

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



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The guide presents good animal welfare practice for the keeping, care, training and use of horses. It is not meant to replace, contradict or put in question any existing legislation, charter, guide or guidelines.

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1. Introduction

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

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 European 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 a chapter on welfare of working equids to the Terrestrial Animal Health Code in May 2016.

Based on the above background and the principle that every animal has to have a “life worth living”, it is necessary, overall, to minimise their negative experiences and to provide them with opportunities to have positive experiences. This guide on the keeping, care, training and use of horses has been produced to help achieve this.

Horses are kept for a variety of purposes, such as sport, racing, pleasure, tourism, breeding, therapy, and meat production. The regulatory provisions on the keeping and care of horses differ between Member States. Only a few have adopted specific legislation on the protection of horses. In some Member States 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 the EU’s horse population ranges from approx. 4 million to approx. 7.7 million.

2. Scope

This guide is addressed to every individual, both professional and non-professional, who owns one or more horses, has horses in their possession or in any other way is engaged in the keeping, care, training and use of horses. It is the responsibility of the owner or keeper of one or more horses to be aware of the requirements of horse welfare, and thus manage their horse or horses in an appropriate manner.

Although this guide in general applies to all categories of horses, it does not specifically address working horses, as these are already covered by OIE chapter 7.12 of the OIE Terrestrial Animal Health Code. The guide does not address donkeys and donkey hybrids, as they may have behaviours/needs different from horses. (See Guide to good animal welfare practice for the keeping, care, training and use of donkeys and donkey hybrids).

This guide addresses areas where there is no specific EU legislation on horses. This means that transport; methods of killing, including slaughter; identification and registration; and zootechnical and genealogical matters are not addressed. Nor does this guide address horses that are kept under wild or semi-wild/feral conditions.

In this guide the term “horse” is used to cover both horses and ponies.

3. Biological characteristics and behaviour

3.1 Ancestry

Today’s domestic horse, the Przewalski’s horse and other feral or wild horses such as the now extinct tarpan, share a common ancestor. Knowledge on natural 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.



Photo 1. Knowledge on the natural behaviour of horses derives mainly from studies of feral horses.

The horse was domesticated more than 5500 years ago. Although certain characteristics, such as size, type, colour, feed conversion, and temperament have changed, horses have retained much of their ancestor’s behaviour, e.g. social and feeding behaviour. The horse is adapted through evolution to a life as a prey animal living on open plains; this is reflected in the behaviour of horses, and the way their senses have developed.

3.2 Vision

Horses have a wide-angled vision, which enables them to detect movements almost all around them. It is very important to appreciate that horses’ vision and interpretation of visual images are markedly different from that of humans.

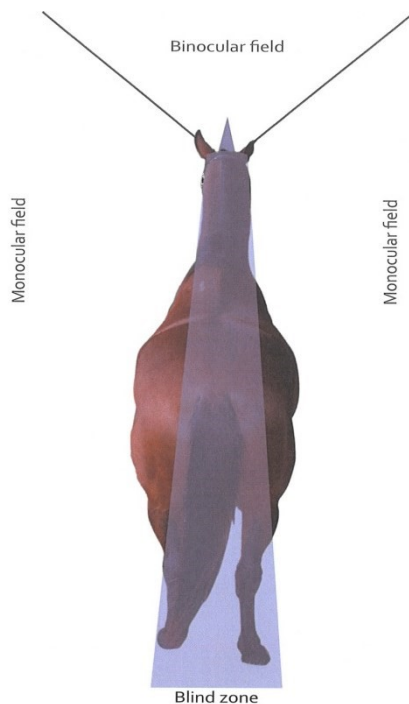


Photo 2. The field of vision of an equine, showing the binocular vision in front, the monocular vision at the side, and the blind spot behind and underneath the equine.

There is a small “blind area” just behind and underneath a horse. As the eyes are not very mobile, horses need to move their heads to see what is happening in the area of the blind spot.

There is also a small blind area in the shape of a triangle in front of the muzzle, which means that horses need to move their head to see what they eat, but they also feel it with sensitive nerve receptors in the skin connected to their whiskers.

In the visual field where horses see with both eyes (binocular vision) they are able to see objects accurately close by and at a distance. This type of vision makes it possible for horses to identify feed items (vegetation) in their nearby surroundings, and at the same time detect possible dangers at a distance.

3.3 Flight reaction

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 or unfamiliar occurrences may cause panic reactions, such as kicking or flight reaction, even in the most confident horse.

3.4 Hearing

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 prefer to stay in visual contact with each other. If one horse is frightened and tries to escape a possible danger, others normally follow. Likewise, a calm and confident horse may have a calming influence on a fearful or shy horse.

