Danske Hestedyrlæger 2011

Hestens Holdbarhed –
Undgå halthed

Foredrag ved Mogens T. Christophersen, Dyrlæge

Denne fil er dannet på opfordring fra deltagere ved møderne. En del sammenhænge, billeder og illustrationer er fjernet af pladshensyn samt ophavsretslige hensyn. Forståelsen kan derfor være vanskelig i det følgende – Men jeg håber det går. Venlig hilsen Mogens.

www.universitetshospitalet.life.ku.dk
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Ved vi noget?
Hvad kan/skal brugeren(træneren/berideren) gøre?
Hvad kan/skal dyrlægen gøre?
Hvad kan/skal beslagsmeden gøre?
---------- O ----------
Tell me and I'll forget
Show me and I might remember
Involve me and I'll understand!
Benjamin Franklin

2 x Indlæg á 45 min. + 30 min. diskussion

Forfædre – Fold - Foder – Fødder – Forventninger

"Hvordan sikres hestens holdbarhed?"

"Hvordan forebygges halthed hos heste?"

Ingen Hov – Ingen Hest –

Optimering – Nobody is Perfect

X-ray: Hovbenet bør have en 3-5° hældning

Den sunde hov:
Den funtionelle hov:

(1) En parallel hov-kode-akse

(2) En kraftig stækt hornvæg

(3) En passende såletykkelse

(4) Et solidt dragtparti

(5) Ensartede vækstringe under kronranden

(6) Bærring til bredeste sted på strålen

Viden:

Videnskab – Sandhed – Erfaring

Nyere forskning: Halthed & Performance

Equine back rehabilitation: Ridgway K et al....2008

The roles of shoeing, turnout, teeth, training aids and devices, compensatory lameness, working surface (footing), longeing, ponying, hot walkers, and swimming are discussed in relationship to back dysfunction and rehabilitation.

Multifaktorielt

Investigation of the incidence and type of injuries associated with high-speed treadmill exercise testing : Franklin SH et al **NOV 10 2010** Data were collated from 9 centres in the UK, France and Belgium, and the prevalence and types of injury were established.

Results:

A total of 2305 records were reviewed, with 2258 horses performing treadmill exercise. There was an overall injury rate of 5.4%. However, the majority of injuries sustained were minor in nature (4.7%). Only 13 horses (0.6%) sustained major injuries in association with treadmill exercise. These included 5 cases of severe exercise-induced myopathy, 4 fractures (of which 1 was catastrophic), 2 tendon injuries, 1 case with undiagnosed severe lameness and 1 with marked exacerbation of a previously diagnosed lameness. Two other major incidents were reported but were not directly associated with treadmill exercise (one had iliac thrombosis and one collapsed and died as a result of a pulmonary embolism).

Conclusions:

This study confirms that the majority of horses undergo treadmill exercise without incident. The majority of injuries that did occur were minor in nature and the incidence of major injuries was similar to that reported during competition elsewhere.

Løbebånd synes OK. ... Husk Variation.

Conformation and Soundness

Daniel Marks, VMD

Conformation should be judged in light of the horse's discipline. What is good for one may be bad for another. Conformation is viewed in relation to the whole horse, not only at rest, **but when moving**. Frequently there is a confusion in terminology. Author's address: 59 Winding Road, Santa Fe, NM 87505. © 2000 AAEP.

Identification of **risk factors for lameness in dressage horses** Murray RC et al. **APR 2010** The aim of this study was to describe the prevalence of illness and lameness at different anatomical sites in registered United Kingdom dressage horses and to identify risk factors for lameness. A questionnaire was sent to all 11,363 registered members of British Dressage in 2005, with one questionnaire assigned per horse. Four multivariable logistic regression models were developed for each section of the questionnaire. A final mixed effects logistic regression model was developed which combined the results from all prior models. Owners reported that 33% of horses had been lame at some time during their career, with 24% of these within the previous 2 years. A number of factors were associated with the occurrence of lameness in the last 2 years, including age, height, indoor arenas, horse-walkers, lunging (as protective), back problems, arenas that become deeper in wet conditions and sand-based arenas. These factors were included as variables in a final model to provide information for selection of horses, development of **safer arenas and more effective training regimens** to minimise the onset of lameness. (C) 2009 Elsevier Ltd. All rights reserved. Dybt og vådt – ikke godt!

Agreement between accelerometric symmetry scores and clinical lameness scores during experimentally induced transient distension of the metacarpophalangeal joint in horses: Thomsen MH et al. **NOV 10 2010**Results:

Interobserver agreements were 70%. There was a statistically significant relationship between AAEP lameness scores and both symmetry scores.

Conclusions:

Both symmetry scores showed a significant relationship with the AAEP scores and can be a valuable tool in the detection and quantification of lameness. While the S score was able to detect changes in degree of lameness, the A score was capable of detecting the lame diagonal. However, more research is needed for the development of a combined accelerometric score to take advantage of the strengths of each of the symmetry scores.

Repeatability of subjective evaluation of lameness in horses: Keegan KG et al. **MAR 2010** :131 mature horses were evaluated for lameness by 2-5 clinicians (mean 3.2) with a weighted-average of 18.7 years of experience. Clinicians graded each limb using the AAEP lameness scale by first watching the horse trot in a straight line only and then after full lameness evaluation. Agreement was estimated by calculation of Fleiss' (kappa). Evaluators agreed if they picked the same limb as lame or not lame regardless of the severity of perceived lameness.

After only evaluating the horse trot in a straight line clinicians agreed whether a limb was lame or not **76.6%** of the time (kappa = 0.44). After full lameness evaluation clinicians agreed whether a limb was lame or not 72.9% of the time (kappa = 0.45). Agreement on forelimb lameness was slightly higher than on hindlimb lameness. When the mean AAEP lameness score was > 1.5 clinicians agreed whether or not a limb was lame 93.1% of the time (kappa = 0.86), but when the mean score was < 1.5 they agreed 61.9% (kappa = 0.23) of the time. When given the task of picking whether or not the horse was lame and picking the worst limb after full lameness evaluation, clinicians agreed **51.6%** (kappa = 0.37) of the time.Conclusions:

For horses with mild lameness subjective evaluation of lameness is not very reliable. !!!

SVÆRT AT SE 3 ud af 4 gange er dyrlægerne enige – jo mindre halt jo mindre enighed

Potential relevance:A search for and the development of more objective and reliable methods of lameness evaluation is justified and should be encouraged and supported.

Motion pattern of the forelimbs in horses with irregular conformation: a computer based kinematographic analysis : Martens J et al NOV-**DEC 2008** Abstract: In this study an earlier developed tool, consisting of a high-speed video camera with appropriate analysis software, is used to analyse limb conformation and hoof landing characteristics as seen from the frontal plane in horses walking an a treadmill. Gait analysis was performed with an s-VHS camera and a high frequency videocamera (KODAK motion corder analyser SR 500, 250 fps) using an analysis software (WINanalyse (R), Cie. Mikromak, Erlangen; ProTrack (R), Cie. Prophysics, Zurich and Microsoft Excel (R)). The study is conducted in 2 study populations. Population A (n= 15) was filmed before, during and after farrier treatment in order to assess limb conformation and hoof landing in a frontal view. In study B (n=28) the same was done, but in this population swing phase characteristics were measured as well. A comparison was made between visual and computer based analysis of the videos. Results were that the computer based cinematographic method allowed for more detailed judgement than visual observation, even if slow motion is used. During the stance phase, the correlation between an uneven first ground contact of the hoof and the horizontal movement of the fetlock joint at the beginning of the stance phase was highly significant. Most horses showed a lateral landing. Trimming and shoeing was performed on the basis of the slow-motion films recorded with the s-VHS camera but improved the type of landing only insignificantly. During the swing phase, all horses had an irregular limb motion in the front view. The segment near the carpus showed predominantly a monophasic movement, arching towards the outside, away from the contralateral limb. In contrast, the hoof and the fetlock joint showed several oscillations in their motion pattern with an overall movement arching inwards, towards the contralateral limb. The conformation of the forelimbs had no influence on the way of landing but tended to influence the movement of the toe during the swing phase. In particular in horses with a base-narrow conformation the anatomic variations of the digits affected the swing phase of the hoof.

Horses with a broken limb-axis had significantly more and larger latero-medial out-of-plane movements than did other horses. The trajectory of the proximal part of the forelimb affected the way of landing significantly. In this kinematographic analysis we were able to demonstrate new and more complicated correlations between the conformation of horses, the limb motion during the swing phase and the way of landing of the hoof than we previously expected.

