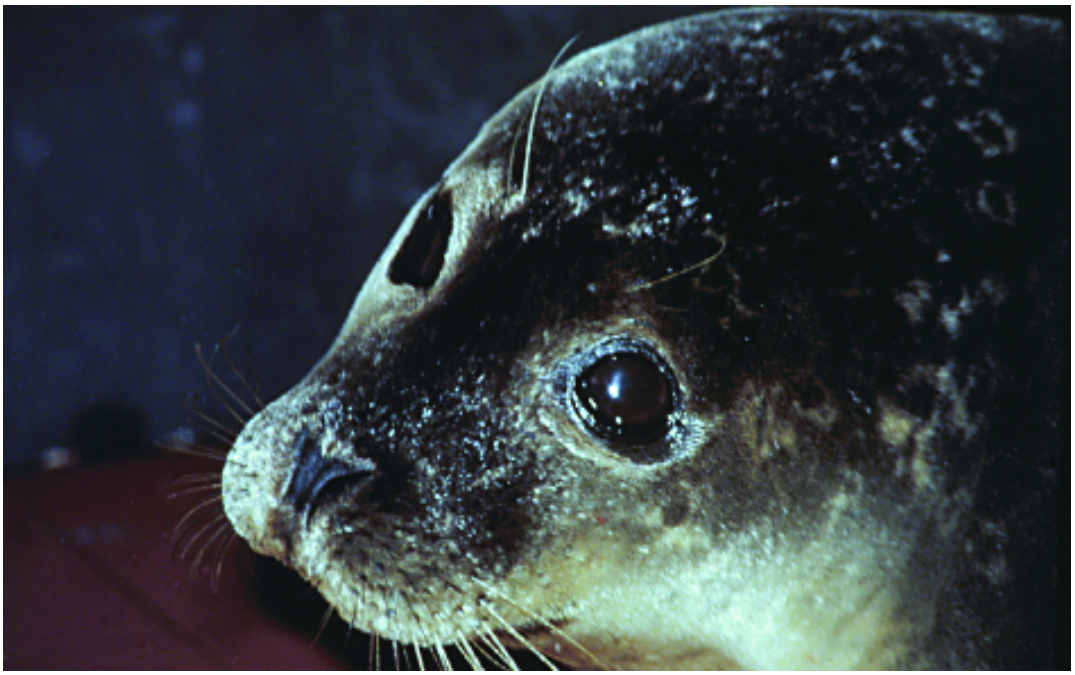
H-C.1

EYE INFECTIONS (CONJUNCTIVITIS)

C-1.1 C-2.1 C-3.1

What are eye infections?

Eye infections cause redness and swelling (inflammation) of the lining of the eyelids. In affected animals, the eyes may appear to be slightly cloudy and partly shut, and there may be a discharge that builds up in the corners of the eye.



Eye infection in a seal with influenza. (Photo credit: Dr. J. Geraci).

H-C.1

What causes eye infections?

- Eye infections can be caused by viruses or bacteria. They can be limited to the eye (localized infection), like pinkeye in humans, or they can be part of a more widespread disease that affects other parts of the body (systemic disease).

What species are affected?

- Seals and walrus.

Other things to look for

- Animals that have eye infections as part of a more generalized infection are likely to show inflammation of the trachea (windpipe) or lungs (see pneumonia in section H-G.7).

Human health concerns

- Animals showing signs of systemic disease, such as pneumonia, should not be eaten.

- Eye infections can be caused by different sicknesses making it difficult to determine the potential health risk to humans and dogs. Therefore, caution should be used. Gloves should be worn and tools, hands and outer clothing washed in hot soapy water after use when handling sick animals.

Safety of the meat for dogs

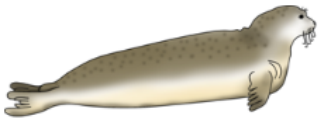
- It is not known if dogs can contract eye infections from eating infected marine mammals. Caution should be exercised. It is not recommended to feed dogs any animals showing signs of eye infections.

Samples to collect

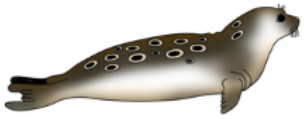
- Collect the entire head or eyelids only; lungs if there is evidence of pneumonia, and other filtering organs (liver, spleen, kidney) if there is evidence of widespread sickness.

H-C.2

HAIR LOSS



C-1.2



C-2.2

What is it?

