

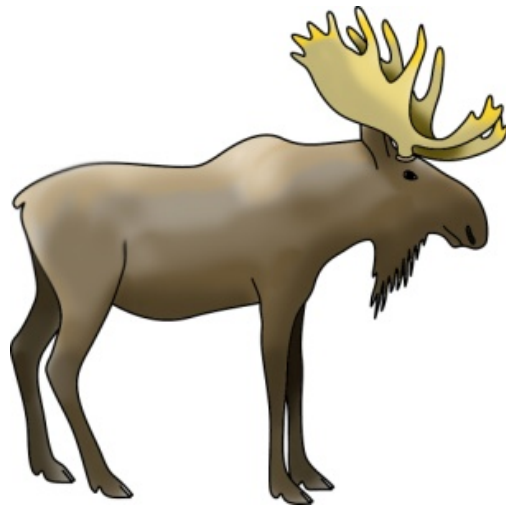
Section E



Caribou
Section E-1



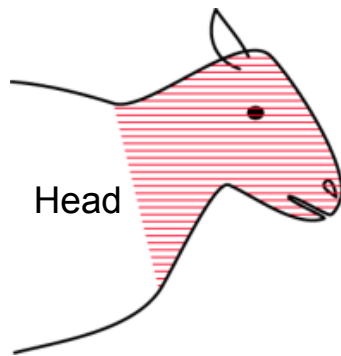
Muskox
Section E-2



Moose
Section E-3

Section E

Diseases and Parasites of Hoofed Animals



Nose and throat bots

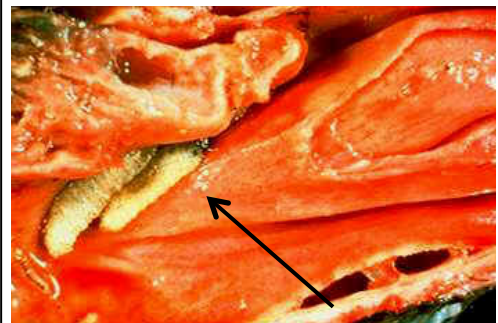


Photo Credit: NWT Wildlife Division

Caribou

Section E-1.1

Lumpy jaw



Caribou

Section E-1.2

Muskox

Section E-2.1

Contagious ecthyma



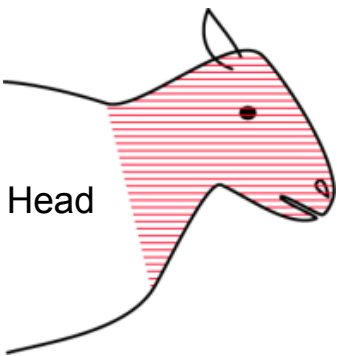
Photo Credit: GNWT

Muskox



Section E-2.2

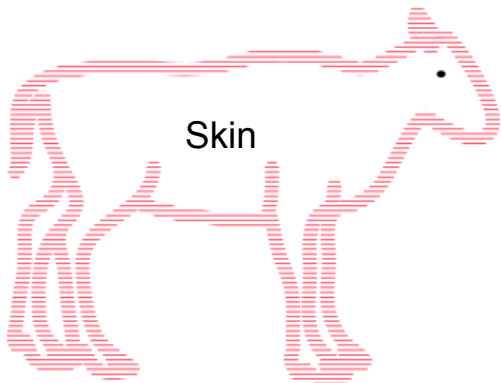
Section E

Diseases and Parasites of Hoofed Animals




Besnoitiosis

	Photo credit: NWT Wildlife Division
Photo Credit: Susan Kutz	
Caribou	Section E-1.11
Muskox	Section E-2.6

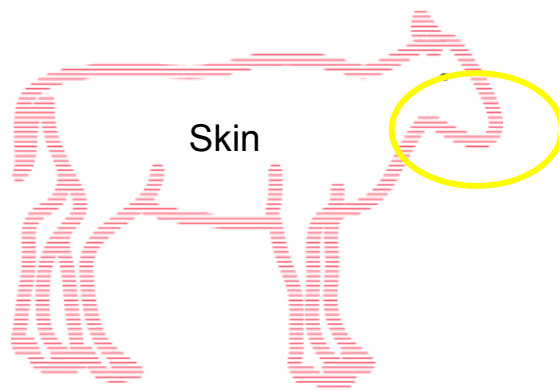


Ticks

	
Moose	Section E-3.1

Section E

Diseases and Parasites of Hoofed Animals



Warts

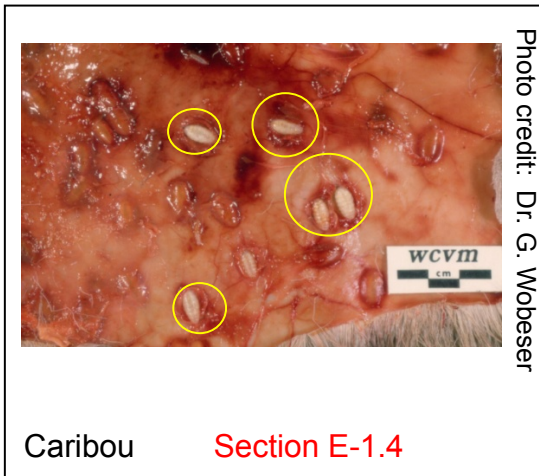


Photo Credit: D. Campbell

Caribou [Section E-1.3](#)

Moose [Section E-3.2](#)

Warbles



Caribou [Section E-1.4](#)

Contagious ecthyma

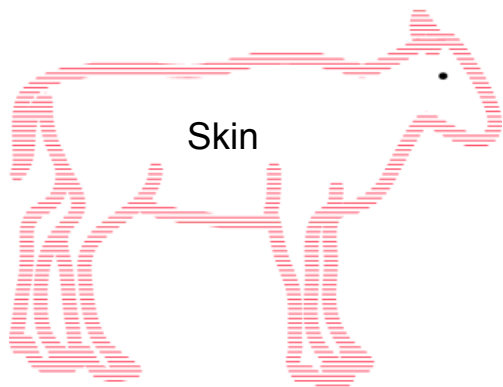


Photo Credit: GNWT


Muskox [Section E-2.2](#)

Section E


Diseases and Parasites of Hoofed Animals



Besnoitiosis

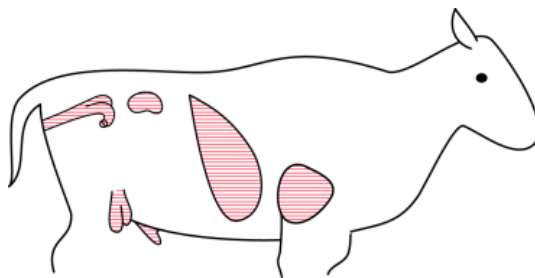
	Photo credit: NWT Wildlife Division
Photo Credit: Susan Kutz	
Caribou	Section E-1.11
Muskox	Section E-2.6

Brucellosis

	Photo credit: Dr. G. Wobeser
Caribou	Section E-1.10
Muskox	Section E-2.5
Moose	Section E-3.6

Section E

Diseases and Parasites of Hoofed Animals



Organs

Liver tapeworm cyst



Photo credit: Dr. G. Wobeser

Caribou [Section E-1.5](#)

Moose [Section E-3.3](#)

Tapeworm cysts in the Lungs (Hydatid disease)

