

Information Sheet

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Ostreid Herpesvirus-1



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Background

- Ostreid herpesvirus-1 (OsHV-1) is a contagious viral disease of bivalve shellfish species with a wide host range.¹
- In 2001-2003, OsHV-1 was discovered to be associated with larval Pacific oyster mortalities occurring in Tomales Bay, California, followed by detections in Inner Bay, Outer Bay, and San Diego Bay, California.²
- OsHV-1 is not a threat to human health.

Distribution

- Globally, OsHV-1 detections have been reported in Australia, China, France, Ireland, Italy, Japan, Mexico, New Zealand, the Netherlands, Norway, Portugal, South Korea, Spain, Sweden, the United Kingdom, and the United States.¹
- The OsHV-1 virus was identified in diseased Pacific oysters in France in the 1990s. Variants of OsHV-1 have since been identified and are classified as variants and microvariants, depending on genetic sequencing.

- In the United States, OsHV-1 has been detected in areas along the California coast.

Susceptible Species

- In the United States, susceptible commercially cultured shellfish include abalone, Manila clam, Mediterranean mussel, Eastern oyster, European flat oyster, Kumamoto oyster, Pacific oyster, and scallops.^{1,4}
- Susceptible cultured and wild shellfish are present in all U.S. coastal waters, including Alaska and Hawaii.⁵
- OsHV-1 is most often associated with high mortality disease outbreaks in Pacific oysters. Variable mortality and latent or subclinical infection occur in other shellfish species.

Transmission and Clinical Signs

- Transmission occurs via water.
- Clinical signs are often observed in larvae and typically develop 3-4 days after spawning. These signs include slowed growth; reduced feeding; weak, circular swimming; and loss of ability to swim.^{1,6}
- Infected oysters may be found dead before clinical signs are observed.⁶
- Occurrence of OsHV-1 is affected by environmental factors, husbandry practices, and co-infection with other pathogenic agents. There is an association between increased water temperatures and development of disease. In California, OsHV-1 tends to occur in the summer when water temperatures rise above 24° C (72.5° F).

Treatment and Prevention

- No treatment or vaccine is currently available.



Disease control and prevention methods include:

- Identifying infected and susceptible cultured and wild shellfish populations and developing risk management plans and biosecurity protocols to mitigate exposure.¹
- Placing culture facilities in areas away from infected shellfish populations and water currents that pass through these areas.^{1,7}
- Using certified disease-free or disease-resistant seed.^{3,4}
- Using personal protective equipment that is single-use or site-specific and can be disinfected.¹
- Regulating shellfish importation and movement (local, regional, global).⁶

Report Suspicious Cases

Suspect cases should be reported to your State animal health official. Currently (2020), OsHV-1 is not listed as notifiable by the World Organization for Animal Health (OIE).

References

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