National Farm Animal Care Council

CODE OF PRACTICE FOR THE CARE AND HANDLING OF EQUINES

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Preface

The National Farm Animal Care Council (NFACC) Code development process was followed in the development of this Code of Practice. This *Code of Practice for the Care and Handling of Equines* replaces its predecessor developed in 1998 and published by the Canadian Agri-Food Research Council.

The NFACC Code development process aims to:

- link Codes with science
- ensure transparency in the process
- include broad representation from stakeholders
- contribute to improvements in farm animal care
- identify research priorities and encourage work in these priority areas
- write clearly to ensure ease of reading, understanding and implementation
- provide a document that is useful for all stakeholders.

The Codes of Practice are national developed guidelines for the care and handling of farm animals. They serve as our national understanding of animal care requirements and recommended practices. Codes promote sound management and welfare practices for housing, care, transportation and other animal husbandry practices.

Codes of Practice have been developed for virtually all farmed animal species in Canada. NFACC's website provides access to all currently available Codes.

The Codes of Practice are the result of a rigorous Code development process, taking into account the best science available for each species, compiled through an independent peer-reviewed process, along with stakeholder input. The Code development process also takes into account the practical requirements for each species necessary to promote consistent application across Canada and ensure uptake by stakeholders resulting in beneficial animal outcomes. Given their broad use by numerous parties in Canada today, it is important for all to understand how they are intended to be interpreted.

Requirements - These refer to either a regulatory requirement, or an industry-imposed expectation outlining acceptable and unacceptable practices and are fundamental obligations relating to the care of animals. Requirements represent a consensus position that these measures, at minimum, are to be implemented by all persons responsible for farm animal care. When included as part of an assessment program, those who fail to

implement Requirements may be compelled by industry associations to undertake corrective measures or risk a loss of market options. Requirements also may be enforceable under federal and provincial regulation.

Recommended Practices - Code Recommended Practices may complement a Code's Requirements, promote producer education and can encourage adoption of practices for continuous improvement in animal welfare outcomes. Recommended Practices are those which are generally expected to enhance animal welfare outcomes, but failure to implement them does not imply that acceptable standards of animal care are not met.

Broad representation and expertise on each Code Development Committee ensures collaborative Code development. Stakeholder commitment is key to ensure quality animal care standards are established and implemented.

This Code represents a consensus amongst diverse stakeholder groups. Consensus results in a decision that everyone agrees advances animal welfare but does not imply unanimous endorsement of every aspect of the Code. Codes play a central role in Canada's farm animal welfare system as part of a process of continuous improvement. As a result, they need to be reviewed and updated regularly. Codes should be reviewed at least every five years following publication and updated at least every ten years.

A key feature of NFACC's Code development process is the Scientific Committee. It is widely accepted that animal welfare codes, guidelines, standards or legislation should take advantage of the best available research.

A Scientific Committee review of priority animal welfare issues for the species being addressed provided valuable information to the Code Development Committee in developing this Code of Practice. The Scientific Committee report is peer reviewed and publicly available, enhancing the transparency and credibility of the Code.

The *Code of Practice for the Care and Handling of Equines: Review of scientific research on priority issues* developed by the equine Code of Practice Scientific Committee is available on NFACC's website (www.nfacc.ca).

Introduction

The daily care and management of horses is the most critical component in ensuring their good welfare. Regardless of breed, discipline, or use, horses rely on their caregivers to provide consistent and appropriate attention to their physical and behavioural needs.

Those responsible for equines should consider the following factors:

- shelter
- feed and water to maintain health and vigour
- freedom of movement and exercise for most normal behaviours
- the company of other equines
- veterinary care, diagnosis, and treatment; disease prevention and control; dental care; hoof care
- emergency preparedness for fire, natural disaster, and motor vehicle accidents
- end of life.

An animal's welfare[1] should be based on the principles of the "Five Domains" model.[2] According to this model, those responsible for horses should consider the following:

- Nutrition (by providing access to sufficient, appropriate/varied food, and unrestricted, clean water)
- Environment (by providing a comfortable environment through suitable substrate, space for movement, tolerable temperatures, and daily routines and choices)
- Health (by preventing and promptly/properly treating illnesses and injuries)

[1] The National Farm Animal Care Council supports the following definition of animal welfare: Animal welfare means how an animal is coping physically, physiologically and psychologically with the conditions in which it lives. Physically includes pain and injury; physiologically includes environmental or disease stressors; and psychologically includes stressors that affect the senses, especially those that result in fear, fighting, distress or stereotypic behaviours due to either frustration or boredom. Animal welfare refers to the state of the animal; the treatment that an animal receives is covered by other terms such as animal care, animal husbandry, and humane treatment.

[2] Adapted from Mellor DJ. Operational Details of the Five Domains Model and Its Key Applications to the Assessment and Management of Animal Welfare. *Animals*. 2017; 7(8):60. https://doi.org/10.3390/ani7080060.

- Behaviour (by providing sufficient space, proper facilities, and the company of the animal's own kind to allow for the full expression of a range of natural behaviours such as exploration, bonding, and playing)
- Mental State (by supporting predominantly positive mental states such as calmness or playfulness while reducing negative states including pain or fear).

All herd sizes require adequate human resources to ensure observation, care, and welfare of individual animals. Neither financial cost nor any other circumstances should result in a delay in treatment or neglect of the animals.

Equines are classified as livestock in Canadian legislation (e.g., the *Health of Animals Act* and the *Animal Pedigree Act*). They have multiple uses and purposes and are raised for recreation, work, competition and for meat. The equine industry is very diverse, and this Code has been written with consideration of the different management systems in use. The authors recognize that there is more than one way to provide good animal welfare for equines.

The scope of the equine Code of Practice is on-farm (i.e., premises where horses are kept). This is to avoid duplication or inconsistencies between Codes. The equine Code includes important transport considerations but does not address animal care during transport.

The *Code of Practice for the Care and Handling of Horses on PMU Ranches*[3] addresses aspects specific to the Pregnant Mare Urine industry that are in addition to the equine Code. For specific guidelines or codes of conduct associated with equine activities that take place off farm, contact the respective governing body.

In this Code, the word "horse" refers to all domestic equine species, namely horses, ponies, miniature horses, donkeys, mules, and hinnies. Specific reference is only made to donkeys, mules, or other specific equines at the outset of each Code section, and within sections, when necessary.

The term "knowledgeable and experienced horseperson" appears throughout the equine Code—consult the glossary for an explanation of this term.

The Equine Code Development Committee

[3] Pfizer Canada Inc. 2013. Code of Practice for the Care and Handling of Horses on PMU Ranches. Available www.naeric.org/about.asp?strNav=5&strBtn=5.

To assemble the Code Development Committee (CDC), Equine Canada struck a Code Criteria Group to outline the criteria and process by which nominations would be solicited for the CDC. This collaborative selection process culminated in a 15-person Committee.

Representing a broad cross-section, the CDC members have substantial expertise in care and custody, equine health and veterinary care, technical knowledge, animal welfare research and advocacy, animal protection legislation, enforcement, biosecurity and international best practices. Specifically, the CDC was composed of individuals with proven hands-on knowledge in the unique husbandry practices within the equine agricultural industry required for large-scale equine breeding, PMU, feedlot management, donkeys and mules, horses used in racing, recreation, and sport. *Appendix T* provides a list of participants on both the CDC and Scientific Committee. Consult the Preface for information on the Scientific Committee.

Glossary

Ambient temperature: the air temperature in the surrounding area.

Ambulatory (general): able to walk. See also *non-ambulatory*.

Assembly centres: places where animals from different sources are temporarily held for sale or transport.

Balanced (in the context of feed): a term applied to a diet or ration of feed that has all the known required nutrients in the proper amount.[1]

Body condition scoring: a tool for determining the amount of fat on an animal's body. It involves a physical palpation and visual assessment of specific anatomical sites that are most responsive to a change in body fat. A body condition score is the value assigned to individual equines from the body condition scoring scale.

Box stall: a confinement area where horses are kept loose (not tied) when housed indoors in a barn or stable.

Broodmare: a female horse used for breeding.

Colic: a sign of pain in the horse's abdomen. The term colic can encompass all forms of gastrointestinal conditions which cause pain as well as other causes of abdominal pain not involving the gastrointestinal tract.

Composting: the managed and controlled biological process that breaks down organic matter such as dead animals, manure, or food waste into a stable, nutrient-rich material called compost.

Concentrate: a feed used with forage to improve the nutritive balance of the total ration (e.g., grain, pelleted feed).

Conformation: the degree of correctness of a horse's bone structure, musculature, and its body proportions in relation to each other. Conformation is usually judged by the horse's intended use or by breed standards.

Consigner (Consignor): the owner or their representative who entrusts their horse to a trainer, auction, or consignment barn to market and sell on their behalf. The consigner

[1] Adapted from National Research Council (2007) Nutrient Requirements of Horses. 6th rev. ed. National Academies Press, Washington, DC.

remains the owner of the horse and is typically responsible for its care and associated costs until the sale is complete.

Creep feeding: the practice of using a creep feeder, which is a feeder designed so that foals can eat concentrates but older horses will not be able to access the feed.

Drip line: an imaginary circle on the ground directly beneath the outermost reach of a tree's branches, indicating the area where most of the rainwater that falls from the canopy will drip. With reference to shelter, it defines the boundary of shade and protection offered by the tree's canopy.

Easy keeper: an informal term used to describe individual horses who easily gain weight or tend to maintain weight or body condition score above the ideal.

"Equine Cushing's" (Pituitary Pars Intermedia Dysfunction, PPID): a syndrome whereby the middle lobe of the pituitary gland (located in the brain) becomes enlarged over time resulting in over production of hormones and hormone-like substances.