Seals and other pinnipeds may be seen, on occasion, with large areas of hair loss. Excessive hair loss can be caused by many different factors. For example: some pups may be born early before the fur has completely formed. These pups are often born dead (stillborn).

The absence of fur on newborn pups that otherwise look normal may be the result of a genetic problem or something that went wrong during pregnancy.

Hair loss may occur in older animals if the seal's fur failed to shed (moult) properly. Moulting occurs annually in seals and some whales like the beluga. The process may be interrupted or impaired by factors such as sickness, poor nutrition, and stress. Some hunters think that incomplete moulting may also occur if seals do not spend enough time out of the water on the ice. Their failure to do so may be a result of changing climatic conditions which affect the formation and duration of ice.

If the seal does not moult properly, the old skin may become infected with bacteria or fungi which might result in the loss of fur.

Where on the animal can hair loss occur?

Hair loss can occur anywhere on the animal.

What species are affected?

Hair loss could occur in any seal.

H-C.2

Human health concerns

- The factors causing hair loss in seals will likely not harm humans if the meat is eaten. However, hair loss can indicate that the seal may be sick for other reasons. Use caution and check the whole animal to ensure there are not other signs of sickness which may be harmful to humans. Caution should be exercised when handling the animal. Wear gloves, wash tools, hands and outer clothing in hot soapy water after use.

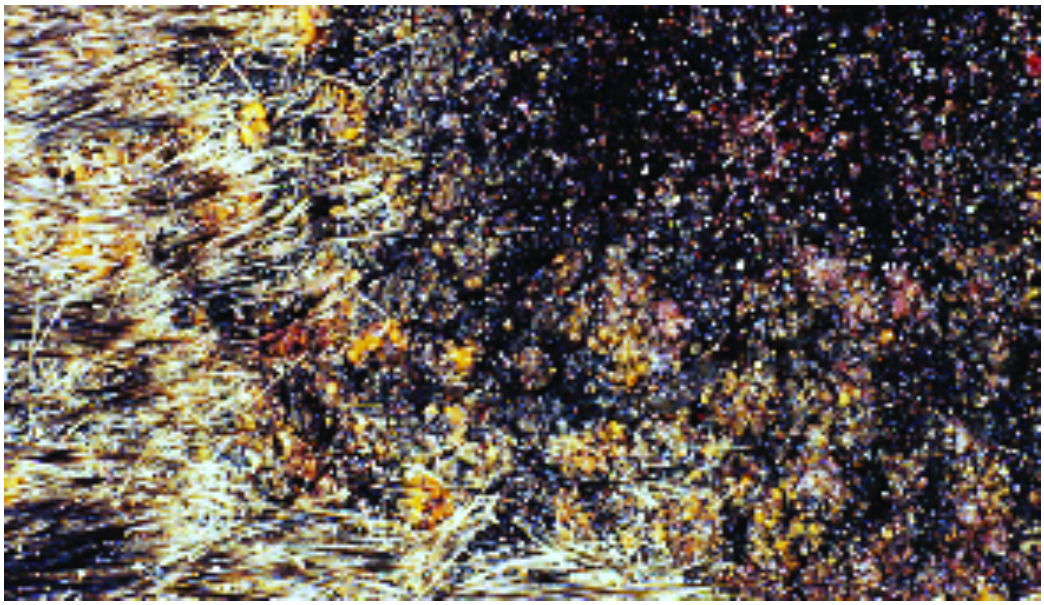
- It is advised to cook all meat well before eating.

Safety of the meat for dogs

- In most cases the meat should be safe to feed to dogs. However, use caution and check the whole animal to ensure there are not other signs of sickness which may be harmful to the dogs.

Samples to collect

- Collect pieces of skin with no hair, as well as some normal tissue around the affected area. Samples of endocrine organs, such as thyroid and adrenal glands, are often very helpful in determining the cause of skin conditions.

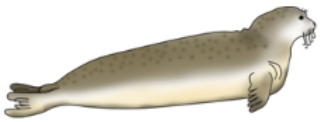


Hair loss and fungal growth in a young seal.

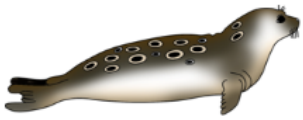
(Photo credit: Dr. P-Y Daoust).

H-C.3

SEAL LICE



C-1.3



C-2.3

What are seal lice?

Seal lice are small (1-5 mm), wingless insects that live on the skin. Their eggs (nits) are attached to hair. Both eggs and adults are visible with the naked eye.