Fremtidens diagnostik:

Use of biomarkers for the diagnosis of joint disease in horses Chavez H et al **2010** Lameness associated to joint disease (JD) in athlete equines is an important cause of economic losses. Intensive training produces biomechanical overload of the synovial joints with a consequent activation of metalloproteinases, which have been associated to the pathogenesis of equine JD. This disease is characterized by the degradation of the extracellular matrix (ECM) of the articular cartilage causing the release of structural components of the cartilage matrix to the joint space and producing changes in the synovial fluid concentration of these ECM components, termed biomarkers. **The changes in the concentration of some of these proteins in the synovial fluid might be used to evaluate both the onset and progression of equine JD.** The measurement of the levels of aggrecan and collagen type II in the synovial fluid using specific monoclonal antibodies is an example of this approach. This review presents an update on biomarkers used for equine JD.

Behandling:

Review of Manual **Therapy Techniques in Equine** Practice Haussler KK et al **DEC 2009** The realm of manual therapy includes diverse techniques such as chiropractic, osteopathy, physical therapy, massage therapy, and touch therapies, which have been developed for use in human beings and the techniques transferred to horses. All forms of manual therapy have reported levels of effectiveness for treating musculoskeletal issues in human beings, but mostly only anecdotally evidence exists in horses. The purpose of this review is to explore the scientific literature for potential common mechanisms of action and evidence of efficacy and safety for different forms of manual therapies, with a specific focus on joint mobilization and manipulation techniques. A description of a detailed musculoskeletal and spinal examination using manual therapy techniques is also presented. In humans, there is an extensive published data base for most forms of manual therapies; however, the methodological quality of most studies is poor, which often prevents definitive conclusions and recommendations.

In horses, there are too few controlled studies to support most anecdotal claims of effectiveness. However, there is limited evidence suggesting effectiveness of spinal manipulation in reducing pain and muscle hypertonicity and increasing joint range-of-motion.

Further research is needed to assess the efficacy of specific manual therapy techniques or combined treatments for management of documented back problems and specific lameness conditions in horses. Additional studies are also needed to define specific treatment parameters required for optimal management of select disease processes, such as the amount of force applied, and the frequency and duration of treatment.

Måske virker chiropractic, osteopathy, physical therapy, massage therapy, and touch therapies – men

Mere forskning er nødvendigt!

Effectiveness of **shock wave therapy** in equine orthopaedic diseases: a review :

Siedler C et al. **2009** Abstract: There is a considerable controversy regarding the effectiveness of extracorporeal shock wave therapy (SWT) in the management of equine orthopaedic diseases. Therefore the aim of this review was a breakdown of current SWT research including technical features, effects on tissue, potential adverse effects and the current clinical evidence for its use in musculoskeletal diseases in horses. Computerised searches were performed using Pub Med, Scopus and Web Spirs databases from 1980 to 2007. The studies were subdivided in equine experimental and clinical studies and classified according to the type of shock waver generator and to the quality of the study design. The search strategy identified a total of

39 studies in horses. These studies could be differentiated into 18 experimental studies and 21 clinical studies. Regarding the experimental studies effects of SWT were described for bone, tendons and nerves with conspicuous differences between different tissues. 61.1 % of the experimental studies showed significant effects after SWT Within the clinical studies effectiveness of SWT ranged from no influence to 100 % of the horses resuming full work. The majority of the clinical studies deals with proximal suspendory disease and navicular disease.

22 studies (56.4 %) used a focused device or extracorporeal shock wave therapy (ESWT) and 13 studies (33.3 %) used a nonfocused device or radial pressure wave therapy (RPWT).

4 studies (10.2 %) compared the 2 shock wave devices: 3 of these studies showed no effects neither with ESWT nor with RPWT In the fourth study both devices caused microcracks in bone, but of different kind.

The review reveals a great inhomogeneity across studies. Experimental studies show various tissue effects. Within the clinical studies there is a moderate evidence that SWT is effective in PSD and navicular disease. **However due of the lack of high quality studies results should be seen with caution.**

Kvaliteten af studierne er ikke god

T**he effect of focused extracorporeal shock wave therapy** on collagen matrix and gene expression in normal tendons and ligaments: Roach G et al **APR 2009** Reasons for performing study: Extracorporeal shock wave therapy (ESWT) is frequently used in equine practice, but little is known about its biological action. Objectives: To study the effects of ESWT on matrix structure and gene expression levels in normal, physiologically loaded tendinous structures in ponies.

Methods: Six Shetland ponies, free of lameness and with ultrasonographically normal flexor and extensor tendons and suspensory ligaments (SL), were used. ESWT was applied at the origin of the suspensory ligament and the mid-metacarpal region of the superficial digital flexor tendon (SDFT) 6 weeks prior to sample taking, and at the mid-metacarpal region (ET) and the insertion on the extensor process of the distal phalanx (EP) of the common digital extensor tendon 3 h prior to tendon sampling. In all animals one forelimb was treated and the other limb was used as control. After euthanasia, tendon tissue was harvested for real-time PCR to determine gene expression levels and additional samples were taken for histological evaluation and biochemical analyses

Results: Histologically a disorganisation of the normal collagen structure was observed 3 lll after ESWT, remnants of which were still visible after 6 weeks. While degraded collagen levels showed an increase at 3 h post treatment (P = 0.012) they were reduced at 6 weeks post ESWT (P = 0.039). Gene expression for both COLI (P = 0.004) and MMP14 (P = 0.020) was upregulated at 6 weeks after treatment.

Conclusions: Exposure of normal tendinous tissue to ESWT is not uneventful; it leads to a disorganisation of matrix structure and changes in degraded collagen levels. The upregulation of COLI expression 6 weeks after ESWT may be indicative for repair.

Potential relevance: The observed disorganisation of the collagen network warrants caution when using ESWT. Exposing noninjured tissue to ESWT should be avoided and it may be advisable to restrict exercise in recently treated patients. However, the induced tissue disorganisation might also be a trigger for repair in chronic tendinopathies.

Kan være skadeligt - Bør ikke anvendes på ikke beskadiget væv - Giv ro til restitution efter behandling!

Effects of **radial extracorporeal shock wave therapy** on radiographic and scintigraphic outcomes in horses with palmar heel pain Byron C et al **2009** Objective: To investigate the effects of radial extracorporeal shock wave therapy (RESWT) on radiographic and scintigraphic variables in horses with clinical pain referable to the palmar heel. Methods: light client-owner horses with palmar heel pain were treated with RESWT for a total of three treatments. Nuclear scintigraphy and radiography were repeated at the beginning and completion of the study. Scintigram region of interest (ROI) density ratios were calculated and compared between treated limbs, untreated limbs, and a population of comparison limbs from eight horses free of lameness. Radiographs were scored for whole navicular bone appearance as well as distal border synovial fossae number and severity. Results: There was not any pre- versus post-treatment difference in scintigraphic navicular pool phase or delayed phase ROI density ratios in treated limbs, or between treated and untreated limbs. Delayed phase ROI density was increased in the central navicular region in treated limbs compared to comparison limbs from non-lame horses at both time points. Radiographic scores remained unchanged. **Clinical significance; RESWT as applied in the present study has no effect on acute palmar heel region scintigraphic or radiographic parameters.** Any acute clinical benefit may be due to analgesic effects rather than stimulation of local tissue metabolism.

Ingen effekt

DIATHERMIA BY CAPACITIVE AND RESISTIVE ENERGY TRANSFER IN THE TREATMENT OF TENDINOUS AND LIGAMENTOUS INJURIES OF SPORT HORSES: PERSONAL EXPERIENCES : Romano L et al **SEP 2009**

Abstract: Tendon and ligaments injuries are common causes of lameness in athletic horses. The natural scar tissue that replaces the damaged site results in reduced performances and a substantial reinjury risk. Therefore the goal of all treatments should be directed to restore normal structural architecture and biomechanical function to an injured tissue, within recovery times related to sport event schedule. Many therapeutic procedures have been described in order to obtain the highest functional recovery, nevertheless, **recovery times are still considered between 200 and 300 days for mild to moderate lesions** (Ross, 2003), forcing the clinician in an attempt to modulate the physiological tissue response. Diagnostic advances, particularly ultrasonography and MRI, have greatly improved our ability to identify and define the extent of damage in tendon and ligament injuries, getting a better prognosis, but therapeutic procedures are still considered unequal to imaging enhancements. The aim of this clinical study was to assess the application and efficacy, in Veterinary Medicine, of a recent instrumental physical treatment used in Sports Medicine: Capacitive and Resistive Energy Transfer on horses presenting traumatic tendinous and/or ligamentous injuries. This series covers 115 cases of sport horses, belonging to the routine orthopaedic clinical workout, treated between June 2005 and April 2008. The Diatermy was generated, on our equine patients, by a Hipertermia INDI-BA MD-308 machine. The protocols were based on the manufacturer recommendations and Humane Medicine literature for soft tissue damage. Diagnosis was based on clinical and ultrasonographic evaluation, allowing an anatomical and structural scoring of the lesions. In objective results analysis, **85% of the treated population improved during treatment period and 76% was lameness free at 30 days time.** Diathermia by Capacitive and Resistive Energy Transfer applied to tendinitis and desmitis in sport horses, turned up to be considered as a novel, non invasive and statistically improved method compared to other therapeutic regimens.Sene- og ligament -skader heles på 30 dage med Capacitive and Resistive Energy Transfer…Case-selection – Personlige erfarringer – Ingen kontrolgruppe – Ikke blændet

