

Discussion paper

Guide to good animal welfare practice
for
the keeping, care, training and use of horses



Content

1. INTRODUCTION	5
2. BIOLOGICAL CHARACTERISTICS AND BEHAVIOUR	5
3. CONTACT TO CONSPECIFICS	8
4. ACCOMMODATION	9
4.1 General considerations	9
4.2. Stable / indoor housing	10
4.2.1 Tie-stalls	10
4.2.2 Individual (loose) boxes	11
4.2.3 Group housing systems	11
4.3. Indoor climate	11
4.4. Light	12
5. OUTDOOR KEEPING	12
5.1. Shelter	12
5.2. Pasture / paddocks	12
5.3. Horses kept outside during winter months	13
6. CARE	14
6.1. Knowledge	14
6.2. Inspection	14
6.3 Disease prevention	14
6.4. Hoof care	15
6.5 Dental care	15
6.6. Feed	15
6.7. Water	16

7. HANDLING AND TRAINING	17
8. EQUIPMENT	18
8.1 Saddlery, harness etc.	18
8.2 Mechanical equipment	18
8.3 Restraint equipment	19
9. DOPING	19
10. USE – SPORT, LEISURE, TOURISM	19
10.1 Sport	19
10.2 Tourism	20
11. MUTILATIONS AND TRIMMING	20
11.1. Tail docking, trimming and nicking	20
11.2. Other mutilations	21
12. BREEDING	21
12.1 breeding methods	21
12.2 Foaling and weaning	21
13. ASSESSMENT OF THE WELFARE OF HORSES	22
14. EUTHANASIA AND SLAUGHTER / END OF LIFE CONSIDERATIONS	22
15. EU LEGISLATION RELEVANT TO HORSES	22
16. REFERENCES	24

This discussion paper presents a proposal for a guide to good animal welfare practice for the keeping, care, training and use of horses.

The paper is meant as a basis for discussion in a possible subgroup on horse welfare under the EU Platform on Animal Welfare, and as such it has been send to the Chairman of the Platform by the Platform members from Belgium, Germany, the Netherlands, Sweden and Denmark.

Photos used in the paper: Birte Broberg

1. Introduction

In 2014 the Commission held a meeting on the welfare of horses, where both Member States and stakeholders from the horse sector attended. The discussions during this meeting revealed that there are challenges concerning horse welfare in the European Union. As a consequence of this, World Horse Welfare and Eurogroup for Animals prepared the report “Removing the Blinkers”, which in more detail illustrates the welfare challenges.

On 14 March 2017 the European Parliament adopted a resolution on responsible ownership and care of equidae. In its resolution the European Parliament calls upon the Commission to develop European Guidelines on Good Practice in the equine sector for various users and specialists, drawn up in consultation with stakeholders and organisations from the equine sector and based on existing guides.

The OIE (World Organisation for Animal Health) adopted in May 2016 a chapter on welfare of working equids to the Terrestrial Animal Health Code.

Based on the above background, a set of draft guidelines on the keeping, care, training and use of horses have been drawn up. Although these guidelines in general apply to all categories of horses, they do not specifically address working horses, as these are already covered by the OIE chapter. The guidelines do not address donkeys, asses, and mules, as they may have behaviours/needs different from horses.

Horses are kept for a variety of purposes, such as sport, pleasure, breeding, therapy, and tourism. The regulatory level on keeping and care of horses differ between Member States. Only a few have adopted specific legislation on the protection of horses. In some Member Countries guidelines have been drawn up either by competent authorities or stakeholders. Common EU guidelines are believed to help enhance the welfare of horses throughout the Union.

It is difficult to assess the number of horses in the EU with any certainty. Figures may be available for example from breeding, racing or equine sports organisations. When it comes to the part of the equine sector where there is no formal organisation, however, figures are unavailable or uncertain. It is estimated that EU's horse population range from approx. 4 million to approx. 7.7 million.

These guidelines address areas where there is no specific EU legislation on horses. This means that transport, killing, including slaughter, identification and registration, and zootechnical and genealogical matters are not addressed. Nor do these guidelines address horses that are kept under wild or semi-wild/feral conditions.

In this guideline the term “horse” is used meaning both a horse and a pony.

2. Biological characteristics and behaviour

Today's domestic horse, the Przewalski's horse and other wild horses such as the now extinct tarpan, share a common ancestor. Knowledge on horse behaviour derives partly from studies on Przewalski's horses reintroduced to their original habitat, but mainly from studies of feral horses - offspring of escaped domestic horses that live under natural or semi natural conditions with no or little human interference.



The horse was domesticated more than 5000 years ago. Although certain characteristics, such as size, type, colour, feed conversion, and temperament have changed, the horse has retained much of its ancestor's behaviour, especially social and feeding behaviour. The horse is through evolution adapted to a life as a prey animal living on open plains; this is reflected in its behaviour, and the way its senses have developed.

Horses have a wide-angled vision, which enables them to detect movements almost all around them. There is only a small "blind area" bordering the flight zone just behind them.