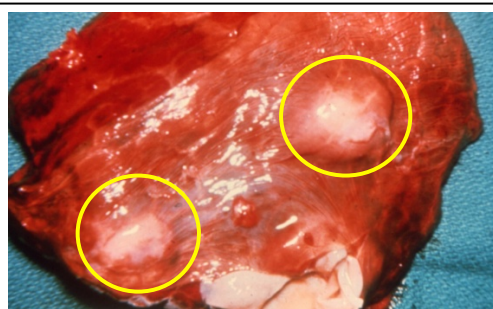


Photo credit: Dr. G. Wobeser

Caribou [Section E-1.7](#)

Moose [Section E-3.4](#)

Brucellosis



Photo credit: Dr. G. Wobeser

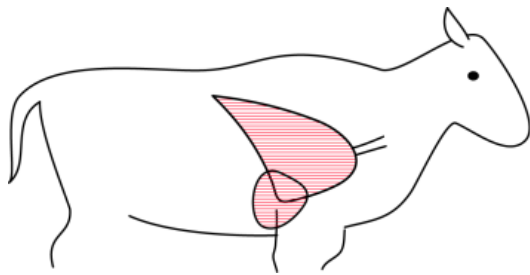
Caribou [Section E-1.10](#)

Muskox [Section E-2.5](#)

Moose [Section E-3.6](#)

Section E

Diseases and Parasites of Hoofed Animals



Lung, heart

Thread lungworm



Photo credit: Dr. G. Wobeser

Caribou

Section E-1.6

Muskox

Section E-2.3

Tapeworm cysts in the Lungs (Hydatid disease)

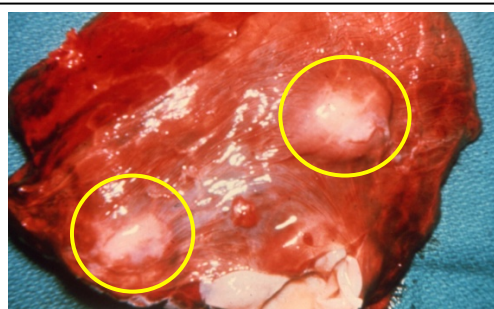


Photo credit: Dr. G. Wobeser

Caribou

Section E-1.7

Moose

Section E-3.4

Muskox lungworm



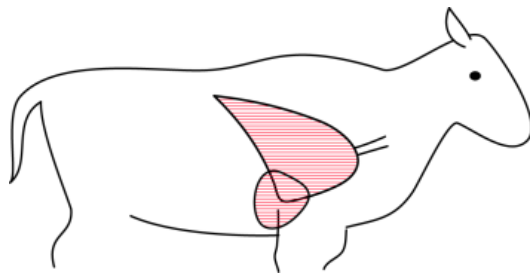
Photo credit: Dr. S. Kutz

Muskox

Section E-2.4

Section E

Diseases and Parasites of Hoofed Animals



Lung, heart

Muscle tapeworm cysts

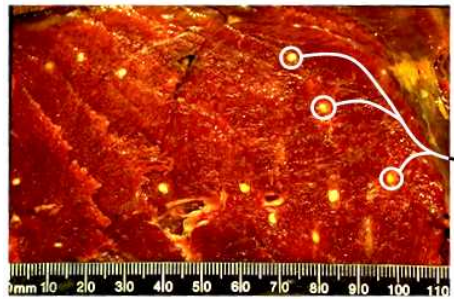


Photo Credit: NWT Wildlife Division

Caribou

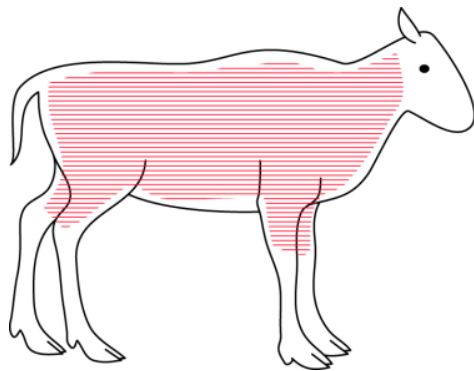
[Section E-1.9](#)

Moose

[Section E-3.5](#)

Section E

Diseases and Parasites of Hoofed Animals



Muscle

Very small muscle cysts (Sarcocystosis)

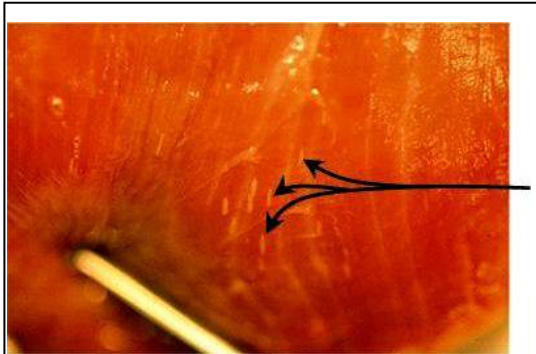


Photo Credit: NWT Wildlife Division

Caribou Section E-1.8

Muscle tapeworm cysts

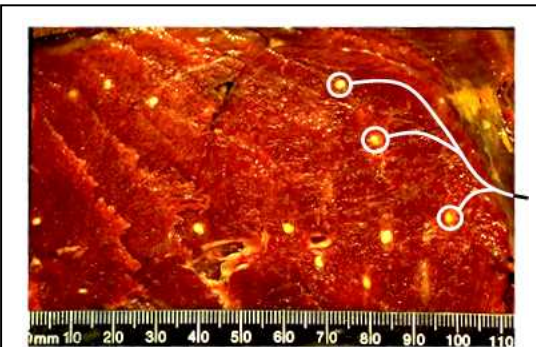


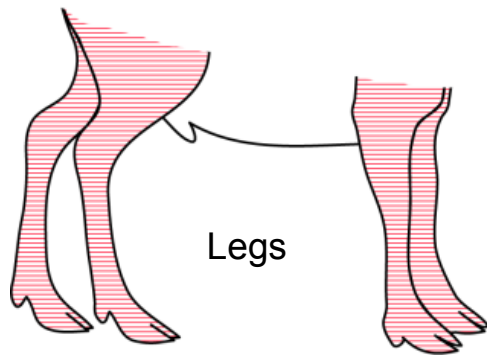
Photo Credit: NWT Wildlife Division

Caribou Section E-1.9

Moose Section E-3.5

Section E

Diseases and Parasites of Hoofed Animals



Besnoitiosis



Photo credit:
NMT
Wildlife Division

Photo Credit:
Susan Kutz



Caribou [Section E-1.11](#)

Muskox [Section E-2.6](#)

Brucellosis



Photo credit: Dr. G. Wobeser

Caribou [Section E-1.10](#)

Muskox [Section E-2.5](#)

Moose [Section E-3.6](#)

Section E

Diseases and Parasites of Hoofed Animals

Besnoitiosis

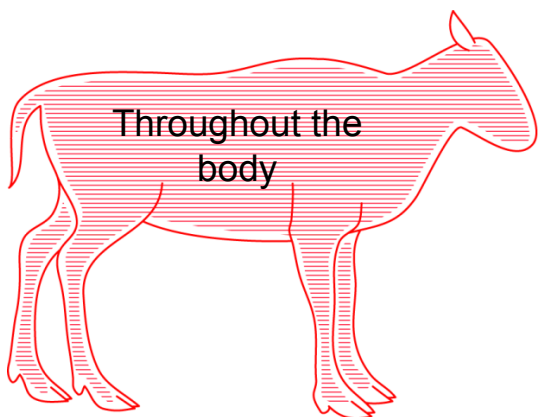


Photo Credit:
Susan Kutz



Caribou [Section E-1.11](#)