3.5 Social interaction and comfort behaviour

Horses are gregarious/herd animals. Under natural conditions horses live close together in stable groups. The groups typically consist of one, or sometimes more than one, 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 social order, which is challenged when new members are introduced. A new social order is typically formed within a few days to weeks. Living in stable groups has a number of advantages, mainly in relation to social transmission of behaviour, seeking feed and water, and a defence strategy to avoid or minimize encounters with predators. As an example, all horses of a group rarely lie down together. One will remain standing and guard the group. Horses will generally become anxious and insecure when isolated from other horses. In domestic 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 are easier to handle and train than young horses kept individually.



Photo 3: Flehmen enables the horse to investigate a scent more closely



Photo 4: Social grooming is a highly prioritised need for horses

Horses communicate through senses of vision, sound, smell, posture and touching. For example, horses may show the flehmen response when investigating odours and tastes of particular interest. 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. Young horses who are kept isolated have difficulty in engaging with other horses if introduced into a group at a later stage.

Horses carry out different types of comfort behaviour. Comfort behaviour is exhibited even in horses who are groomed regularly and 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 includes nibbling with the teeth, scratching with a leg (typically a hind leg), rubbing against an object, rolling in sand, mud, snow etc., and social grooming, where two horses groom each other (typically on the withers or back).



Photo 5. Scratching with a leg.



Photo 6. Rolling in sand.

Although horses are social animals, they have a social space, which defines the distance that they wish to keep from 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 young horses appear to have a very narrow or less developed 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.



Photo 7. Horses standing close to keep insects away from each other's head.

Horses have different phases of sleep. In particular, horses require a phase of sleep during every 24hour period where they are lying down on their sides with their limbs extended and their muscles relaxed. To achieve this they need to feel safe, have enough space and a dry lying area. It is important to keep this in mind for the size and type of accommodation for horses.



Photo 8. Horses need to lie flat on their side to enter deep sleep. The natural position is to extend the legs, neck and head.

3.6 Foraging and need for moving

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 to move. If they are kept in a restricted area for a certain time, which limits their ability to move, they may express this need abundantly once they are allowed sufficient space. Especially for foals and young horses, free movement and playing with other horses 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. 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 have not been digested in the small intestine.

3.7 Abnormal behaviour

Abnormal behaviours are seldom or never seen in horses that live under natural conditions. Abnormal behaviour is a sign that the environment and/or the conditions, in which horses are kept or have been kept, do not fulfil their needs. Permanent dysfunction of the central nervous system in response to stressful conditions may mean that developed stereotypies may not resolve despite later changes to the environment or conditions. Many abnormal behaviours are stereotypies such as crib biting, wind sucking, stable walking, weaving and auto-mutilation (e.g. biting themselves). Horses may also exhibit compromised welfare in subtler ways such as becoming apathetic and withdrawn.



Photo 9. Crib biting may be performed on any suitable surface

Other abnormal behaviours may be normal behaviours, which occur with an abnormal frequency such as aggressive behaviour. Development of abnormal behaviours differs between individuals. It is a misunderstanding that stereotypies are contagious. If horses in the same stable develop the same abnormal behaviour, this most likely reflects that they are kept under the same suboptimal conditions. In addition, related horses may share the same stress-sensitivity.

4. Contact with other horses

As mentioned above, horses are gregarious animals, and lack of social contact with other horses both early and later in life may cause development of different abnormal behaviours and lack of development of normal social behaviour. Horses prefer full physical direct contact in paddocks, on pasture or in group housing.



Photo 10. Social contact is important for horses.

It is recommended that horses, at least during a part of the day, have full physical contact with 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 normal social behavioural patterns, including learning to read the signals of other horses. Horses should always be able to at least see other horses.

5. Accommodation

5.1 General considerations

The need for social contact with other horses 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, at all times, the horse is able to lie down easily, rest in a natural position (see photo 8), turn around, get up unimpeded, and stand in a natural position.

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 of being thoroughly cleaned and disinfected.

Windows in accommodation for horses should be made of unbreakable glass or be protected by an appropriately constructed grid or the like to prevent horses from breaking the glass and injuring themselves.



Photo 11. Window with a grid.

The lying area for horses should be non-slippery and 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. It is recommended that doors should be at least 1.2 metres wide for horses and 1.1 metres wide for ponies, and they should either be sliding doors or open outwards. Doors to individual boxes or group housing systems should be fitted with devices that fasten on both top and bottom.

The indoor height should allow the horses to stand in their natural position and carry out normal head movements.

When accommodation for horses is designed, constructed or refurbished, the risk of fire should be taken into consideration. This is especially important with regard to electric installations. The materials used should, where possible, be fireproof. The person responsible for the horses should have a contingency plan in case of fire or natural disasters (e.g. floods).

5.2 Stable - indoor housing

The most common indoor housing system is individual (loose) boxes and, in some regions, tie-stalls. However, group housing is becoming more popular, especially for young horses.