Use of **autologous platelet concentrates** obtained by the tube method as a treatment for arthropathies in horses: Carmona JU et al. **2009** Abstract: The clinical effect of the intra-articular injection of an autologous platelet concentrate (APC) in **7 horses with severe joint disease** (4 with osteoarthritis and 3 with osteochondrosis) was evaluated. The degree of lameness (DL) and joint effusion (JE) were recorded. Three injections of the APC were performed at two week intervals. Horses were evaluated before each injection and two months after the last treatment. Clinical follow-up.) levels per ml of the APC was conducted during 1 year. Count of platelets, leucocytes, and determination of transforming growth factor beta 1 (TGF-beta(1)) levels per ml of the APC were performed. A mean of 250 (range: 140-480) x 10(6) platelets, 8.68 (3.3-18) leucocytes x 10(6), and 12.5 (3-15) ng of TGF-beta(1) per ml of the APC were obtained. No adverse clinical signs resulted from this treatment. Horses treated with APCs showed a clinical improvement in both the DL and JE. The most remarkable improvement was observed 2 months after the last treatment and apparently persisted up until 8 months later. **Despite the seemingly positive effects of this substance, the clinical use of APCs cannot be recommended until further Studies with higher number of cases and longer follow tip can be undertaken.**

IRAP / PRP: En del positive erfarringer – Mere forskning nødvendig

Anvendes endnu ikke på vores Hospital og endnu ikke på SLU, Sverige…

Glukosamin + Hyaluronan:

Ledbehandling ok –

I foder (Peroralt) – Tvivlsomt **Udfør selv challenge-forsøg!**

Evaluation of **polysulfated glycosaminoglycan or sodium hyaluronan administered intra-articularly for treatment** of horses with experimentally induced osteoarthritis Frisbie DD et al. : **FEB 2009** Objective-To assess clinical, biochemical, and histologic effects of polysulfated glycosaminoglycan (PSGAG) or sodium hyaluronan administered intra-articularly in treatment of horses with experimentally induced osteoarthritis. Animals-24 horses.

Procedures-Osteoarthritis was induced arthroscopically in 1 middle carpal joint of all horses. Eight horses received hyaluronan (20 mg) and amikacin (125 mg) intra-articularly on study days 14, 21, and 28. Eight horses received PSGAG (250 mg) and amikacin (125 mg) intra-articularly on study days 14, 21, and 28. Eight control horses received 2 mL of saline (0.9% NaCl) solution and amikacin (125 mg) intra-articularly on study days 14, 21, and 28. Clinical, radiographic, synovial fluid analysis, gross, histologic, histochemical, and biochemical findings were evaluated.

Results-No adverse treatment-related events were detected. Induced osteoarthritis caused a substantial change in lameness, response to flexion, joint effusion, and radiographic findings, and of these, synovial fluid effusion was reduced with PSGAG, compared with control horses. No changes in clinical signs were seen with PSGAG or hyaluronan, compared with control horses. Histologically, the degree of synovial membrane vascularity and subintimal fibrosis was significantly reduced with PSGAG treatment, compared with controls. Histologically, significantly less fibrillation was seen with hyaluronan treatment, compared with controls.

Conclusions and Clinical Relevance-Results indicated that PSGAG and hyaluronan had beneficial disease-modifying effects and are viable therapeutic options for osteoarthritis in horses. (Am J Vet Res 2009;70:203-209)

Low quality of evidence for glucosamine-based nutraceuticals in equine joint disease: Review of in vivo studies: Pearson W et al. **SEP 2009** Abstract: Nutraceuticals are increasingly applied to the management of equine arthritis and joint disease, particularly those based upon glucosamine and chondroitin sulphate. While the first report of using glucosamine in horses appeared more than 25 years ago, it was not until 1992 that isolated studies began to be reported. Since that time, 15 in vivo papers have been published in the equine literature, usually on products already commercially available and often seeking evidence for efficacy. These studies demonstrate an encouraging trend to manufacturers of these products investing in research, but most do not meet a quality standard that provides sufficient confidence in the results reported. This review discusses the entirety of published in vivo research on glucosamine-based nutraceuticals (GBN) for horses, including that on Cosequin, Cortaflex, Synequin, Sasha's EQ, Myristol, chondroitin sulphate, glucosamine sulphate and glucosamine hydrochloride; and considers experimental limitations of this research along with their impact on interpretation of results. A quality score was calculated for each paper according to preset quality criteria. A minimum quality standard of 60% was set as the threshold for confidence in interpretation of results. Of the 15 papers reviewed, only 3 met the minimum quality standard. Experimental limitations of each research paper are discussed. **It is concluded that the quality of studies in this area is generally low, prohibiting meaningful interpretation of the reported results. New high quality research on GBN for horses is needed and recommendations for future research are discussed.**

How long will equestrian traditionalism resist science?

The biggest obstacle for such a development to come about will probably not be technical limitation, but the attitude of the average very conservative equine community that has been indoctrinated by all empirically based and never questioned do's and dont's that are so typical of the industry. Sjef Janssen, the trainer of the double Olympic and world dressage champion Anky van Grunsven has often referred to the advantage he found in entering the horse world at the relatively late age of 25, because he was not infected by the many ingrained prejudices.

P. Rene´ van Weeren
Department of Equine Sciences,
Faculty of Veterinary Medicine, Utrecht University,
2008 The Veterinary Journal, Editorial.

Halthed:
Multifaktorielt – Kan erkendes – Skal behandles -
Men helst forebygges ☺

Udbytte

Bagtilbrudt tåakse

Avl + Bevægelse + Foder

Registreret Beslagsmed hver 4-6. uge!

Syge heste skal behandles!

REAGÉR !
Undlad "hygge-avl" !
Prioritér !

Developmental orthopaedic disease in limbs of foals: between-breed variations in the prevalence, location and severity at weaning Lepeule J et al. FEB **2008**Developmental orthopaedic disease (DOD) affects all breeds and is a common cause of pain and lameness for horses in sports. A thorough knowledge of between-breed variations for the prevalence of DOD, for its distribution among the various joints and for its severity at earlier stages in the disease process is needed in order to improve the relevance and the cost-effectiveness of DOD screening protocols. However, no prevalence study for DOD simultaneously performed on several breeds with similar farming systems and based on radiographic findings (RF) on quite a large number of joints and views, has been reported earlier The objective of this study was to describe variations in the prevalence, location and severity of DOD in foals at weaning among Warmbloods (Wb), Standardbreds (St) and Thoroughbreds (Tb) with similar farming systems. DOD assessment was based on RF on the limb joints. A total of 392 foals from 21 volunteer stud farmers were included To determine the statuses of foals regarding DOD, they were X-rayed on the front- and hind-limb digit, carpus, hock and stifle joints X-ray data were analysed by three experienced equine veterinarians who gave a common assessment about the entity and the severity of RE Between-breed variations were analysed in two steps: the first implemented for each anatomical site, the second considered only foals affected by DOD to explore RF association patterns on the affected sites, at foal level. The three breeds were represented by 25.0% of Wb, 41.1% of St and 33.9% of Tb. DOD was present in 66.3% of the foals (95% confidence interval (CI). – 61.6% to 71.0%). Prevalence of foals affected by DOD and distribution of the RF severity score on the anatomical sites differed depending on the breed. **Wb foals seemed to be the most affected by DOD. Cluster analyses showed no clear association among sites. However, Wb and Tb foals were preferentially classified together because they were affected on the same sites, whereas St foals were distributed in other classes. The most severely affected sites were the proximal part of the hock and the femoro-patellar joint for Wb and St foals, and the fore fetlock and the distal part of the hock for Tb foals.** This is the first epidemiological study reporting between-breed variations in DOD distribution and severity, for the limb joints of foals. These results contribute to broaden the knowledge on DOD and are of great interest to improve detection of DOD within a particular breed.e performance horse.

Forskning og identifikation af gode gener er i gang men der er lang vej endnu –

Du som avler har et stort ansvar for at selektere de bedst egnede i samråd med avlsforbund, træner, smed og din dyrlæge.

