

Primary Amoebic Meningoencephalitis (PAM)

[Fact sheet](http://conditions.health.qld.gov.au/HealthCondition/condition/14/165/115/primary-amoebic-meningoencephalitis-pam) (<http://conditions.health.qld.gov.au/HealthCondition/condition/14/165/115/primary-amoebic-meningoencephalitis-pam>) - Health conditions directory.

[Naegleria fowleri: Qs and As](http://conditions.health.qld.gov.au/HealthCondition/condition/14/165/101/Naegleria-fowleri-Qs-As) (<http://conditions.health.qld.gov.au/HealthCondition/condition/14/165/101/Naegleria-fowleri-Qs-As>) - Health conditions directory.

Primary amoebic meningoencephalitis (PAM) is a rare and severe disease caused by a single-celled amoeba called *Naegleria fowleri*. It causes inflammation and destruction of the brain and the linings of the brain, and is usually fatal.

PAM was first described in South Australia in the 1960s. It has since been identified in many countries throughout the world. Although *Naegleria fowleri* occurs commonly in the environment, it only rarely causes disease. There have been four confirmed cases and one probable case documented in Queensland since the year 2000.

Naegleria fowleri occurs naturally in untreated fresh water, and prefers temperatures between 25oC and 40oC. It can grow in warm, stagnant water bodies such as lakes and hot springs. It can also occur in untreated water piped long distances above ground and in other man-made environments such as poorly maintained swimming pools, wading pools and spas.

Infection with *Naegleria fowleri* can occur if water containing the amoebae is pushed up the nose, through activities such as jumping, diving or falling into the water. The amoebae can then make their way to the brain. Even if contaminated water does go up the nose, the chance of contracting infection is extremely small. Children and young adults appear to be more susceptible to infection than adults, although it can occur at any age. In the USA, half of the documented cases of *Naegleria* have been children aged 12 years and younger.

The disease cannot be contracted by drinking water or through person to person contact. *Naegleria fowleri* are not found in sea water.