5.2.1 Individual (loose) boxes

Individual (loose) boxes should be dimensioned to fit the size of the horse, so that the horse can lie down in a natural lateral position (see photo 8), turn around and get up unimpeded, and stand in a natural position. Boxes for foaling or boxes for a mare with foal at foot need to be larger than boxes for single horses. When considering space requirements, the time the horse spends in the box should be taken into account. The box should be larger if the horse is stabled for a major part of the day. The upper part of partitions between boxes should not be solid, but allow horses in neighboring boxes to see each other and allow for adequate ventilation. 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 faeces.



Photo 12. Individual boxes, which allows horses to touch each other.



Photo 13. Individual boxes, which allow horses to see each other.

5.2.2 Group housing systems

In group housing systems the total floor area should allow free movement, sufficient access and space at feeding and watering stations, and ensure a dry bedded area large enough to allow all horses to lie down undisturbed at the same time. Fittings to allow temporary tethering of horses, for example when a concentrate ration is fed, should be considered. Care should be taken to select groups of horses that are compatible. Ill or injured horses or horses with deviating behavior (for example aggressiveness) should be managed accordingly and group housing may not be suitable for such individuals. Facilities for temporary separation of individuals should always be available. The design of the group housing system should ensure that all horses are able to move away from each other and to access feed and water at any time. Dead-ends and sharp corners should be avoided to prevent horses from being trapped.



Photo 14. Horses in a group housing system with access to an outside run.

5.2.3 Tie-stalls as a housing system

Tie-stalls severely restrict a horse's movements and, as the horse is often tied with the head up to a wall, they also restrict the horses' ability to see what is going on around them. This housing system is not recommended and should 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 extended. The tie-stall should be long enough to accommodate the horse within the stall and also allow room for a crib and access to water.

Except at the head of the horse the partitions should have a height approximately similar to the height of the horse at the withers. Partitions should be solid and extend to the full length of the stall, in order to prevent horses in neighbouring tie-stalls from kicking 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 the head fully on the floor. Measures should be taken to avoid a leg being trapped in the tether. This can be done by passing the tether through a ring or hole, with the rope being weighted in such a way as to keep the rope reasonably tight whilst allowing the horse sufficient movement to reach its feed and water and to lie down.

5.3 Indoor climate

The indoor climate is important for the welfare and health of horses. An inappropriate indoor climate can be damaging, especially to the respiratory system of horses, and the benefit of fresh, clean air should not be underestimated. Dust levels, relative air humidity, temperature and gas concentrations should therefore be kept at levels not harmful to the horses through the provision of proper and adequate

ventilation – ideally natural although in some cases forced/mechanical systems may be required. These should give a good and evenly distributed airflow through all parts of the horses' accommodation without unnecessary draught.

5.4 Light

During normal daylight hours, 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. As a guideline, the light levels should be bright enough for a human to be able to easily read a newspaper. 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 periods of light and dark. As a guideline, the dark period should be at least 6 hours and the light period at least 8 hours. However, this does not apply to horses kept outside.

5.5 Noise

Noise in stables should not exceed a level and frequency such that it affects the horses' health or welfare in a negative way. In indoor accommodation, any exposure of horses to mechanical, constant, sudden or loud noise should be avoided.

6. Turnout

Horses should be protected against adverse weather conditions, as well as against insects and possible predators as far as reasonably practicable.

6.1 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 protection from flying insects, and in winter to protect them against wet, windy and cold conditions. The shelter should be large enough to comfortably provide protection to all horses at the same time.

Sufficient shelter may be provided by the natural surroundings, such as trees, hedges or other natural vegetation or by purpose-built shelters.



Photo 15. Shelter should be large enough to provide protection to all horses at the same time

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

6.2 Pasture / paddocks

It is recommended that all horses should be given daily access to paddocks or pasture, where possible together with other horses, in order to fulfill their need for free movement and social contact. However, there may be situations where veterinary advice or extreme weather conditions make this contradictory.



Photo 16. It is recommended that horses are given daily access to a paddock or pasture, where possible with other horses.

Paddocks and pastures should be well drained in order to avoid muddy conditions as much as possible. 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 an appropriate 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. The distance between posts and rails/wires and between rails/wires will also depend on the size of the horses. Barbed wire should not be used.

As a guideline, there should be at least 330 m² of paddock per horse, and no paddock should be less than 800 m² when only used for turnout. In order to supply enough grass pastures need to be much bigger.

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, i.e. until aggressive interactions have ceased, and the horses resume feeding, when they are grouped together in a paddock or on pasture. When new horses are to be introduced into an existing group, it is recommended that the horses are pre-exposed to each other, e.g. in neighboring boxes or paddocks, before mixing.

Tethering on pasture is not recommended. It restricts the free movement of the horse, and it does not allow for social contact with other horses. Furthermore, there is a risk that tethered horses will become entangled in their tether and injure themselves.

The use of hobbles should be discouraged.

7. Care

7.1 Knowledge

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

7.2 Identification and registration

In the European Union provisions as regards the methods for the identification and registration of equidae have been adopted.

The provisions on identification and registration of horses are complex, and persons responsible for horses are therefore referred to seek more thorough information from the competent authority dealing with this in the Member State where the horse lives.