Andre faktorer for holdbarhed og præstation:

Kolik

Undersøgelser har vist at heste på fold (kontinuerlig græsning) har mindre risiko for kolik

Variation og selvbestemmelse

- Heste foretrækker adgang til flere grovfodermidler frem for til et grovfodermiddel Goodwin et al., 2002, Equine Vet. J. 34, 7, 686-691.
- Heste med adgang til flere grovfodermidler bruger mere tid på at optage grovfoder end heste med adgang til et grovfodermiddel Thorne et al., 2005, Appl. Anim. Behav. Sci. 94, 149-164.

Heste på fold - luftveje

Hesten indånder ca. 30 mio. liter luft om året

Jo mindre støvpartikler jo dybere når de ned i luftvejene

Undersøgelser på bøjesener viser:

Senevævet styrke opbygges i 0-2 års alder.

Føl og plage på fold opnåede den bedste senestyrke.

Stor risiko for skade ved decideret træning.

Heste på fold – knogler

Undersøgelser af knogledensitet (knogletæthed/styrke).
Unge heste, der kommer på fold, får en højere knoglestyrke.
Folden skal være stor nok til at hestene kan tage nogle spurter ind imellem. (Hesteloven = 20x40m er for lille)

80-100m er minimum for en ok spurt.

Ledbrusk ernæres fra ledvæsken.

Væske 'pumpes' ud og ind af brusken, når hesten går

Hvilket "valg" får hesten ofte?

Heste kan ikke lide MUDDER!

Stalden

- Æde og drikke
- Hvile (liggende)
- Kropspleje
- Social kontakt
- Ofte tørt + fast bund

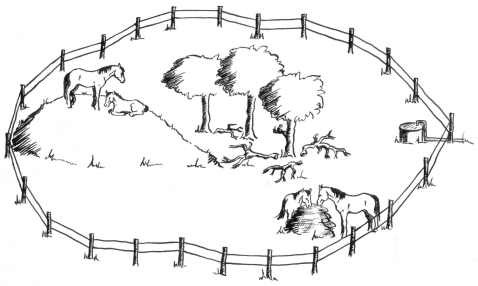
- Folden
  - (Drikke)
  - Hvile (stående)
  - Kropspleje
  - (Social kontakt)
  - Bevægelses**mulighed**
  - Ofte mudder + Blød bund

Foldens indretning - hegn

Fokus på at hjælpe de enkelte heste
Miljø (Fugt/Mudder)
Hvordan får I gjort jeres folde attraktive?
Sørg for hård bund
Oplysning, Uddannelse & Engagement

Foldens indretning – andre heste

Den ideelle fold



Udbetalinger
Liv og Uanvendelighed:

Nyt Diagnose register i Danmark

Primært: Haltheder & Bevægelsesforstyrrelser

Rideheste > Islandske & Ponyer
Flere skader jo kortere tid på fold
Boks > Løsdrift
Ældre > Unge
Meget ridning > Mindre ridning

Kilde: Pedersen & Albrechtsen 2004 (Internet Bruger-spørge-skema)
Nye projekter undervejs Norge + Foulum (DTU)
Senest: Reliability of an injury scoring system for horses.
Acta Veterinaria Scandinavica 2010, 52:68 doi:10.1186/1751-0147-52-68
Cecilie M Mejdell (cecilie.mejdell@vetinst.no), Grete HM Jørgensen, Therese Rehn, Kjersti Fremstad, Linda Keeling and Knut E Bøe.

Skader hvor dyrlæge var nødvendig:
Flest haltheder - Fold , Bid, Spark

Frequency of diseases and injuries in the Swiss horse population: Knubben JM et al **AUG 2008** Through a written questionnaire, which was sent to a representatively distributed and randomly selected sample of Swiss horse owners, data of 2912 horses and ponies were acquired to extrapolate prevalence data of health disorders. General questions about the horse and associated factors of housing and use, as well as questions about the current health status and the occurrence of diseases and injuries had been asked. 718 horses (24.7% of the sample) had been examined by a veterinarian within the 12 months prior to the survey. Orthopaedic and traumatic disorders (41.5%) had the largest proportion, followed by gastrointestinal (27.1%) and respiratory (14.0%) diseases. Half of the lameness cases occurred as a direct consequence of a injury. **The injuries were associated with pasture/pad-dock (38.1%), kicking and biting (21.6%), boxstall (7.8%), terrain and hacking (13.4%), training (3.5%), competition (3.5%), transportation (3.0%) or other circumstances (9.1%).** A change in feeding management up to 4 weeks before development of a colic episode occurred in 26.5% of all colic cases. In 13.8% of all respiratory cases the same disease was diagnosed in other horses in the same barn. 8.1% of all cases had to be treated surgically, 6.7% required hospitalization for several days. Information about diagnostic or therapeutic procedures was related to specific disease categories. In 25.6% of all cases diagnosed by a veterinarian alternative therapeutic methods were used either in addition to traditional medicine or exclusively.

I ¼ behandlinger indgik alternative terapeutiske metoder

Mest alm. årsag til aflivning/død:***Led-problemer !***
(Kilde: Egenvall et al. Vet. Rec. Mar. 2006)

Hvad kan/skal dyrlægen gøre ?

Skab et godt miljø for samarbejde mellem smed, trænere, beridere, andre dyrlæger
Brug second opinion
Vær på hestens side -
Tag kurser

Føl og Ungheste skal ses når dyrlægen er i stalden – De er fremtiden !

Kilde: Verner Kristoffersen

Adfærd og trivsel -- Kend din hest – Er den frisk?

Relationships between behaviour and health in working horses, donkeys, and mules in developing countries : Burn CC et al **SEP 2010**

Abstract: Recent studies raise serious welfare concerns regarding the estimated 93.6 million horses, donkeys and mules in developing countries. Most equids are used for work in poor communities, and are commonly afflicted with wounds, poor body condition, respiratory diseases, parasites, dental problems, and lameness Non-physical welfare problems, such as fear of humans, are also of concern Interventions to improve working equine welfare aim to prioritise the conditions that cause the most severe impositions on the animals' subjectively experienced welfare, but data identifying which conditions these may be, are lacking. Here we describe a stage in the validation of behavioural welfare indicators that form part of a working equine welfare assessment protocol. Over 4 years, behavioural and physical data were collected from 5481 donkeys, 4504 horses, and 858 mules across nine developing countries Behaviours included the animals' general alertness, and their responses to four human-interaction tests, using the unfamiliar observer as the human stimulus. Avoidance behaviours con elated significantly with each other across the human-interaction tests, with 21% of animals avoiding the observer, but they showed no associations with likely anthropogenic injuries Over 13% of equids appeared 'apathetic': lethargic rather than alert Measures of unresponsiveness correlated with each other across the five tests, and were associated with poor body condition, abnormal mucous membrane colour. faecal soiling, eye abnormalities, more severe wounds, and older age, depending on the equine species **This suggests that working equids in poor physical health show an unresponsive behavioural profile, consistent with sickness behaviour, exhaustion, chronic pain, or depression-like states**

Diseases Prevalent in Equids in India: A Survey of Veterinary Practitioners: Singh BR et al. **MAR 2010** There are about **20 million equids in India** and might be harbouring numerous diseases at any time, however there is little information on prevalence of most of the diseases. A survey of equine practitioners was undertaken to understand the diseases scenario in equids in India. A total of 2000 survey questionnaires were sent to equine practitioners of 64 districts in 14 states, plus 30 private equine farms and four government farms. A total of 532 (26.6%) equine practitioners responded to the questionnaire. On an average each yet treated >1000 animals and >50 equids per year. Out of the 72 health problems of equids identified by the equine practitioners, colic was the commenest followed by trypanosomiasis (surra), lameness (3.hyppigst), respiratory tract infections including pneumonia and bronchitis and abscess/wounds/injuries group. The information may help in prioritizing future and research resources to improve equine health and welfare.

Fælles ansvar for uddannelse og oplysning

Hvad skal/kan dyrlægen gøre?

Rådgive og uddanne !!!

Undgå at godkende for dårlige heste til avl og brug

Uens hove

Bagtil brudt tåakse

Præcise diagnoser:
Sygeforsikringer og Attester
NB: Kronisk = For stedse
Definition: Ridebrug ? Tiltænkte brug ? + Dyreværn ?

Dyrlægers pligter: Lov om dyrlæger –
Svar på spørgsmål stillet ved foredraget i Viborg:
Skal dyrlægen ikke sige fra, og i visse tilfælde søge second opinion?

Svar: Jo

Kapitel 3

§ 8. En dyrlæge er under udøvelsen af sin gerning forpligtet til at vise omhu og samvittighedsfuldhed.