Equine Metabolic Syndrome (EMS): a multi-faceted condition of obesity (generalized and/or regional), insulin resistance, and laminitis. Primary contributing factors to the development of EMS are genetics and the quantity and type of feed.[2]

Exercise: for the purpose of this Code, exercise refers to any indoor or outdoor physical activity for horses including, but not limited to, riding, driving, lunging, walking in-hand, and hand grazing.

Feedlots: centralized feeding operations where animals are fed concentrated feed mixtures to efficiently reach a target weight prior to slaughter. There are horses that are purpose bred for the market, while other horses are sold/consigned for processing for a variety of reasons.

Feral horses: descendants of domesticated horses that live in the wild. While not wild by nature, they have become untamed after being abandoned, escaping, or being left to live without human management. Feral horses typically live in herds and can be found throughout Canada. Their interactions with humans range from very limited to non-existent. When rounded up or captured, they may be sent to feedlots, sold, adopted by individuals, or taken in by equine rescues or sanctuaries.

[2] Equine Code of Practice Scientists' Committee (2012) Code of Practice for the Care and Handling of Equines: Review of Scientific Research on Priority Issues. Lacombe AB: National Farm Animal Care Council.

Foal: the offspring of a horse or other equines from birth to weaning and under one year old.

Forage: bulky feeds such as grass or hay; can also refer to the act of foraging (eating hay, grazing pasture, browsing).

Gait: a particular way or manner the horse moves on foot.

Grain: seed from cereal crops or corn.

Geriatric horse: for the purpose of this Code, geriatrics are ageing horses that need specialized care. Horses are generally considered to be geriatric when they are 15–20 years of age or older. Donkeys are generally considered to be geriatric when they are 20 years of age or older.

Gestation: the period of development of the fetus from conception to birth.

Hay: grasses or herbage especially cut and cured for animal feeding.[3]

Haylage: Feed that was cut as fresh forage and that has been chopped and stored at relatively high moisture content. Haylage undergoes a similar fermentation process to silage. See also *silage*.

Hyperlipemia/Hyperlipidemia: a medical condition caused, in part, by equines going off feed and which results in rapid mobilization of body fat. Fatty substances accumulate in the blood and infiltrate the liver. The syndrome can affect any equines although donkeys, ponies, and miniature horses are at greater risk.

Intermediary site: a facility or location where a horse is temporarily held such as auctions, fairs, competition venues, or rest stations.

Jack: a male donkey.

Jennet/Jenny: a female donkey.

Knowledgeable and experienced horseperson: for the purpose of this Code, this refers to people who have knowledge of a given topic or have successfully managed horses relative to a given topic. This includes those who have years of hands-on experience with horses and those who have knowledge gained through formal education, training, and/or

[3] Adapted from National Research Council (2007) Nutrient Requirements of Horses. 6th rev. ed. National Academies Press, Washington, DC.

professional certification (some examples include experienced breeders, certified trainers/coaches, and extension staff).

Lameness: for the purpose of this Code, lameness is any alteration in the horse's gait that appears to be caused by pain and discomfort. Lameness can manifest as a change in performance or willingness to move, head nodding, or hip hiking.

Laminitis: inflammation in the foot (specifically the sensitive laminae connecting the hoof bone and the hoof capsule) that may result in severe pain, abnormal foot growth, and lameness. Also known as "founder."

Mare: an adult female horse.

Non-ambulatory: an animal that is unable to stand without assistance or move without being dragged or carried,[4] regardless of size or age. See also *ambulatory*.

Owner: a person or entity that legally holds ownership of a horse having the right to possess, use and benefit from it, while also bearing the responsibility for its care, welfare, and end-of-life considerations.

Paddock: a small, fenced-in field or enclosure (with varying surface terrain) where horses are kept or exercised.

Parasitism: an infection with parasites.

Parturition: the act or process of giving birth to the foal (also referred to as "foaling").

Pasture: a large, fenced-in area where horses are kept loose and can graze.

Pelleted feed: feed that has been ground and processed to produce a pellet shaped feedstuff.

"Poor doer": an informal term used to describe individual horses that have difficulty gaining weight or maintaining appropriate weight or body condition score.

Ration: the total amount of feed that is provided.

Reinforcement: positive and negative reinforcement are training terms that refer to anything that will make a response from the horse more likely in the future. "Positive" and "negative" do not mean "good" and "bad" in this context, but describe whether the

[4] Health of Animals Regulations. C.R.C. c. 296. Available: https://laws-lois.justice.gc.ca/eng/regulations/c.r.c.,_c._296/page-1.html#h-546840.

behaviour is reinforced by having something added (positive reinforcement, e.g., a treat) or removed (negative reinforcement, e.g., release of pressure).[5]

Rescues: an individual or organization, usually nonprofit and volunteer-run, with the intent to save, rehabilitate, and rehome animals that are abandoned, abused, neglected, or at risk.

Rest station: a facility or area where animals being transported are unloaded to receive necessary feed, water, and rest to ensure their welfare, as mandated by humane transport regulations.

Rodeo bucking stock (Rough stock): equines trained to compete in rough stock events at rodeos. While they are trained to buck, they are not horses that are trained to lead or be ridden. They are raised in a herd setting and handled on the ground as part of the herd.

Seasonal endocrine rhythms: the predictable, cyclic changes in hormone production and regulation that occur in animals in response to seasonal environmental cues (e.g., day length, temperature, and food availability).

Silage: succulent, moist feed (from forage, corn, or other crops) that has gone through a process of fermentation that helps it stay free from spoilage. See also *haylage*.

Slinger truck: a specialized vehicle designed to deliver and place with precision aggregate materials such as sand and gravel.

Social License to Operate (SLO): the ongoing, informal approval granted by the public and stakeholders that allows the industry to continue its activities beyond just meeting legal and regulatory requirements.

Social opportunities: for the purpose of this Code, this term refers to occasions when horses can interact with other horses via sight, sound and/or direct contact.[5]

Soundness: freedom from lameness or disease that would affect the horse's usability.

Stable: an enclosed building with a roof and sides for housing horses.

Stallion: an adult male horse that has not been castrated and is typically kept for breeding.

[5] Equine Code of Practice Scientists' Committee (2012) Code of Practice for the Care and Handling of Equines: Review of Scientific Research on Priority Issues. Lacombe AB: National Farm Animal Care Council.

Stereotypy: formerly referred to as a vice, a stereotypy is an abnormal behaviour that serves no apparent function and is performed in a repetitive, invariant way.[5] One example is cribbing/wind sucking. *Section 6.1.1* provides other examples.

Teeth floating: a procedure for removing the sharp enamel points on the horse's teeth. Teeth floating is necessary because the teeth of horses continue to erupt from the gums until horses are approximately 20 years of age.

Temperament: the horse's disposition.

Thermoneutral zone: a temperature range in which animals do not have to expend any additional energy to maintain normal body temperature. In horses, the thermoneutral zone is between 5–20°C.

Tie stall: a space in a barn or stable where horses are tied when housed indoors. Also called a "standing stall."

Tractability: the horse's capability to be easily led, taught, or controlled.

Turnout: for the purpose of this Code, this term refers to allowing horses "free time" (i.e., not under controlled exercise) in a dry lot, arena, pen, or pasture. Turnout does not necessarily mean the horse is grazing.

Weanling: a term to identify equines from weaning until one year of age.

Yearling: a term to identify equines from one to two years of age.

Section 1: Duty of Care

Horses, donkeys, and mules can live for 30 years or longer. Ownership of these animals can be a great pleasure, but it is also a significant responsibility associated with a long-term commitment of time and money. Equids are sentient animals that are highly social, capable of long-term relationships with their herd mates and their caregivers. It is important that both their physical and psychological well-being is ensured in keeping with the model of the "Five Domains," which essentially translates into a life worth living[1]. In addition, the equine industry is the subject to increasing public scrutiny regarding the Social License to Operate (SLO). In order to protect SLO, it is essential that the industry makes horse welfare a top priority, regardless of the end use or the financial value of individual animals.

Owners and staff have a duty of care for the animals they are permanently or temporarily responsible for. A parent or guardian of a minor must take responsibility for any animal that is owned or cared for by the minor. If an owner leaves the animal in the care of another person, it is the owner's duty to ensure the person is competent and has the necessary authority to act in an emergency. In this case, it is important to have a written boarding and/or care contract in place. Responsibility for an animal includes having an understanding of their specific health and welfare needs and having the appropriate knowledge and skills to care for the animal. Those responsible must also comply with relevant legislation and be aware of the Requirements and Recommended Practices in this Code. They should also know when to seek advice from a knowledgeable person.

Horses may be subjected to many changes in ownership throughout their lives. Many of these changes result in a move for the horse and a complete loss of both equine and human attachments, which can be very stressful. Horse owners should consider the stress of multiple sales and subsequent relocations of a horse throughout its lifetime. **In addition, caregivers are advised to choose boarding stables carefully to avoid unnecessary uprooting of horses and to allow the animal to maintain its social bonds over the long term.**

Donkeys and mules need the same good animal care for their health and well-being as do horses. There are, however, some significant differences between the equids, both in behaviour and health matters. Key points about specific animal care needs of donkeys and mules are included throughout this Code and are summarized in *Appendix K – Key Points for Owners of Donkeys and Mules*.

[1]Mellor DJ. Operational Details of the Five Domains Model and Its Key Applications to the Assessment and Management of Animal Welfare. *Animals*. 2017; 7(8):60. https://doi.org/10.3390/ani7080060.

REQUIREMENTS

Owners must have the resources for and knowledge of the basics of care as stated in this Code and ensure such care is provided.

