Case of Primary Amebic Meningoencephalitis Reported
Health Officials Stress Caution When Swimming in Natural Bodies of Water

The Oklahoma State Department of Health announced today that a Bryan County youngster has died after being hospitalized with PAM (Primary Amebic Meningoencephalitis) symptoms following swimming and diving in the Red River last week.

PAM is an extremely rare and usually deadly disease caused by infection with a single-celled organism (ameba), *Naegleria fowleri*. These disease-causing organisms are naturally present in most lakes, ponds, and rivers but multiply rapidly in very warm and stagnant water. Persons may be exposed to *Naegleria fowleri* ameba when they dive or submerge their head in contaminated water. The ameba then travels up the nose to the brain where it destroys the brain tissue.

“As the heat and drought conditions intensify in Oklahoma, the risk of certain waterborne illnesses also increases,” said State Epidemiologist Dr. Kristy Bradley.

Symptoms of PAM initially include: high fever, headache, nausea, and vomiting. Later, symptoms may include stiff neck, seizures, hallucinations, and coma. PAM cannot be spread from person-to-person. Most occurrences of PAM occur in the southern states. Since 1998, six deaths due to PAM have occurred among Oklahomans.

Health officials encourage Oklahomans to observe these water safety tips to avoid illness while swimming in lakes, rivers and other natural bodies of water:
- Avoid water entering nose or mouth when swimming, jumping, diving, or dunking your head into bodies of fresh warm water.
- Hold your nose or use nose plugs when jumping or diving into water.
- Never swim in stagnant or polluted water.
- Do not swim in areas posted as "No Swimming".
- Avoid swallowing water from rivers, lakes, streams, or stock ponds.
- Use earplugs, swim goggles, or masks if you tend to get ear or eye infections.
- Swim only in properly maintained pools, because chlorine rapidly kills the ameba.

In addition, like last summer, blue-green algae continue to be present in some Oklahoma lakes. Blue-green algae can produce toxins that result in illness in humans and animals. Direct contact with water that has a blue-green algae bloom can result in a skin rash; eye, ear and throat irritation; asthma-like symptoms; and diarrhea, vomiting, or abdominal cramps. Individuals are advised to avoid swimming or other recreational water activities where mats of algae appear on the water.

For more information, visit: http://www.ok.gov/health/Disease_Prevention_Preparedness/Acute_Disease_Service/Disease_Information/Primary_Amebic_Meningoencephalitis.html.

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FROM HEALTH DEPT

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"As the heat and drought conditions intensify in Oklahoma, the risk of certain waterborne illnesses also increases," said State Epidemiologist Dr. Kristy Bradley. Symptoms of PAM initially include: high fever, headache, nausea, and vomiting. Later, symptoms may include stiff neck, seizures, hallucinations, and coma. PAM cannot be spread from person-to-person. Most occurrences of PAM occur in the southern states. Since 1998, six deaths due to PAM have occurred among Oklahomans.

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Cartwright boy dies of water-borne disease
by From Associated Press and Staff reports
August 01, 2012

OKLAHOMA CITY — The Oklahoma Department of Health says a Bryan County youngster has died after being hospitalized with a rare disease caused by an amoeba that is present in lakes, ponds and rivers.

Officials said Tuesday the youth exhibited symptoms of primary amoebic meningoencephalitis, (PAM) which occurs after being infected by Maegleria fowleri. They say the youth had been swimming and diving in the Red River last week.

Dalton Counts, 9, Cartwright, died Tuesday at Childrens Medical Center in Dallas, and funeral services for him are pending with Cunningham’s Funeral Home in Colbert.

Health officials say the disease-causing organisms multiply rapidly in very warm and stagnant water.

People are exposed to the amoeba when they dive or submerge their head in contaminated water. The amoeba then travels up the nose to the brain, where it destroys the brain tissue.

State Epidemiologist Dr. Kristy Bradley says waterborne illnesses increase as heat and drought conditions intensify.

