

Pneumococcal Meningitis; what you need to know!

Pneumococcal meningitis outbreak in Ghana

The outbreak of the disease which began in December 2015 in the Brong Ahafo region is still a challenge even with the enhanced technical support the ministry of health has deployed to the affected regions.

The WHO has stepped in to provide technical support for Ghana to contain pneumococcal meningitis.

The Center for Disease Prevention and Control (CDC) in Atlanta, Georgia in the United States of America (USA) is also providing support for the confirmatory testing of samples.

The centre will also help the Ministry of Health (MOH) to identify the causative organisms (strains) of the outbreak.

What Is Pneumococcal Meningitis?

Meningitis is an infection and inflammation of the meninges. Your meninges are the membranes that cover your spinal cord and your brain.

Meningitis can be caused by many different germs, including bacteria, fungi, and viruses.

Pneumococcal meningitis, however, is a bacterial form of meningitis.

Another bacterial form of meningitis usually occurs seasonally in Ghana especially in the north- this is caused by a different bacteria called *Neisseria meningitides*. This is not what is causing the current outbreak.

What Causes Pneumococcal Meningitis?

Pneumococcal meningitis is caused by bacteria called *Streptococcus pneumoniae*.

There are over 90 strains (or serotypes), but only a minority

commonly cause disease. The pneumococcus can also cause other serious infections such as pneumonia, blood poisoning and septic arthritis, and less serious infections such as otitis media, glue ear and sinusitis. Together these are known as pneumococcal disease or pneumococcal infection.

How Is Pneumococcal Meningitis Transmitted?

Pneumococcal meningitis is transmitted from person to person. The bacteria are spread through the tiny droplets from an infected person's mouth, throat, or nose.

For example, if someone with the infection coughs or sneezes on or near you, you may contract the disease.

You can also contract the disease from an infected person by kissing or by sharing anything that comes into contact with the mouth such as:

- a cup
- a fork
- a straw
- lipstick
- a cigarette

PLS NOTE: Close living situations—can increase your risk for infection.

The harmattan season may also have contributed to the spread and outbreak because of the dry nature of the weather leading to cracks in the lining of people's throats.

Signs of Pneumococcal Meningitis

You will typically develop symptoms one to three days after you were exposed to the bacteria. In some cases, the symptoms may develop sooner or later than that.

Symptoms of pneumococcal meningitis usually come on rapidly. An infected person may develop the following common symptoms:

- high fever
- chills
- headache

- vomiting
- confusion
- Dislike of bright lights (photophobia)
- Convulsions/seizures
- Loss of consciousness

Other possible symptoms of this form of meningitis include:

- agitation
- irritability
- rapid breathing
- stiff neck
- In infants, the soft spot on the head (called the fontanelle) may bulge outward.
- cough
- weakness
- chest pain

How Is Pneumococcal Meningitis Diagnosed and treated?

Pneumococcal meningitis is generally diagnosed through a spinal tap (lumbar puncture). This involves your doctor collecting a sample of the fluid in your spine (CSF). This fluid becomes infected when a patient has meningitis.

Sometimes treatment with antibiotics is started before the lumbar puncture procedure because the patient's condition is too serious for a lumbar puncture to be performed. In these cases the lumbar puncture can be done when the patient's condition has improved.

If someone is seriously ill, they will require specialist care and treatment in an intensive care unit. Here the doctors and nurses can closely monitor their condition, respond to emergencies and provide immediate support when it is needed.

Your doctor might also perform a physical examination when trying to figure out if you have pneumococcal meningitis.

Signs that point toward the condition include:

- fast heart rate
- fever

- stiff neck
- vomiting

Visit the nearest health post or center as soon as you start feeling any of the above symptoms. Early diagnosis and early treatment saves lives.

Pneumococcal meningitis needs rapid admission to hospital and urgent treatment with antibiotics.

Appropriate hospital care and treatment are essential if the patient is to make a good recovery.

What happens after pneumococcal meningitis?

Most people who get pneumococcal meningitis will make a good recovery, but around 25% will be left with severe and often permanent after-effects. However, the exact number of people who experience after-effects is not known.

The after-effects of meningitis usually happen because of damage to various areas of the brain, including the nerves responsible for hearing and sight. The serious and disabling after-effects are well recognised and include hearing loss or deafness, loss of vision or blindness, epilepsy, severe brain damage, speech problems.