7.3 Inspection

All horses, including those in paddocks and on pasture, should be inspected at least once a day and preferably more often. 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 the horse is in pain, veterinary advice should be obtained without delay. Where necessary ill or injured horses should be separated in suitable accommodation.

7.4 Infectious diseases and biosecurity

Spread of infectious diseases is one of the main reasons for reduced welfare, illness and mortality in horses and a cause of significant financial loss to the horse industry.

7.4.1 Prevention of spread of infectious diseases

To prevent spread of infectious disease it is always recommended to separate any horse with clinical signs of disease from other horses. Horses affected by respiratory infectious disease often seem generally unwell, not eating or drinking normally. Other signs can be: high body temperature (fever), increased respiratory rate, coughing, nasal discharge, swollen lymph nodes and neurological problems. Horses affected by infectious skin disease show abnormality of the skin consistent with skin infection, patchy loss of hair, skin irritation etc. All types of infectious disease should be handled according to the recommendations in this chapter.

As all infectious diseases have an incubation period (time from when the infection enters the body to the horse showing signs of disease) it is recommended to quarantine newly arriving horses from horses permanently stabled at a premises for an adequate period of time (as a minimum 10-14 days depending on the health status of the horses). Vaccination status of newly arrived horses should be verified. The temperature of horses in quarantine should be monitored daily and diagnostic tests to rule out infection or carrier status can be performed.

Cleaning and disinfection of stables and transport vehicles should be carried out between occupation by different horses. It should be ensured that people managing the horses understand basic hygiene principles. Equipment should not be shared between horses to prevent the spread of disease, e.g.

strangles or ringworm. Horses should not be allowed to drink from communal water sources when assembled in new groups (shows, competition, sales etc.).

7.4.2 Limitation of outbreak of infectious disease in a horse population

Depending on the type of disease causing the outbreak different biosecurity measures should be taken to limit and control spread within the population at risk. All horse owners should follow recommendations set from authorities or professional organisations as a minimum standard. This includes separation of ill horses, quarantine of affected premises or regions, and implementation of standards for hygiene and disinfection, transport and assembly of groups of horses (event, shows etc.).

7.5 Veterinary care, medical treatment

A horse that appears ill or injured should be given appropriate care without delay. If the horse does not rapidly respond to such care, a veterinarian should be called to examine the horse. Facilities for temporary separation of ill or injured horses should always be available.

General signs of illness can include lack of appetite, depression, change in behaviour, colic, diarrhoea, coughing, sneezing, discharge from eyes or nose, dermatitis, loss of hair, itchy skin, lameness, back pain, reluctance to move, head bobbing or facial mimic/body posture indicating pain.

Medication of horses should be based on examination, evaluation of clinical signs and adequate diagnostics performed by a veterinarian. Only medication prescribed by a veterinarian for a particular horse should be used for that horse.

In case of chronic medication, the prescribing veterinarian should assess the horse regularly.

In particular, care should be taken when administering antimicrobials to horses to counteract resistance against medicines. Careful veterinary examination including adequate diagnostics should be performed.

Medication and treatment of horses should always be according to standards of best practice and never compromise the overall welfare of the horse. Side effects associated with treatment should be reported to the appropriate authority.

7.6 Routine health care

It is recommended that horses have a veterinary examination at least once a year. For geriatric horses or chronically ill horses this should be more frequent.

7.6.1 Vaccination

Vaccination against tetanus is always recommended. Horses are very susceptible to infection with the bacterium *Clostridium tetani* (tetanus). The 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 new-born 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 equine influenza is mandatory for horses taking part in most competitions and is also recommended for other horses, especially those that have regular contact with horses from other premises.

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

7.6.2 Endoparasite monitoring program

Intestinal parasites can be a welfare problem causing weight loss, colic and even death. This is especially the case for foals and young horses, and immunocompromised horses. A monitoring and targeted programme should be established according to advice from a veterinarian.

Appropriate pasture or paddock management practice, in particular collection of faeces, is necessary to reduce the parasitic burden and should always be of high priority in an endoparasite monitoring and targeted deworming programme. Horses kept in permanent paddocks where faeces is not removed regularly have an increased risk of infestation.

The use in healthy adult horses of an anthelmintic without previous laboratory tests or other relevant diagnostic work to establish parasite burdens should be discouraged to counteract development of anthelmintic resistance.

7.6.3 Hoof care

It is recommended that only trained professionals should trim and shoe horses. The hooves of a horse should be trimmed at regular intervals. 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 disease or injuries, such as thrush, cracks or foreign bodies (stones for example) at appropriate intervals. If there are signs of hoof problems, such as lameness, hooves should be checked immediately.

7.6.4 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. Dropping feed (quidding) is another sign of dental problems.