Stk. 2. Får en dyrlæge under udøvelsen af sin gerning kendskab til, at dyrenes sundhed ikke tilgodeses, eller til, at der på bedrifter med dyr til fødevareproduktion ikke tages de fornødne hensyn vedrørende hygiejne, medicinanvendelse og andre forhold af betydning for fødevaresikkerheden, skal dyrlægen gøre dyreejeren eller den besætningsansvarlige opmærksom herpå med henblik på at få forholdene ændret eller om nødvendigt rette henvendelse til rette myndighed. Ministeren for fødevarer, landbrug og fiskeri kan fastsætte regler herom.

§ 9. En praktiserende dyrlæge er forpligtet til på anmodning at yde den første fornødne hjælp til alvorligt tilskadekomne dyr eller dyr med smertevoldende sygdomme eller fødselshindringer, når hurtig hjælp efter de foreliggende oplysninger må anses for nødvendig. Dyrlægen er dog fritaget for denne forpligtelse, hvis den pågældende har gyldigt forfald eller rettidig hjælp kan ydes af en anden, som efter forholdene er nærmere dertil.

Hvad skal dyrlægen gøre?
Dyreværnsloven: Omtalt i diskussioner ved foredragene:

Kapitel 4

Tilsyn

§ 20. En dyrlæge, der bliver bekendt med, at et dyr behandles uforsvarligt, skal anmelde forholdet til politiet. Dette gælder dog ikke, hvis forholdet ikke er groft og i øvrigt straks rettes.

Stk. 2. En dyrlæge, der tilser et tilskadekommet eller sygt dyr, skal opfordre den ansvarlige til at lade dyret aflive, hvis det ikke kan helbredes, og det vil medføre unødig lidelse at lade det leve. Aflives dyret ikke, skal dyrlægen indberette forholdet til politiet.

Stk. 3. Dyrlægen kan aflive dyret straks, hvis den ansvarlige nægter at efterkomme en opfordring efter stk. 2, og hvis det vil medføre unødige alvorlige lidelser for dyret at følge fremgangsmåden i § 21, jf. § 20, stk. 2, 2. pkt.

§ 21. Behandles dyr uforsvarligt, kan politidirektøren give den ansvarlige pålæg om dyrets behandling. Er dyret sygt eller kommet uhelbredeligt til skade, kan politidirektøren meddele pålæg om aflivning af dyret, hvis det vil medføre unødig lidelse at lade det leve.

Stk. 2. Pålæg skal meddeles skriftligt. Inden der meddeles pålæg, skal politidirektøren indhente en erklæring fra en dyrlæge og om fornødent fra kredsdyrlægen. 2Endvidere skal den, der har ansvaret for dyret, have lejlighed til at udtale sig.

Stk. 3. Stk. 2 kan fraviges i det omfang, det er nødvendigt for at afværge en væsentlig lidelse for dyret.

Stk. 4. **Politidirektøren afholder omkostningerne ved sagens behandling**, men kan kræve beløbet refunderet af den, der har fået pålæg. Refusionskravet tillægges udpantningsret.

§ 22. Efterkommes pålægget efter § 21, stk. 1, 1. pkt., ikke, skal politidirektøren sørge for dyrenes pasning og kan herunder anbringe dyrene et andet sted. Efterkommes pålæg efter § 21, stk. 1, 2. pkt., ikke, skal politidirektøren sørge for, at dyret aflives.

Stk. 2. Politidirektøren kan straks eller senere bestemme, at dyrene skal sælges eller aflives, hvis forholdene taler derfor, herunder dyrenes tilstand, udsigten til, at ejeren kan passe dyrene igen, og udgifterne ved dyrenes placering andetsteds.

Stk. 3. § 21, stk. 4, finder tilsvarende anvendelse på udgifterne efter denne bestemmelse.

Hvad kan/skal smeden gøre?

Se den gå – Se den i brug !

Forståelse +
(efter) Uddannelse

- 5-6 uger interval
- Selekter i kunderne – Opdrag dem - Bestem over arbejdet, men vær fair –
- Prioriter føl og ungheste.
- Hjælp kunderne - kun så få heste, som de har råd til at passe!!!
- **Ingen hov –**
- **Ingen hest**

Kilde: Simon Curtis

Lov om Hold af Heste:
Ikraft 01. januar 2008…2011…2016…2020

- Spiltovsopstaldning forbudt
- Mindst to timers bevægelse (ude af boks) dagligt
- Føl + Plage <2 år **SKAL** på fold med artsfæller
- Tilstrækkeligt strukturfoder
- Fri adgang til frisk drikkevand (4 timer)
- Dagligt tilsyn (både stald og fold/græs)
- Tidlig oplæring til håndtering
- Individuel tilpasset træning, brug og udstyr
- Doping forbydes (Nervesnit, Medicinsk doping)
- **Krav om beskæring og beslag af uddannede personer, kan stilles…på vej nu…**
- **Beskæring + Beslag efter behov…**

Spørgsmål fra Aalborg:
Det er dyrt og besværligt at få slagtet vores hest.
Kan vi få frit lejde i en periode?

Hestens Værn har netop talt med Louise Fisker som er dyrlæge i Fødevarestyrelsen og har med identifikation af heste at gøre.
Ideen om frit lejde, med hende. Desværre er dette EU-regler og der er **ingen** mulighed for frit lejde eller anden midlertidig lettelse af reglerne. Desværre!
De er godt klar over problematikkerne, men det er hesteejernes ansvar at sørge for at følge reglerne og der har været/er overgangsordninger som udløber i 2012.

Sørg for sikker ID og dokumentation af produktet, kvaliteten af din hest.

VIGTIGT!!!

Den gode bruger/træner ved hvilken type hest, han/hun har med at gøre, og er villig til at tilpasse træningsmetoden efter hestens reaktioner!!!

Atleter er ikke fede!

VARIATION I TRÆNINGEN OG UNDERLAG

Med ønske om en konstruktiv dialog

Der er store muligheder for forbedringer derude…!
For relativt få midler

1) Forskellige lidelser og terapi
2) Beskærings- og Beslag-intervaller
3) Mere viden – Bedre dyrevelfærd
4) Hvem skal udføre arbejdet?

Hesten har 5 hjerter –
Pas godt på dem!

- Tåakser
- Benstilling
- Vækst og Vækstlinjer:
- Overarm/Skinneben: 12-24 mdr.
- Pibe: 1-9 mdr.
- Tå: 8-12 mdr.
- NB:Længdevækst
- Racer
- Sport / Brug
- Alder
- Fold
- Foder

Mere forskning:
Beskæring, Beslag og effekt.
Jo bedre vi forstår jo bedre kan vi forebygge.

Quantitative morphology of the **equine laminar junction in relation to capsule shape in the forehoof** of Standardbreds and Thoroughbreds : Thomason JJ et al. **JUL 2008** - Differences in hoof morphology have largely been underappreciated in the literature until recently, and it is these that hold the key to interpreting functional adaptation in the hoof. …

Understanding the biological responses of hoof tissues to stress should add to the ability to prevent lameness involving the hoof and maintain its health.

Current concepts of **navicular disease** : Dyson S et al **JAN 2011** While there is strong evidence that biomechanical forces may result in **failure of functional adaptation** and excessive modelling, **it is likely that each disease or injury type has a multifactorial cause.**

Sygdomme i hoven

Eksternt synlige **fysisk undersøgelse**:

Tilskadekomst kronrand, sålen, hovvæg. Spalter (Okse-Kløft); Sure stråler; Canker; Hovbyld +/- opbrud i kronranden; White line disease; Seedy toe/wall (bred hvid linje); Knusninger (sål, væg, hjørnestøtte); Keratom; Melanom, Pladecelle carcinom; Laminitis = Forfangenhed; Rumperet dyb bøjesene(DDFT);

Lang tå/lav dragt ubalance;

Lateromedial ubalance (lander ud- eller ind-vendigt);

Balleforskydning;

Anatomy

- **Røntgen**:

Brud (fraktur): Hovben, Hovseneben; Forbenede dragtbruske og brud på disse;
Laminitis = Forfangenhed (Akut og kronisk)
White line disease; Keratoma;
Infektioner i knoglerne. Pedal osteitis;
Cyster i knoglerne; Ekstensor process fragmenter;
Slidgigt i hovled og kronled; Hovsenebenssyndrom / Betændelse; Forklakning i den dybe bøjesene.