Symptoms of PAM initially include: high fever, headache, nausea, and vomiting. Later, symptoms may include stiff neck, seizures, hallucinations, and coma. PAM cannot be spread from person-to-person. Most occurrences of PAM occur in the southern states. Since 1998, six deaths due to PAM have occurred among Oklahomans.

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DURANT

RARE DISEASE KILLS CHILD

A child died after contracting primary amebic meningoencephalitis while swimming in the Red River last week, according to a state Health Department news release issued Tuesday. The child’s age and gender were not released, citing privacy laws. The rare disease is contracted by being infected by a single-cell organism found in most lakes and ponds; people may be infected when submerged in contaminated water. The amoeba travels up the nose to the brain and destroys tissue. The disease is not infectious; only six deaths have been reported in the state since 1998, according to the Health Department.

FROM STAFF REPORTS
Amoeba death a rare occurrence

By Michael Pineda, Staff Writer
The Ardmoreite

Posted Aug 02, 2012 @ 08:00 AM

Ardmore — A child in Bryan County has been identified as the sixth person to die from PAM (Primary Amebic Meningoencephalitis) since 1998.

The Oklahoma State Department of Health announced on Tuesday the death occurred last week and is the result of swimming and diving in the Red River. The department said the disease-causing organisms are naturally present in most lakes, ponds and rivers and multiply rapidly in very warm and stagnant water.

Given the drought conditions within the state, the risk of contracting PAM is rising but it remains a rare occurrence that can be avoided.

“It is very rare,” Mendy Spohn, Carter County Health Department administrative director, said. “I think it is a tragic situation anytime there is a youngster that develops PAM. It is important to know this has occurred, but the biggest message for people to know is that it is very rare.”

Spohn said the health department always recommends swimming in chlorinated water, but those that enjoy aquatic activities at lakes, rivers and ponds should avoid areas of stagnant water. Other safety tips include:

- Avoid water entering the nose or mouth when swimming, jumping, diving or dunking your head into bodies of fresh, warm water.
- Hold your nose or use nose plugs when jumping or diving into water.
- Never swim in stagnant or polluted water.
- Do not swim in areas posted as “No Swimming.”
- Avoid swallowing water from rivers, lakes, streams or stock ponds.
- Use earplugs, swim goggles or masks if you tend to get ear or eye infections.

PAM travels up the nose to the brain where it destroys brain tissue. Symptoms include high fever, headache, nausea and vomiting. Late symptoms may include stiff neck, seizures, hallucinations and coma. It cannot be spread from person to person.

Outdoor enthusiasts are also advised to avoid swimming or other recreational water activities where high levels of blue-green algae are present. Direct contact with water containing blue-green algae can result in a skin rash, eye, ear and throat irritation, asthma-like symptoms and diarrhea, vomiting or abdominal cramps.

Lake Texoma is the only lake within the area where reports of high levels of blue-green algae blooms have been reported.

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Heat, drought in state allow deadly amoeba to thrive

Associated Press

— OKLAHOMA CITY — High temperatures and an ongoing drought are having an impact on more than just crops and livestock.

State health officials say they are also creating ideal conditions for the growth of a tiny, single-cell organism that lives in Oklahoma’s rivers, lakes and ponds and can cause a disease that is almost always fatal.

The organism, Naegleria fowleri, is being blamed for the death of a 9-year-old Bryan County boy who came down with a case of primary amoebic meningoencephalitis, or PAM, after swimming and diving in the Red River last month.

The amoeba that causes the disease occurs naturally in warm freshwater worldwide and in the U.S. is more prevalent in the southern states.

This summer, triple-digit heat and lack of rain have caused temperatures to rise and levels to fall in Oklahoma lakes and streams — a perfect environment for the organism to thrive, said epidemiologist Lawrence Burnsed of the Oklahoma State Department of Health.

“You have the conditions that are ripe for this amoeba to multiply,” Burnsed said. “It is a severe disease. The vast majority of cases have resulted in death.”

The fatality rate for persons infected with the parasite is more than 99 percent, according to the Centers for Disease Control and Prevention.

