

Primary Amebic Meningoencephalitis

Public Health Response
Florida Department of Health
2007-2008

Primary Amebic Meningoencephalitis

- Florida Department of Health established a Florida work group including representatives from affected Florida County Health Departments in 2007
- Florida Department of Health assisted in establishing a national work group sponsored by the Council of State and Territorial Epidemiologists and the Centers for Disease Control and Prevention in 2007

Primary Amebic Meningoencephalitis CDC/CSTE National Work Group Activities

- Create a national database of PAM cases
- Develop standard case definitions for PAM
- Propose adding PAM to the list of nationally notifiable diseases
- Develop evidence-based risk reduction information for the public
- Increase education of health care providers on diagnosis and treatment of PAM
- Identify areas for research

Primary Amebic Meningoencephalitis CDC/CSTE National Work Group Progress

- Prepared updated line list of all reported cases of PAM in the US
- Prepared updated CDC Fact Sheet for health care providers and the public
- Preparing MMWR article to alert health care providers and the public to risks of PAM
- Preparing technical document to propose making PAM a national notifiable condition
- Compiling environmental sampling data on PAM in the United States

Primary Amebic Meningoencephalitis FDOH Work Group

- Develop consensus, evidence-based information on PAM for the general public
- Develop information on diagnosis and treatment of PAM for health care providers
- Make PAM a reportable disease in Florida
Revision of Rule 64D-3, FAC
- Participate in the national CDC/CSTE work group on PAM

Primary Amebic Meningoencephalitis Risk Communication

- What is Naegleria?

Naegleria is a natural, free-living, heat-adapted amoeba commonly found in warm fresh water and soil.

Infection with the amoeba causes a very rare but severe brain inflammation, primary amebic meningoencephalitis.

Most infections are fatal.

Primary Amebic Meningoencephalitis Risk Communication

- Where is Naegleria found?

Naegleria is found in the environment worldwide.

It is known to have caused human infections in 15 southern tier states

(AR, AZ, CA, FL, GA, LA, MO, MS, NC, NM, NV, OK, SC, TX, VA).

Primary Amebic Meningoencephalitis Risk Communication

- How common are Naegleria infections in the United States?

Infections are very rare, but the consequences of an infection are severe.

From 1998 to 2007, there were 33 documented human infections in the U.S.

Primary Amebic Meningoencephalitis

- How common is Naegleria in Florida?
 - 30 documented cases from 1962 to 2008
 - 3 cases in Orange County in 2007**
 - 16 cases were from Central Florida
 - Cases from the following counties: Baker, Brevard, Broward, Citrus, Lee, Miami-Dade, Orange, Pasco, Pinellas, Polk, Putnam, Seminole

Primary Amebic Meningoencephalitis Risk Communication

- When do Naegleria infections most commonly occur?

Summertime. Infections are most common in July and August. Infections are more likely to occur in southern tier states when air temperatures rise for prolonged periods resulting in higher water temperatures and lower water levels. The number of infections usually increase during years characterized by heat waves.

Primary Amebic Meningoencephalitis Risk Communication

- How can I reduce the risk of infection with Naegleria?

A low risk of Naegleria infection will always exist from exposure to warm freshwater lakes, rivers, and hot springs.

The only known way to prevent Naegleria infections is to refrain from recreational fresh water activity.

Primary Amebic Meningoencephalitis Risk Communication

- **Measures that might reduce risk of infection by lowering the chance of contaminated water going up the nose include:**
 - Avoid water-related activities in bodies of warm, freshwater, hot springs, and thermally-polluted water such as water around power plants.**
 - Avoid water-related activities in warm freshwater during periods of high water temperature and low water volume**
 - Hold the nose shut or use nose clips when engaging in recreational fresh water activities**
 - Avoid digging in or stirring up the sediment while taking part in water-related activities in shallow, warm, freshwater lakes.**

Primary Amebic Meningoencephalitis Risk Communication

Recreational water users should assume that there is always a low level of risk associated with entering all warm fresh water in southern tier states. Because the location and number of ameba in the water can vary a lot over time, posting signs is unlikely to be an effective way to prevent infections. In addition, posting signs on only some fresh water bodies might create a misconception that bodies of water that are not posted are Naegleria-free.

Primary Amebic Meningoencephalitis Risk Communication

Information about the risks associated with Naegleria infection should be included in public health messages discussing general issues of recreational water safety and risk.