

Aeromonas salmonicida

In cyprinids

What is *Aeromonas salmonicida*?

Aeromonas salmonicida is a bacterial pathogen of fish. It is naturally occurring in waters world wide. The bacteria has been found infecting many freshwater fish species and some marine fish. It can survive for a long period of time in water, mud and detritus providing a source of infection. However, direct contact with infected fish or healthy carriers, which shed the bacteria into the water, is the main route of spread between fish.

What does *Aeromonas salmonicida* do?

Aeromonas salmonicida infection causes ulcers on the skin of the fish and damage to internal organs. The open lesions are often colonised by other bacteria and fungus that are present in the water. These secondary infections can contribute to disease and death. Typical lesions caused by *A. salmonicida* are often on the flanks and along the lateral line, surrounded by a white ring of damaged tissue. Symptoms of systemic (whole body) infection include lethargy, abnormal swimming & darker colouration. When infection doesn't kill the fish, the ulcers may heal resulting in grey-black scars.



A typical *Aeromonas salmonicida* lesion on a carp.

Minimising the threat of *Aeromonas salmonicida* – what can I do?

Aeromonas salmonicida disease outbreaks usually occur in the spring or summer when water temperatures are high and can be caused by spawning stress. More and more cases are now seen caused by other stressors, such as overstocking or poor habitat. The severity of infection during an outbreak is often dependent on the general health of the fish. The use of antibiotics in the water or feed is often impractical in a fishery and may be harmful. But the risk and severity of an outbreak can be managed by:



Aeromonas salmonicida lesion on a perch.

Reducing stress within the fish population

Stress decreases the ability of the fish to manage challenges such as infection or wounds, allowing opportunistic bacteria to take hold.

Take care when introducing new fish

Care should always be taken to limit stress to fish during stocking. Particular care is needed during rising temperatures. This period can be stressful to the fish and favours rapid bacterial reproduction.

Regular monitoring of water quality

Disease outbreaks are usually linked with a sudden change or a gradual decline in the aquatic environment causing stress to the fish. Regular monitoring helps to detect the early signs of problems.

Varied habitat

Habitat variation can help reduce competition between fish for food and space. It also provides areas of cover where the fish can hide if they are threatened and recover from handling following capture by anglers, reducing their stress levels. Good varied habitat within a fishery can also improve water quality.

As with many species of bacteria, environmental and management conditions can influence the severity of an outbreak and inhibit or aid recovery. Good fisheries management to minimise stress, is the best method to reduce the risk of disease outbreaks. For more information about managing water quality, fishery habitat and stock density, see the relevant fact sheets in this series.

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