In the area, where horses see with both eyes (binocular vision) they are able to see objects clearly both close by and at a distance. This type of vision makes it possible for horses to identify feed items (vegetation) close by, and at the same time detect possible dangers at a distance. In nature a quick reaction to a danger and escape (flight reaction) is crucial for survival. Much of this behaviour is present in today's domesticated horse. Sudden, unknown occurrences may cause panic reactions, such as kicking or flight reaction, even in the most confident horse.

Horses have good hearing, and due to their ability to move the ears independently they are able to localise sounds/noise, and react to sudden or unusual noise either by alertness or even a flight reaction. Horses in nature or in paddocks normally stay within visual contact with each other. If one horse frightens and tries to escape a possible danger, others normally follow. Likewise, a calm and confident horse may have a positive influence on a fearful or shy horse.



Horses are gregarious/herd animals. Under natural conditions horses live relatively close together in groups. The groups typically consist of an adult stallion and a number of mares with offspring, including young males. Young stallions and older stallions without a group of mares also group together. The group stabilises itself with a hierarchy, which is challenged when new members are introduced. A new hierarchy is typically formed within a few days to weeks. Living in groups has a number of advantages, mainly in relation to social learning, seeking feed and water, and a defence

strategy to avoid or minimize encounters with predators, an example of this is, when horses on pasture have one horse standing as watchman, when the others are laying down to sleep or rest. Although there may be individual differences, horses will generally become anxious and insecure when isolated from other horses. Lack of social contact both early and later in life may cause development of abnormal behaviour such as weaving in stabled horses, or more aggressive interactions when on pasture with other horses. Furthermore, group housed young horses seem to be easier to handle and train than young horses kept individually.

Horses communicate through a number of behaviours, such as flehmen, tooth clapping (especially in foals and colts), posture, sound, and touching. Touching can be both aggressive (kicking and biting) and friendly (grooming). Some of these behaviours are innate, while others need some learning at a young age. It seems that young horses who are kept isolated have difficulty in engaging with other horses if introduced into a group.



Flemen



Social grooming

Horses carry out different types of comfort behaviour. This behaviour serves different purposes such as a reaction to itching of the skin, to keep insects away, to keep the coat in a good condition, or for a social purpose. Comfort behaviour is exhibited even in horses who are groomed regularly. Comfort behaviour include nipping with the teeth, scratching with a leg (typically a hind leg), rubbing against an object, rolling in sand, mud, snow etc., followed by body and head shaking, and social grooming where two horses groom each other (typically on the withers or back).



Scratching with a leg



Rolling in sand

Although horses are social animals, they have a social space which defines the distance they wish to keep to other horses. This distance is individual, and is dependent on age and on how well the horses know each other. During social grooming, for example, the distance is zero. Horses may also be seen standing close together when trying to keep insects away. Foals and colts do normally not react to others entering their social space, and they may be seen lying close together. When horses are group housed, it is important to take social space into account when deciding how much space they should be given.



Under natural conditions, horses spend most of the day seeking feed. Depending on feed availability they may move over large distances. Horses have a need for moving, and if kept in a restricted area for a certain time which limits their ability to fulfil this motivation they will express this abundantly once they are allowed free movement. Especially for foals and colts, free movement and playing with conspecifics is important for the development of muscles, joints, tendons, and bone structure. Furthermore, free movement will enhance their balance and coordination.

Horses are herbivores. The natural way for a horse to eat is to move slowly forward, with the head down, grazing. They may spend up to 14 – 16 hours a day eating. The period when they don't eat is normally not more than 3 – 4 hours. This more or less continuous feeding fits the digestive system of the horse which has a relatively small stomach but large colon and caecum. In the colon and caecum there is a microbial breakdown of feed, especially fibrous materials, which was not digested in the small intestine.

Abnormal behaviours are seldom or never seen in horses that live under natural conditions. The development of abnormal behaviours is a sign that the environment and/or the conditions in which horses are kept do not fulfil their needs, and are thus indicative of a more or less compromised welfare. Many abnormal behaviours are stereotypies such as crib biting, wind sucking, stable walking, weaving, and auto-mutilation (biting themselves). Others may be normal behaviours which occur with an abnormal frequency such as aggressive behaviour and continuous biting on wood in a horse's accommodation. Development of abnormal behaviours differs between individuals. It is a misunderstanding that stereotypies are contagious. Horses that develop stereotypies may have the same stress level or the performance of some stereotypies may cause disturbance in the environment, which affect other susceptible horses.



Crib biting is not necessarily preformed on the crib

3. Contact to conspecifics

As mentioned above, horses are gregarious animals and lack of social contact to conspecifics both early and later in life may cause development of different abnormal behaviours. Social contact can be both direct and indirect. Direct contact is when horses are able to touch each other over/through partitions or in paddocks or in group housing (where horses have full contact with each other). Indirect contact is when horses are able to see, smell and hear other horses. Horses prefer direct contact in paddocks, on pasture or in group housing.



