## Effects of Conformation on Injury and Arthritis

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# The role of conformation in musculoskeletal problems in the racing Thoroughbred

(Reference: Anderson TM et al Equine Vet Journal. 2004;36(7):571-575)

#### The role of Conformation

- Recent study by Anderson et al (2004) has looked at the role of conformation in lameness and injury
- Looked at 115 racing thoroughbreds and 162 racing quarter horses
- Purpose: Make objective measures of conformation and correlate these with the risk of injury

#### Conformation: The knee

As carpal valgus increased the risk of carpal effusion and fracture is reduced



#### Conformation: Cannon & knee

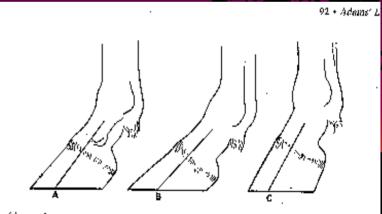
The further a knee is offset the greater the chance for fetlock problems



#### Conformation: Hoof & knee

Long toes and underslung heels, were associated with knee chip fracture





#### Conformation: Neck & fetlock

◆ Every inch increase in the length of the underside of the neck increased the risk of fetlock problems



#### Conformation: Shoulder & knee

 A longer scapula (shoulder) reduces the risk of carpal / knee chip fracture



#### Conformation: Shoulder & knee

♦ In quarter horses the shorter the distance from the shoulder to the ground the less likely they were to sustain a carpal fracture



### Conformation: Shoulder, Fetlock & Knee

◆ In quarter horses a straighter shoulder increases the risk of fetlock fracture but the decreases the risk of carpal damage



#### Conclusions

- Conformation is important
- It would appear different aspects of the conformation become more important in different equine disciplines
- Further studies are required to validate present findings

#### Conclusions

- Straight legs appear not to be ideal;
  Some carpal valgus may be desirable
- Offset knees are a feature worth noting
- Properly maintained hooves and regular shoeing is important so toes are not long

#### References:

Anderson TM, McIlwraith CW, Douay P. Equine Veterinary Journal. 2004;36(7):571-575)