Muskox [Section E-2.6](#)



Brucellosis



Photo credit: Dr. G. Wobeser

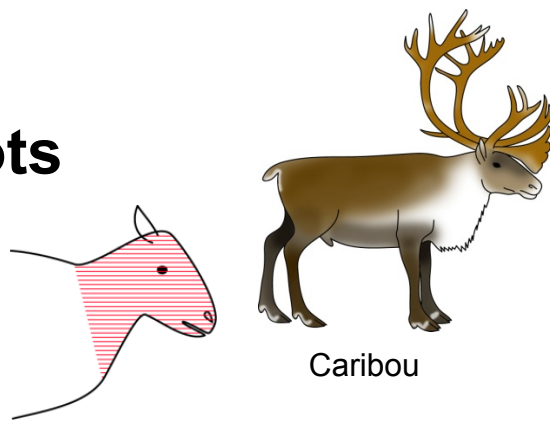
Caribou [Section E-1.10](#)

Muskox [Section E-2.5](#)

Moose [Section E-3.6](#)

E-1.1

Nose and Throat Bots



1. What are they ?

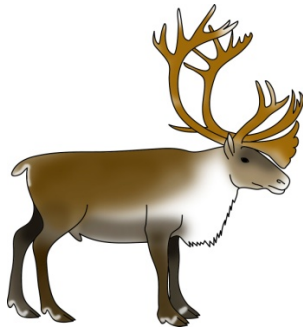
- nose & throat bots are larvae of the bot fly
- adult bot flies lay eggs in the nose of caribou
- eggs hatch into larvae and move to the back of the throat.



2. Where are they found ?

- the larvae of the bot fly grow in the soft tissues of the inner nose and back of throat
- they are sneezed or coughed out in spring.





Nose and Throat Bots

3. Is it safe to skin the caribou ?

SAFE

4. Is it safe to eat the caribou ?

SAFE

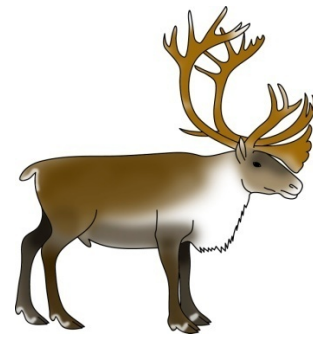
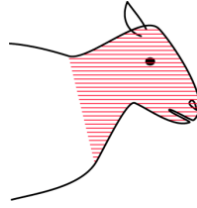
5. Is it safe to feed to dogs ?



For more information go to [H-E.1](#)

E-1.2

Lumpy Jaw



Caribou

1. What do you see ?

- The jaw may appear deformed or swollen and if the sore has not healed, it may contain thick yellow pus.

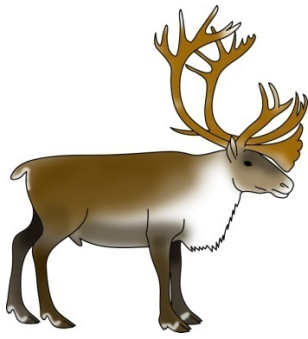
2. What is it ?

- Lumpy jaw develops from a sore in the jaw or mouth that becomes infected with bacteria.
- The sore can be caused from many different things such as rough food or a broken tooth.



The jaw bone can become permanently deformed from bacterial infection.

Photo Credit: NWT Wildlife Division



Lumpy Jaw

3. Is it safe to skin the caribou ?

SAFE

4. Is it safe to eat the caribou ?

CAUTION

The meat is safe to eat.
However, it is not recommended to eat any meat that has touched infected areas.

5. Is it safe to feed to dogs ?

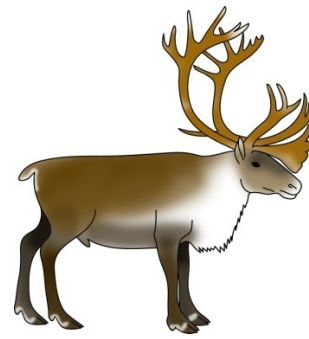
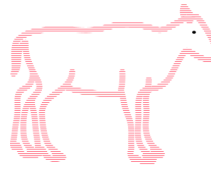
The meat is safe to eat.
However, it is not recommended to feed any meat that has touched infected areas.



For more information go to [H-E.2](#)

E-1.3

Warts



Caribou

1. Where are they found ?

- Warts are often found on the head, but can also be seen on other parts of the body.
- Warts are most common in animals younger than two years old.

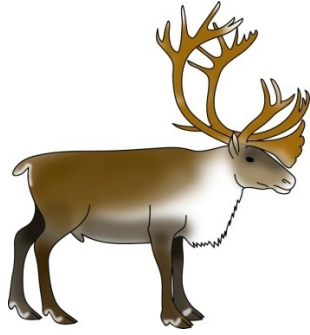
2. What are they ?

- Warts in animals are caused by a virus similar to those causing warts in people.
- They are seen as lumps of many shapes and sizes

- Photos show warts on a deer's neck (A) and leg (B).
- Similar warts can also occur on caribou.



Photo Credit: D. Campbell



Warts

3. Is it safe to skin the caribou ?

SAFE

4. Is it safe to eat the caribou ?

SAFE

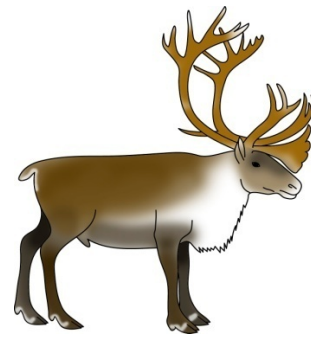
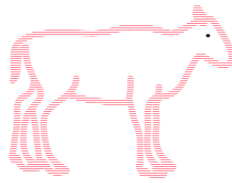
5. Is it safe to feed to dogs ?



For more information go to **H-E.5**

E-1.4

Warbles



Caribou

1. Where are they found ?

- Warbles are found just underneath the skin, usually on the caribou's back.
- They break through the skin in early summer and drop to the ground.

2. What are they ?

- Warbles are larvae of the warble fly.



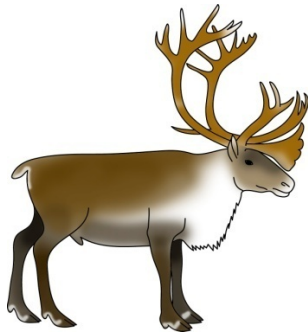
Photo Credit: WCVM



Larvae of a warble fly.