It is recommended that horses, at least during a part of the day, have contact to other horses in a paddock, pasture or in group housing. This makes social grooming possible, and, especially for young horses, allows for the development of other social behavioural patterns, including learning to read the signals of other horses. Horses should always be able to at least see other horses.

4. Accommodation

4.1 General considerations

The need for contact to conspecifics should be kept in mind when designing accommodation for horses. Furthermore, any accommodation should be dimensioned to fit the size of the horse so that it at all times is able to lie down, rest and get up unimpeded, and stand in its natural position.

Although there are differences between breeds, there is a fairly good correlation between the height at the withers and total height and length of the horse. The length of a horse standing in its natural position is approx. the height at the withers multiplied by 1.5. The height of a horse standing in its normal position is approx. the height at the withers multiplied by 1.3. This may be used as a guideline when designing accommodation for horses. However, it should be kept in mind that more space is needed for a horse to turn around freely and for head lifting.

The accommodation should be constructed and maintained so that there are no sharp edges or protrusions likely to cause injury to the horses. Materials, with which horses may come into contact, should not be harmful to the animals and should be capable to be thoroughly cleaned and disinfected.

Windows in tie-stalls, individual boxes and group housing systems should be made of unbreakable glass or be protected by a grid or the like to prevent the horse from breaking the glass and injure itself.

The laying area for horses should be provided with an adequate amount of suitable bedding material, to ensure a dry and comfortable resting area.



Passageways should have a non-slip surface and be wide enough to allow horses to pass each other safely and without difficulty. Doors should be at least 1.2 meters wide for horses and 1.1 meters wide for ponies, and they should be sliding doors or open outwards. Doors to individual boxes or group housing systems should be fitted with devices that fasten them both on top and bottom.

The indoor height should allow the horses to stand in their natural position and carry out normal head movements. As a guideline, the indoor height of any accommodation should be at least the height of the withers plus 75 cm.

4.2. Stable / indoor housing

The most common indoor housing system is individual (loose) boxes and in some regions tie-stalls. However, group housing is gaining more and more ground, especially for young horses and where stable groups are possible.

4.2.1 Tie-stalls

Tie-stalls severely restrict a horse's movements, and as the horse often stands with the head up to a wall, it also restricts the possibilities to see, what is going on around the horse. This housing system is not recommended and should therefore be phased out. In the meantime certain minimum requirements should be considered. The width of the tie-stall should at least allow for the horse to lie with its legs stretched, as a guideline the width should be at least height at the withers multiplied by 1.1. The tie-stall should be long enough to accommodate the horse within the stall, as a guideline the length should be at least the height at the withers multiplied by 1.7 to also allow room for a crib. Except at the head of the horse the partitions should have a height approx. similar to the height of the horse at the withers, and should be solid and extend to the full length of the stall, in order to prevent horses in neighbouring tie-stalls to kick each other. If the partitions at the head of the horse are higher, the upper part should not be solid, but allow the horses in neighboring stalls to see each other. The length of tether should allow the horse to reach feed and water and lie down without difficulty. When lying down, the horse should be able to rest its head fully on the floor. Measures should be taken to avoid a leg being trapped in the tether. This may be obtained by letting the tether go through a ring and have a block of adequately heavy material at the end.



4.2.2 Individual (loose) boxes

Individual (loose) boxes should have a size, which allows the horse to turn around, lie down, rest and get up without difficulty. Fittings, such as feeding and watering equipment, should be positioned, designed and maintained in a way as to avoid injury to the horse, and as far as possible avoid contamination with urine and feces. The floor area of an individual (loose) box will depend on the size of the horse and how for example feeding and watering equipment is positioned; as a guide line the floor area should be at least (the height at the withers multiplied by 1.7)². Boxes for foaling or for a mare with foal at foot will require a bigger floor area. The upper part of partitions should not be solid, but allow horses in neighboring boxes to see each other, and allow for adequate ventilation.



4.2.3 Group housing systems

In group housing systems the total floor area should allow free movement, sufficient space at feeding and watering equipment, and ensure a bedded area large enough to allow all horses to lie down undisturbed at the same time. As a guideline the total floor area should be at least (the height at the withers multiplied by 2)². Fittings to allow temporary tethering of horses, when concentrate is fed, should be considered. Care should be taken to select groups of horses that are compatible. In group housing systems there should be a possibility to isolate ill or injured horses or aggressive horses.



4.3. Indoor climate

The indoor climate is important for the welfare and health of horses. An inappropriate indoor climate can be damaging, especially for the respiratory system of horses. Dust levels, relative air humidity and gas concentrations should therefore be kept within limits that are not harmful to the horses. This requires adequate ventilation – natural or forced, which gives a good and evenly distributed airflow through all parts of the horses' accommodation without unnecessary draught.

Dust levels should be kept at a minimum. To get an impression of the dust level in the accommodation a piece of black paper can be left in a place out of reach of the horses for a couple of hours. Then move a finger across the paper to get an impression.