Horses may have painful dental or oral pathology without showing any obvious signs of discomfort and a number of dental and non-dental problems related to the oral region and eating habits may develop during the lifespan of a horse. It is advisable to perform an oral examination including check of teeth regularly and at least annually. It is recommended that only trained professionals should carry out this examination and any correcting measures.

7.7 Feed

Horses should be fed a wholesome diet of a sufficient quantity to maintain them in good condition (normal weight) and to avoid malnutrition, poor condition or obesity.

Grass is an essential feed source for horses and grazing should be offered to all horses on a daily basis whenever possible.

Horses' feed ration should always contain sufficient roughage such as hay, haylage, straw, dry wrap hay, if they are not fed fully by grass. The horse should be fed such rations in a way that ensures sufficient chewing time throughout the day and night, as the horse's digestive system is adapted to a more or less continuous intake of feed with high fibre content.

Chewing promotes production of saliva that acts to neutralise the continuous production of acid in the stomach. To prevent stomach ulcers and enhance gut health horses are dependent on near-continuous access to roughage.



Photo 17. Horses should have access to roughage both when they are stabled and in paddocks without grass.

A guideline for daily supply of roughage should be at least 1.2 kg of hay per 100 kg horse or 2 kg dry wrap hay per 100 kg horse, although this may need to be modified in the case of those prone to weight gain and/or laminitis.

Consuming roughage should resemble the natural feeding pattern of a grazing horse as far as possible. Horses should have access to roughage both when they are housed, in paddocks or turned out in areas without grass. If the horse has prolonged time without access to roughage (3-4 h), it may affect the overall health of the horse negatively (e.g. disposition for colic, stomach ulcers) and can cause the horse to develop abnormal and unwanted behavioural patterns (e.g. crib biting, eating sand).

Many horses can live on grass or roughage alone, supplemented with vitamins and minerals if necessary. Some groups such as sport horses, young, growing horses or horses meant for breeding purposes may have a need for a higher energy consumption due to their level of exercise or basic needs. Therefore, they may need to be supplemented with high energy feed (concentrate).



Photo 18. Some groups of horses may need to be supplemented with high energy feed.

High-energy feed should be given in small rations divided throughout the day (as a guideline at least 23 meals per day depending on the amount of feed being given).

High-energy feed should not be given immediately before or after strenuous exercise and the amount should be adjusted to the current level of work for the horse.

All feed sources should be of good hygienic and nutritional quality and stored under hygienic conditions. Dusty, mouldy or rancid feed should not be fed.

Feeding equipment should be kept clean and placed in a way that minimises contamination.

Any feed change should be done gradually over a period of days.

For group housing or in paddocks there should be sufficient feeding space to avoid competition and aggression among horses.

Care should be taken to make individual adjustments of the daily feed supply based on the body condition score of the horse. See annex 2 for guidelines for body condition scoring.

The problem of obese horses and horses developing metabolic disease and laminitis is a significant and growing threat to horse welfare, and as serious a risk to their health as being too underweight.

7.8 Water

Horses' need for water depends mainly on the level of activity, ambient temperature, and water content of their feed. Horses will typically drink 5 – 10 % of their bodyweight daily. Lactating mares and horses with a high level of activity, such as racehorses, may routinely drink more.

Horses prefer to drink from a water surface, but learn without difficulty to drink from a water cup. When automatic drinking systems are used, they should be checked daily and should have a water flow of approx. 8 liters per minute in order to ensure sufficient water intake.



Photo 19. Horses prefer to drink from an open water surface



Photo 20. Water cups should be checked daily for cleanliness and functionality

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 a regular supply of liquid 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.

8. Handling and training

The welfare of the horse should always be paramount in all aspects of handling and training, both in a short term and long term perspective.

Persons with responsibility for the use, handling or training of horses should have appropriate knowledge, experience and skills so that they know and understand the normal behaviour of horses as well their facial expressions and body language.

Horses should be handled from an early age. However, handling immediately after birth should be avoided as it disrupts mare-foal bonding. Gentle handling (feeding/brushing) of the mare in the presence of her foal has long-term effects in that the foal becomes less fearful towards humans and easier to handle. Foals should learn to be led by a head-collar, be touched all over the body, and to have their feet lifted.

Handlers and trainers should always take the horse's natural flight response into consideration when handling horses.

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

Methods normally applied when training horses are negative and positive reinforcement as well as classical conditioning (i.e. the forming of associations between cues). When negative (subtraction) reinforcement is used, a pressure is applied to the horse, for example through the reins or the legs of a rider and correct behaviour is rewarded through removal of the pressure. For this method to be effective and not cause confusion, it is important that the pressure starts at a low intensity and is maintained or gradually increased until the horse shows the desired response and then stops immediately. In positive (addition) reinforcement, the horse responds to a cue, e.g. a verbal command, and a reward is given immediately, when the horse responds correctly (e.g. the horse comes when called for and receives a carrot). When used correctly and with appropriate knowledge and patience, both methods are suitable to train horses to show desired responses.

Training methods should be adapted to the age of horses and their physical and mental capacity to protect them from pain, suffering, anxiety, injuries and permanent disability.