Principal caregivers must be familiar with and provide the basics of care as stated in this Code.

1.1 Commitment to Horse Ownership

Before buying or agreeing to become responsible for a horse, consider the following:

What are the costs? The costs vary but can be substantial. The cost of purchasing a horse will be less than the ongoing costs associated with its care. Refer to *Appendix A – Template Budget for Horse Ownership*. What type of horse is appropriate? In the context of your skill level and intended use for the horse, evaluate what breed, sex, age, level of training, and temperament will be most appropriate. Children and novice owners may benefit from buying a horse that is already well trained or that has experience in their intended discipline.

How much time is needed? Consider the time commitment for daily care (e.g., grooming, feeding, manure removal or management) along with non-daily tasks (e.g., veterinary visits, stable maintenance and hoof care).

How and where will the horse be kept? Suitable off-site accommodation needs to be available unless there is suitable accommodation on the home property.

What skills and knowledge are required? All persons responsible for horses must have good working knowledge of their feed and water requirements, stable maintenance, signs of ill health, humane handling, and common horse illnesses and injuries.

What contingency plans should be made? A simple plan may involve identifying capable persons who can look after the horse should you be temporarily or permanently unable to care for the animal.

Another aspect of horse ownership is planning for the time when you may want or need to bring your ownership of a horse to an end and have a plan in place should your horses outlive you. Ensure you appoint a trusted individual capable of making decisions on re-homing or euthanasia and/or establish a fund to support your horses to the end of their natural lives. Refer to *Section 11 – Change or End of Career*.

RECOMMENDED PRACTICES

a. gain experience in horse care prior to ownership (e.g., volunteer work, riding stables, Horse Clubs)
b. develop a budget that includes short- and long-term costs to ensure you are financially capable of caring for the horse (refer to *Appendix A – Template Budget for Horse Ownership*, including the consideration of medical/surgical insurance)
c. view a prospective horse with a knowledgeable and experienced horseperson (e.g., certified trainer or coach)
d. try the horse in all aspects of work the horse will be expected to perform, but ensure the horse is safe to mount and ride by having the seller or their agent demonstrate the horse for you
e. find a knowledgeable and experienced horseperson to provide ongoing advice for horse care
f. participate in continuing education opportunities (e.g., hands-on horse clinics, conferences, webinars).

1.1.1 Pre-Purchase Veterinary Examinations

A pre-purchase veterinary examination informs prospective owners of the horse's overall health and condition (1). The veterinarian's role during the examination is to discover pre-existing conditions or problems that potentially affect the future health and soundness of the horse (1). The results are interpreted relative to the intended use of the horse—a high performance prospect may require a more extensive examination compared to a pleasure horse. The responsibility of veterinarians is to provide the best information of the horse's soundness/fitness on that day, but ultimately the purchase decision lies with the buyer. Prospective owners are strongly urged to have a pre-purchase examination performed by a veterinarian who is proficient in equine practice, and preferably familiar with the breed and/or discipline you wish to pursue. The consequences of buying a horse that is not fit for the purpose for which it was purchased far outweigh the costs of the examination. It also potentially places the buyer in the position of being responsible for an unsound, unsafe or unsuitable animal.

RECOMMENDED PRACTICES

a. arrange for the examination to be done by a veterinarian who is independent of the seller if possible and who has expertise in the breed, discipline, or use for which the horse is being purchased. If the horse's regular veterinarian is the only option for the pre-purchase examination, there must full transparency of this pre-existing

relationship with both buyer and seller, and the medical record should be made available

b. inform the veterinarian of your primary uses for the horse and your short- and long-term goals
c. consult the veterinarian on what procedures should be included in the examination and the costs of those procedures (2)
d. ensure that, as the buyer, you are present during the examination and/or have a trusted agent present if possible.

Section 2: Facilities and Housing

Horses are successfully managed in a variety of outdoor and indoor environments from extensive range to relatively intensive housing. Attentive management is important regardless of how horses are kept.

2.1 Pastures, Paddocks, and Pens

Horses are highly adaptable to many weather conditions (3)—keeping them outdoors or giving them frequent outdoor access is encouraged. Mud management is an important factor in some regions. If horses do not have access to a mud-free site, they can acquire painful skin or hoof conditions. "Muddy conditions" are defined as mud depth that exceeds the coronary band. *Appendix S – Resources for Further Information* provides resources for pasture management.

The risk of injury increases when horses are overcrowded in pastures or yards or when there is competition for any resource. The amount of outdoor space horses need depends on many factors. Generally, a **minimum** space allowance per horse, in m^2, is 2 to 2.5 times the height of the horse (at the withers), squared. They should also each have the ability to move at various speeds at the same time, to complete natural behaviours such as grazing and play, and escape potential aggression without risk of injury.

REQUIREMENTS

At a minimum, each horse must have enough space to move easily, walk forward, turn around with ease and lie down in a normal resting posture. There must also be sufficient space for subordinate horses to escape aggression.

In muddy conditions, horses must have access to a well-drained area, on which they can stand and lie down, that offers relief from mud in the pasture/yard.

During periods of high precipitation there must be an ongoing mud management plan implemented.

To ensure safe pasture management, the application of fertilizers, pesticides, herbicides and farm manure must be timed to prevent any health risks to grazing horses or contamination of ground water.

RECOMMENDED PRACTICES

a. there should be enough space to allow horses to run and perform natural behaviours and movements in a group setting

b. practice good pasture management (e.g., pasture rotation, weed control, appropriate stocking density)

c. minimize/address mud in high traffic areas (e.g., mud grids/soil stabilizers, walking mats, gravel, and/or routine mud removal)

d. maintain pastures free from equipment, obstacles, debris, and poisonous plants.

2.1.1 Shade and Outdoor Shelter

Horses can adapt to a wide range of environmental conditions due to their physiological and behavioural responses that help them maintain body temperatures within a normal range (3). **Shelter can be natural (e.g., established groups of trees/hedges) or constructed (e.g., shade cloths, sheds, run-ins)** (3). For an open-front shed housing more than one horse: provide 11.1 m^2 (120 ft^2) each for the first two horses and 5.6 m^2 (60 ft^2) for each additional horse kept in the pasture or paddock. Research shows that horses are particularly likely to seek shelter during hot and humid conditions, rainy, windy conditions, or snowy, windy conditions (3). Any shelter, constructed or natural, is meant to protect horses from heat or cold stress and should be able to protect all animals at the same time. Consider the density of foliage as well as the drip line for trees when assessing the sufficiency of natural shelter.

The following horses are more vulnerable to cold, damp weather:

- foals and geriatrics (3)
- horses that are injured, sick, or have a low body condition score (3)
- horses with a moist or wet coat, due to rain or sweat (a wet coat has reduced insulation capacity) (3). The hair coat of donkeys makes them particularly vulnerable to cold, damp weather
- body clipped horses
- horses that are not acclimatized to cold, damp weather
- donkeys.

Blankets are sometimes used to help protect vulnerable horses (as defined above) from weather and insects. It is critical that blankets be used appropriately for the weather conditions: blankets can compress hairs, which removes natural insulation against cold. They can also lead to sores and heat stress and can also mask changes in the horse's

health. Some of these changes can occur quickly (e.g., skin infections, a change in weight or body condition score).

Thermoregulation

Within a temperature range called the "thermoneutral zone," animals do not have to expend any additional energy to maintain normal body temperature (3). In horses, the thermoneutral zone is between 5 and 20°C, whereas donkeys' is between 23 and 30°C (3). Within the lower or upper temperatures of their respective ranges, horses and donkeys may modify their behaviour without any increased energy needs. In temperatures outside the range, increased metabolic energy is required to maintain normal body temperature.

Shivering is a heat-producing response to cold temperatures. It may be seen particularly when the horse is unable to move around, whether indoors or outdoors. Shivering horses are not thermally comfortable (5). Donkeys are more susceptible to cold stress so extra preventative measures should be taken in the winter months in addition to increased monitoring for signs of this (43). Signs of cold stress in horses include shivering, blue gums, lethargy, breathing difficulty or rapid breathing, and/or an unwillingness to stand (44). Dehydration is also a common outcome from cold stress and can result in dry, hard feces.

Horses should also be monitored for heat stress in hot ambient temperatures. A horse facing heat stress may appear weak or disoriented. Other signs of heat stress include muscle tremors and shallow or rapid breathing.

Refer also to *Section 4.4.1 – Thermal Impacts on Dietary Energy Needs* and *Appendix S – Resources for Further Information*.

REQUIREMENTS

Horses must have access to shelter (constructed or natural) that protects them from the harmful effects of extreme weather conditions. The shelter(s) must be large enough to accommodate all horses in a given area at the same time.

Promptly assist individual horses that are showing signs of heat or cold stress.

If blankets are used, the condition of the horse beneath the blankets must be examined at least weekly and frequently enough to recognize changes in body condition and keep the horse free from ill effects.

Blankets must be appropriate for the weather conditions and not result in heat stress.

RECOMMENDED PRACTICES

a. build or renovate shelters for the easy removal of wastes

b. only blanket vulnerable horses as needed and remove blankets daily to inspect the horse's condition

c. ensure blankets are well fitted, in good repair, and appropriate for weather conditions. If blankets are used in wet conditions, they should be waterproof and breathable.

2.1.2 Mixing and New Arrivals

Horses are herd animals and prefer to live in groups; this should be given high priority when housing horses of all types. Donkeys have a particularly strong need for social opportunities and may become depressed or apathetic when separated from a former companion. This can have health implications, particularly if they go off feed.