Photo Credit: Susan Kutz



Warbles

3. Is it safe to skin the caribou ?

SAFE

4. Is it safe to eat the caribou ?

SAFE

5. Is it safe to feed to dogs ?



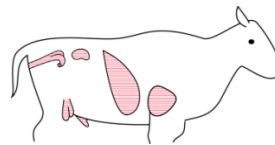
For more information go to **H-E.6**

E-1.5

Tapeworm Cysts in the Liver



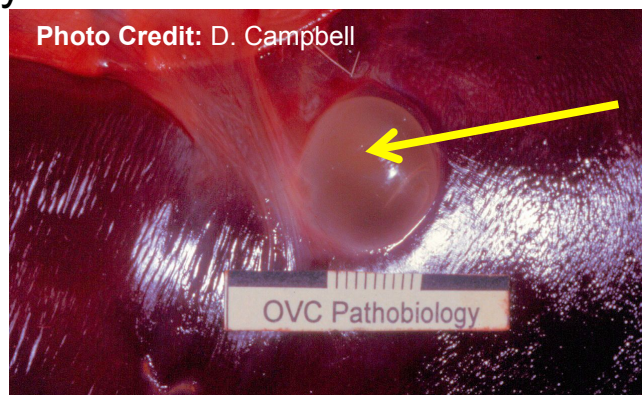
Caribou



1. Where are they found ?

- Sacs, or cysts, are filled with clear liquid and contain an immature tapeworm.
- Large cysts are usually found attached to the liver or the lining of the body cavity.

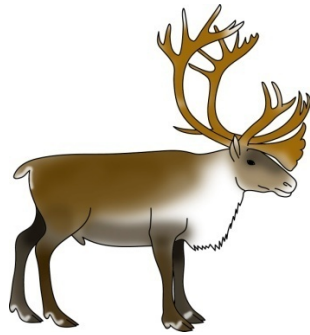
- There may also be
- white, star-like scars on the surface of the liver from past infections that have healed.



- Cysts can be easily removed during butchering.

2. What are they ?

- The disease is caused by immature tapeworms which move to the liver and become enclosed in fluid-filled sacs, or cysts.



Tapeworm Cysts in the Liver

3. Is it safe to skin the caribou ?

SAFE

4. Is it safe to eat the caribou ?

SAFE

5. Is it safe to feed to dogs ?

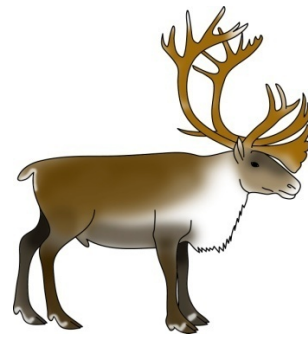
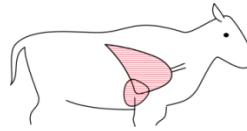


Dogs can become infected by eating infected parts.

For more information go to [H-E.7](#)

E-1.2

Thread lungworm



Caribou

1. Where is it found ?

Photo Credit: NWT Wildlife Division

- Adult lungworms are white, threadlike and may be 1 – 8 cm long.

- They may be seen when cutting into the lung.

Affected lung



- The presence of lungworms may also be seen as round, grey lumps (up to 2 cm diameter) of dead tissue.
- Very sick animals may be weak and have a dull hair coat.
- Very sick animals may also have difficulty breathing and may not be able to run well.

2. What is it ?

- The sickness is caused by thin, thread-like roundworms which move to the lungs.



Thread lungworm

3. Is it safe to skin the caribou ?

SAFE

4. Is it safe to eat the caribou ?

SAFE

5. Is it safe to feed to dogs ?



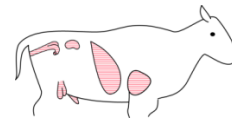
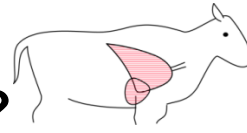
For more information go to **H-E.8**

E-1.7

Tapeworm cysts in the lungs (Hydatid Disease)



Caribou



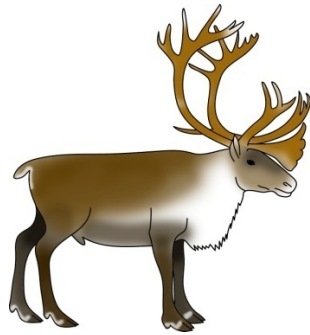
1. Where are they found ?



- Sacs, or cysts, in the lungs have thick walls and are filled with clear liquid.
- Cysts are usually found in the lungs, but can also occur in the liver and other organs.
- Fluid-filled cysts can be 2-20 cm in diameter.
- Cysts can easily be removed during butchering.

2. What are they ?

- The disease is caused by immature tapeworms which move to the lungs and become enclosed in fluid-filled sacs, or cysts.



Tapeworm cysts in the lungs (Hydatid Disease)

3. Is it safe to skin the animal ?

SAFE

4. Is it safe to eat the animal ?

SAFE

5. Is it safe to feed to dogs ?

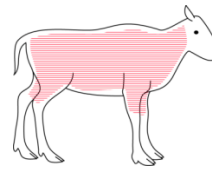
Dogs can become infected by eating parts with cysts.
Humans can be infected from tapeworm eggs in the droppings of infected dogs.



For more information go to [H-E.9](#)

E-1.8

Very small muscle cysts (Sarcocystosis)



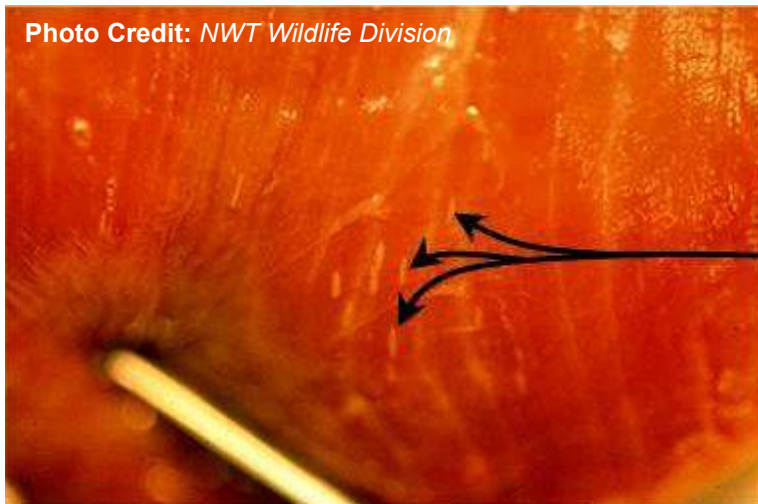
1. Where are they found ?

- These sacs, or cysts, are found in the meat (muscle) of the animal.
- Infected muscle may be swollen and sometimes show green cigar-shaped areas up to several centimeters in length caused by dead cysts.

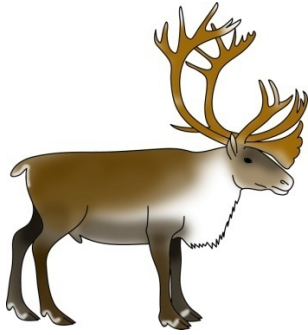
2. What are they ?

- These are sacs, or cysts, of a parasite.
- They look like small grains of rice (<5mm).
- They grow into adult parasites only in meat eaters (e.g., wolves, foxes, dogs).

Photo Credit: NWT Wildlife Division



- The rice-shaped cysts are found inside the muscle of the animal.



Very small muscle cysts (Sarcocystosis)

3. Is it safe to skin the caribou ?

SAFE

4. Is it safe to eat the caribou ?

SAFE

5. Is it safe to feed to dogs ?

Dogs can become infected by eating meat with cysts.

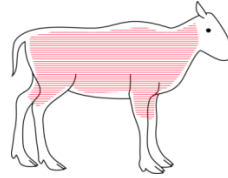
Droppings from infected dogs can infect humans.