- **MRI => DIAGNOSE**:

Synovitis/Capsulitis DIP joint; Articular cartilage degeneration DIP joint; Collateral desmitis DIP joint; Occult subchondral bone disease; Navicular bone edema; Navicular fibrocartilage degeneration; Navicular distal border fragments; Navicular bursitis; Collateral sesamoidean desmitis/enthesitis; Collateral impar desmitis/enthesitis; Distal annular desmitis; Oblique distal sesamoidean desmitis/enthesitis; Straight distal sesamoidean desmitis/enthesitis; Laminar enthesitis; Bone bruise middle phalanx; Bone bruise distal phalanx; Occult fracture distal phalanx; Digital DDFT tendonitis/enthesitis

Scintigrafi + CT-scan

Generelt:

- Klip alt hår ved skader - +/- (våde) forbindinger

- Plan!
- "***Ignorantia juris non excusat***"
- Antibiotika +/-
- Stivkrampe - Tetanus prophylaxis.
- Smertebehandling
- Røntgen
- Led- Seneskeder- Slimsæk- punktat

- **Hovbyld: Lokal infektion mellem sålehorn og læderhuden:**

Ofte simpel diagnose og behandling –

MEN…

Kan være
Svært
Langvarigt
Dyrt

☺ God prognose

Overfladisk versus dyb

- **Kompliseret hovbyld med knogleinvolvering:**

Røntgen og evt. en el. flere operationer er nødvendige -

Ofte efter indtrådt "søm"

Hvis led, slimsæk, seneskede da dårligere prognose.
evt. Artroscopi / Ledskylning
Prognose: God - Tid: 3-6 måneder.

- **Keratom:**

- Prognose: God (Kirurgi 83%) – Tid: Måneder – Tilbagefald ses.

- **Canker:**
  Alvorlig kronisk sur stråle
  Kirurgi er nødvendigt

  Sko (Hospital-plate) / Boots –
  TØRT !
  Prognose: God - Tid: Måneder

- **White line disease: (Degeneration + Separation af hov væg):**
  Keratinopathogene svampe
  (Scopularopsis) + Bact. + Factor X

Skær rent – tør ud
Miljø-skift!!!
Prognose: God – Tid: Måneder - År –
Tilbagefald ses ofte ☹

- **Hov spalter:**

Stress i hornvæggen
ofte gennem lang tid.
Brug penge på ordentlig beskæring og beslag.
Rettidigt + Omhyggeligt

- **Forfangenhed / Laminitis:**
  Akut: **NSAID + Køle 48h**

  Trimning (for at "derotere") klinik og x- ray:
  Rotation & Sinker

  Altid: Skade på basal membranen
  Altid: X-rays

Cost – benefit ???

Sand / Styroform / Pads / Boot
Hornvægs-resektion
Kronrands "grooving"
(Tenotomi DDF)

Prognose: Reserveret –
Tid: Måneder -> År…
- en lidelse for livet

Forfangenhed

Severity and outcome of equine pasture-associated laminitis managed in first opinion practice in the UK Menzies-Gow NJ et al. **SEP 2010** Abstract: Data from 107 cases of pasture-associated laminitis were obtained from first opinion practices to study factors associated with severity, survival and return to ridden exercise. There were 43 mares and 64 geldings, with a median age of 11 years. Of the 107 animals, 33 were small ponies, 45 were large ponies/cobs, 17 were small horses and 12 were large horses. Ninety-seven animals were categorised as having laminitis as defined by Cripps and Eustace (1999): 76 had mild (Obel grade 1 or 2) laminitis and 31 had severe (Obel grade 3 or 4) laminitis. Forty-three animals had previously had laminitis, and were significantly less likely (P=0.02) to have severe laminitis than those that had not. Eighty-nine animals were overweight, and there was a trend (P=0.09) towards severe laminitis cases having a higher body mass index. Eight weeks after disease onset, 102 animals were alive. Lower bodyweight, optimal body condition, mild laminitis and category of acute/chronic founder as defined by Cripps and Eustace (1999) were significantly associated with survival. There was a trend (P=0.06) towards treatment with acepromazine being associated with survival. Of the 81 animals that were used for riding, 48 were being ridden again; this was 2.6 times more likely in animals without previous laminitis. The clinical outcome was judged by a panel of three veterinarians as 'good' in 77 of 107 of cases. Clinical outcome was significantly associated (P=0.03) with horse type: the outcome was 'bad' in none of the small horses, compared with 15 of 45 large ponies/cobs, 11 of 33 small ponies and three of 12 large horses.

Over halvdelen kunne rides igen!

Især ved første gangstilfælde.

Skal jeg til at revidere min opfattelse?

Viden:

Videnskab – Sandhed – Erfarring

Influence of different exercise regimes on the proximal hoof circumference in young Thoroughbred horses
Decumpex V et al **MAR 2009** Reasons for performing study: Most lameness in horses relates to foot problems and may be associated with changes in hoof shape, but there is a lack of information on the influence of normal exercise on hoof shape. Objectives: To investigate the effect of training on proximal hoof circumference in young Thoroughbred racehorses being prepared for racing.
Methods: Thirty-seven young Thoroughbred racehorses were included in this study. Front hoof circumference immediately below the coronary band was measured weekly with a measuring tape in all horses present at the stable. Most horses accomplished a minimum of 2 training periods at the stable separated by periods of rest on a paddock. One sample t tests were used to evaluate if the mean change per week differed from zero. To estimate the repeatability coefficient, the left proximal hoof circumference of 25 horses was measured 3 times in a random order on one day.
Results: Most horses showed a similar pattern of change. **The proximal hoof circumference decreased during the training periods (P<0.0001) and increased when the horse was rested** (P<0.0001). The decrease of the circumference during the first training period was -0.66 mm/week on the left and -0.64 mm/week on the right. During the second training period, this was -0.58 mm/week on the left and -0.57 mm/week on the right. During the rest period, the circumference increased by 1.03 mm/week on the left and 1.12 mm/week on the right. The repeatability coefficient for the left circumference was 1.8 mm.
Conclusions: Horses showed a decrease in circumference during race training that reversed when they were rested.
Potential relevance: Measurement of front hoof circumference is a simple method to assess change in hoof shape. It provides an opportunity to investigate the **relationships between specific training, hoof shape and soundness.**

Træningens konsekvenser

Forskning pågår, men vi er på begynderstadiet.

Quantitative morphology of the equine laminar junction in relation to capsule shape in the forehoof of Standardbreds and Thoroughbreds Thomason JJ et al. **JUL 2008** Reasons for performing study: Differences in hoof morphology have largely been underappreciated in the literature until recently, and it is these that hold the key to interpreting functional adaptation in the hoof. Hypotheses: Primary laminar morphology correlates with hoof capsule shape; and breeds with different hoof shapes and loadings show different patterns of correlation.
Methods: Seventeen measurements of capsule shape and 3 of primary epidermal laminae (PEL) morphology (spacing, orientation and curvature) were made on right and left front hooves from 27 Standardbred and 25 Thoroughbred horses, and tested for breed differences. Three laminar variables (spacing, orientation and curvature) were measured on each hoof for samples of 25 PEL in 5 circumferential and 4 proximodistal locations. Pairwise correlations of capsular and laminar measurements were compared within breeds. Significant correlations were mapped onto the 20 sampling sites.
Results: Capsule shape differed significantly between breeds in 7 measurements and in a multivariate test. Between breeds, PEL differed in orientation and spacing primarily at the medial quarters and heels, and in curvature at both quarters (P<0.05). Significant correlations between several pairs of capsule and laminar variables were found at sample locations that differed markedly between breeds.
Conclusions: Laminar morphology, hoof capsule shape and correlations between them differ between Standardbreds and Thoroughbreds. These results support the concept that remodelling of PEL is, at least in part, stimulated and directed by varying stress or strain levels in the laminar junction.
Potential relevance: **Understanding the biological responses of hoof tissues to stress should add to the ability to prevent lameness involving the hoof and maintain its health.**

Der er forskel på de forskellige racer… forståelse af hovens respons på stress skal hjælpe os til at forebygge halthed.

Føl hov – til smed max. 1 måned gammel
NB.:
1) Hovomkreds : Lille -> Stor
2) Break-over skal styres --- Ofte ses spids tå-væg.

Farriery for the Young Horse
Stephen E. O'Grady, BVSc, MRCVS Author's address: Northern Virginia Equine, P.O. Box 746, Marshall, VA 20116; Email:sogrady@look.net.

Sund hornvæg
Maximal såletykkelse
Stor + massiv stråle
Lad hjørnestøtter stå

Bukkehov:

Arv + Miljø
(Foder: Mineral ubalance + for meget energi (protein)/vækst)
+
Smerte

Individuel vurdering. 6-8 måneder!