After-effects are often complicated and can require on-going support (for life) from a wide range of health professionals and organisations. In many cases, the after-effects will be helped by various kinds of therapy, for example, physiotherapy and occupational therapy.

Other people may experience one or more of a wide range of less noticeable but still significant after-effects. These can be temporary or permanent and include memory loss, anxiety, depression, headaches, learning difficulties and behaviour problems. Whatever the after-effect, mild or severe, meningitis can change a person's life forever.

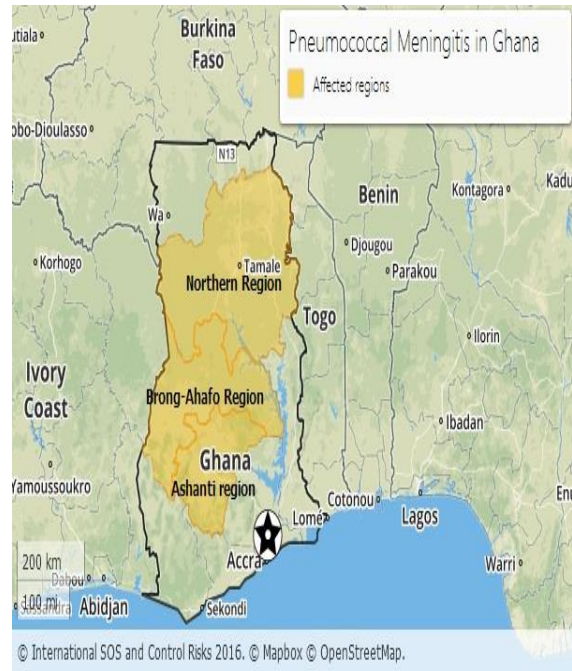
Tragically, some patients will die despite receiving the best possible treatment and care. The death of someone close following meningitis or

septicaemia can be traumatic, distressing and painful.

Prevention – Behavioural

The best way to avoid infection during the outbreak is to practice good personal hygiene, especially if you are around an infected person.

- ✓ Wash your hands frequently with warm water and soap, regardless of whether you are sick or healthy. Encourage others to do so as well. Practice good personal hygiene.
- ✓ Children who are unwell or exhibiting any of the symptoms above should stay away from school and seek medical attention.
- ✓ Avoid crowds in affected areas.
- ✓ Keep food, drinks, eating utensils, lipstick, cigarettes etc. to yourself. Sharing these objects transmits germs.
- ✓ Avoid close contact, such as kissing, with an infected person.
- ✓ Clean objects that may be contaminated using soap and water, then disinfect with a bleach solution or other disinfectant.
- ✓ Wash your hands after using the toilet or helping a sick child use the toilet, after changing a sick baby's diaper, and after handling used bed sheets, towels, clothes, or personal items of a person with meningitis or an unwell person.
- ✓ Drink enough water to prevent your throat from becoming dry.
- ✓ Pneumococcal vaccine helps prevent some strains of pneumococcal meningitis. Talk to your doctor to make sure your vaccinations are up to date.
- ✓ Avoid unnecessary travels to the regions affected so far.
- ✓ Report quickly to the hospital as soon as you develop any of the symptoms above.



KEY:

- **Bacteria / bacterium**
Single-celled micro-organisms, of which there are many types. Some types can cause disease in humans. One organism is called a bacterium and more than one are called bacteria.
- **Cerebrospinal Fluid (CSF)**
A protective fluid that flows around the brain and spinal cord, helping to maintain healthy cells.
- **Immunity / immune response**
The body's ability to recognise and resist specific infectious diseases. The immune system responds to infection by producing antibodies.
- **Inflammation**
A response of the body tissues to injury or irritation. The response is characterized by redness, swelling, heat and pain.
- **Lumbar puncture**
A procedure to remove CSF from below the base of the spinal cord.
- **Meninges**
Three protective membranes (layers of tissue) that surround the brain. These are called the dura mater, arachnoid mater and pia mater.
- **Vaccine / vaccination**
An injection given to encourage the body to produce antibodies which help fight infectious disease. The injection commonly contains a harmless extract prepared from the disease-causing organism.
- **WHO**
World health organization.

It is very important to note that there are over 90 strains of the Streptococcus pneumonia and the current vaccines available do not cover all the serotypes. We do not know as yet which serotype(s) is/are causing this outbreak.

Therefore at this point in time, early reporting to a health facility when you have symptoms and prompt treatment is key to survival.