



## Amoebic Meningitis

### Environmental Health Guide

#### What is Amoebic Meningitis?

Amoebic meningitis is a disease that causes inflammation and eventual destruction of the brain and brain linings. It is caused by a single-celled amoeba that lives in fresh water. The amoeba, *Naegleria fowleri*, can survive in soil for a long time and still reactivate when put in fresh water.

This rare and fatal water-borne disease was discovered at the Adelaide Children's Hospital in the 1960s. Since then 15 countries in Asia, Europe, North and South America have detected *Naegleria fowleri*.

Most victims have been children who didn't know the dangers of swimming in or playing with unclean water. Taking the simple precautions listed below will help you protect them.

#### Symptoms of Amoebic Meningitis

The following symptoms are usually recorded within three to seven days of infection and result in death.

- severe and persistent headache
- sore throat
- nausea
- vomiting
- high fever
- sleepiness

#### How do you Get It?

Amoebic meningitis occurs **only if water containing the amoebae goes up the nose**. The amoebae can then make their way up the nerves to the brain.

#### When do you Get It?

When a number of conditions occur at the same time:

- if the amoebae are present in the water
- if they get a chance to multiply
- if water gets up your nose



## Where do you Get It?

*Naegleria fowleri* thrive in water temperatures between 28° and 40°C. You can get amoebic meningitis from:

- ✗ unchlorinated or incorrectly chlorinated fresh water (drinking water, bore water, ),
- ✗ warm inland waters (dams, lakes, geothermal water, or waterholes),
- ✗ poorly maintained swimming pools and spas,
- ✗ water piped above ground for long distances without proper treatment.
- ✗ garden hoses and sprinklers containing stagnant water.

*Naegleria fowleri* will not grow in any water body with more than two percent salt such as sea water and river estuaries

## To Prevent Infection

- ✓ Don't allow water to go up your nose or sniff water into your nose when bathing, showering or washing your face.
- ✓ Don't allow children to play unsupervised with hoses or sprinklers as they may accidentally squirt water up their nose.
- ✓ Let bath and shower taps run for a few minutes to flush out the pipes.
- ✓ Don't jump into or duck dive into bathing water - walk or lower yourself in.
- ✓ Swim in and play with safe water only. Stay out of dirty pools, waterholes, dams, swimming pools, spas, etc.
- ✓ Disinfect your swimming pool water. Chlorine is the most effective way to continually disinfect water as it kills all stages of *Naegleria fowleri*.
- ✓ Keep wading pools clean by emptying, scrubbing and allowing them to dry in the sun after each use.
- ✓ Swim in sea water as you cannot get amoebic meningitis from water containing more than two per cent salt.

## Remember - to Stop Amoebic Meningitis Infection

- Don't allow water to go up your nose.
- Do not play with garden hoses and sprinklers.
- Let bath and shower taps run for a few minutes.
- Keep wading pools clean and only use the water once.
- Keep your swimming pool or spa clean.
- Test your swimming pool or spa at least every day.
- Stay out of hazardous water - dirty pools, spas, waterholes, dams, etc.
- If you do come in contact with unsafe water, walk or lower yourself in.

## Further Information:

For further information contact your local government Environmental Health officer

or

Environmental Health Directorate  
Department of Health  
PO Box 8172  
PERTH BUSINESS CENTRE WA 6849

Telephone: (08) 9388 4999  
Facsimile: (08) 9388 4955

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