning Signs of Meningitis
- Ways to Prevent Meningitis
- My Meningitis Story
- Words: Expert Advice

My Experience With Meningitis: Francesca's Story

Originally mistaken for the flu, meningitis nearly killed Francesca Twiss. Now she's advocating for young people to get vaccinated.

Dr. David Newman
Massachusetts General Hospital, Harvard Medical School



As a 17-year-old senior in high school, Francesca Twiss had a lot to look forward to. But when she woke up one morning with a fever and a stiff neck, she knew something was wrong. It wasn't until she was hospitalized that she was diagnosed with meningitis. The illness was so severe that she had to be intubated and put on a ventilator. She spent several weeks in the hospital, and her recovery was a long and difficult process. Now, Francesca is a vocal advocate for young people to get vaccinated against meningitis.

National Meningitis Association

The National Meningitis Association is a non-profit organization dedicated to raising awareness of meningitis and promoting research and education. We provide resources, support, and information to help you understand meningitis and its prevention.

The Centers for Disease Control and Prevention currently recommend vaccination at age 11-12 with a booster at 16, but the vaccine is available for other ages to talk to your healthcare provider!



MASSAPEQUA Observer

A Daughter's Memory, A Mother's Mission

Doctors were not prepared for the sudden onset of meningitis in Francesca Twiss. The illness was so severe that she had to be intubated and put on a ventilator. She spent several weeks in the hospital, and her recovery was a long and difficult process. Now, Francesca is a vocal advocate for young people to get vaccinated against meningitis.

Richard Deener
@RichardDeener
Apr 23
Meningitis Awareness Day is a national day of awareness for meningitis. #MeningitisAwarenessDay



NMA (@NMAUSA) · Mar 4

The first serogroup B meningococcal disease vaccine was approved in the U.S. last week. We answer some FAQs about it: bit.ly/1zR4uxp

Meningitis Awareness Day Designated By Legislation
Posted May 15, 2014 by Majority Caucus



Nevada Vaccine Requirements

Meningococcal vaccination required for students living on campus under the age of 23.

66.5 percent of adolescents in Nevada have received the first dose of the routinely recommended vaccine to protect against A, C, W and Y



More Information and Resources

Educational Resources

- NMA’s website:
 - www.nmaus.org
- Resources available to download or order:
 - Meningococcal disease fact sheet
 - Disease impact report
 - Educational brochures
 - Fliers and posters
 - Resource guides
 - Educational videos



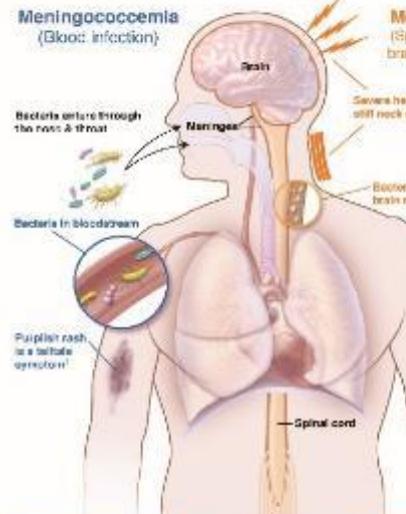
FACTS ABOUT MENINGOCOCCAL DISEASE AND VACCINATION

What is meningococcal disease?

Meningococcal disease, commonly referred to as bacterial meningitis or simply as meningitis, is a rare but sometimes deadly bacterial infection. The disease strikes quickly and has devastating complications, including hearing loss, brain damage, kidney damage or limb amputations.

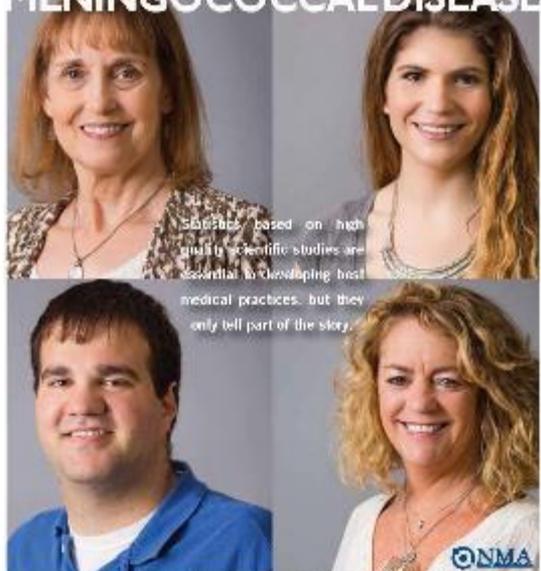
Of those who contract meningococcal disease, 10 as 20 percent live with permanent disabilities. Very meningococcal disease.

Meningococcal Disease
Two Most Common Manifestations & Their Symptoms



| | | |
|--------------------------------------|------------------------|-------|
| Symptoms of Meningococcal | Symptoms of Meningitis | Signs |
| Flu or infected skin (purplish rash) | Very stiff & painful | Stiff |
| Headache with fever & vomiting | High fever | Stiff |
| Swelling of joints & sore throat | Confused & drowsy | Stiff |
| Loss of appetite & irritability | Nausea | Stiff |

BEYOND THE SCIENCE: PUTTING A FACE ON MENINGOCOCCAL DISEASE



Statistics based on high quality scientific studies are essential to developing best medical practices, but they only tell part of the story.

FOR MORE FACT SHEETS, FLYERS, AND OTHER MENINGITIS ASSOCIATION MATERIALS...



NMA on Social Media

Like us on Facebook

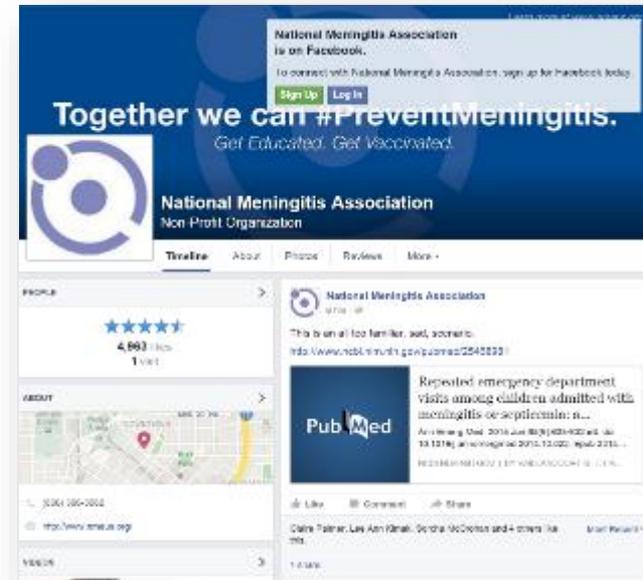
- National Meningitis Association

Follow us on Twitter

- @NMAtweets

Subscribe to our blog

- <http://parentswhoprotect.com>



Questions?

Thank You

Lynn Bozof
President, National Meningitis Association
Phone: 678-779-3370
E-mail: Lynn.nma@gmail.com