When establishing new relationships, aggression is a normal part of the integration process. This carries a risk of injury; however, the aggressive interactions are generally short-lived. Some horses are more aggressive and may not be suitable for group housing. Aggression can be reduced by increasing the space allowance (initially or permanently), managing resources such as food and water, and/or allowing horses to become familiar with an existing group by first keeping them in an adjacent area (but separated by a strong fence or stall wall). **Refer to *Section 5 – Health Management* for information on disease transmission, an important consideration when mixing animals, especially new arrivals**.

REQUIREMENTS

Horses kept in groups must be managed in a way that minimizes the risk of injury.

Newly formed groups must be monitored daily at minimum and interventions made as necessary.

New arrivals must have access to feed and water, especially in situations where other horses may prevent access.

RECOMMENDED PRACTICES

a. get advice from a knowledgeable and experienced horseperson on the first introduction of horses

b. segregate horses into compatible groups. Where necessary, take into consideration the nutritional needs, age, sex, and size of the horses. Separate animals that prove to be incompatible

c. new arrivals should be quarantined before mixing to support best biosecurity practices (refer to *Section 5.1.1 – Biosecurity*).

2.1.3 Fences and Gates

Several types of fencing materials are suitable for horses, including wood, metal pipe, mesh, and electric. Page wire, barbed wire, and narrow gauge, high tensile steel wire are used in extensive grazing settings but should be avoided in closely confined paddocks. These types of fencing can cause severe injury to horses, especially if in poor repair. It is also important to use non-toxic materials in fencing: take care to use non-toxic paint or wood preservatives in fencing and stall doors.

Horses must be effectively contained through strong, well-maintained fencing and gates, as otherwise they may leave the property, which brings a significant risk of injury to that horse (e.g., road accidents) and the safety of other horses and humans. The strength and height of fencing is particularly important for stallion enclosures but should be considered carefully for all horses. Foals and miniature horse breeds may be more prone to escaping enclosures by rolling under fencing that has a base elevated off the ground.

When fencing is not being used due to extenuating circumstances, measures to protect the horses from roaming in unsafe areas or trespassing onto land or fields of others should still be enacted to protect the horse and respect neighbouring land and properties from injury and damage. Alternative strategies can be determined mutually between parties to determine a productive solution.

REQUIREMENTS

Fences must be constructed and maintained to minimize the risk of injury, be strong enough to contain horses, and be otherwise appropriate for the horses it contains. Refer to municipal fencing by-laws, if applicable.

Electric fences must be installed according to the manufacturer's specifications, grounded properly, and be energized.

All power units for electric fences must be maintained to prevent short circuits and/or stray voltage.

Temporary electric fences used for strip grazing or pasture rotation are not an acceptable permanent perimeter fence for horses.

RECOMMENDED PRACTICES

a. introduce horses to unfamiliar fenced areas during daylight hours to reduce the risk of injury

b. mark smooth wire and other hard-to-see fencing in such a way that it is more visible to horses (e.g., tie flags to the fencing)

c. supervise horses when they are first introduced to electric fencing (and avoid mixing new horses at the same time as the group is first introduced to electric fencing)

d. ensure gates used by horses are at least 1.22 m (4 ft) wide

e. facilities should be designed to contain the animals living there and to stop them from encroaching/trespassing on other land based on regional by-laws/regulations.

2.2 Facilities for Special Needs

2.2.1 Foaling

Foaling can take place in stalls, paddocks, or pastures. The foaling area should be large enough to accommodate the ambulatory movements of the mare/jennet during foaling and allow her to comfortably lie down on her side during and after foaling. Bedding should be clean, non-slip, and be sufficient in amount to allow the mare/jennet to lie down comfortably, prevent sores or abrasions, and absorb urine. In stalled environments, straw is the preferred bedding during foaling. After foaling, the area should provide ample space for the addition of the foal. If box stalls are used to house the mare/jennet and foal (up to two months of age) they should be at least 30% larger than the average box stall.

If foaling takes place in a fenced area, the fencing should be constructed to prevent the mare's/jennet's legs from becoming entangled when she lies down to foal and to ensure the foal cannot become entangled. Fencing should also take foal size into consideration to avoid escape from rolling or otherwise. Stalls used for foaling should have solid walls for safety. It is also important to ensure the foaling area offers protection from predators.

Every effort should be made to ensure foals are thermally comfortable. Foals are sensitive to adverse weather conditions and can also lose body heat if they are wet, lie down on cold surfaces, or are kept in drafty environments. **Keeping warm requires energy—letting a newborn foal become chilled is an immense drain on a foal's already modest energy reserves**. Weak, premature, or sick foals are even more vulnerable to chilling, and the loss of body heat in these foals can substantially reduce their chances of survival.

Methods to prevent heat/cold stress include providing adequate shade and shelter, ensuring water is available, and blanketing appropriately to weather conditions, keeping in mind that foals are vulnerable to thermal stress (refer to *Section 2.1.1 – Shade and Outdoor Shelter*). Heat lamps or space heaters are sometimes used to warm the stall. However, unless used with caution, such heaters can be a fire hazard and can lead to overheating, particularly if the foal is not able to move away from the heat source. Using a foal blanket is often the most practical option and is effective. Any foal requiring an additional heat source or blanket should be monitored frequently.

RECOMMENDED PRACTICES

a. provide a clean, dry, sheltered foaling area

b. allow the mare/jennet to become familiar with the foaling area by moving her to that site on the farm several days before the expected foaling date

c. keep a familiar companion near the mare/jennet if she is to foal in an area isolated from herd mates

d. if foaling coincides with adverse weather conditions or for any weak, premature, or sick foal, ensure the foal is dried off promptly and that there is supplemental shelter and other means of keeping the foal warm (e.g., extra bedding, foal blankets)

e. feed mares/jennets away from fences to avoid risk to foal (escape/entanglement).

2.2.2 Stallions

Stallions need specialized management and should only be handled and cared for by experienced horsepeople. It is important to consider their social needs while maintaining appropriate safety measures when deciding how to house stallions, but structures should remain strong and durable in all scenarios.

Stallions have the same social needs as other horses. While stallions may not be suitable for turnout with other horses, efforts should be made to meet their social needs and/or provide environmental stimulation. Stallions can often be group housed in a large pen or pasture.

REQUIREMENTS

Ensure fencing for stallions is safe and strong enough to contain them.

RECOMMENDED PRACTICES

a. stallions should not be housed alone or kept exclusively in stalls. All housing should be constructed or renovated to allow for social opportunities (tactile and visual) between adjacent horses or stallions. (Refer to *Section 7 – Husbandry*).

2.2.3 Sick or Injured Horses

Sick or injured horses benefit from facilities (constructed or natural) that minimize stress and provide protection from environmental extremes. *Appendix S – Resources for Further Information* provides references on preventing the spread of disease. Refer to *Section 5.1.1 – Biosecurity* for recommended biosecurity practices.

REQUIREMENTS

Owners must have the ability to segregate sick or injured horses for treatment.

If sick pens or stalls are used, they must be equipped with a source of feed and water and be cleaned and disinfected before use by a new horse.

RECOMMENDED PRACTICES

a. have sheltered, segregated, and well-bedded sick pens/stalls for horses that are sick, injured, or recovering

b. when dealing with a contagious disease, situate sick pens/stalls such that contact is not possible between horses in adjoining pens

c. build sick pens/stalls that can be easily cleaned and disinfected.

2.3 Indoor Facilities

Horse welfare should be prioritized when constructing or renovating facilities; this includes barns, stalls, and other indoor structures where horses are housed, trained, or kept. Depending on the intended activities and needs of the horse (e.g., riding, foaling), space allowances may need to be increased. Unless otherwise specified, the following space requirements are for a single horse. The main considerations are the safety and comfort of the horses, opportunity for social contact, ease of access, and adequate drainage and ventilation. If poorly designed or managed, stabling can contribute to the development of stereotypies, spread of disease, and the risk of injury. *Appendix S – Resources for Further Information* provides resources on preventing the spread of disease.

REQUIREMENTS

Facilities must be designed and maintained to minimize the risk of injury to humans and animals.

The stall area must also be of a design or texture that will not bruise, cut or otherwise injure the horse.

RECOMMENDED PRACTICES

a. newly built or renovated facilities should allow ample social opportunities, such as group housing or stall design that enables horses to have visual or tactile contact with other equines

b. avoid having sharp corners and projections and ensure facilities are free from dangerous objects

c. build facilities that can be easily cleaned and disinfected

d. when building new facilities, consider factors such as drainage and manure removal when determining where on the farm to situate the facilities.

2.3.1 Indoor Space Allowance

An appropriate space allowance, in m^2, is 2 to 2.5 times the height of the horse (at the withers) squared, for example, 10 feet by 12 feet, or approximately $11m^2$, would house a 16hh horse or smaller (4). This space allowance allows for the normal movements of the horse, including lying down.

Sample calculation based on the above formula for a horse that measures 15 hands at the withers: (Step 1) 15 x 4 in = 60 in, which converts to approx. 1.5 m; (Step 2) 1.5 m x 2 = 3 m; (Step 3) 3 x 3 = 9 m^2.

REQUIREMENTS

For indoor facilities: each horse must have enough space to lie down in a normal resting posture, stand with the head fully raised, walk forward and turn around with ease.

For tie stalls: each horse must have enough space to lie down in a normal resting posture, stand with the head fully raised and step forward in comfort.

For group housing: there must also be sufficient space for subordinate horses to escape aggression.

RECOMMENDED PRACTICES

a. ensure ceiling or support beam height allows a minimum clearance space of 1 m (3.3 ft) above horse head height when standing. Ceiling height is important for horse comfort, safety, and ventilation

b. ensure alleyways in indoor systems are wide enough to allow a horse to turn around comfortably (3 m [9.8 ft] is a suggested minimum width)

c. ensure doorways used by horses are wide enough to allow easy passage (e.g., 1.22 m [4 ft] wide). Doorways that may need to accommodate two horses at once should be twice this width. The use of doorways built for human passage is not ideal for horses and is discouraged

d. ensure entrances used by horses are at least 30.5 cm (1 ft) above head height when the horse is in a normal standing posture.