As a guideline the following values for relative humidity and gas concentrations should not be exceeded:

Relative air humidity	80 % (should be kept between 50 – 60 %)
Carbon dioxide (CO ₂)	3000 ppm
Ammonia (NH ₃)	10 ppm (20 ppm?)

CO₂ in the concentration mentioned above does not in itself have a negative effect on horses, but it is a good indicator as to whether the ventilation is sufficient.

4.4. Light

There should be natural light, if necessary supplemented with artificial light at a level, which is sufficient for the horses to clearly see each other and their surroundings. Furthermore adequate lighting – fixed or portable – should be available to enable the horses to be thoroughly inspected at any time. The light sources should be out of reach of the horses or should be protected by appropriate fittings.

The lighting regime should follow a 24 hour rhythm and include sufficient uninterrupted light and dark periods. As a guideline, the dark period should be at least 6 hours and the light period at least 8 hours. As a guideline, the light level where horses are accommodated should be at least 80 lux. In areas where horses are cared for such as hoof trimming, a light level of at least 200 lux is recommended.

5. Outdoor keeping

Horses should be protected against adverse weather conditions, and they should in the best possible way be protected against possible predators.

5.1. Shelter

Sufficient shelter should be available all year round; in the summer to provide the horses with shade from the heat of the sun and flying insects, and in winter to protect them against wet, windy and cold conditions.

Sufficient shelter may be provided by the natural surroundings, such as trees and hedges, by purpose-built shelters or by waterproof turn-out rugs, depending on weather conditions, and whether horses are stabled during the night or are kept outside around the clock. If rugs are used, they should be checked daily and should be of a type which corresponds to the ambient temperature.



5.2. Pasture / paddocks

All horses should be given daily access to paddocks or pasture, where possible together with other horses, in order to fulfil their need for free movement and social contact. However, there may be situations where veterinary advice or extreme weather conditions makes this contradictory.

Horses should as far as possible be kept in stable groups.

Paddocks and pastures should be well drained in order to as far as possible avoid muddy conditions. They should be kept clear of dangerous objects and regularly checked for poisonous plants.

Fences should be clearly visible to the horses, be well maintained, and of a sufficient type and height to prevent horses from escaping. The sufficient height of the fence depends on the type of horses within the paddock or pasture. As a guideline, the height of the fence should be at least the height at the withers multiplied by 0.75. Stallions may need higher fences. The distance between posts and rails/wires and between rails/wires will also depend on the size of the horses. Rails/wires should be set on the horse side of the fence. Barbed wire should not be used.

As a guideline, a horse should have at least 200m² of paddock, and the minimum size of a paddock should be at least 800 m². Paddocks for small ponies may be smaller. In order to supply enough grass pastures need to be much bigger. As a guideline there should be approx. 0.5 hectare pr. horse, if grass is the only feed. Especially for certain pony breeds it may be necessary to restrict the access to grass to certain periods, as they may otherwise become too fat, and risk laminitis.

Horses should be introduced to new types of fence during day-time, and should be supervised for an appropriate period of time after being introduced to a new fence type or after being moved to a new paddock or pasture.

Horses should also be supervised for an appropriate period of time, when they are grouped together in a paddock or on pasture, or when new horses are introduced into a group.

Tethering on pasture should be avoided. It restricts the free movement of the horse, and it does not allow for social contact to other horses. Furthermore, there is a risk that the tethered horse becomes entangled in the tether and injures itself.

The use of hobbles should be discouraged.



5.3. Horses kept outside during winter months

Not all horses have the same ability to withstand cold winter conditions. Lighter horse breeds or breeds that are not selected for cold conditions are less hardy than for example the Icelandic horse or certain pony breeds, such as Shetland ponies or Exmoor ponies.

All horses that are kept un-stabled around the clock in cold conditions during winter months should be prepared for this. They should have developed a thick coat and be in a very good bodily condition.



Thick coat and good bodily condition

The hardy breeds may, if the natural conditions give sufficient shelter, including a dry lying area, be kept without a purpose-built shelter. Other breeds should have access to a purpose-built shelter of a suitable design and size. Ill or injured horses should be taken care of in suitable accommodations.

A purpose-built shelter should, as a guideline, have the same floor area as indicated above for group housing systems, and it should provide a dry lying area. The shelter should have two entrances.

6. Care

6.1. Knowledge

Horses should be cared for by a sufficient number of persons, who possess the appropriate ability, knowledge and professional competence.

6.2. Inspection

All horses, including those in paddocks and on pasture, should be inspected at least once a day. Ill or injured horses, mares in late pregnancy, newborn foals, newly introduced horses, stallions during the mating season and very old horses should be inspected more often.

Any horse who appears ill or injured should be given appropriate care without delay. If the horse does not respond to such care, or if it is in severe pain, veterinary advice should be obtained without delay. Where necessary ill or injured horses should be isolated in suitable accommodation.

An adult healthy horse in a resting mode has a rectal temperature between 37.5 and 38.5, a pulse between 28 and 48 beats/minute and a respiratory rate between 12 and 20 breaths/minute, both depending on training condition.