The lice that occur on seals are sucking lice (*Echinophthirius horridus*), which use sharp mouthparts to penetrate the skin of the host and suck blood.

Lice are transmitted from one animal to another through close contact while the animals are out of the water. Lice may irritate the host and in the case of heavy infestations may cause a significant loss of blood.

The sucking louse of ringed seals acts as the host for the immature worm (intermediate host) for heartworm (*Acanthocheilonema spirocauda*) which affects this species of seal (see heartworm in section H-C.11).

What animals are affected?

Lice are commonly reported on seals. A different species of lice than those illustrated on the next page were found on walruses near Akpatok Island, Ungava Bay.

What do seal lice look like?

Seal lice look like tiny bumps on the fur / skin of the animal. They are often found around the head and flippers. Large numbers of lice are more likely to occur in animals that are sick or weak and are spending more time than normal out of the water.

H-C.3

Lice on the head of a seal (top). Close-up view of a louse with a microscope (bottom). (Photo credits: Dr. J. Geraci).

Human health concerns

- Lice tend to be very host-specific and are not transmitted easily to other species. Seal lice will not feed on people. The meat is safe to eat.

Safety of the meat for dogs

- The meat is safe to feed to dogs.

H-C.4

SEALPOX

Sealpox has not been found in seals from the Canadian Arctic

See fact sheets C-1.4 & C-2.4

What is sealpox?

Sealpox is a poxvirus that causes disease of the skin. This virus can be passed from seal to seal when they rub against each other. Sores (lesions) occur most commonly on the head and neck – areas which are most likely to come into contact with another animal.

What does sealpox look like?

Sealpox forms small (2-3 cm) lumps (nodules) on the skin which can break open and ooze out fluid. Eventually these heal over, but a grayish, slightly raised scar without fur is often left.

These lumps may occur singly or in groups and are more common on the head and neck, but may occur anywhere on the animal.

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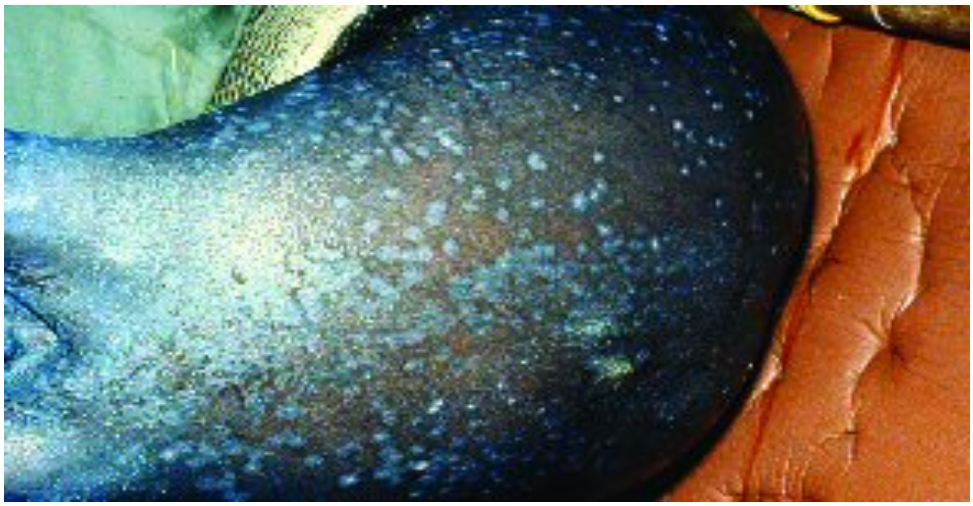


Sealpox in a seal. (Photo credit: Dr. J. Geraci).

H-C.4

What species are affected?

- Sealpox has been seen in harbour seals, grey seals, harp seals, northern fur seals, northern elephant seals, and California sea lions. It has not been reported in seals from the Canadian Arctic, but it could someday be found here.

Human health concerns

- Only a few people have developed sealpox. These human cases likely resulted from handling an infected animal with unprotected hands (i.e. no gloves) which allowed the virus to enter through a small cut on the hand.
- The infection in humans appears to be limited to blister-like sores on the hand. These sores appear to clear up on their own, but may occur again. Always wear gloves and wash tools, hands and outer clothing well with hot soapy water when handling an animal suspected to have sealpox.
- The greatest health concern to humans is likely related to touching the infected skin of the seal with unprotected hands. It may be OK to eat the meat, particularly if it is well cooked. However, not much is know about human health risks. As a precaution, it is recommended that the meat not be eaten unless the raised pox on the seal look old and healed, thus indicating the virus is likely no longer present.