For more information go to [H-E.11](#)

E-1.9

Muscle tapeworm cysts



1. Where are they found ?

- These cysts are found in the meat of the animal.

2. What are they ?

- These are sacs containing an immature tapeworm.
- These tapeworms mature to adults only in meat eaters like the wolf or dog.

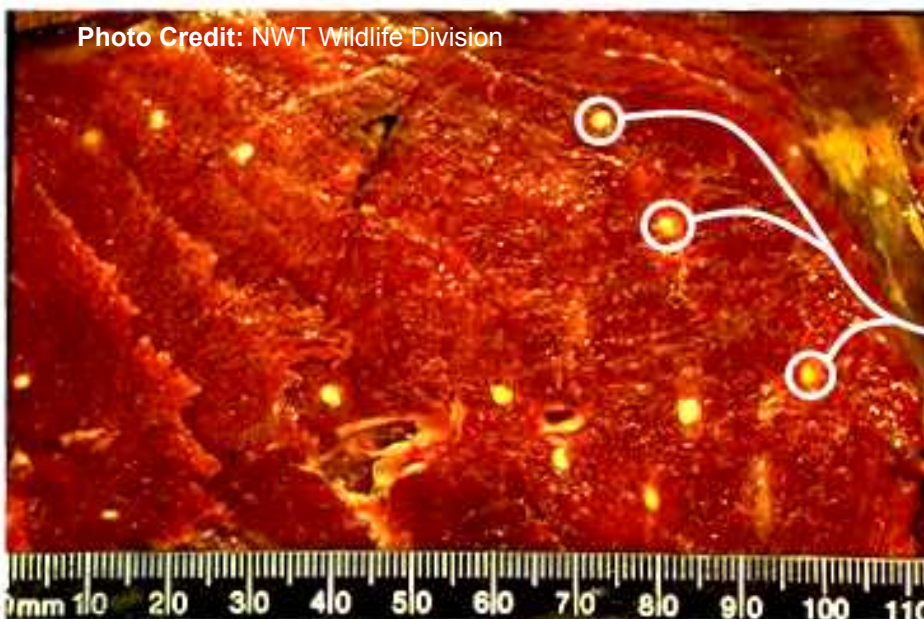
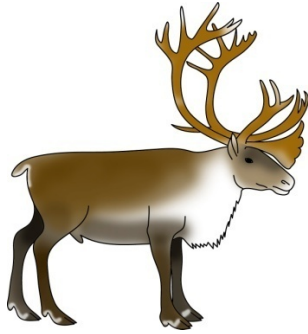


Photo Credit: NWT Wildlife Division

The round cysts are found inside the meat of the animal.



Muscle tapeworm cysts

3. Is it safe to skin the caribou ?

SAFE

4. Is it safe to eat the caribou ?

SAFE

5. Is it safe to feed to dogs ?

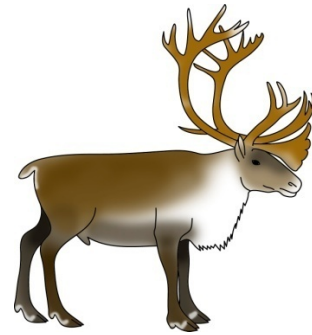
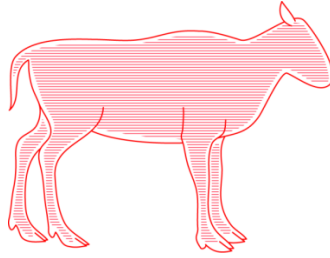
Dogs can become infected by eating parts with cysts.



For more information go to [H-E.12](#)

E-1.10

Brucellosis (lumpy knee)



Caribou

1. Where is it found ?



Swelling around knee.



Swelling around testicles.

- Swelling around leg joints (especially in front legs) often causes limping.
- Pus-filled swellings under the skin, in the meat or in the internal organs may be seen when butchering.
- The testicles or womb may be affected.

2. What is it ?

- Brucellosis is caused by bacteria.
- It is spread in the afterbirth and fluids spilled during calving.
- This fluid can contaminate plants used for food by caribou.



Brucellosis

3. Is it safe to skin the caribou ?

CAUTION

You can get brucellosis from handling contaminated parts. Avoid cutting into diseased parts. Avoid spilling fluid from the womb onto meat. Wash tools, hands and outer clothing with hot soapy water.

4. Is it safe to eat the caribou ?

The meat is safe to eat only after cooking well*.

5. Is it safe to feed to dogs ?

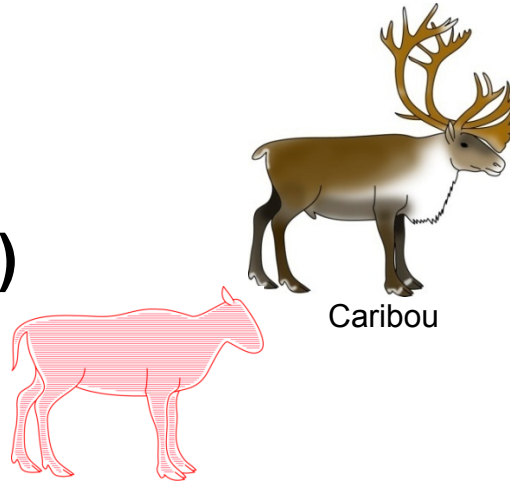
It is not recommended to feed diseased parts to dogs.

**Brucella is not killed by freezing, smoking, drying or pickling.*

For more information go to **H-E.13**

E-1.11

Besnoitiosis (bone meal disease)



1. Where is it found ?

Photo Credit: NWT Wildlife Division

- Sacs, or cysts, are found under the skin of the lower legs and face, and around the eye.



- The skin may be thick and rough.

Small cysts under the skin around the eye.



Photo Credit: Susan Kutz

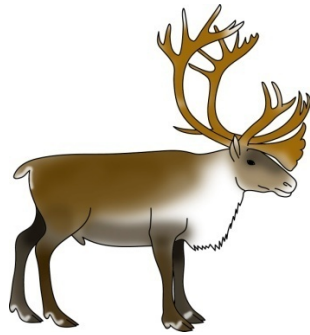
2. What is it ?

- The disease is caused by a parasite that forms small, hard cysts under the skin or around the eyes.

Photo credit: NWT Wildlife Division



Hair loss and thick skin on head of caribou



Besnoitiosis (bone meal disease)

3. Is it safe to skin the caribou ?

SAFE

4. Is it safe to eat the caribou ?

Meat is safe to eat if well
cooked.

5. Is it safe to feed to dogs ?

It is not recommended to feed
parts containing cysts to dogs.

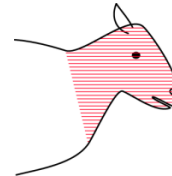
For more information go to [H-E.14](#)

E-2.1

Lumpy Jaw



Muskox



1. What do you see ?

- The jaw may appear deformed or swollen and if the sore has not healed, it may contain thick yellow pus.

2. What is it ?

- Lumpy jaw develops from a sore in the jaw or mouth that becomes infected with bacteria.
- The sore can be caused from many different things such as rough food or a broken tooth.



The jaw bone can become permanently deformed from bacterial infection.

Photo Credit: NWT Wildlife Division



Lumpy Jaw

3. Is it safe to skin the muskox ?



4. Is it safe to eat the muskox ?



The meat is safe to eat. However, it is not recommended to eat any meat that has touched infected areas.