2.3.2 Indoor Lighting

Lighting in indoor facilities can be natural or artificial and should provide uniform illumination and permit effective observation and safe handling (e.g., for veterinary procedures) of horses. Consider lighting in stalls, aisles, feed rooms, and where any work with horses is done or equipment is accessed. Lighting is also important for normal reproduction, seasonal endocrine rhythms, and seasonal adaptation (e.g., hair coat).

REQUIREMENTS

For horses kept indoors without natural light, artificial lighting must be provided, at minimum, for a period of six hours per day. Keeping horses in continuous light or darkness is not acceptable.

RECOMMENDED PRACTICES

a. ensure light fixtures are safe and not accessible to horses (e.g., avoid the use of exposed light bulbs)

b. provide horses, and especially foals, with a period of darkness of comparable length to natural darkness where residing (to encourage sleeping)

c. sufficient facility lighting (natural and/or artificial) should be provided for horses to see their food, surroundings, and companions, and for caretakers to see and inspect horses and spaces safely.

2.3.3 Indoor Flooring

The ground or flooring in stalls and alleyways should be well-drained and must provide non-slip surfaces to reduce the risk of horses slipping or falling. Examples of non-slip surfaces include sand, dirt (but not mud), rough cut planked floors, rubber mats, and stamped or grooved concrete. For shod horses, the addition of rubber mats or epoxy flooring to concrete helps avoid slipping. Ideally, stall flooring will be reasonably level but designed to move excess moisture away from horses. Soft ground surfaces (e.g., sand, earth) should be routinely maintained by leveling out any holes. Refer also to *Section 2.3.5 – Indoor Bedding*.

REQUIREMENTS

Provide non-slip surfaces in stalls and alleyways to reduce the risk of horses slipping or falling.

RECOMMENDED PRACTICES

a. ensure flooring is well-maintained, as dry as possible, and free from standing water or urine.

2.3.4 Arena Footing and Maintenance

The footing for horse training and exercise areas is critical for both lameness prevention and safety of horses, riders, and trainers. The ideal footing varies considerably between disciplines and expert advice should be sought for your region, considering climate conditions, the amount of use of the facility, and available materials. Most training surfaces are comprised of sand, with or without amendments. A common problem encountered in arena construction or refurbishment is the laying down of too much sand, resulting in excessively deep footing that can cause both fatigue and injury. **For initial arena construction, a maximum depth of 3.75–5.00 cm (1.5–2 in) of sand** preferable laid with a Slinger truck will provide a non-slip and suitably cushioned surface for most disciplines. It is much easier to add more sand if needed than to remove it evenly (80).

2.3.5 Indoor Bedding

Well-managed bedding provides comfort, warmth, dryness, traction, and protection against abrasions. Examples of bedding include straw, shavings, shredded paper, and peat moss. Each type of bedding has advantages and disadvantages (3). The Scientific Committee report for the equine Code (2012), listed in the References, provides more detail.

Horses prefer to lie down in bedded areas in the stalls; therefore, providing ample clean bedding also helps ensure horses get enough rest, which is important for their well-being and performance (3). Dusty or unclean bedding can decrease air quality and impact horse health with prolonged exposure. For further information refer to *Section 2.3.6 – Indoor Air Quality and Humidity.* In addition, some materials (e.g., types of wood used in shavings) can be toxic to horses even in small amounts.

REQUIREMENTS

Ensure stalls are kept clean. Horses must be provided with a dry lying area.

Stalls must have a depth of bedding sufficient to absorb urine, prevent sores, and encourage the horses to lie down. Bedding must be non-toxic.

Concrete or hard rubber mats in stalls without adequate bedding are not acceptable surfaces.

RECOMMENDED PRACTICES

a. remove wet and soiled bedding at least once a day. For deep bedded systems, add clean, dry bedding daily

b. provide disposable bedding on top of stall mats to help absorb urine and provide extra cushioning

c. use bedding that is as dust free as possible.

2.3.6 Indoor Air Quality and Humidity

Respiratory problems can be created or made worse by poor bedding practices and poor indoor air quality. The concentration of ammonia and airborne particles, such as dust and mould, are of particular concern (3). The concentration of fungal spores, the main component of dust in stables, is determined by the rate of release from feed and bedding and the rate of clearance, mainly by ventilation (6). Keeping facilities and bedding clean helps maintain good indoor air quality.

Excessive ammonia concentrations can pose a health threat to humans and animals. The concentration of ammonia should ideally be less than 10 ppm. **When a human observer can detect ammonia (by smell or irritation to the eyes) it is likely to be at a concentration of 20 ppm or higher. There are also several tools for measuring ammonia concentration, including litmus paper, detection tubes, and electronic devices**.

A good ventilation system will reduce humidity, maintain ideal ambient temperature, bring in fresh air (without causing drafts, especially at horse level), and remove excess heat and moisture (a factor in mould development).

REQUIREMENTS

Air quality in barns must be maintained to prevent the buildup of noxious gases, dust and moisture.

Ventilation must effectively maintain good indoor air quality.

The concentration of ammonia in the air must not exceed 15 ppm. Refer to the above information on options for assessing ammonia concentration.

Leaf blowers must not be used while horses are in enclosed facilities.

RECOMMENDED PRACTICES

a. strive to maintain good indoor air quality at all times (refer to *Appendix S – Resources for Further Information*)

b. keep your ventilation system in good repair

c. avoid exposing horses to drafts when housed indoors

d. where possible, remove horses from the building when cleaning stalls and aisles and allow airborne particles to settle before letting horses re-enter the stalls

e. aisle sweeping raises less dust than power leaf blowers.

Section 3: Emergency Preparedness

3.1 Emergency Prevention and Preparedness

Emergencies are, by their nature, atypical and undesirable. They interrupt normal routines and can be quite devastating. It is normal, therefore, to avoid thinking about them, let alone planning for such. Advanced meaningful planning may help to prevent bad situations from becoming much worse.

Pre-planning (e.g., predicting, planning, and preventing) may enable horse owners and caretakers to prevent emergencies and to respond in a timely and effective manner, thus providing for the welfare of horses during emergencies. Once methods to prevent emergency situations have been put in place and preparation for different types of emergencies has been completed, action plans must be established in case emergencies arise (to establish contingency plans refer to Equestrian Canada's Emergency Preparedness Protocol). For most, if not all emergencies, the steps to be followed in terms of planning and responding are similar. Practicing emergency scenarios is important to ensure that people respond calmly and automatically in possibly panic-inducing situations.

REQUIREMENTS

***An emergency telephone list must be readily available for the horse owners, managers, farm hands, caretakers, and emergency crews. Refer to* Appendix B – Emergency Telephone List.**

Facility-specific emergency plans must be prepared for emergencies such as fires, equipment or power failures, extreme weather events, and evacuations. The procedures must be written and communicated to all horse owners, managers, farm hands, caretakers, and emergency crews.

***A map of the barn or facility and its surroundings must be drawn and kept readily accessible for emergency crews. Refer to* Appendix C – Mapping Barns and Surrounding Areas for Fire Services.**

Emergency plans must include specific actions and those designated to conduct specific actions.

Plans must be easily accessible at the onset of an emergency.

Plans must ensure that the welfare of the horses is safeguarded in any potential emergency event.

RECOMMENDED PRACTICES

a. ensure that all caretaker and family member training includes an annual review of the emergency procedures

b. consider emergency management protocols when designing or renovating facilities (e.g., rapid evacuation of horses, installation of fire alarms, emergency lighting)

c. decide how and where animals will be relocated if necessary (refer to *Section 3.1.4 – Deciding to Evacuate or to Shelter in Place*)

d. maintain a secure perimeter fence to prevent animals from leaving the property

e. ensure there is a safe space to confine horses

f. keep a first aid kit on site. Ensure caretakers and family members know its location and how to use it.

3.1.1 Fire in Farm Buildings

Fires in farm or facility buildings are devastating events. The loss of animals, buildings, and equipment can be overwhelming. Fortunately, nearly all structure fires are preventable. Staying vigilant and using practical fire prevention methods can significantly minimize the risk of fires. Regular inspections and maintenance of electrical systems, equipment used for handling hay and grain, and facilities are key to reducing the risk of barn fires.

In the event of a fire, panicked horses will often refuse to leave the barn or facility on their own. Consider covering the horse's eyes with a towel secured under their halter, rendering the animal more manageable and easier to guide to safety. Once removed, horses should be secured in a safe location such as a paddock or tie area, as they may attempt to return to the barn or facility that is on fire.

REQUIREMENTS

All electrical connections to equipment must be hard-wired. Extension cords must only be used temporarily and unplugged when not in use.

All electric wiring, outlets, and fixtures must be out of reach of horses.

Fire extinguishers must be available at the entrances and high-risk areas in the facility and maintained according to manufacturer's instructions. Caretakers must know where they are located and must be competent in their use.