6.3 Disease prevention

Vaccination at least against tetanus is recommended. Horses are very susceptible to this disease, which is caused by a bacterium (*Clostridium tetani*). This bacterium is often found in the soil of horse premises. It enters the body through wounds, including small penetrating wounds, which may be difficult to detect, or through the navel in newborn foals. Even though affected horses may survive especially, if the disease is diagnosed in an early phase, they often have to be euthanized for welfare reasons.

Vaccination against influenza and tetanus is mandatory for horses taking part in most competitions, but vaccination should also be considered for other horses, especially those that have regular contact to horses from other premises.

Vaccination against other diseases may also be advisable depending of the geographical location of the horse. Advice on this should be sought from a veterinarian.

Intestinal parasites can be a welfare problem causing weight loss, colic and even deaths. This is especially the case for foals and young horses, and for horses kept in permanent paddocks, where manure is not removed regularly. A monitoring and deworming program should be established. Appropriate pasture or paddock management practice may help reduce the parasitic burden.

6.4. Hoof care

The hooves of a horse should be trimmed at regular intervals by a person with the necessary skills. The frequency depends on a number of factors, including age, use and whether the horse is shod. As a guideline, horses that are shod should be trimmed and have shoes renewed every 6 – 8 weeks. If horses are used for sport or leisure without shoes, the hooves should be inspected after use for over-wear. Other horses for example brood mares should be checked for horn growth at regular intervals, and be trimmed at appropriate intervals to maintain the hooves in a good and healthy condition.

Hooves should be cleaned and checked for signs of illness, such as thrush, cracks or foreign bodies (stones for example) at appropriate intervals.

6.5 Dental care

Horses wear their teeth slowly when they chew. This may cause the formation of sharp edges or hooks, which will cause discomfort to the horse, and may be the cause of weight loss or abnormal behavior such as avoiding or fighting the bit and head tossing. Half chewed feed, which drop out of the mouth is another sign of dental problems. A number of other dental problems may arise during the life of a horse. To avoid these conditions to become a problem, it is advisable to have the teeth checked at least annually by a veterinarian or other competent person.

6.6. Feed

Horses should be fed a wholesome diet of a sufficient quantity to maintain them in good condition and fulfil their nutritional and behavioral needs.

As mentioned above in chapter 2, the digestive system of the horse is adapted to a more or less continuous intake of food with high fiber content (roughage). Roughage will ensure a sufficient chewing time resulting in production of saliva, which is believed to contribute to minimizing the risk of stomach ulcers and otherwise promote gut health.

The modern horse especially when used for racing or other energy demanding purposes can normally not live on grass or other types of roughage alone; they also need high energy feed (crib feed) to ensure a correct supply of energy, protein, vitamins and minerals. The supply of crib-feed will depend on the use of the horse. The ration should be divided in two to three meals a day, and should not be given immediately before or after strenuous exercise.



Horses that have been given a tranquiliser for example due to veterinary treatment, should not be given crib-feed or roughage while still tranquilised, nor should horses be given roughage immediately after strenuous exercise, as this may increase the risk of constipation of the esophagus.

Care should be taken not over-feed horses with crib-feed. The ration should be cut down on days when the horse is not used/trained, as the horse otherwise may be at risk of developing laminitis or tying-up.

All horses should, independent of their use, be given a sufficient amount of roughage to resemble their natural feeding pattern as far as possible, as a guideline the daily supply should be at least 1.2 kg of hay pr. 100 kg horse or 2 kg dry wrap hay pr. 100 kg horse. Horses should have access to roughage both when housed and when in paddocks. If roughage is not fed or fed in insufficient amounts, this may harm gut health, result in colic due to eating sand, and induce the development of certain other abnormal behaviors.



Roughage should be feed at ground level, since this best resembles the normal feeding position of the horse and will support the health of the respiratory tract. If hay nets are used care should be taken to prevent legs from becoming entangled in the net.

Any feed changes should be done gradually over some days.

Feeding equipment should be kept clean and be placed in a way that minimizes contamination. In group housing or in paddocks there should be sufficient feeding space to avoid competition and aggression among horses.

The body condition of the horses should be monitored to avoid both too thin and too fat horses. Guidelines for body condition scoring are readily available on the internet.

All feed should be stored under hygienic conditions, and be of good quality and free of mould and dust.

6.7. Water

Horses' need for water depend mainly on the level of activity, ambient temperature, and water content of the feed. A horse will typically drink 5 – 10 % of its body weight daily. Lactating mares and horses with a high level of activity such as race horses may drink more.

Horses prefer to drink from a water surface, but learn without difficulty to drink from a water cup. When water cups are used, they should have a water flow of at least 8 liters pr. minute in order to ensure sufficient water intake.

Horses should preferably have free access to water, and should not be without water for more than four hours. This also applies to horses in paddocks and on pasture. During winter conditions with temperatures below zero extra precautions should be taken to ensure this for example by providing heated watering equipment or regular supply of wet water.



