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Infectious Salmon Anaemia

What is infectious salmon anaemia?

Infectious salmon anaemia is an infectious disease of finfish. It is caused by the infectious salmon anaemia virus, which belongs to the family Orthomyxoviridae.

There are strains of infectious salmon anaemia virus that cause disease and those that do not.

What species of finfish can be infected with infectious salmon anaemia?

Infectious salmon anaemia has been found or suspected in finfish species listed in Table 1.

Is infectious salmon anaemia a risk to human health?

No. The causal agent of infectious salmon anaemia is not a risk to human health.

What are the signs of infectious salmon anaemia?

Infectious salmon anaemia is a cause of death in hatched life stages of susceptible finfish. Up to 90 percent of infected finfish overall can die of the disease, depending on the strain of virus. Some strains of the virus do not result in high finfish losses. The death rate may be initially low and may increase over an extended period of time.

Infected finfish may exhibit any of the following signs:

- behaviour
  - loss of appetite
  - abnormal swimming patterns (slow swimming, swimming slowly at the surface)
  - fish congregating at the edges or outlets of holding units
  - fish gasping at the surface
- appearance
  - grey gills
  - swollen abdomen
  - areas of bleeding that may be present along the belly and sides of the fish
  - dark and swollen kidney, liver and spleen
  - areas of pinpoint bleeding in the fatty tissue surrounding organs
  - areas of bleeding in the pyloric cecae, intestines and liver
  - pale heart
  - bloody fluid in the abdominal cavity and around the heart

Is infectious salmon anaemia found in Canada?

Yes. In Canada, only the non-disease causing strain of infectious salmon anaemia is currently found in New Brunswick.

How is infectious salmon anaemia spread?

Infectious salmon anaemia is spread between finfish by

- contaminated water, or
- contaminated equipment.

People can spread infectious salmon anaemia by moving any of the following

- infected live or dead finfish,
- contaminated equipment, or
- contaminated water.

How is infectious salmon anaemia diagnosed?

Diagnosing infectious salmon anaemia requires laboratory testing. Not all infected finfish show signs of the disease.

How is infectious salmon anaemia treated?

There are no treatment options currently available for infectious salmon anaemia. However, a vaccine is available to prevent the disease.

What measures can be taken to prevent the introduction and spread of infectious salmon anaemia?

If you frequently handle or work with finfish, be aware of the signs of infectious salmon anaemia.

Do not import live infected finfish into Canada.

- An import permit will be required from the CFIA for certain species of finfish as of December 2011.
- People bringing finfish into Canada should check other federal, provincial, and/or territorial requirements before entering the country.

Do not introduce live finish from another country or another province into the natural waters of Canada.

- People releasing finfish into the natural waters or rearing facilities within Canada should check if federal or provincial and/or territorial permits are required.

If you frequently handle or work with finfish, be aware of where infectious salmon anaemia occurs in your area.

- A federal, provincial and/or territorial permit or licence may be required to relocate finfish within Canada.

Do not use finfish that were bought in a grocery store as bait for catching finfish or other aquatic animals.

When cleaning and gutting finfish, dispose of all waste in your municipal garbage.

The Canadian Food Inspection Agency (CFIA) recommends that you do not visit Canadian aquaculture sites, zoos or aquariums for 14 days if you have

- visited an aquaculture site, or
- had contact with wild finfish.

Wash and disinfect the footwear you wore to the site or when you had contact with wild finfish. Also wash your clothing thoroughly and dry it at a high temperature.

What is being done to protect Canadian aquatic animals from infectious salmon anaemia?

Infectious salmon anaemia is a reportable disease in Canada. This means that anyone who owns or works with aquatic animals, and who knows of or suspects infectious salmon anaemia in their fish, is required by law to notify the CFIA.

If infectious salmon anaemia is found, the CFIA would control its spread by carrying out disease response activities. These may include

- controlling the movements of infected animals that people own or work with
- humanely destroying infected animals
- cleaning and disinfecting

The control measures chosen would depend on the situation.

What do I do if I think finfish that I am raising or keeping may have infectious salmon anaemia?

If you suspect a finfish that you are raising or keeping may have infectious salmon anaemia, you are required under the *Health of Animals Act* to immediately notify the CFIA. All strains of the virus must be notified to the CFIA.

How do I get more information?

Contact your CFIA Area office

Atlantic: 506-851-7651
Quebec: 514-283-8888

Ontario: 519-837-9400
West: 403-292-4301

You can find contact information for your local CFIA Animal Health Office

- on the CFIA website at www.inspection.gc.ca, or
- by consulting the blue pages of your local phone directory.

Table 1: The following is a list of species susceptible to infectious salmon anaemia that exist in the natural environment in Canada.

Each species of finfish may have several common names, but only one common name is listed.

Note: Species identified with an asterisk have not been confirmed as susceptible to infectious salmon anaemia.

Scientific Name	Common Name
Clupea harengus	Atlantic herring
Gadus morhua	Atlantic cod
*Oncorhynchus kisutch**	coho salmon*
*Oncorhynchus mykiss**	rainbow trout*
Salmo salar	Atlantic salmon
Salmo trutta	brown trout
*Salvelinus alpinus**	Arctic char*

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