

KOI HERPESVIRUS (KHV)

April 30, 2008

What is Koi herpesvirus?

- Koi herpesvirus is a disease of carp, koi and goldfish caused by a virus.
- Koi herpesvirus is found worldwide and was first found in North America in 1999 in the United States.

Can people get Koi herpesvirus?

- No, the virus does not affect humans. Carp infected with KHV are safe to eat and handle.

What fish are susceptible?

- This virus appears to affect all ages of common carp, goldfish and koi.

Where has KHV been found?

- The virus has been found in wild carp from Lake Scugog and Pigeon Lake in the Kawartha Lakes area of Ontario.



Photo: John Lumsden

Fish may show the following signs:

- Patches of discolouration on skin
- Swollen, pale and rotting gills
- Sunken eyes and notch on the nose of the fish
- Excess mucus early in disease, or loss of mucus in late stages of disease outbreak
- Appetite loss or erratic swimming
- Some of these signs are characteristic of other fish diseases; therefore laboratory diagnoses are needed to identify the Koi herpesvirus.

Cause of a Koi herpesvirus disease outbreak:

- The Koi herpesvirus virus causes disease and death when water temperatures are between 18 to 28°C. Disease outbreaks are rare when water temperatures are lower than 13°C.
- Fish are most susceptible when stressed as a result of fluctuating high water temperatures, crowding, spawning, etc.
- The virus is highly contagious and has been linked to large mortalities of carp and koi.
- The virus is most likely passed from fish to fish in close contact, entering the body through the gills or possibly through the intestine.
- The virus lives in fish, in water for short periods of time (possibly for at least four hours, probably less than a day), in feces, and possibly in the mud bottoms of lakes and rivers.
- Fish infected with KHV may survive a disease outbreak and become carriers of the virus, passing the virus to other fish.

Preventing disease outbreaks:

- Outbreaks of Koi herpesvirus in the wild are almost impossible to prevent or treat.
- Minimize outbreaks in cultured koi or goldfish by knowing the source of fish purchased and holding fish separately before mixing them into ponds or aquariums.
- Sick goldfish or koi should be humanely killed and then buried or disposed of in the garbage. Do not flush sick or dead goldfish or koi down the toilet.

For more information:

Still have questions?

For general inquiries, call the Natural Resources Information Centre: 1-800-667-1940

For reporting [fish die-offs](#), call 1-866-929-0994.