How to protect yourself

- You can avoid contact with the virus by not handling the pelt or skin of seals that have pox.
- You can reduce the chances of the virus getting into your skin by washing your hands often or by wearing rubber gloves while handling the carcass of a seal that appears to have sealpox.

Safety of the meat for dogs

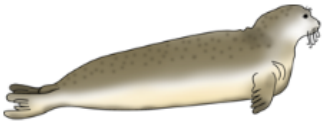
- It is not recommended to feed dogs anything not considered suitable for human consumption.

Samples to collect

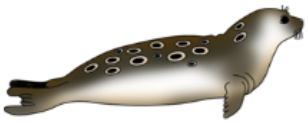
- Collect pieces of skin containing one or more lumps, as well as some normal skin around the affected area.

H-C.5

PELT DISCOLOURATION



C-1.5



C-2.5

What is it?

Occasionally, seals have been seen with areas of skin that are darker than normal accompanied by a loss of hair. Affected areas may appear reddened, and are characterized by broken hair shafts and thickening and flaking of the skin.

Initially, it was thought that the seals may have encountered an oil spill which damaged and stained their pelts. However, pelt discolouration appears to be caused by a fungus that infects the skin and hair shafts. The fungus has not yet been identified.

Where on the seal does the hair loss occur?

Pelt discolouration can occur anywhere on the animal.

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Ringed seal with a fungal infection. (Photo credit: D. White)

H-C.5

What species are affected?

- Pelt discolouration could occur in any of the seal species.

Human health concerns

- The things that cause pelt discolouration in seals are not likely to harm humans or dogs if the meat is eaten. The pelt should be handled with care, while wearing gloves, since the fungus that is thought to sometimes cause this condition has not been identified and may have the ability to infect people or dogs. Pelt discolouration could indicate that the seal is sick for other reasons. Always check over the animal carefully to make sure that there are not other parasites or sicknesses that could affect you. It is not recommended to eat an animal that you suspect is sick.

Safety of the meat for dogs

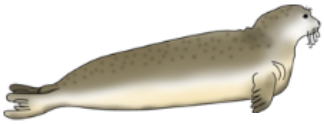
- The meat should be safe to feed to dogs, unless the animal looks sick or you see other sicknesses that may cause harm to your dogs.

Samples to collect

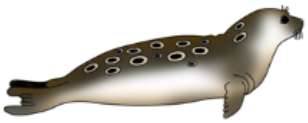
- A full thickness sample of skin from the hair to the blubber layer, including both affected and unaffected areas, is the critical sample. If the animal appears to be suffering from a more widespread sickness, a sample of the major organs (heart, lung, liver, spleen, kidney, and brain, if possible) should also be collected.

H-C.6

TAPEWORM OF THE INTESTINE



C-1.6



C-2.6

What are tapeworms?

Tapeworms (cestodes) are flat, segmented, parasitic worms. These worms do not have a mouth. They feed on the digested food within an animal's intestine by absorbing it.

Most tapeworms have complex life cycles involving hosts that harbour an immature (larval) stage of the tapeworm (intermediate host), and a host that harbours the adult worm (final host). Seals likely acquire tapeworms from eating fish (see tapeworms of fish in section H-A.5).

The worm will often attach itself by hooks or suckers to the inside surface of the intestine. Sometimes, these worms can get large or plentiful enough to rob most of the digested food away from the infected animal. In some cases, the worms may block the intestine, causing harm to the animal.

Many different genera and species of tapeworms exist.

Diplogonomporus tetrapterus and Anophryocephalus species have been found in the intestine of the ringed seal. *Diplogonomporus* species have been found in bearded seals.

Where in the body do tapeworms occur?

Adult tapeworms are generally found in the intestines of the animal.

What species are affected?

Tapeworms can affect most animals.

H-C.6

Human health concerns

- You can not get tapeworms from handling, butchering or eating a marine mammal which has adult tapeworms. The worms you see in these animals are most likely adult worms and therefore can not harm you. You would need to eat the immature stages of a tapeworm (such as those sometimes found in fish) in order to become infected (see tapeworms of fish in section H-A.5).

Safety of the meat for dogs

- Meat can be fed to dogs.

Samples to collect

- Collect a segment of intestine containing the worms or just the worms themselves.

Diphyllobothrium sp. tapeworm after removal from intestine.
(Photo credit: Dr. S. Kutz)

H-C.6

Tapeworm Life Cycle