5. Is it safe to feed to dogs ?



The meat is safe to feed to dogs. However, it is not recommended to feed any meat that has touched infected areas.

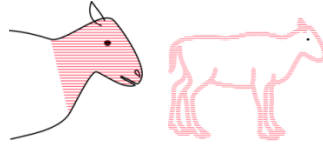
For more information go to [H-E.2](#)

E-2.2

Contagious Ecthyma



Muskox



1. Where is it found ?

- Blisters and scabs are generally found on the lips, mouth, nose, eyelids and ears.
- Scabs can also occur on the udder and the top of the foot just above the hoof.
- It is more common and severe in younger animals.

- The photo shows scabs on a mountain goat. Scabs would look similar on a muskox.



2. What is it ?

- This sickness causes pus-filled blisters which form thick scabs on the head.
- It is caused by a virus that is easily passed by touching animals infected with scabs.
- It occurs in mountain goats and muskoxen in Alaska, but is not known to occur in Nunavut.



Contagious Ecthyma

3. Is it safe to skin the muskox ?

CAUTION

You can get infected from touching scabs of an infected animal.

Wear gloves when handling animal and wash tools, hands and outer clothing in hot soapy water.

4. Is it safe to eat the muskox ?

The meat is safe to eat. However, it is advised to first trim off affected parts and cook well before eating.

5. Is it safe to feed to dogs ?

The meat is safe to feed. However, it is advised to first trim off infected parts as well as any parts that have touched infected parts.



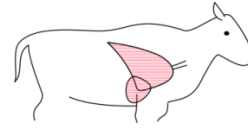
For more information go to [H-E.3](#)

E-2.3

Thread lungworm



Muskox



1. Where is it found ?

- Adult lungworms are white, threadlike and can be 1 – 8 cm long.
- They may be seen when cutting into the lung.

Photo Credit: NWT Wildlife Division

Affected lung



adult worms

- The presence of lungworms may also be seen as round, grey lumps (up to 2 cm diameter) of dead tissue.
- Very sick animals may have difficulty breathing and can not run well.
- Very sick animals may also be weak and have a dull hair coat.

2. What is it ?

- The sickness is caused by thin, thread-like roundworms which move to the lungs.



Thread lungworm

- 3. Is it safe to skin the muskox ?**
- 4. Is it safe to eat the muskox ?**
- 5. Is it safe to feed to dogs ?**



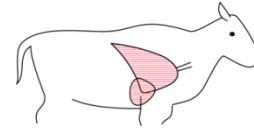
For more information go to [H-E.8](#)

E-2.4

Muskox lungworm



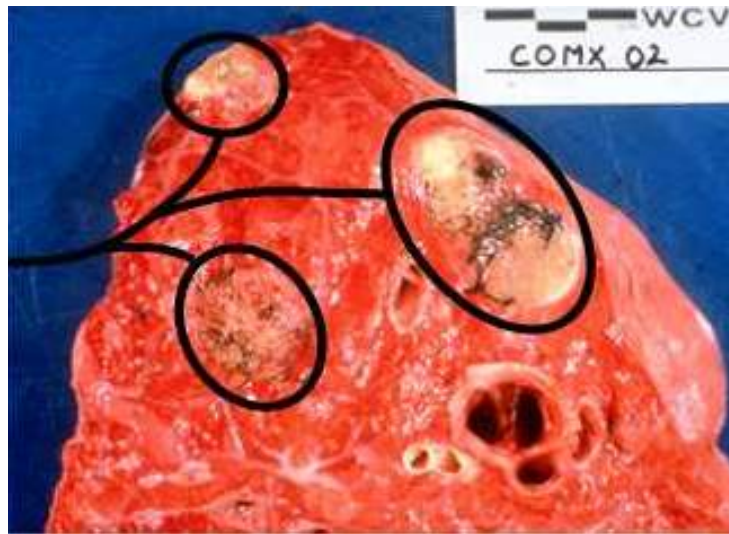
Muskox



1. Where are they found ?

- Sacs, or cysts, in the lungs have thick walls and contain adult lungworms, their eggs and larvae.

- Cysts can be 1-4 cm in diameter.



- Older animals with muskox lungworm may have difficulty breathing and can not run well.

2. What are they ?

- The sickness is caused by roundworms which move to the lungs and become enclosed in a sac, or cyst.

- Muskoxen get the disease by eating snails or slugs containing immature worms.



Muskox lungworm

3. Is it safe to skin the muskox ?

SAFE

4. Is it safe to eat the muskox ?

SAFE

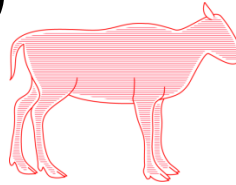
5. Is it safe to feed to dogs ?



For more information go to [H-E.10](#)

E-2.5

Brucellosis (lumpy knee)

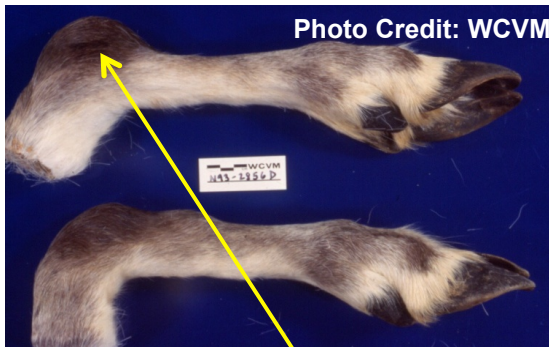


Muskox

1. Where is it found ?

- Swelling around leg joints (especially in front legs) often causes limping.
- Pus-filled swellings under the skin, in the meat or in the internal organs may be seen when butchering.
- The testicles or womb may be affected.

Swelling around knee.



Swelling around testicles.



2. What is it ?

- Brucellosis is caused by bacteria.
- It is spread in the afterbirth and fluids spilled during calving.
- This fluid can contaminate plants used for food by muskoxen.



Brucellosis

3. Is it safe to skin the muskox ?



You can get brucellosis from handling contaminated parts. Avoid cutting into diseased parts. Avoid spilling fluid from the womb onto meat. Wash tools, hands and outer clothing with hot soapy water.

4. Is it safe to eat the muskox ?



The meat is safe to eat only after cooking well*.

5. Is it safe to feed to dogs ?



Do not feed any parts to dogs.

**Brucella* is not killed by freezing, smoking, drying or pickling.

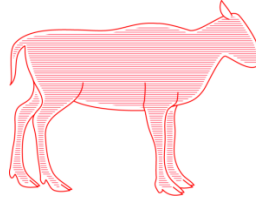
For more information go to [H-E.13](#)

E-2.6

Besnoitiosis (bone meal disease)



Muskox



1. Where is it found ?

- Sacs, or cysts, are found under the skin of the lower legs and face and around the eye.

- The skin may be thick and rough.



Photo Credit: NWT Wildlife Division

Small cysts under the skin around the eye.



Photo Credit: Susan Kutz

2. What is it ?

- The disease is caused by a parasite that forms small, hard sacs, or cysts, under the skin or around the eyes.

Photo credit: Susan Kutz



Hair loss and thick skin on head of a caribou.
Sores on a muskox would look similar



Besnoitiosis (bone meal disease)

3. Is it safe to skin the muskox ?

SAFE

4. Is it safe to eat the muskox ?

Cook the meat well before eating.

