

# White Muscle Disease (WMD)

# Definition

- Degenerative muscle disease found in all large animals.
- Deficiency is either Selenium (Se) or Vitamin E
  - it is not normally known which one is lacking

# Sheep and Goats

- All breeds of sheep and goats are susceptible to WMD
- Most common in newborns or fast growing animals
- Kids more so than lambs → need more Se

# Deficiency

## Selenium

- Occurs when soil is lacking Se
- Grass and animal eating the grass lack in Se

## Vitamin E

- Nothing to do with soil
- Grazing animals don't have this problem
  - Silage, oil seeds, root crops, cereal grains and dry hays are poor sources of vitamin E
  - Lose about 50% a month

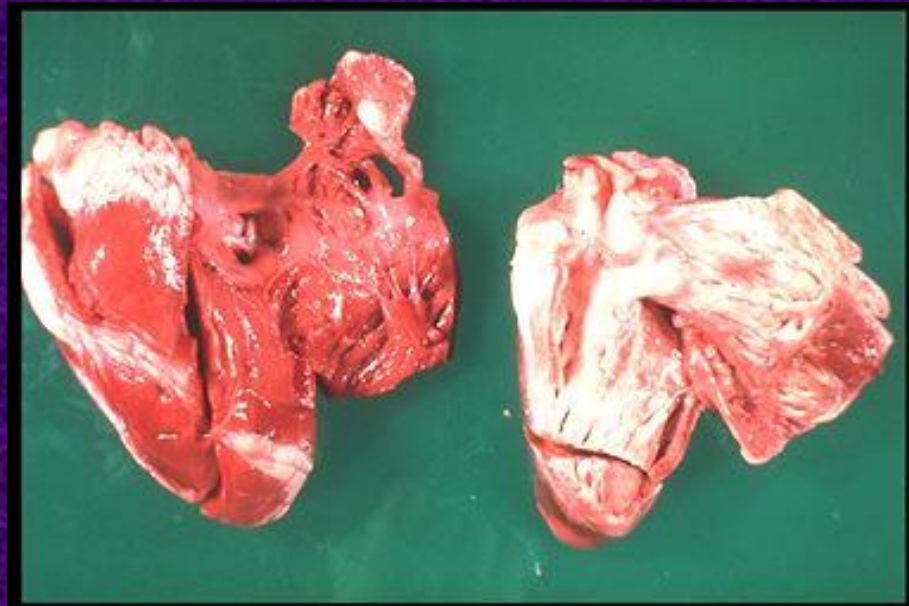
# Symptoms

## Skeletal

- Mild stiffness, obvious pain from walking, stiff gait, hunched appearance and inability to stand
- Lambs/kids tremble in pain when held in a standing position
- Normal appetites and bright personalities—until too weak to nurse
- Newborns born weak and unable to stand
- Sudden exercise may trigger WMD in older lambs or kids

## Cardiac

- Shows signs similar to pneumonia
  - Difficult breathing
  - Frothy nasal discharge (may be blood stained)
  - Fever
- Heart and respiratory rates elevated and often irregular
- Both types may occur at the same time!



# Treatment

## Cardiac

- Ineffective to treat
- Those that survive do not thrive because of residual cardiac damage

## Skeletal

- Successfully treated with supplemental Se and vitamin E
- Follow directions carefully!
- Se and vitamin E products do not contain enough vitamin E for just a vitamin E deficient animal and may need supplements through injections or orally.
- Respond within 24 hours
- Can give 2 doses if no response is seen but do not exceed 2.

# Prevention

- Deficiency occurs when animals are fed poor quality hay or straw or lack access to a pasture
  - Supplement the diet of the risk animals with Se or vitamin E
  - Especially pregnant animals since newborns are also at risk
- Sheep can get supplements either orally in their feed ration or through injections
- Goats can only get injections