Meningococcal meningitis

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What is the disease?

Meningococcal meningitis is a type of bacterial infection that affects the membranes lining the brain and spinal cord. It is caused by the bacteria Neisseria meningitidis. The disease spreads quickly and is considered a medical emergency. Meningococcal disease can be fatal, with 5–10% of cases resulting in death, even with treatment, so seeking immediate medical attention is encouraged.

What are the symptoms?

Symptoms of meningitis include fever, headache, a stiff and painful neck, discomfort from bright lights, nausea, drowsiness, confusion, difficulty waking up, joint and muscle pain, and rash or bruises that do not disappear when pressed. For babies and young children, their symptoms can include fever, irritability or being unsettled, being floppy, lethargic, or difficult to wake, poor feeding or refusing to eat, vomiting, a fontanelle (bulge in the soft spot on a baby's head) and pale or blotchy skin. This disease can develop quickly, so it is best to seek immediate medical help when symptoms occur.

Who is at risk and how is it transmitted?

The harmful bacteria, Neisseria meningitidis, cause the disease. The bacteria spread through close, prolonged contact with respiratory and throat secretions from an infected person, meaning it is carried through saliva and mucus. Saliva, however, contains lysozyme (which can break down bacteria) and adrenomedullin (which can damage bacterial membranes), meaning that sharing drinks, food, or cigarettes does not easily spread the disease, as saliva can inhibit the bacteria's growth. It is important to note that it is not as easily spread because the bacteria cannot live outside the body for long. Many people can also carry the bacteria in their nose and throat without it harming themselves, though it can still be spread from person to person. Smoking, exposure to secondhand smoke, crowded living conditions, and a recent viral respiratory infection can increase the risk of contracting meningitis. Though this disease is not easily spread unless facing prolonged contact with an infected individual, precautions such as immunisations are still encouraged.

How to not get Meningitis

GET VACCINATED! The most effect solution is to get vaccinated against common causes. The best way is to talk to a doctor about getting vaccinated against the harmful bacteria that cause meningitis. Vaccines work by introducing a weakened or dead form of a certain bacteria or virus, so the body is able to create memory cells to fight the bacteria if the individual does come in contact with the disease. The meningitis vaccine is based on the polysaccharides (complex carbohydrates made of long chains of simple sugars called monosaccharides) found on the meningococcal capsule, which is a part of the bacteria that causes the disease. The two main types are meningococcal ACWY and meningococcal B (MenB) vaccines, as no single vaccine covers all types. It is important to always be up to date with all recommended immunisations. It is also good to practice hygiene and not share any personal items, such as water bottles. Some examples of daily activities may include frequently washing or sanitising hands, avoiding close contact with sick people, covering coughs and sneezes and saying "NO!" if your mate offers you a cigarette. Additionally, it is important to be aware of your surroundings. If you have been in close contact and feel some of the listed symptoms, it is strongly encouraged that you seek immediate medical attention. When handling rodents, take precautions as their fur can often harbour a range of micro organisms. Keep frequently touched surfaces disinfected and clean, and get vaccinated!

Key Figure: Gaspard Vieusseux

Gaspard Vieusseux is a Swiss Physician from the Republic of Geneva, who is most known for providing the first clinical description of bacterial meningitis. Born in Geneva on February 18, 1746, Vieusseux obtained his doctorate from the University of Leiden. He then returned to Geneva to practice medicine. In January 1805, Vieusseux recorded an outbreak of 'cerebrospinal fluid'. His report detailed symptoms such as severe headaches, chills, nausea, vomiting, neck pain, convulsions, delirium, stiffness, and how patients often died within 24 hours of contracting the disease. At the time, the medical community did not know that bacteria caused diseases, as the germ theory of disease wasn't established until the late 19th century. Consequently, Vieusseux theorised that the disease was caused by 'bad air,' rather than contagion from person to person. His observations marked the initial recognition of the disease as a separate entity and helped to establish the foundation for modern understanding and diagnosis. Gaspard Vieusseux died on October 21, 1814, at the age of 68 from a neurological illness later identified as lateral medullary syndrome (a neurological disorder caused by a stroke affecting the lateral side of the brainstem's medulla oblongata, typically due to a blockage in the vertebral or posterior inferior cerebellar arteries)