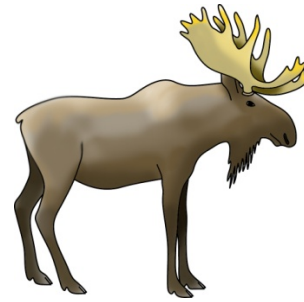
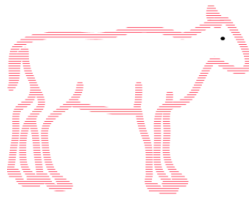
5. Is it safe to feed to dogs ?

It is not recommended to feed parts containing cysts to dogs.

For more information go to [H-E.14](#)

E-3.1

Ticks



Moose

1. Where are they found ?

- Ticks are often found on the neck, shoulders and back, but can be found anywhere on the body.

2. What are they ?

- Ticks are small parasites that live on the skin.
- They suck on blood and other body fluids.
- They are generally 4-5 mm in size but can grow 2 to 3 times larger when filled with blood.



- Ticks cause hair loss and white patches from broken hairs.



Ticks

3. Is it safe to skin the moose ?

SAFE

4. Is it safe to eat the moose ?

SAFE

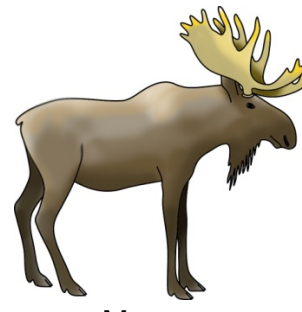
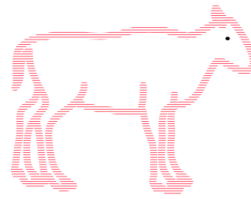
5. Is it safe to feed to dogs ?



For more information go to [H-E.4](#)

E-3.2

Warts



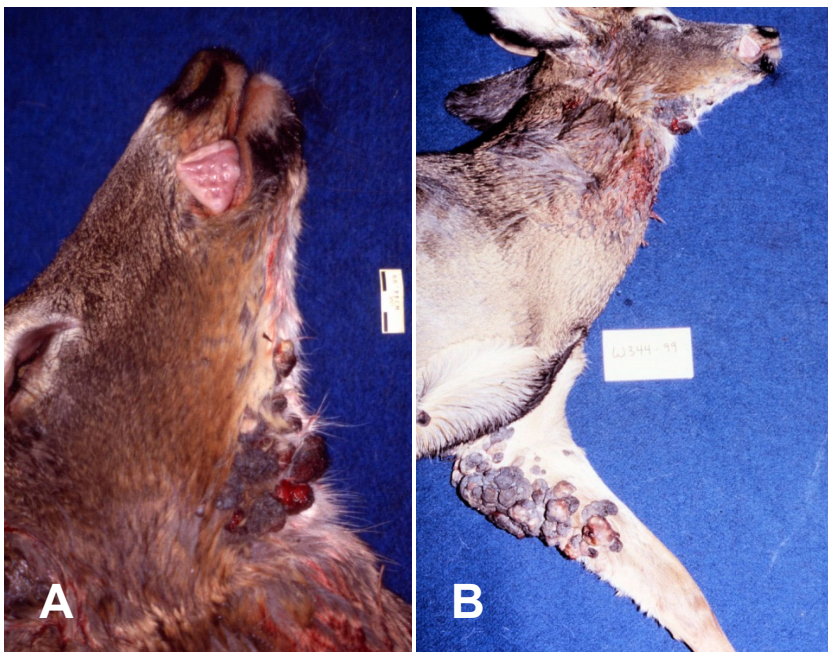
Moose

1. Where are they found ?

- Warts are often found on the head, but can also be seen on other parts of the body.
- Warts are most common in animals younger than 2 years old.

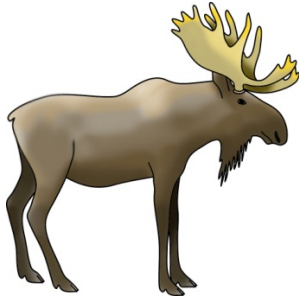
2. What are they ?

- Warts in animals are caused by a virus similar to those causing warts in people.
- They are seen as lumps of many shapes and sizes.



- Photos show warts on a deer's neck (A) and leg (B).
- Similar warts can also occur on moose.

Photo Credit: D. Campbell



Warts

3. Is it safe to skin the moose ?

SAFE

4. Is it safe to eat the moose ?

SAFE

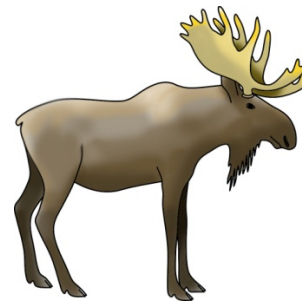
5. Is it safe to feed to dogs ?



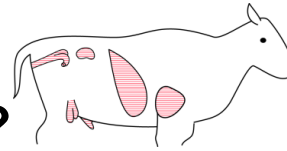
For more information go to [H-E.5](#)

E-3.3

Tapeworm Cysts in the Liver



Moose



1. Where are they found ?

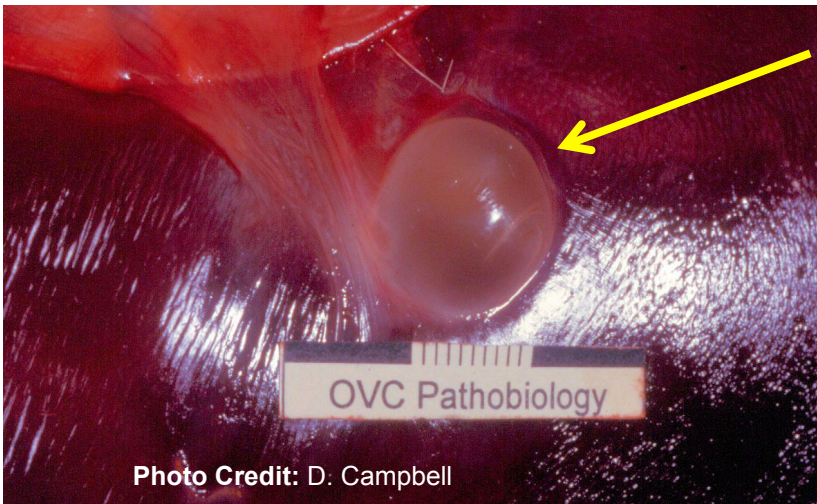


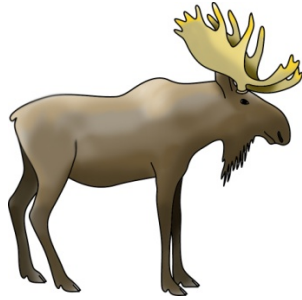
Photo Credit: D. Campbell

- Sacs, or cysts, are filled with clear liquid and contain an immature tapeworm.

- Large cysts are usually found attached to the liver or the lining of the body cavity.
- There may also be white, star-like scars on the surface of the liver from past infections that have healed.
- Cysts can be easily removed during butchering.

2. What are they ?

- The disease is caused by immature tapeworms which migrate to the liver and become enclosed in fluid-filled sacs, or cysts.



Tapeworm Cysts in the Liver

3. Is it safe to skin the moose ? 

4. Is it safe to eat the moose ? 

5. Is it safe to feed to dogs ?

Dogs can become infected with tapeworms if they eat parts with cysts.