Konservativ vs. Kirurgisk (ALDDF – desmotomi)

Føllet bør ikke æde hoppens foder

Beskærings- og Beslag- Intervaller

Tåakser
Benstilling
Vækst og Vækstlinjer
Racer
Sport / Brug
Alder
Fold NB. Nyt HV-hæfte
Foder

6 UGER !!!

Store variationer
Vær foran væksten!!!=> 4-5ugers interval optimalt

Føl m. problemer 2-4ugers interval!

Forskning!

An Evidence-Based Assessment of the Biomechanical Effects of the Common Shoeing and Farriery Techniques, 2007.

Ehud Eliashar, BSc, DVM, MRCVS. Department of Veterinary Clinical Sciences, The Royal Veterinary College, Hawkshead Lane, North Mymms, Hatfield, AL9 7TA, United Kingdom

Meget fin grænse mellem maximal præstation og overbelastningsskader.

Hesten udviser samme type halthed ved mange sygdomme.

Øget dragthøjde => ændrede vinkler i hov- og kodeled…

Vi kender ikke de kliniske konsekvenser ved behandling af syge heste…

Forskellige resultater fra forskellige forskere - mest på løse ben og pony-studier.

Der er en alvorlig mangel på veterinær forståelse af beskæring og beslag ved haltheder og behandling

Forhåbentlig kan fremtidige studier øge forståelsen ved sammenligning af halte heste med raske kontrol-heste for langtids-effekter af de forskellige teknikker og beslag.

Kan hestene præstere det ønskede uden beslag/sko?

Nej

Ikke under "normale" forhold i Danmark

Der er for meget fugt og for lidt hård bund

Hoven bliver blød og sårbar

Ømtåethed, knusninger, hovbylder

Hesten er ca. 22 timer i blødt og evt. tillige fugtigt miljø, med højt indhold af gødning og urin!

Hesten skal efterfølgende præstere på varieret underlag i 1-2 timer.

Tag sko af i perioder hvor de ikke er nødvendige

Det individuelle hensyn!

Basic farriery for the performance horse: O'Grady SE et al APR **2008** Proper farriery promotes a healthy functional foot and biomechanical efficiency and prevents lameness. Because the equine veterinarian is responsible for the soundness of the horse, a working knowledge of farriery becomes essential. A thorough knowledge of traditional horseshoeing enables the veterinarian to interact with the farrier at the farrier's level; this ultimately enhances and promotes quality hoof care. This article focuses on fundamental farriery and recognizing subtle changes in hoof conformation that can be used to

preserve the integrity of the hoof capsule, along with the structures enclosed within, and thus prevent lameness!!!

God hovpleje forebygger halthed

Træner du din – Hest? Gerne flere gange dagligt.

Genoptræning af hest der har været ude af arbejde i mere end 6 uger

Hesten skal (uge 1-5) gå med en lang fri hals og gerne søge frem og ned mod biddet. Dette gælder uanset gangart. Rid fremad med ben og sæde!

Uge 1:
Skridt lige ud, på fast plant underlag (hovslag/stier/asfalt). Længden øges dagligt så I sidst i perioden skridter ca. 60-90 minutter fordelt over 1-3 gange dagligt. Foldophold (alene) er ok, men folden skal være lille (10 x10 m) og hesten skal forholde sig roligt på folden (sørg for at der er halm el. lign)

Uge 2 + 3:
Fortsat på fast plant underlag. Nu kan du efter skridtopvarmning (15 min.) indlægge små travintervaller á 2-3 minutter. Start med 5 intervaller/dag. Hvorefter du kan lægge 1-2 intervaller til så du sidst i perioden er oppe på en samlet travperiode på ca. 30-35 minutter. Husk afskridtning 15-20 minutter.
Jeg foreslår at hesten longeres (efter skridt opvarmning m. rytter) med elastik-chambon 4 x 5 minutter 2 gange om ugen (5 min. skridt hj. volte + 5 min. trav vs. volte + 5 min. skridt vs. Volte + 5 trav hj. volte). Herefter afskridtning under rytter. Den daglige træning reduceres med antal longe-minutter.

Uge 4 + 5:
Som uge 2+3 dog øges travintervallernes længde til 4-5 minutter, start med 4-5 intervaller og læg 1 interval på hver anden dag til så du sidst i perioden er oppe på en samlet travperiode på ca. 40-45 minutter, og max. 9 intervaller. Husk afskridtning 15-20 minutter.

Medio uge 5: Dyrlæge kontrol:
Halt?; Ømheder?, Muskelfylde?, Mere fold?, Hvis alt ok fortsættes nedenstående.

Uge 6+7:
Nu kan du forlange mere lidt mere af hesten og begynde på ridebane eller i ridehus. Du kan efter opvarmning starte med lidt samlet travarbejde, men kun store volter. Travarbejdet skal udgøre ca. 30 minutter (intervaller á 5 minutter). Nu startes galop-intervaller á ca. 2 minutter, på store volter, start med 2-3 intervaller og øg til 5 intervaller á ca. 3 minutters varighed. Husk afskridtning 15-20 min.
Hvis dette genoptræningsprogram følges, uden halthed eller andre komplikationer, kan du efterfølgende arbejde normalt med din hest, men brug gerne ovenstående incl. longearb. til at tilrettelægge din træning.
Held og lykke

Kondition – Styrke – Intervaller - VARIATION

Plan, Do, Check, Act principle

Konditræning – Pony – Max. 3 x pr. Uge.
Bedst udendørs så snart vejret tillader det. Gerne kuperet terræn.

	Skridt (aktiv)	10-15min	Lang løs tøjle. Rid frem m. sædet.	Store volter	R
	Trav (arbejds)	4min	Frem og ned. Let sæde.	Store volter	O
	Skridt (samlet)	2min	2-3 parader, evt. schenkelvigninger	Varieret	S
x	Galop (frisk/stor)	4min	Let støtte på tøjle. Let sæde.	Store volter	+
3	Skridt (afslappet)	1min	Lang løs tøjle. Slap af.	Store volter	R
	Trav (arbejds)	5-10min	Frem og ned. Let sæde.	Store volter	O
	Skridt (afslappet)	10-20min	Afskridtning +/- dækken		S

Husk. Forbudt 3 dage før og tre dage efter konkurrencer!!!
Stævner: Sørg for at hesten får mulighed for at få sit hoved ned til jorden i alle pauser – æde strå fra gulvet/jorden – Herved "renses" øvre luftveje. Vigtigt!!!

Opvarmning for **Springtræning/Konkurrence:**

Skridt (aktiv)	10-15min	Lang løs tøjle. Rid frem m. sædet.	Store volter
Trav (arbejds)	4min	Frem og ned. Let sæde.	Store volter
Skridt (samlet)	2min	2-3 parader, evt. schenkelvigninger	Varieret
Galop (frisk/stor)	4min	Let støtte på tøjle. Let sæde.	Store volter
Galop (varieret)	4 min	Rundt ml. spring - mange parader	Variér volter

Springtræning	Max. 1 x pr. uge	
	30-40 spring/træning (konkurrence)	Over 50 = skader
	Urutinerede el. unge 4-7år max. 30 spring/træning	
	Spring kun sjældent på max. Højde	
	Løssspringning anbefales til max. Højde	
Afskridtning	10-20min. +/- dækken	
Konkurrence:	10-14 dages mellemrum gerne mere	

Mere viden – Bedre dyrevelfærd

Hestens Værn:
2011: Se hjemmesiden!

Bliv Beslagsmed – Folder + HJemmesiden
Emnehæftet: Hove & Hovpleje - Ny
Ny lærebog –
Charlotte Frigast og Verner Kristoffersen
2010 ☺

Støt Hestens Værn

Hestens Værn gør noget ved vanrøgt og mishandling af heste og ponyer

Vi får langt over 200 anmeldelser om året. Flest om vanrøgt.
Nogle er så alvorlige, at de meldes til politiet.

Sammen med vores landdækkende netværk af hestekyndige lægfolk og dyrlæger gør Hestens Værn en stor indsats for at afhjælpe og opklare disse sager.

www.hestens-vaern.dk

Statistik - anmeldelser

Region	2010
Hovedstaden	26
Sjælland	41
Nordjylland	27
Midtjylland	43
Syddanmark	32
I alt (pr. 13.7.2010)	169

STATISTIK

Antal anmeldelser 2010
Region Antal
Hovedstaden 44
Sjælland 74
Nordjylland 53
Midtjylland 61
Syddanmark 64
I alt (pr. 30.12.2010)
296

Region	2009	2008	2007
Hovedstaden	34	27	27
Sjælland	61	56	46
Nordjylland	27	29	8
Midtjylland	74	48	33
Syddanmark	45	51	48
I alt	241	211	162

Hvem skal udføre behandling / beskæring / beslag ?