Insufficient or inappropriate training methods may have a negative impact on the welfare of the horse, and such methods also lead to aggressive or conflict behaviour, which may compromise the safety of the

horse and those handling the horse. Inappropriate training methods also include situations where the trainer is inconsistent and gives conflicting signals to the horse. As an example it will confuse the horse if, when responding correctly to pressure from the bit or rider's legs, the pressure is not released.

Training methods should aim to gradually strengthen the physical and mental ability of the horse. All types of training that may harm the horse physically or mentally or cause anxiety or distress (for example intensive hyperflexion) are considered inappropriate.

When horses are handled and trained, it may occasionally be necessary to correct the horses, when they show an unwanted behavior. Importantly, the cause of the unwanted behaviour should be identified and removed if possible. The method used to correct behaviour should follow the basic principles of learning theory, creating the least possible anxiety or pain for the horse and the best short term and long term results.

In all types of training, excessive force should never be applied. It is the responsibility of the handler or rider to ensure sufficient and updated knowledge about learning theory, training and training methods before applying it to a horse.

The company of a known and calm horse is usually beneficial when a horse has to be habituated to an unknown environment, for example being loaded for transport or being introduced to a novel environment or objects.

Horses are social animals and prefer to be in the company of other horses. If horses are to be socially separated, e.g. for training purposes, it is necessary to gradually habituate them to tolerate social separation. Separation anxiety causes stress and reduces learning ability, and therefore training for other abilities should not take place until the horse is confident with being alone. Social separation should be minimised and should only be used for training purposes under human supervision.

All horses should be trained to be tied for the time necessary to be groomed, undertake hoof care, transportation etc. Horses should be gradually trained to being tied using the principles of negative or combined reinforcement, and in the company of other, calm horses. The tie should have a quick release system. Horses that are not yet used to being tied should be supervised.

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

9. Doping

Administration of any substance or method intended to artificially alter the horse's physical or physiological capacities or to mask health problems, is contrary to the horse's welfare and to the ethics of the horsehuman relationship. International codes (race and sports) set lists of prohibited substances and methods. This does not only include inappropriate use of medicine, but also surgery and other methods that conceal clinical signs or disease, so the horse can train and participate in competitions. An example is medical or surgical interference with limb sensitivity.

10. Equipment

10.1 Saddlery, harness etc.

Tack and equipment used for handling and training of horses should be fitted and adjusted correctly and should not cause harm or be used as coercive measures. All equipment should be kept safe, functional, clean, and well maintained. 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. Special gauges have been designed to streamline this measurement.

Equipment and tack such as whips, spurs, various types of reins and bits etc. are used to provide tactile signals to the horse. This equipment should be used with care and patience and should never be used in a forceful way acting as coercive measures. It is the responsibility of the handler or rider to ensure sufficient and updated knowledge about equipment and tack and the correct use of it before applying it on a horse.

10.2 Mechanical equipment

Mechanical equipment such as horse walkers and treadmills are used for exercising horses.



Photo 21. Horses should be supervised by a competent person at all times when exercised on a treadmill

This equipment should be maintained in good working order according to instructions from the manufacturer. It should have both an emergency stop button and a device, which automatically stops the equipment if a horse falls or tries to baulk. When the equipment is in use, horses should be supervised by a person who has the capacity to act correctly in an emergency.

10.3 Restraint equipment

In certain situations, it may be necessary to restrain horses for their own safety, for the safety of other horses or those handling 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. Use of these should be temporary and have a sound justification.

When a horse has to be restrained the mildest method should be applied, and only for the minimum time necessary. Restraint should never be a substitute for good management, training or habituation of the horse. Where necessary to facilitate safe handling for urgent procedures, sedation applied by a veterinary surgeon would be recommended.

10.4 Rugs

During cold winter months, waterproof and breathable turnout rugs may be used to protect horses from adverse weather conditions.



Photo 22. Horse with a winter rug

Specially designed summer rugs give some protection against insects, but they do not provide adequate heat protection.

If rugs are used, they should be well fitted, checked daily and should be of a type which corresponds to the ambient temperature.

It should be noted that rugs affect the horse's natural thermoregulation, and consideration should be given as to whether a horse actually needs a rug.

11. Working horses

As with any other horses their basic needs have to be fulfilled and capability of workload considered. Please refer to chapter 7.12 on welfare of working equids in the OIE Terrestrial Animal Health Code for detailed consideration of the working horse welfare needs.



Photo 23. Working horses used for agricultural purposes.

12. Horses used for sport, leisure, tourism

Horses are used in a number of different contexts, such as sport, races, leisure, tourism, in therapy, and as working horses. No matter the context in which a horse is used, the recommendations in this guide 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 (and care for the horse, if different). It is advisable that people who do not have appropriate prior experience in keeping or training a horse, seek appropriate advice prior to purchasing or taking on the responsibility of a horse.