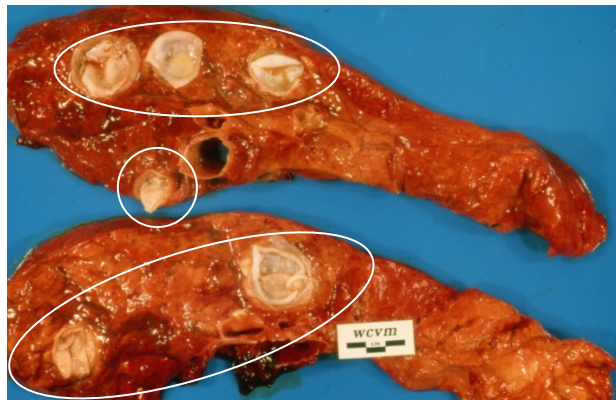
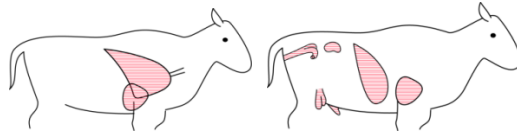
For more information go to [H-E.7](#)

E-3.4

Tapeworm cysts in lungs (Hydatid Disease)



1. Where are they found ?



- Sacs, or cysts, in the lungs have thick walls and are filled with clear liquid.
- Cysts are usually found in the lungs, but can also occur in the liver or other organs.
- Fluid-filled cysts can be 2-20 cm in diameter.

2. What are they ?

- The disease is caused by immature tapeworms which move to the lungs and become enclosed in fluid-filled sacs, or cysts.



Tapeworm cysts in lungs (Hydatid Disease)

3. Is it safe to skin the animal ?

SAFE

4. Is it safe to eat the animal ?

SAFE

5. Is it safe to feed to dogs ?

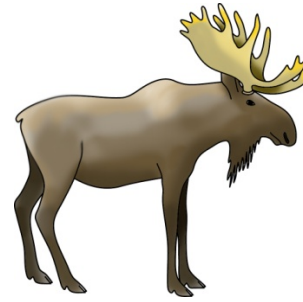


Dogs can become infected by eating parts with cysts.
Humans can be infected from tapeworm eggs in the droppings of infected dogs.

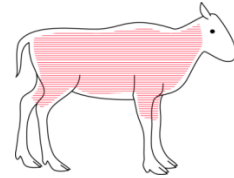
For more information go to [H-E.9](#)

E-3.3

Muscle tapeworm cysts



Moose

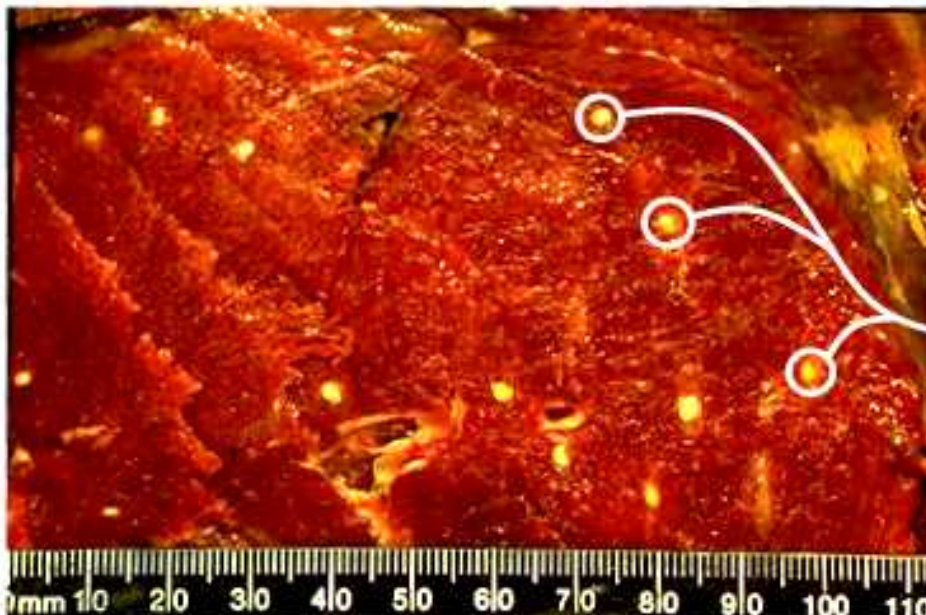


1. Where are they found ?

- These cysts are found in the meat of the animal.

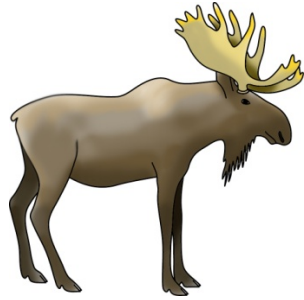
2. What are they ?

- These are sacs, or cysts, of an immature tapeworm.
- These tapeworms mature to adults only in meat-eating animals like the wolf and dog.



- The round cysts are found inside the meat of the animal.

Photo Credit: NWT Wildlife Division



Muscle tapeworm cysts

3. Is it safe to skin the moose ?

SAFE

4. Is it safe to eat the moose ?

SAFE

5. Is it safe to feed to dogs ?

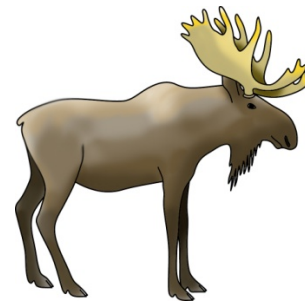
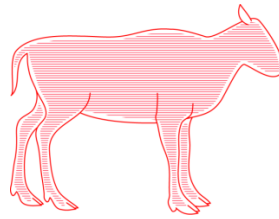
Dogs can become infected by eating parts with cysts.



For more information go to [H-E.12](#)

E-3.6

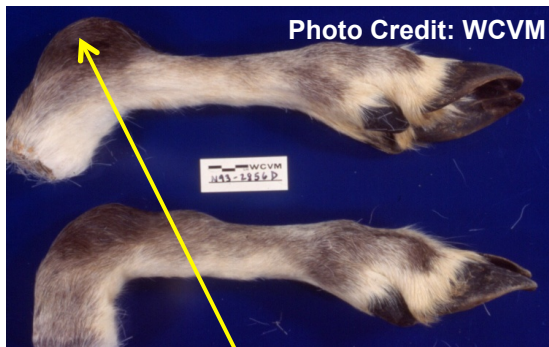
Brucellosis (lumpy knee)



Moose

1. Where is it found ?

- Swelling around leg joints (especially in front legs) often causes limping.
- Pus-filled swellings under the skin, in the meat or in the internal organs may be seen when butchering.
- The testicles or womb may be affected.



Swelling around knee.



Swelling around testicles.

2. What is it ?

- Brucellosis is caused by bacteria.
- It is spread in the afterbirth and fluids spilled during calving.
- These fluids can contaminate plants used for food by the moose.



Brucellosis

3. Is it safe to skin the moose ?

CAUTION

You can get brucellosis from handling contaminated parts. Avoid cutting into diseased parts. Avoid spill fluid from the womb onto meat. Wash tools, hands and outer clothing with hot soapy water.

4. Is it safe to eat the moose ?

The meat is safe to eat only after cooking well*.

5. Is it safe to feed to dogs ?

It is not recommended to feed any parts to dogs.



**Brucella* is not killed by freezing, smoking, drying or pickling.

For more information go to [H-E.13](#)