RECOMMENDED PRACTICES

a. ensure that a fire safety self-assessment is completed annually. Refer to *Appendix D – Assessing Facility Buildings for Fire Prevention*

b. consult local fire services for specific advice on fire prevention, particularly before renovating or building a new facility, and including the correct number of and best location for fire extinguishers

c. ensure stalls and equipment that restrains horses have quick release mechanisms. A halter and lead rope should be available at each stall front to facilitate the rapid removal of horses

d. whenever possible, all stalls should have a walk out door, either in newly-constructed buildings or renovations

e. inspect and maintain electrical systems on a regular basis to ensure appropriate function

f. check electrical equipment regularly for stray voltage and ensure wiring or electrical panels are not accessible to the animals

g. ignition sources such as smoking, torches, or other open flames should be prohibited in and around barns or buildings, especially near any flammable materials

h. refuel engines outside of barns or buildings, ensuring they have been turned off and properly cooled down beforehand

i. remove combustible materials (e.g., hay, shavings, manure, gas, oil, propane) from around electrical systems and facility buildings to prevent build-up

j. store flammable compounds in separate areas/buildings that are suitable for combustible materials and away from animal housing

k. ensure proper ventilation during grain handling and feed preparation activities to prevent grain dust buildup

l. harvest and store hay properly to reduce levels of moisture thus lowering the risk of spontaneous combustion

m. ensure moisture levels in stored hay are less than 18–20% (46)

n. store hay away from animal housing in well-ventilated and dry areas

o. properly protect electrical fixtures using conduit fittings and NEMA 4X

p. use of totally enclosed fan-cooled motors is recommended

q. fans designed for indoor or residential use should not be used for agricultural use.

3.1.2 Wildfires

A wildfire involves the uncontrolled burning of grasslands, brush, or woodlands. Wildfires destroy property and valuable natural resources and may threaten the lives of people and animals. Wildfires can occur at any time of year, but usually occur during dry, hot weather. Check federal and provincial government websites for wildfire probability forecasts (e.g., Environment Canada) and review wildfire history in your area. Local radio and television stations also broadcast information and warnings on local fire conditions.

Wildfires are normally recognized by dense smoke, which may fill the air over a large area. When a wildfire occurs, the decision to shelter in place, evacuate animals, and/or evacuate people must be continually considered as the situation evolves. Refer to *Section 3.1.4 – Deciding to Evacuate or to Shelter in Place*.

RECOMMENDED PRACTICES

a. use only fire-resistant materials on the exterior of your barn or facility, including the roof, siding, decking, and trim

b. consider installing fire suppression systems for buildings as well as an outdoor system

c. when constructing pools and ponds, make them accessible to fire equipment—they may serve as a source of water for fighting wildfires

d. ensure that dedicated hoses are long enough to reach all parts of your building

e. maintain a fire break around the perimeter of the property, pastures, or buildings

f. controlled burns should not be conducted near horse buildings. Local fire departments should be consulted for advice on controlled burns.

3.1.3 Power/Mechanical Failure

Power and mechanical failures can be triggered by a variety of events, including ice storms, wildfires, or severe weather, and may trigger on-farm emergencies capable of endangering animals and their caretakers. These failures have a greater impact on animals that are reliant on power and mechanics to provide feed, water, and ventilation.

REQUIREMENTS

If the systems cannot be run manually, an alternative method or power source must be available to run critical systems (e.g., watering system, ventilation, feeding).

Owners or caretakers must have enough feed and safe, clean, and palatable water to meet the needs of their animals for at least 72 hours.

All electrical and mechanical equipment and services including water bowls and troughs, ventilating fans, heating and lighting units, and alarm systems must be inspected at least annually and kept in good working order.

RECOMMENDED PRACTICES

a. calculate the amount of water that your animals need daily. A reliable backup source of water of acceptable quality should be identified. This can be a well if a generator is available to operate a pump

b. estimate the electrical needs of your facility to ensure production and management continuance

c. a generator (fuel or tractor powered) should be available for emergency use

d. keep fuel reserves sufficient to run the generator for 72 hours on-site

e. alarms and fail-safe devices, including an on-site alternate power supply, should be tested according to manufacturer's recommendations to ensure that they are in working order

f. a standard operating procedure for maintenance of all equipment and services on site should be developed and available for all caretakers

g. determine the minimum daily feed ration for the animals' level of production. Consult with your nutritionist or veterinarian to establish these minimums

h. keep extra maintenance supplies and parts on hand in case of longer delivery times due to adverse weather conditions or road closures in your area.

3.1.4 Deciding to Evacuate or to Shelter in Place

In times of extreme environmental conditions, if thorough preparations are in place (including a good emergency plan that can be implemented if or when needed), staying on site may be conceivable. However, in emergency situations involving floodings, hurricanes, tornados, or wildfires, the evacuation of animals and/or humans may be necessary. To help prepare for proper evacuation planning of animals and family, consider the following:

- consider likely emergencies your facility may experience (e.g., located in a flood plain, near grasslands) and develop contingency plans accordingly

- contact local emergency management authorities to become familiar with at least 2 possible evacuation routes and locations where horses can be relocated
- arrange for a place to shelter animals (e.g., fairgrounds, other farms, racetracks, exhibition centres)
- consider the health status of the herd and whether they will come into contact with other herds during evacuation
- ensure that enough feed, water, and medical supplies are available at the destination
- make sure animals have enough identification to be able to tell them apart from others
- make sure to have adequate and safe fencing or pens to separate and group animals appropriately
- prepare an emergency kit that will follow the animals (refer to *Appendix E – To Prepare in Case of Evacuation*).

There may be circumstances where the risk to life is great and there is not enough time to evacuate animals (e.g., having a wildfire start in the immediate area). In this situation:

- protection of human life and safety should be the priority
- after ensuring human safety and if it is safe to do so and time permits:
    - open gates between pens and pastures to give the animals more room to escape the hazard. Do not let animals out into unfenced areas as they could become hazards on roads or for emergency rescue teams
    - put extra feed and water out where the animals can get to it, as it may be a few days before caretakers are allowed to return home
    - consider turning off power, propane, and natural gas to reduce the chance of these utilities causing additional problems.

If a decision is made to remain on the property during an emergency, decide whether to confine animals in an available shelter or leave them outdoors. A safe pasture has:

- no overhead power lines or poles
- no debris or sources of blowing debris
- adequate and safe fences that will contain the animals
- enough open space to allow animals to avoid blowing debris

- access to at least 3 days of food and clean water.

REQUIREMENTS

Create a written evacuation and/or shelter in place plan(s).

RECOMMENDED PRACTICES

a. evacuate as soon as the first alert is issued

b. when advance notice of an emergency is available, evacuation plans should be applied at least 72 hours before anticipated landfall to avoid being caught in high winds, flooded roads, or heavy traffic

c. consider training your animals annually to be able and willing to load into a trailer (refer to *Section 10.4.1 – Training to Load*)

d. ensure you have an action plan to load animals that are unwilling to load, including having the proper equipment on site to herd the animals into the trailer (e.g., chute or panel system, type of trailer, the use of a companion animal)

e. ensure you have the appropriate equipment (e.g., trailer that meets size and quantity requirements) to safely transport your animals off site, or have access to alternate arrangements (e.g., borrow, rent)

f. ensure you have a list of people, including livestock haulers, who can assist on short notice in the event that your animals need to be evacuated (refer to *Appendix B – Emergency Telephone List*)

g. ensure the equipment that would be used in an evacuation is ready and serviceable (e.g., trailer is in good working condition, accessible) and stocked with necessary supplies (e.g., extra feed, halters, lead ropes, bedding material, medications)

h. consider special provisions that are required when transporting compromised or unfit animals (refer to *Section 10.1 – Fitness for Transport*)

i. ensure your animals have some form of visual identification (e.g., livestock marking pencil, marking spray, back tags, tags on halters, neck bands) to tell them apart from others whether you are evacuating or remaining on the property

j. keep a record (e.g., ID numbers, photos) of your animals' identification in case animals from different sites share a relocation site

k. consider using a Livestock Evacuation Documentation Form when your animals are being relocated off-site.

3.1.5 Motor Vehicle Accidents

Horses involved in transport are vulnerable to injury, stress, and fear, particularly during emergencies such as vehicle collisions or trailer malfunctions. Ensuring a plan is in place to anticipate and proactively address unexpected transport events that outlines practical procedures to protect horse welfare during such incidents is important. Establishing immediate and appropriate actions to take during these situations to reduce suffering, safeguard human and animal lives, and comply with legal and ethical obligations is important. Recognizing that accidents are often unpredictable, it is crucial to prioritize preparedness, equipment readiness, training, and a calm, informed response.

All individuals involved in transporting horses should be trained in emergency equine handling and restraint, basic equine first aid, emergency scene safety, and procedures for contacting authorities and veterinarians.

Consider the following emergency response procedures to assist in these situations:

- ensure human safety first
    - move yourself and others to a safe location away from traffic if possible
    - turn on hazard lights and deploy reflective triangles/cones to alert other motorists
    - call 911 or local emergency services to report the accident
- assess the situation
    - look for injuries, signs of shock, or distress
    - assess the stability of the trailer and the safety of removing the horses
    - DO NOT unload horses unless:
        - The trailer is at risk of tipping
        - There is fire or smoke
        - First responders advise to do so
        - It is safe to do so
- secure the horses
    - approach calmly and quietly
    - use halters and lead ropes to secure each horse
    - move horses to a secure area away from the road, if unloading is necessary
    - if horses are loose, attempt to calmly corral them while ensuring human safety. Request assistance from police or animal control if needed
- administer first aid
    - treat minor wounds with the equine first aid kit
    - do not attempt to treat serious injuries unless you are qualified
    - contact a veterinarian immediately for any visible or suspected injuries

- cooperate with emergency responders
    - provide information about the number of horses, their condition, and any health concerns or behavioural issues
    - follow the instructions of emergency personnel at the scene
- documentation
    - document the incident thoroughly with photographs and written notes
    - report the incident to relevant authorities and insurance providers
    - file a report if required under local laws or animal welfare regulations
- post incident care
    - ensure all horses involved are examined by a veterinarian post-accident, even if injuries are not immediately apparent
    - monitor horses for signs of trauma or behavioural changes in the days following the accident
    - provide rest and minimize stress until the horse fully recovers.