Watering equipment should be kept clean, and be placed in a way that minimizes contamination. In group housing or in paddocks and on pasture there should be sufficient drinking space to avoid competition and aggression among horses.

7. Handling and training

Persons that responsibility for the use, handling or training of horses should have appropriate knowledge, experience and skills so that they know and understand the natural behavior of horses and their specific expressions.

Horses should be handled from a very early age. Young foals should learn to be led by a head-collar, be touched all over the body, and to have their feet lifted. Young foals are not so strong and therefore easier to handle than older horses, thus habituation to being handled is safer for both animal and man.

The visual field of horses should be kept in mind when handling horses that are not yet familiar with humans or when in an unknown environment. Handlers and trainers should be aware of the flight zone of horses in order to avoid flight reactions from the horse.

Training for different activities, such as riding or driving, should not start until the horse has reached a developmental stage, where it is capable of performing the activities, without risk of injury or distress in either the short or long term. No fixed age can be set for this, as it will vary not only between or within breeds, but also according to the training intensity.

Methods, which are normally applied when training horses, are negative and positive reinforcement. When negative reinforcement is used, a pressure is applied to the horse, for example through the reins or the legs of a rider. For this method to be effective and not cause confusion, it is important that the pressure is not too strong, and that it stops immediately, when the horse respond correctly. In positive reinforcement the horse is given a reward, immediately when it responds correctly. When used correctly and with appropriate patience, both methods are suitable to teach a horse to react in a correct way.



Training methods should be appropriate to the age and training stage of the horse. Especially for young horses a gentle and patient training is important to maintain their mental and physical fitness. Inappropriate training methods may have a negative impact on the welfare of the horse, and such methods may also lead to aggressive or conflict behavior, which may compromise the safety of those handling the horse. Apart from rough and brutal methods inappropriate training methods also include situations, where the trainer is inconsistent and give conflicting signals to the horse. As an example it will confuse the horse, if it responds correctly to pressure from bit or legs, and the pressure is not released, or if an unwanted behavior is not punished immediately every time it occurs.

The hyperflexion of the neck of horses could lead to pain or distress in horses. Prolonged, intensive or high-grade hyperflexion should be avoided.

When horses are handled and trained, it may occasionally be necessary to punish the horse, when it shows an unwanted behavior, for example bites or kicks the walls of its box when begging for a treat. Depending on the type of behavior the punishment will be different. Unwanted behavior such as biting should be punished immediately and consequently, so that the horse associates the unwanted behaviour with the punishment. A punishment should always be justified.

The company of a calm and confident horse could prove beneficial, when a horse has to be habituated to an unknown environment, for example being loaded for transport, or to a novel object, which the horse could see as dangerous.

Even though horses are social animals and prefer to be in the company of other horses, it is necessary to train a horse to be on its own. In the beginning the isolation may stress the horse. Stress reduces learning ability, and therefore training for other abilities should not take place, until the horse is confident with being alone.

All horses should be trained to be tethered for the time necessary to be groomed, have hoof care etc. The tether should have a quick release system. Horses that are not yet used to be tethered should be supervised.

Attention should be paid to the ground on which horses are trained; it should be designed and maintained in a way, which reduce factors that could lead to injury.

8. Equipment

8.1 Saddlery, harness etc.

All equipment used to ride, drive, lunge, or in any other way handle a horse (such as head-collar, saddle and girth, bridle, bit, martingales, breastplate, driving harness, boots, and blinkers) should be kept clean and well maintained. It should be fitted correctly in order to avoid injury, pain or distress, and it should be checked before use.

Excessive restriction, for example from side-reins during lunging or pressure from a very tight noseband should be avoided. As a guideline it should be possible to pass two fingers between the noseband and the nasal bone of the horse. A special gauge has been designed to streamline this measurement.

Implements such as whips, spurs, sliding reins and German martingales are used as aids to make a horse understand what to do. These implements should be used with care and patience, and they should never be used in a forceful way, which causes pain or distress to the horse. On rare occasions it may be necessary to reprimand a horse for example using a whip. This should be without delay and without excessive power.



8.2 Mechanical equipment

Mechanical equipment such as horse walkers and treadmills are used for exercise of horses. This equipment should be maintained in good working order according to instructions from the manufacturer. It should have both an emergency stop and a device, which automatically stops the equipment, if a horse falls or tries to bolt. When the equipment is in use, horses should be supervised by a person, who has the capacity to act



correctly in an emergency.

8.3 Restraint equipment

In certain situations it may be necessary to restrain a horse for its own safety, for the safety of other horses or those, who handle the horse. Means of restraint could for example be the use of a twitch or a restraining box for veterinary treatment, or the use of hobbles on a mare during natural breeding to protect the stallion.

When a horse need to be restrained the mildest method should be applied, and only for the time absolutely necessary. Restraint should never be a substitute for good management. For example a twitch should not be used on a horse to ease braiding, and hobbles should not be used to prevent a horse from kicking the side of its box. In the latter case the reason for kicking should be sought and corrected.