Below are some specific points relating to the challenges that horses or their owners may face in relation to sport and tourism.

12.1 Sport

Most sports organisations (racing, riding, driving etc.) have standards or codes of conduct, which aims to help ensure the welfare of horses while they are taking part in competitions.



Photo 24. Show jumping.



Photo 25. Driving.

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

Horses should always be fit for the competitive work they are asked to do. No horse should be entered in a competition or race until the preparatory training has made the horse mentally and physically ready.

12.2 Tourism

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



Photo 26. Carriage horses used in tourism.

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 ignore 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, ability and willingness to ensure that the horses' needs are met, including those for rest, water, feed, protection from inclement weather, well-fitting equipment and appropriate hoof care.

12.2.1 Carriage horses

Carriage horses often work long hours and travel long distances. During the day when at rest, carriage horses should be positioned in the shade or with access to shelter from sun, rain or snow, and provided with roughage and fresh, clean water. Individual water buckets should be provided, as shared water troughs can increase the risk of disease spread.

Ideally any tight harness equipment should also be loosened or, if appropriate, removed during these rest periods. Care should be taken to ensure the carriage is not over-loaded and its wheels and harness are in good condition, so not overburdening the horse. The weight that a horse can pull will be dependent on the terrain, topography, condition of the horse and experience of the horse. It is essential that all harness equipment fits properly and the carriage is balanced.

13. Mutilations and trimming

13.1 Tail docking, trimming and nicking

Docking the tail and the nicking of tendons to affect tail carriage should be strongly discouraged. Docking of horses' tails should only be carried out for veterinary reasons. The trimming of horses' whiskers and inner ear hairs should be discouraged.



Photo 27 and 28. Tail docking and hot iron branding should be strongly discouraged.

13.2 Other mutilations

No other mutilations should be performed on horses, except castration, which should only be carried out by a veterinarian and performed under sedation and local anaesthesia or total anaesthesia, in both

cases followed by long lasting analgesia. Hot iron branding should be strongly discouraged. If freeze branding is undertaken, it should be done professionally.

14. Breeding

14.1 Responsible breeding

Owners have a huge responsibility when considering whether to breed from their horse and should consider why they are breeding instead of buying or rehoming. If too many horses are bred without any intended use, it will create a surplus of unwanted horses contributing to poor horse welfare. Owners should consider whether it is appropriate to breed from their mare or stallion and do their best to ensure they are breeding quality progeny with desirable attributes that are useful. It may not be in the mare's best interest to be used for breeding. Horses with heritable disorders, poor conformation, disagreeable temperaments or those that are injured should not be bred from, if it is likely that any undesirable traits will be passed on to any progeny or that the mare's welfare may become compromised during gestation. Owners, who plan to sell any progeny, should understand the market as well as the costs and resources associated with breeding, and should be confident that they will be able to find a responsible owner to purchase the foal once weaned.

14.2 Breeding methods

Horses should not be bred in a manner that may entail suffering. Horses with hereditary disease, defects or other traits that may inflict pain, suffering or other defects in the offspring should not be used for breeding. Horses that have had difficulty giving birth or have produced offspring that are born dead should also not be used.

Female horses may become sexually mature around one and a half to two years of age. However, if bred that early it may compromise their growth, thus breeding should not begin until the mare is three to four years old at a minimum. Fertility in the mare begins to decline at around 15 years of age. Veterinary advice should always be sought before breeding from the older mare or any mare with a history of difficult pregnancies.

14.3 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. Brood mares should always be vaccinated regularly according to the protocol for the vaccines to have a sufficient level of antibodies. 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 available immediately after foaling).

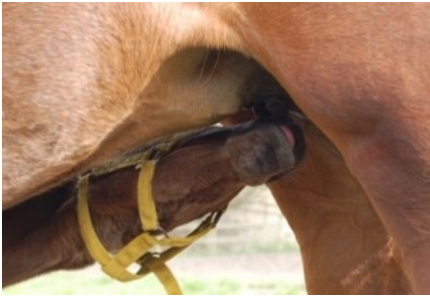


Photo 29 and 30. Foals should drink colostrum within a few hours after birth, and they should be given time in a paddock or on pasture from day one.

Colostrum protects the foal from possible disease agents in the environment. It is therefore vital that the foal drinks milk from the mare within a few hours of birth. If this isn't possible, for example due to a problem with the mare, then veterinary advice should be sought without delay.

Foaling complication is a veterinary emergency: birthing should be monitored to verify the normal foaling stages and if any abnormalities are observed during parturition, a veterinarian should be called.

If not born outside on pasture, the mare and foal should be given time in a paddock 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, so alternative arrangements should be made. The height of the foal should also be taken into account to ensure the fencing will be secure.

Weaning is a stressful experience for both mare and foal and should be carried out in a way to minimise stress. Stress responses appear to be lower where foals are weaned gradually and allowed to have social contact with other foals and adult horses.