RECOMMENDED PRACTICES

a. ensure all vehicles and trailers used for transport are regularly inspected and maintained
b. ensure tires, brakes, hitch connections, and lighting systems are in good working condition
c. trailers should be equipped with:
    - non-slip flooring
    - proper ventilation
    - secure partitions or dividers
    - emergency exits (if available)
d. transport vehicles should be equipped with:
    - first aid kits
    - fire extinguishers
    - emergency roadside kit (cones, reflectors, high-visibility vests)
    - lead ropes and halters (one per horse)
    - emergency contact list
    - horse identification documents (if applicable)
    - emergency plan summary sheet.

Note: This section is largely based on Section 3: Emergency Preparedness and Management *from the* Code of Practice for the Care and Handling of Goats *(2022) available at https://www.nfacc.ca/goats-code-of-practice#Sec3Goats. The original material has been adapted, expanded, and supplemented to fit the context of this Code.*

Section 4: Feed and Water

Horses require good quality feed. Good overall feed management includes providing feeds that are safe and that meet the nutritional and behavioural needs of horses. **Good quality forage (hay or pasture) should form the bulk of the diet for horses**. *Section 5.5 – Body Condition Scoring* includes other information relevant to feeding horses.

4.1 Water

Water is the single most important nutrient in the management of horses. Horses (in particular, donkeys and mules) will limit their water intake to the point of dehydration if the quality (palatability) of drinking water is compromised. Horses typically will not drink water that is too hot, as they are sensitive to both the temperature and taste of their drinking water. Water that is excessively warm—especially above 100°F (38°C)—can become unpalatable or uncomfortable for them, leading to reduced water intake. They may also limit their intake of water from a new source, such as when moved to a new location. It may be advisable to take a supply of water with you on trips.

Water demand in horses depends on several factors such as physiological state, air temperature, exercise, illness, and diet. Generally, the **minimum** daily amount of water required by horses at maintenance and in a moderate environment (i.e., 5°C–20°C) is 5 L (1.32 gal) of water for every 100 kg (220 lbs) of body weight (3). The amount of water the horse needs will go above this minimum with:

- increased humidity
- increased ambient temperature
- increase in the horse's metabolic activity level (in work, pregnant, lactating)
- the presence of some health conditions (e.g., diarrhea)
- a diet high in salt or potassium.

Refer to *Appendix F – Sample Water Intakes*.

Snow as a Water Source

During the winter, it is important that feed intake is not limited by a lack of water as there are increased energy needs during periods of cold temperatures. Horses require a lot of water to digest dry feed and will often reduce their water intake as temperatures decline.

Reduced water intake, combined with increased forage consumption, can lead to a greater incidence of impaction and colic.

Given the scientific research on the water needs of horses in general, snow alone will not meet their water requirements. Some research shows that limiting liquid water intake can lead to reduced feed intake, a particular concern in the winter months given the increased energy needs of horses in cold temperatures (3). Water requirements may even increase in cold temperatures because water intake increases as feed intake increases (3).

REQUIREMENTS

Horses must have regular access to safe, palatable and clean water in quantities to maintain health and hydration.

In extreme weather conditions (cold or hot), special attention must be paid to ensure water availability, access and intake.

Water troughs, containers and any automatic watering devices must be cleaned regularly and maintained in working order with no sharp or abrasive edges.

Snow is not an acceptable sole source of water for horses.

RECOMMENDED BEST PRACTICES

a. construct and locate water troughs and buckets so they are protected from contamination and freezing

b. check automatic watering systems daily to ensure they are dispensing water properly

c. check for stray voltage from the water source (e.g., electric fence ground rods and defective heaters). Horses may refuse to drink if they receive even a slight electric shock when drinking

d. offer tepid water in cold temperatures to encourage intake, especially for geriatric horses (water can be heated up to 20°C to optimize intake in cold temperatures)

e. water troughs and/or buckets should be kept in shade whenever possible and changed frequently to avoid overheating. A thermometer should be used to check the water temperature regularly

f. water quality should be tested at least annually, or more frequently if there is a change or refusal to drink, unless it is from a previously tested water supply safe for human consumption

g. horses that are not in appropriate body condition should be segregated in order to provide supplemental feed and ensure an adequate opportunity to feed, being mindful of bonded pairings

h. ensure that submissive herd members have access to water. Providing more than one station is helpful.

4.2 Safety of Feedstuffs

It is important that feedstuffs be clean. Before feeding hay, ensure it is free from dust, mould, soil, weeds, and poisonous plants. Concentrates should be dust-free and not too finely ground. Some feeds that are appropriate for other farm animals are not appropriate for horses (e.g., medicated cattle feeds).

Feed must also be securely stored and, when possible, kept separately to prevent accidental access. It is also important to be aware of the components of forages being fed in order to avoid feeding unsafe feedstuffs (mycotoxins, fescue, monensin). This will help prevent contamination of the feed, which can impact horse health. When horses gain unrestricted access to concentrates (e.g., pellets, grains such as oats and barley), they are likely to overeat, which can also cause serious health problems, such as laminitis, grain overload, and colic. (3).

REQUIREMENTS

Horses must have daily access to forage that is free from offensive odours, visible mould and that has minimal dust.

Horses must only receive feedstuffs that are appropriate for the species.

Concentrates must be stored in a secure manner that prevents horses from overeating.

RECOMMENDED PRACTICES

a. ensure the ration has been balanced for nutrient content and that all feed ingredients used in the ration are of good quality and free from spoilage and excessive moisture

b. ensure clear labeling and identification of all feeds and employ appropriate storage methods. Keep labels and feed tags in case of accidental contamination or feed recall

c. ensure buckets and troughs are cleaned regularly

d. store concentrates in sealed, rodent-proof containers

e. remove baling twine and any other debris from the feeding area.

4.3 Feeding Behaviour

Horses are strongly motivated to forage (eating hay, grazing pasture) based on their inherent nature (3). When given the opportunity, they exhibit approximately the same feeding patterns observed in free-ranging horses: eating an average of 12–16 hours per day and never voluntarily fasting for more than 3–5 hours.

Horses without available pasture or free-choice forage (e.g., round bales) should be fed at least three to four times daily. If feeding concentrates, a good practice is to feed forage first. Horses prefer to default to a comfortable or relaxed posture while engaged in eating (head down, neck level to the withers, fully stretched out), known as a "neutral stance." Feeding forage increases the amount of time horses spend eating and results in slower digestion. Allowing large spans of time between meals (and thus with the horse's stomach essentially empty) appears to be linked to gastric ulcers and has sometimes been associated with increased frequency of stereotypic behaviour, such as cribbing.

REQUIREMENTS

Feeding practices must allow for natural feeding posture and must not negatively impact health.

Horses that do not have access to pasture or continuous hay supply must be fed, at minimum, twice daily.

RECOMMENDED PRACTICES

a. maximize the time that horses have access to forage. Depending on dietary needs, this may be achieved by free-choice feeding of forage, feeding forage multiple times per day, or using slow-feeding devices such as slow-feeding hay nets or trickle feeders

b. allow horses to feed in a head-down position when possible. This results in natural dental wear and reduces the risk of respiratory conditions. The ground/flooring where horses are fed should be free from contaminants (e.g., sand and manure), or the feed should not be in direct contact with the ground

c. consider social dynamics during feedings of multiple horses housed together. Sufficient feeder space should be provided so that all horses can eat at the same time

d. monitor feed intake regularly to ensure all horses receive adequate feed and take appropriate action for animals with inadequate body condition.

4.4 Nutritional Content and Feed Management

The amount of feed horses need is based on the horse's maintenance needs (i.e., to maintain at rest or idle) plus the horse's activity needs (growing, in work, pregnant, lactating). The average mature horse will consume 1.5–2% of its body weight in feed per day to meet its daily maintenance needs. **As forage is important to maintain proper gut function, it is crucial that forage forms the majority of the ration**. It is advised to have a veterinary and/or nutritionist consultation to best develop and implement a feeding plan catered to the horse's specific needs. The use of a Body Condition Scoring Chart can be helpful to guide nutritional programs.

The nutrient content of hay can vary. With forages of good nutritional content, little to no supplementation is needed. Donkeys, mules, miniature equids, ponies, and some breeds of horses are particularly prone to obesity and insulin resistance. Improper rationing and overfeeding can increase the risk of metabolic problems, and these animals may need special feed management (e.g., provide coarse grass types of hay and/or some straw). Miniature horses have a high prevalence of dental disease and malocclusion related to their small stature and disproportionately large teeth. Miniature horses may require more frequent dental care evaluation to manage this, in addition to offering soaked feed or feed in a slurry or mashed form, feeding small, frequent meals, feeding separately, and feeding highly digestible feed.

Feeding haylage or silage can be suitable for horses provided these feedstuffs are of excellent quality, are free from toxins and ruminant-specific additives, and the horses are given time to adapt to this type of feed. Consult a veterinarian regarding vaccination against botulism poisoning.

Concentrates are fed at different rates based on the increased energy needs not met by the forage. The quantity of concentrates fed should be no more than that necessary to provide the required energy—many horses will not need concentrates to meet their energy needs. Feeding excessive concentrates can contribute to obesity, digestive upset, and laminitis.

Minerals and vitamins may be deficient in some diets. It is advisable to consult a nutritionist or veterinarian familiar with the nutrient content of feeds grown in your region (e.g., Selenium deficiency or toxicosis).