9. Doping

Most sports organisations have very comprehensive rules on doping. This includes withdrawal periods for medicines used for treating disease or injury, which go beyond the time of full recovery, and a ban on the use of substances, which would normally not imply a welfare problem. Thus animal welfare concerns only cover some aspects of the sports organisations' rules on doping.

Administration of any substance or method, which aims at improving the performance of a horse beyond its capacity or disguising a disease or a painful condition, should be avoided. This does not only include inappropriate use of medicine, but also for example methods that either increase or decrease limb sensitivity.

10. Use – sport, leisure, tourism

Horses are used in a number of different contexts, such as sport, leisure, tourism, in therapy and as working horses. No matter the context in which a horse is used, the recommendations in these guidelines will apply.

When purchasing a horse consideration should be given to the cost of keeping a horse, and to the intended use of the horse compared to the skills of the person, who is going to use the horse. It is advisable that persons, who do not have appropriate prior experience in keeping or using a horse, seek appropriate advice prior to purchasing a horse.

Below are mentioned some of the challenges, which horses or their owners may face in relation to sport and tourism.

10.1 Sport

Most sports organisations (racing, show jumping, dressage, eventing, endurance riding, driving, polo etc.) have standards or codes of conduct, which aim to help ensure the welfare of horses while they are taking part in competitions or races.

This may include rules on what tack can be used, on training methods during warming-up for the competition, on when pregnant mares can no longer compete or race, on use of whip and spurs, and on illegal substances or methods (doping).



These standards and codes are only enforced during competitions or races, but they should also be respected during daily training and handling of the horses.

No horse should be entered in a competition or race until the preparatory training has made it is mentally and physically ready.

10.2 Tourism

Horses are used in connection with tourism in different ways. This may be to carry tourists to sights of interest, including horse trekking with or without a guide, or as carriage horses to drive tourists on sight-seeing tours etc.

Tourists may not have sufficient knowledge about horses to spot welfare problems, they may not see the welfare of the horse as their responsibility, or they may repress, what they see, because they want to go on the sight-seeing tour. It is therefore essential for the welfare of these horses that the persons responsible for them have the necessary knowledge and willingness to ensure that the horses' needs for rest, water, feed, protection from inclement weather, a well-fitting equipment and hoof care are met.



11. Mutilations and trimming

11.1. Tail docking, trimming and nicking

Docking the tail and trimming the whiskers of horses should be prohibited; the same should apply to the nicking of tendons to affect tail carriage. Docking of a horses' tail may only be carried out for veterinary reasons.

Tail docking should be prohibited



11.2. Other mutilations

No other mutilations should be performed on horses, except castration, which should only be carried out by a veterinarian and performed under anaesthesia followed by long lasting analgesia.

12. Breeding

12.1 breeding methods

Horses should not be bred in a manner that may entail suffering or affect their natural behaviour. Horses with a hereditary of diseases, defects or other traits that may inflict pain, suffering or other defects in the offspring should not be used for breeding. Horses with a high frequency of difficulty giving birth or producing offspring that are born dead should also not be used.

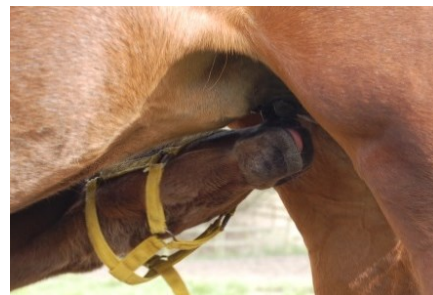
A female horse may become sexually mature around one and a half to two years. However, if bred that early it may compromise their growth, thus breeding should not begin until the mare is three to four years old.

12.2 Foaling and weaning

The mare should be kept in the environment where foaling is to take place approx. one month before foaling, in order for her to produce antibodies related to the environment. Vaccination against influenza and tetanus should for the same reason take place approx. three weeks before expected time of foaling. Vaccination against Herpes Virus type 1 and 4 should also be considered depending on the disease situation in the area, where the horses are kept. The antibodies are transferred to the foal via colostrum (antibody-rich milk produced the just before and the first few days after foaling). Colostrum protects the foal from possible disease agents in the environment. It is therefore important that the foal drinks milk from the mare within a few hours.

If not born outside on pasture, the mare and foal should be given time in a paddock or on pasture already from day one. Care should be taken to ensure that the fence is clearly visible to the foal, which may not be the case for electrical fences.

Weaning may be a stressful experience for both mare and foal and should be carried out gradually. This could for example be done by placing mare and foal in adjacent boxes during the night while letting them out together in a paddock or on pasture during the day for a week or two.



Weaning should preferably not take place the foal has reached five months of age.

13. Assessment of the welfare of horses

Horse owners or those responsible for premises, where horses are kept, may wish have the welfare of the horses under their responsibility assessed. A protocol ([AWIN welfare assessment protocol for horses](#)) for this purpose has been developed. It is important to note that correct use of this protocol requires adequately trained assessors. It is also important to note that such an assessment can't replace daily inspection or a clinical examination, when disease or injury is suspected or identified.