Of 123 people known to have been infected in the U.S. between 1962 and 2011, only one has survived, the CDC said.

Infections are rare. Between 2002 and 2011, only 32 infections were reported in the U.S., according to the CDC.

Of those, 28 people were infected by contact with contaminated lakes, streams or other water used for recreation.

Two people were infected by water from an untreated, geothermal drinking water supply and two other were infected by contaminated tap water while irrigating their sinuses.

The latest Oklahoma victim was swimming with a group of people but was the only person infected, Burnsed said. Still, people need to be aware of the risk.

“It’s not common, but there is a risk there,” he said. “This is kind of a similar pattern of what’s been observed before.”

The organism infects people when water containing it gets in their nose and sinuses, typically when they swim or dive in contaminated lakes and rivers, according to information about PAM on the state Health Department’s website.
The amoeba then travels up the nose to the brain where it causes inflammation of the lining of the brain and spinal cord, attacks the central nervous system and destroys brain tissue. The disease cannot be spread from person to person.

Symptoms include fever, headache, nausea, vomiting, stiff neck, seizures and eventually coma. In most cases, victims are described as young, healthy individuals who had been swimming three to seven days prior to the onset of symptoms.

Infections do not respond to routine treatment although Burnsed said a variety of antibiotics have been used. In the rare instances in which treatment has been effective it was started “very early” in the course of the illness, according to the state Health Department. Infected individuals generally die within a week.

Infections of the amoeba have been reported in other states this summer. The CDC says a 9-year-old boy died earlier this month after he became infected while swimming in a Minnesota lake.

A separate Minnesota child died from the disease two years earlier after swimming in the same lake.

Officials have closed the lake to swimming as a precaution.

In South Carolina, an 8-year-old boy died last month about a week after he and other members of his family had gone tubing in a lake.

The boy from Bryan County is the latest victim from Oklahoma but he is not the first. In August 2005, two Tulsa boys died after becoming infected with the organism while playing at a municipal park splash pad. Afterward, officials closed the splash pad and announced plans revamp it so it would not use recirculated water.

The first documented case of infection by the amoeba in the state occurred in August 1998 when 3-year-old Emerald Watson died after splashing in waist-deep water during a picnic with her family at Lake Fort Gibson, said her mother, Wilma Watson.

“She tripped on a rock and went under water. She got water up her nose,” Watson said.

The incident occurred on a Saturday, and the little girl began showing signs of illness the following Tuesday, she said.

“I felt her, she was really hot,” Watson said. She soon became nauseous and showed other signs of illness.

“She was just real lethargic and she said she had a really bad headache. I couldn’t keep her hydrated,” she said.

Emerald died on Aug. 9, a little more than a week after the picnic. The loss of her daughter was the start of a journey for Watson that culminated in the creation of The Emerald Academy, a gymnasium in Skiatook that offers training to youngsters in gymnastics, dance and cheerleading.

“There really is something good out of every single, solitary thing,” Watson said. “There’s a purpose in everything we’ve got 200 little Emerald’s running around.”

Watson also warns of the dangers of summertime recreation in lakes and streams and said she supports the public posting of warnings about the possibility of infection and the required use of nose clips.

“Just be responsible,” she said.
High temperatures and drought conditions allow deadly amoeba to thrive in Oklahoma waters

TIM TALLEY  Associated Press
First Posted: August 18, 2012 - 4:50 pm
Last Updated: August 18, 2012 - 4:46 pm

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The Associated Press
NORMAN —
By TIM TALLEY
Associated Press

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Original Print Headline: Disease-causing amoeba thrives in heat, drought

By TIM TALLEY Associated Press

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Okla. heat, drought allow deadly amoeba to thrive

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TIM TALLEY, Associated Press

OKLAHOMA CITY (AP) — High temperatures and an ongoing drought are having an impact on more than just crops and livestock.

State health officials say they are also creating ideal conditions for the growth of a tiny, single-cell organism that lives in Oklahoma's rivers, lakes and ponds and can cause a disease that is almost always fatal.