Loven: Kapitel 8
Hovpleje og mærkning
§ 28. Beskæring eller anlæggelse af beslag på heste skal ske efter behov.
Stk. 2. Justitsministeren kan fastsætte regler om, at beskæring eller anlæggelse af beslag kun må foretages af personer, der har den relevante faglige uddannelse hertil. Justitsministeren kan desuden fastsætte krav til uddannelsen.

Rådet for Hovpleje og Hestebeslag

Firmaer som er tilsluttet
Rådet for Hovpleje og Hestebeslag: R
Hov- og Beslagsmedebranchens Ankenævnsordning: H
Registreret beslagsmed med uden tilslutning: ---

Officiel registreringsliste udarbejdet af

Hestens Værn
Gl. Hovedgade 8, 2970 Hørsholm
Tlf. 4586 8774
post@hestens-vaern.dk - www.hestens-vaern.dk

Revideret maj 2010 – Liste nr. 048

Postnummer / By	Firmanavn	Indehaver	Telefon	Tilsluttet

Før og efter beskæring og anlæggelse af beslag:

Mønstring, Overrulning og Funktionel balance - Vigtigst
Kom så ud og mønstre de heste!!!

THE FEI CODE OF CONDUCT FOR THE WELFARE OF THE HORSE

The Fédération Equestre Internationale (FEI) requires all those involved in international equestrian sport to adhere to the FEI's Code of Conduct and to acknowledge and accept that at all times **the welfare of the horse must be paramount and must never be subordinated to competitive or commercial influences.**

1. At all stages during the preparation and training of competition horses, welfare must take precedence over all other demands. This includes good horse management, training methods, farriery and tack, and transportation.

2. Horses and competitors must be fit, competent and in good health before they are allowed to compete. This encompasses medication use, surgical procedures that threaten welfare or safety, pregnancy in mares and the misuse of aids.

3. Events must not prejudice horse welfare. This involves paying careful attention to the competition areas, ground surfaces, weather conditions, stabling, site safety and fitness of the horse for onward travel after the event.

4. Every effort must be made to ensure that horses receive proper attention after they have competed and that they are treated humanely when their competition careers are over. This covers proper veterinary care, competition injuries, euthanasia and **retirement.**

5. The FEI urges all involved with the sport to attain the highest levels of education in their areas of expertise

Heste skal ikke fixes op til konkurrencer, kåring, jagt:
Sarapin, ACTH, Mesotherapi, Lavdosis NSAID, m.m.m
Ro, Restitution, Rehabilitering – Bliv lærehest på et lavere niveau!

Rollkür

http://www.youtube.com/watch?v=8hIXGiV4N4k

The FEI does not permit excessive or prolonged (10 min.) Hyperflexion in any equestrian sport, and has a strict stewarding program to protect the performance horse in all disciplines."

Forslag fra Viborg:
Se www.arr.de

EQUI-Parmoni

Hypoteser:

Alt for mange heste slagtes/destrueres i for ung en alder.

Moderne ride- / dressur- metoder har negativ påvirkning på hesten i forhold til fysisk og psykisk velfærd og holdbarhed.

Der avles mange særdeles gode rideheste, som ikke får de rette træningsbetingelser og derfor får et for kort liv.

Fakta:

Alt for høje krav til heste i for ung en alder. Kåring af 3 års heste. Deltagelse i konkurrencer af 3 års (som er imod rideforbundets egne regler) og 4 års heste

Alt for mange heste kan ikke gå rentaktet (4 taktet galop, 3 taktet trav). Ikke engang DRF vælger billeder med rigtig takt til at illustrere deres dressurreglement. Reglementet bruges både af ryttere og dommere herunder til undervisning af dommeraspiranter!

DRF's og FEI's reglement og den faktiske anvendelse af dem stemmer ikke overens.

Målsætning:
At fremme viden om hestens grundgangarter, herunder takt og rytme, hestens anatomiske og fysiologiske forudsætninger for at bevæge sig og arbejde under rytter, med det formål at bedre hestenes velfærd og holdbarhed. (overordnet målsætning)
Påvise den moderne dressurmetodes negative effekt på hestekroppen.
Bevise at den oprindelige klassiske metode (ikke den barokke) forbedrer holdbarhed og velfærd.
Påvise at heste kan trænes så de bevarer deres naturlige gangarter.
Påvise at mange heste med rygproblemer kan komme sig og blive helt eller delvis funktionsdygtige med den rette træning. (Skal heste med nakke-/halsproblemer medtages?)

Arbejde for at hestens udviklingspotentiale og rytterens ambitioner matches bedre. Herunder skabe forståelse fra at hesten trods evt. økonomisk tab kan få et langt og godt liv med en anden og mindre ambitiøs rytter, el. en rytter med et andet metodevalg og bedre tålmodighed. Der tænkes her på en egentlig hesteformidling: A-hest til A-rytter, B-B, C-C. Herunder gensalg af rehabiliterede heste.
Købsaftale / Lån / Gen-Forsikring /Tilbagekøb. / "Horsematching DK"

Anti-Doping Folder:

Flere kan rekvireres fra Hestens Værn
Se det nye site: http://www.hestens-vaern.dk/?pid=97

Hold af Heste

Læs rapporten !

HESTELOVEN (2007); § 27:

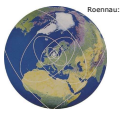
Enhver form for medicinering og behandling, herunder kirurgisk behandling, som har til formål at skjule sygdomssymptomer, så hesten kan træne og deltage i konkurrencer, er ikke tilladt.

Behandle

1881 Preussen: Første straffesag for doping.

Hvor vil vi gerne hen? Fairplay + Dyrevelfærd

"Primum est non nocera" Hippocrates
Uddannelse og oplysning
Out of competition testing!
Dialog
Ansvarlighed hos DRF, LR, Trav & Galop, m.fl.
Accept af omkostninger for brugerne
Lovgivning
Offentlige støttemidler reguleres
Dyrlæger uddannes og deltager i kontrollen! Og Straffes ved fusk!
DK-Folder og DK-ETUE



Roennau: Land Art-projektet Vinterens Hjerte 2000.

MOD

"Egenskaben der garanterer for andre egenskaber"

Etik: Man skal gøre hvad man ved omtanke finder rigtigt - Non-violent
Hesten -> dyrlægen -> ejeren -> træneren -> publikum

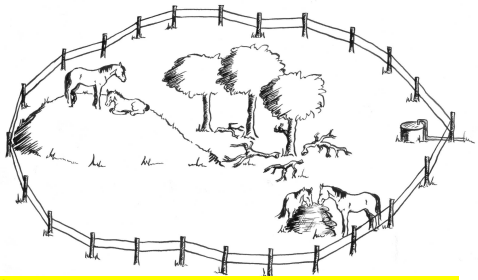
Tell me and I'll forget
Show me and I might remember
Involve me and I'll understand!
Benjamin Franklin

Love -Truth – Equality: The way out of madness!
Do what you know is right. Non violent.
Mahatma Ghandi

Referenser: Nævnt undervejs &:

- Adams´Lameness in horses, 5.ed.: T. S. Stashak. Lippincott Williams & Wilkins 2002
- Differential diagnosis of foot pain: M. C. Schramme; ACVS proceedings 2007.
- Equine Podiatry: A. E. Floyd & R. A. Mansmann. Saunders, Elsevier 2007.
- Equine Surgery, 3.ed.: J. A. Auer & J. A. Stick. Saunders, Elsevier 2006
- Hoof wall wound repair: C. C. Pollit & M. Daradka; EVJ 2004.
- How to treat Equine Canker: S. E. O´Grady & J. B. Madison; AAEP proceedings 2004.
- Lameness in the horse: M. W. Ross & S. J. Dyson. Saunders, Elsevier 2003.
- Radiological interpretation of the navicular bone, S. Dyson, 2008.
- Maj Halling Thomsen: Tegninger, Dias.
- Eva Søndergaard – Heste på Fold, Tegninger, Dias.
- Beslaglære – Hoven i fokus: Charlotte Frigast & Verner Kristoffersen. Gyldendal 2010.
- LOV nr 528 af 06-06-2007
- Equine Surgery, Auer & Stick.
- Billeder & Video:
- Adam Mørk, Per Torp, Aziz Tnibar, Casper Lindegaard, Dorte Vaabengaard, Hestens Værn, Keith Baptiste, Arne (Naturhov), Torben Frandsen, Mogens T. Christophersen, m.fl.

Hvad kan/skal brugeren gøre ?



Gode og dårlige dage – Hest og/eller bruger :
Monty Roberts: … "Hvis ikke du kan smile, - så lad vær.." -
Fri bevægelse på en god fold med artsfæller –
Det er livet for heste!

Vær foran sliddet i dragten!

Bagtil brudt tå-akse