

Koi Herpes Virus

Koi Herpes Virus. Those three little words can spell disaster for any koi owner. Koi herpes virus is a viral infection that can kill 95-100% of exposed koi in 24-48 hours. Quarantining any new additions can keep KHV from spreading to established populations. With warm water and transport stress, fish will become sick and die quickly, but since they are quarantined, they will not spread the disease to your other fish.

In the cyprinid (koi and goldfish) herpes family, there are 3 known viruses. Cyprinid herpesvirus-1 causes carp pox. Carp pox is a skin disease of koi that causes irregular growths usually around the dorsal fin in koi. Cyprinid herpesvirus-2 is a disease in goldfish causing hematopoietic necrosis of the internal organs. Cyprinid herpesvirus-3 is the causative agent of the deadly koi herpes virus. The virus causes severe necrosis of the gills and other internal organs. Death occurs quickly, within 24-48 hours.

Koi owners need to be aware that KHV is present and deadly. Without proper quarantining procedures, all the fish in your pond can be decimated. Any new additions to any pond should be quarantined separately for minimum 4-6 weeks. The incubation period for KHV is 7-21 days. New additions need to be quarantined with new koi to make sure they are not a carrier. **Carrier fish will never show physical signs of the disease, but can transmit it to other fish. Goldfish and other carp species can be carriers and NEVER show any signs of illness.** Be sure the water is between 60°-77°F (16°-25°C) to bring out the virus if it is present. If your new additions are indeed carrying KHV, they will sicken and die quickly, but your other fish will be protected. Any fish that survive an outbreak of KHV are carriers of the virus and can spread it to other fish. It is recommended that carriers are isolated for the remainder of their lives or humanely euthanized.

So how do koi get KHV? **Koi can get KHV through direct contact with infected fish or their fluids as well as contaminated water, mud or equipment.** Once they contract KHV, the sick fish usually show unspecific signs of illness, most commonly, sudden death. Post-mortem analysis of fresh dead fish can confirm an outbreak of KHV. If there is suspicion that a fish may be a carrier of KHV, **there is another test available that can confirm the presence of KHV in live fish from a blood sample.**

KHV is a reportable disease to the [state and OIE](#). It is not an actionable disease, like Spring Viremia of Carp, meaning that **euthanasia of survivors is NOT required**. It is up to the owner and veterinarian to decide what will be done with any survivors.

Unfortunately, **there is no treatment for KHV**. A vaccine was previously available, but has since been discontinued. The best thing to prevent KHV from spreading is quarantine. **Quarantine all new fish additions for 4-6 weeks in water 60°-77°F (16°-25°C).**

If you suspect your fish may have KHV, contact your local fish veterinarian IMMEDIATELY. In California, call (831) 346-6151. To find a fish veterinarian in your area, review the following databases.

American Association of Fish Veterinarians – <https://fishvets.org>

World Aquatic Veterinary Medical Association – <https://aquavetmed.info>

For more information, [check out this handout from UFL](#) or e-mail hospital@cafishvet.com.