The organism, Naegleria fowleri, is being blamed for the death of a 9-year-old Bryan County boy who came down with a case of primary amoebic meningoencephalitis, or PAM, after swimming and diving in the Red River last month.

The amoeba that causes the disease occurs naturally in warm freshwater worldwide and in the U.S. is more prevalent in the southern states. This summer, triple-digit heat and lack of rain have caused temperatures to rise and levels to fall in Oklahoma lakes and streams — a perfect environment for the organism to thrive, said epidemiologist Lawrence Burnsed of the Oklahoma State Department of Health.

"You have the conditions that are ripe for this amoeba to multiply," Burnsed said. "It is a severe disease. The vast majority of cases have resulted in death."

The fatality rate for persons infected with the parasite is more than 99 percent, according to the Centers for Disease Control and Prevention. Of 123 people known to have been infected in the U.S. between 1962 and 2011, only one has survived, the CDC said.

Infections are rare. Between 2002 and 2011, only 32 infections were reported in the U.S., according to the CDC. Of those, 28 people were infected by contact with contaminated lakes, streams or other water used for recreation. Two people were infected by water from an untreated, geothermal drinking water supply and two other were infected by contaminated tap water while irrigating their sinuses.

The latest Oklahoma victim was swimming with a group of people but was the only person infected, Burnsed said. Still, people need to be aware of the risk.

"It's not common, but there is a risk there," he said. "This is kind of a similar pattern of what's been observed before."

The organism infects people when water containing it gets in their nose and sinuses, typically when they swim or dive in contaminated lakes and rivers, according to information about PAM on the state Health Department's website. The amoeba then travels up the nose to the brain where it causes inflammation of the lining of the brain and spinal cord, attacks the central nervous system and destroys brain tissue. The disease cannot be spread from person to person.

Symptoms include fever, headache, nausea, vomiting, stiff neck, seizures and eventually coma. In most cases, victims are described as young, healthy individuals who had been swimming three to seven days prior to the onset of symptoms.

Infections do not respond to routine treatment although Burnsed said a variety of antibiotics have been
used. In the rare instances in which treatment has been effective it was started “very early” in the course of the illness, according to the state Health Department. Infected individuals generally die within a week.

Infections of the amoeba have been reported in other states this summer. The CDC says a 9-year-old boy died earlier this month after he became infected while swimming in a Minnesota lake. A separate Minnesota child died from the disease two years earlier after swimming in the same lake. Officials have closed the lake to swimming as a precaution.

In South Carolina, an 8-year-old boy died last month about a week after he and other members of his family had gone tubing in a lake.

The boy from Bryan County is the latest victim from Oklahoma — but he is not the first. In August 2005, two Tulsa boys died after becoming infected with the organism while playing at a municipal park splash pad. Afterward, officials closed the splash pad and announced plans revamp it so it would not use recirculated water.

The first documented case of infection by the amoeba in the state occurred in August 1998 when 3-year-old Emerald Watson died after splashing in waist-deep water during a picnic with her family at Lake Fort Gibson, said her mother, Wilma Watson.

"She tripped on a rock and went under water. She got water up her nose," Watson said. The incident occurred on a Saturday, and the little girl began showing signs of illness the following Tuesday, she said.

"I felt her, she was really hot," Watson said. She soon became nauseous and showed other signs of illness.

"She was just real lethargic and she said she had a really bad headache. I couldn't keep her hydrated," she said.

Emerald died on Sunday, Aug. 9, a little more than a week after the picnic. The loss of her daughter was the start of a journey for Watson that culminated in the creation of The Emerald Academy, a gymnasium in Skiatook that offers training to youngsters in gymnastics, dance and cheerleading.

"There really is something good out of every single, solitary thing," Watson said. "There's a purpose in everything — we've got 200 little Emerald's running around."

Watson also warns of the dangers of summertime recreation in lakes and streams and said she supports the public posting of warnings about the possibility of infection and the required use of nose clips.

"Just be responsible," she said.
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