History

Gaspard Vieusseux, a Swiss physician from the Republic of Geneva, clinically described an epidemic of the disease in 1805, followed by Anton Weichselbaum, a Viennese bacteriologist and pathologist who identified the bacterium that causes meningococcal meningitis, Neisseria meningitidis, in 1887. Others, like Heinrich Quincke (German internist and surgeon) and Josef Brudzinski (Polish pediatrician), later developed diagnostic tools and signs for meningitis. Much later in the 1960s, Emil C. Gotschlich (researcher at the Rockefeller Institute) invented the first meningitis vaccine. This vaccine was based on the polysaccharides of the meningococcal bacteria capsule. It later became available in the 1970s when Gotschlich and his colleagues at the Walter Reed Army Institute published their key findings in 1969.

Summary

In conclusion, Meningococcal meningitis is a type of bacterial infection that affects the membranes lining the brain and spinal cord. First documented by Gaspard Vieusseux in 1805, it is caused by the bacteria Neisseria meningitidis. The disease spreads when coming in prolonged close contact with an infected individual without ever being vaccinated. Meningococcal disease can be fatal, with 5–10% of cases resulting in death, even with treatment. Get Vaccinated!

Stay strong and live long - Get vaccinated against Meningococcal meningitis!

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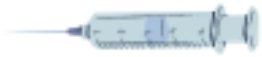
BE WISE AND IMMUNISE!

A NEEDLE WON'T HURT AS MUCH AS MENINGITIS DOES!

WHY SHOULD I?

Meningitis is a severe bacterial infection and can be fatal in some cases - protect YOUR healthy mind from this life-threatening disease!

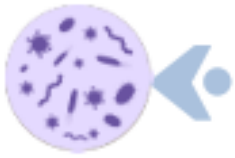


236,000 PEOPLE

DIED FROM MENINGITIS Worldwide in 2019

IT COULD CAUSE...

Permanent brain damage, learning problems, hearing loss or deafness! Imagine never listening to your favourite song ever again just because you didn't get vaccinated!

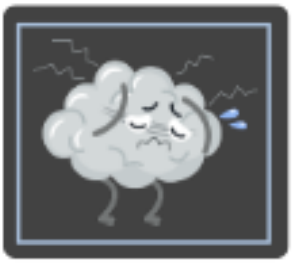


SYMPTOMS MAY INCLUDE...

fever, headache, a stiff and painful neck, discomfort from bright lights, nausea, drowsiness, confusion, difficulty waking up, joint and muscle pain, and rash or bruises that do not disappear when pressed.

YOU MIGH EVEN...

Contract sepsis and get deformed limbs! Getting limbs severed is WAY WORSE than braving a needle! Get vaccinated today!



If Meningitis doesn't kill you, the consequences might as well if you were to survive the deadly disease, you may have to face serious and permanent health issues. This can include...

Permanent brain damage, hearing loss or deafness, learning and behavioral problems, (especially in children) epilepsy and seizures, problems with memory and concentration, loss of limbs due to sepsis, kidney damage, physical disabilities and coordination problems!

ONE LITTLE PRICK does the trick!

MENINGITIS WON'T GET YOU SICK!

BE SMART AND PLAY YOUR PART

Meningococcal vaccines not only help protect YOU from meningitis, but also the wider community, by reducing the spread of bacteria. This happens when vaccinated people stop carrying and transmitting the bacteria in their noses and throats.

LETS BE BRAVE!

Meningococcal meningitis is a type of bacterial infection that affects the membranes lining the brain and spinal cord. Stay tough, tuff and strong- meningitis won't last long!

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