Domestic horses are often weaned prematurely compared to the natural weaning age at 10-11 months. Weaning should preferably not take place before the foal has reached six months of age. After weaning, the young horse should be kept in groups with other horses and preferably at least one adult horse.

15. Assessment of the welfare of horses

Horse owners, keepers or those responsible for premises, where horses are kept, may wish to have the welfare of the horses under their responsibility assessed. A protocol for this purpose has been developed ([AWIN welfare assessment protocol for horses](#)). 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 cannot replace daily inspection or a clinical examination, when disease or injury is suspected or identified.

16. End of life considerations

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

The options are killing or slaughter. Slaughter is an option in most European Countries, unless the horse has been declared as not intended for slaughter for human consumption. This will be marked in the Horse Passport (see 7.2 Identification and registration). Killing 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 via 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 slaughterhouse. Furthermore, for animal welfare reasons transport of slaughter horses over long journeys should be avoided or limited as far as possible.

Killing should always be performed when a horse is suffering and is not responding to treatment, or when a horse has a chronic and incurable condition, which causes pain or distress.

A horse should under no circumstances be abandoned or left to suffer.

Annex 1

Glossary

For the purpose of this guide the following definitions are used:

- a) **An olfactory cue** means a chemical signal received by the olfactory system that represents an incoming signal received through the nose
- b) **Hobbles** mean a device, which limits the movement of horses. They usually consist of two leather straps tied around the horse's legs and connected by a short chain or rope. When used on pasture the hobbles are fitted on the pasterns of the front legs of the horse, and thus only allow the horse to move slowly over relatively short distances. Hobbles may also be used as a restraint equipment, e.g. to prevent a mare from kicking the stallion during natural breeding. In this situation, they may be fitted around the pasterns or hocks of the mare with a rope, which passes between her front legs to a strap around the neck.
- c) **Tethering** means to tie a horse to a long rope or chain (the tether) on pasture to prevent it from escaping, if on pasture without an appropriate fence. The tether is connected to the head collar or neck strap of the horse in one end and to a peg stuck in the ground in the other.
- d) **Paddock** means an enclosure, where horses are turned out for exercise with or without grass.
- e) **Pasture** means an area of farmland with grasses, where horses may get all or part of their daily feed supply depending on the time they spend on pasture and its quality.
- f) **Biosecurity** means a set of practices employed to prevent the introduction of infectious organisms into a herd, and their transmission between animals
- g) **Killing** means any intentionally induced process, which causes the death of an animal, this includes slaughter, which is killing of an animal for human consumption
- h) **Separation due to injury** means a temporary physical separation of an injured horse to prevent further trauma from contact with other horses and to keep the horse at rest. To prevent mental stress the horse should be able to see, hear, and if possible, have partial physical contact with other horses
- i) **Quarantine** means a period of time during which an animal that might have a disease is kept away from other animals so that the disease cannot spread.

Annex 2

Body condition scoring

Source: AWIN, 2015. AWIN welfare assessment protocol for horses. Doi: 10.13130/AWIN HORSES 2015

Body condition scoring is a standardised method to evaluate the amount of fat on a horse's body. Body condition can be affected by a variety of factors such as feed availability, reproductive activities, weather, performance or work activities, parasites, dental problems, diseases and feeding practices.

How to assess [Individual]

Start with a general visual inspection from the side of the horse and assess the fat/muscle covering the neck, ribs, shoulder, back, abdomen and pelvis. Stand at a safe distance behind the horse and assess the fat reservoirs/deposits around the tail bone/caudal vertebra of the horse, assess the shape of the croup, the visibility of the spine and hip bone.



How to score

Use the Body Condition Score system of Carrol and Huntington (1988 Equine vet j, 20(1) 41-45) with a scale from 1 to 5. This system is used for all breeds and all purposes of use.



Score 1

Neck: ewe neck, narrow and slack at base.

Back and ribs: ribs easily visible, prominent backbone with skin sunken on either side.

Pelvis: prominent pelvis and croup, sunken rump but skin supple, deep cavity under tail



Score 2

Neck: narrow but firm

Back and ribs: ribs just visible, backbone covered but spine can be felt
Pelvis: rump flat either side of backbone, croup well-defined, some fat, slight cavity under tail



Score 3

Neck: no crest (except for stallions), firm neck

Back and ribs: ribs just covered and easily felt, no gutter along back, backbone well covered but spine can be felt

Pelvis: covered by fat and rounded, no gutter, pelvis easily felt



Score 4

Neck: slight crest, wide and firm

Back and ribs: ribs well covered

Pelvis: gutter to root of tail, pelvis covered by soft fat,
needs firm pressure to feel



Score 5

Neck: marked crest, very wide and firm, folds of fat

Back and ribs: ribs buried, cannot be felt, deep
gutter along back, back broad and flat

Pelvis: deep gutter to root of tail, skin distended,
pelvis buried, cannot be felt

For more information see also <http://www.worldhorsewelfare.org/Right-Weight>.