14. Euthanasia and slaughter / end of life considerations

Although some horses die of natural causes or due to accidents, horse owners may at some point have to face the difficult decision to end the life of their horse.

The options are euthanasia or slaughter. Slaughter is an option, unless the horse has been declared as not intended for slaughter for human consumption. Euthanasia will typically take place on the premises, where the horse is kept, whereas slaughter will involve transport for a shorter or longer distance, and maybe even through a market. Before the decision for slaughter is taken it is necessary to assess whether the horse is fit for the intended journey to the slaughter house. Furthermore, for animal welfare reasons transport of slaughter horses over long journeys should be limited as far as possible.

Euthanasia should always be performed, when a horse is in severe suffering, which does not respond to treatment, or when a horse has a chronic, incurable condition, which cause pain or distress.

A horse should never be abandoned.

15. EU legislation relevant to horses

Horse owners and those responsible for the keeping of horses should make themselves acquainted with the following EU legislation, which is relevant to horses:

- ✓ Commission Regulation (EU) 2015/262 laying down rules pursuant to Council Directives 90/427/EEC and 2009/156/EC as regards the methods for the identification of equidae (Equine Passport Regulation)
- ✓ Council Regulation (EC) No. 1/2005 on the protection of animals during transport and related operations
- ✓ Council Directive 2009/156/EC on animal health conditions governing the movement and importation from third countries of equidae (codified version) (as transposed into national legislation)
- ✓ Council Directive 98/58/EC concerning the protection of animals kept for farming purposes (as transposed into national legislation)

- ✓ Council Regulation (EC) No. 1099/2009 on the protection of animals at the time of killing (including possible stricter national legislation)

16. References

1. Removing the Blinkers: The Health and Welfare of European Equidae in 2015. A World Horse Welfare and Eurogroup for Animals report
2. European Parliament resolution of March 2017 on responsible ownership and care of equidae (2016/2078(INI))
3. Code of Practice for the Welfare of Horses, Ponies, Donkeys and their Hybrids, Department for Environment, Food and Rural Affairs (DEFRA), 2009
4. Animal Welfare guidelines for Horses, Ponies and Donkeys, Irish farm Animal Welfare Advisory Council
5. Equine Industry Welfare Guidelines Compendium for Horses, Ponies and Donkeys, National Equine Welfare Council (NEWC), UK
6. Djurskyddsmyndighetens föreskrifter och allmänna råd om hästhållning (18. juni 2007)
7. föreskrifter om ändring i Statens jordbruksverks föreskrifter och allmänna råd (SJVFS 2010:45) om träning och tävling med djur (12 december 2013)
8. HästSverige, homepage (<http://hastsverige.se>)
9. Leitlinien – Tierschutz im Pferdesport, Bundesministerium für Verbraucherschutz, Ernährung und Landwirtschaft, 2004
10. Leitlinien zur Beurteilung von Pferdehaltungen unter Tierschutzgesichtspunkten
11. Gids voor Goede Praktijken, SRP Sektorraad Paarden, 2011
12. Hold af heste. Rapport affives af Justitsministeriets arbejdsgruppe om hold af heste. Januar 2006 [Keeping of horses. Report from the Ministry of Justice working group on keeping of horses, January 2006]
13. Hestens velfærd i Danmark, Dyrenes Beskyttelse, 2013 [Horse welfare in Denmark, Danish Society for the Protection of animals]
14. DJF Rapport Opstaldning og hold af heste Danske anbefalinger, 2002. [DJF (now Aarhus University) Report on the stabling and keeping of horses Danish recommendations]

15. E. Søndergaard & J. Ladewig, 2004. Group housing exerts a positive effect on behaviour of young horses during training. *Appl. Anim. Behav. Sci.* 87, 105 – 118
16. OIE Terrestrial Animal Health Code, chapter 7.12, Welfare of working equids.
17. Council directive 98/58/EC concerning the protection of animals kept for farming purposes
18. The welfare of animals during transport (details for horses, pigs, sheep and cattle). Report of the Scientific Committee on Animal Health and Animal Welfare. Adopted on 11 March 2002
19. Rapport fra Aarhus Universitet "Udegående heste I vinterperioden: Hvilke faktorer har betydning for anvendelsen af læskure", 2014 (Report from Aarhus University "Horses kept outdoors during the winter period: Factors of importance for the use of purpose-built shelters", 2014)
20. AWIN welfare assessment protocol for horses
21. Bekendtgørelse nr. 304 af 30. marts 2017 af lov om hold af heste (Danish Act on the keeping of horses, codified version)
22. Forskrift om velferd for hest (Norwegian regulation on the welfare of horses)
23. FEI code of conduct for the welfare of the horse
24. ISES code of conduct - Ensuring Welfare, Safety and Performance for Horse and Rider.
25. Code of practice for the welfare of equidae. The Scottish Government, 2009
26. Code of practice for the welfare of Equines. Welsh Assembly Government, 2008