Feed Space

Feed space varies depending on the size, number, and temperament of horses that will feed simultaneously from the same site (4). Generally, competition for feed can be reduced by providing horses in groups with multiple feeding sites (whether buckets or boxes) (4). Feeding stations and feed troughs that provide 1 m (3.3 ft) of feeding space per animal are generally appropriate. **An extra feeding point (i.e., one more than the number of horses) can help reduce aggression**.

REQUIREMENTS

Horses must receive a diet that is adequate for maintaining a good state of health.

The daily ration must address the horse's maintenance and activity needs and other factors relevant to the individual horse and the environment.

Horses must have access to salt either provided in the ration or free access (a block or loose salt).

RECOMMENDED PRACTICES

a. consult a nutritionist or veterinarian to develop a balanced ration and ensure an adequate feeding plan is implemented
b. monitor the weight and body condition score of individual horses on a weekly basis and adjust the feed to maintain an optimum body condition score (refer to *Section 5.5 – Body Condition Scoring*)
c. have new feeds, including forage, analyzed to obtain accurate nutrient values and ensure free from contamination and spoilage
d. provide feed on a regular daily schedule, preferably divided into several meals
e. make any changes to the type or quantity of feed gradually over 7–10 days to avoid gastrointestinal upset
f. feed on the basis of the energy value and weight of the feed (not volume of feed)
g. feeding stations should be maintained and placed away from fence lines, gates, and other areas that may pose a safety hazard.

4.4.1 Thermal Impacts on Dietary Energy Needs

Horses exposed to ambient temperatures below 5°C need more feed (particularly forage) for maintenance (3). Most horses will increase their feed intake in cold temperatures to meet their increased energy needs; however, some may need to be fed a more energy-

dense diet (3). Horses may voluntarily decrease feed intake as temperatures increase (3). Refer also to *Section 2.1.1 – Shade and Outdoor Shelter* and *Appendix S – Resources for Further Information*.

RECOMMENDED PRACTICES

a. increase the quantity of forage in the diet during cold temperatures

b. supply additional feeds (e.g., concentrates) for horses not maintaining their body condition on forage only during cold temperatures.

4.4.2 Growing Horses

Growing horses will generally consume 3% of their body weight in feed per day. Their specific feed requirements depend on their age, growth rate, activity level, and anticipated weight at maturity. A key principle in feeding young, growing horses is to provide high quality feeds that are balanced for growth.

Foals and Weanlings

The dam's milk will normally meet the foal's nutrient requirements for the first 6–8 weeks of life. If creep feed is necessary, it should be provided to foals at a rate of 0.5–1% of body weight per day to a maximum of 1.8–2.3 kg (4–5 lbs) (8). The same formulation of creep feed can be fed to weanlings at a rate of 1% of body weight per day up to a maximum of 2.3–2.7 kg (5–6 lbs). Weanlings need high quality hay, fed free choice or at 1.5–2% of body weight per day. Creep rations need to be balanced for growth.

Yearlings and Two-Year-Olds

Growth rate slows considerably by 12 months; however, even two-year-olds have higher nutrient requirements than mature horses at maintenance (8). It is advisable to feed yearlings and two-year-olds separately from mature horses as they may not compete well when fed with mature horses (8). If high quality hay or high quality pasture is available, yearlings and two-year-olds may not need concentrates (8). For donkeys, Mammoth breed donkeys, and draft horses, it may take up to three years to fully mature, and this should be taken into consideration for their nutritional requirements as well.

REQUIREMENTS

Growing horses must receive a diet that is adequate for maintaining a state of good health and development.

Weaned foals must have access to a suitable diet before, during, and after weaning.

RECOMMENDED PRACTICES

a. consult a veterinarian or nutritionist when caring for an orphan foal. Specialized knowledge is needed to meet their nutritional requirements

b. ensure the total daily ration for growing horses consists of 13–15% protein overall (depending on the region, the protein content of forage will vary and should be balanced with the concentrate)

c. consult a nutritionist or veterinarian to ensure the nutrient requirements of young horses are being adequately met and to determine if your foal would benefit from creep feed

d. feed horses of similar nutritional needs together.

4.4.3 Horses in Work and Competition

Work increases nutrient needs. Dietary energy (the caloric content) is the nutrient most affected by increased work (9). Other nutrient requirements also increase marginally; however, the increased protein, vitamin, and mineral needs are often met with the extra energy source (9). The addition of more energy-dense feeds (e.g., concentrates) to the ration is usually necessary for horses in work. Added fat can be used to reduce reliance on large amounts of carbohydrates (9).

REQUIREMENTS

Horses in work and competition must receive a diet that is adequate for maintaining a state of good health.

RECOMMENDED PRACTICES

a. divide the concentrate ration into at least two meals and avoid feeding more than 0.5–0.6 kg (1.1–1.3 lbs) of concentrate per 100 kg (220 lbs) of body weight in any single feeding

b. avoid feeding immediately prior to or after strenuous exercise

c. ensure sufficient salt is provided as horses lose salt in sweat during work

d. ensure any increase in concentrate is done gradually over 7–10 days to prevent digestive upset.

4.4.4 Breeding Stallions

In the breeding season, stallions have higher energy requirements similar to horses in work (refer to *Section 4.4.3 – Horses in Work and Competition*). Although the energy expended by the stallion during mating is modest, the additional activity or changes in behaviour (e.g., pacing) can substantially increase energy needs (10). Stallions finishing the breeding season in good body condition can be tapered down to maintenance by increasing the hay portion and decreasing the concentrate portion (10). Adding extra feed or supplements will not enhance fertility for stallions already receiving a balanced diet (10).

REQUIREMENTS

Breeding stallions must receive a diet that is adequate for maintaining a state of good health.

RECOMMENDED PRACTICES

a. take advantage of the months prior to the breeding season to ensure the stallion's body condition is appropriate (refer to *Section 5.5 – Body Condition Scoring*)

b. ensure any increase in concentrate is done gradually over 7–10 days to prevent digestive upset (9)

c. avoid feeding more than 0.5–0.6 kg (1.1–1.3 lbs) of concentrate per 100 kg (220 lbs) of body weight in any single feeding (9).

4.4.5 Reproductive Mares and Jennets

Proper nutrition improves fertility and promotes normal growth and development of the fetus. Mares and jennets undergo significant physiological changes during gestation, including metabolic changes and so careful, continual monitoring of body condition is important to the health of the mare and developing foal.

The energy requirements of mares and jennets increase significantly during late gestation (i.e., the last three months) and are the greatest during early lactation (i.e., months 1–3). Mares typically gain 12–16% of their initial body weight during pregnancy to support both the fetus and the placental tissues.

Energy requirements increase significantly when lactation begins, and some mares may lose weight during this period. For this reason, it is not advisable to have a mare below a BCS of 5 when she foals.

Additionally, mares in thin body condition are less likely to get pregnant. If rebreeding is a goal, keeping mares in good body condition is important. It is important to be mindful to not

over-condition a mare during conception and pregnancy, as this can have negative health and developmental impacts on both the mare and foal including insulin and cortisol dysregulation, as well as impacts to orthopedic health.

Pregnant mares should not have access to endophyte-infected tall fescue, as they are likely to show signs of tall fescue toxicity, characterized by prolonged gestation, difficulty foaling, thickened placenta (including premature separation of the placenta known as a "red bag" presentation), decreased or absence of milk production, weak or dead foals, and reduced breeding efficiency following parturition.

There are advantages to including a small amount of concentrate (i.e., 0.5–0.75% of body weight) during late gestation (11):

- growth of the foal in late gestation can compress the mare's/jennet's digestive tract, reducing the mare's/jennet's digestive capacity. Including concentrate will supply the energy needed while reducing the amount of hay she needs to consume
- concentrate may help meet the mare's/jennet's increased nutrient requirements when the nutrient content of hay is poor
- it can help adapt the mare/jennet to increased concentrate feeding during lactation.

REQUIREMENTS

Pregnant and lactating mares/jennets must receive a diet that is adequate for maintaining a state of good health and that allows the mares/jennets to provide adequate nutrition to the foal.

RECOMMENDED PRACTICES

a. consult a nutritionist and/or veterinarian to ensure the nutrient requirements that are of concern during pregnancy and lactation are met (e.g., calcium, phosphorous, selenium, and micronutrients) (11)

b. ensure mares/jennets are fed a diet with sufficient protein (11% during late gestation; 13.5% in early lactation [months 1–3]; 11% in late lactation [months 4–6]) (11)

c. supplement with concentrate when energy needs increase (late gestation and lactation), the mare/jennet needs to improve body condition, or if the nutrient content of hay is poor

d. ensure any increase in concentrate is done gradually over 7–10 days to prevent digestive upset

e. divide the concentrate into at least two meals and avoid feeding more than 0.5–0.6 kg (1.1–1.3 lbs) of concentrate per 100 kg (220 lbs) of body weight in any single feeding.

4.4.6 Geriatric Horses

Geriatric horses (see glossary) will typically consume 1.5–2% of body weight in feed to meet their daily maintenance needs (12). Good quality forage is generally a good sole maintenance feed source provided the teeth are in good condition (12). Dental disease is common in geriatric horses and can result in slower eating, inadequate chewing and/or refusal to eat due to pain. Some geriatric horses may need specialized rations, such as soaking the feed, or using hay cubes (soaked), hay pellets, or chaff (chopped hay). Refer to *Section 5.3 – Dental Care*.

Weight loss or failure to maintain appropriate body condition in the face of perceived adequate feeding strategies are common problems in geriatric horses (12). **However, old age itself is not a cause for weight loss**. Therefore, owners need to make an effort to determine the cause and take corrective action, with the help of their veterinarian when necessary. **Euthanasia may be necessary on welfare grounds if appropriate corrective actions fail to result in an increase in body condition above the minimum acceptable score**. Refer to *Section 5.5 – Body Condition Scoring*.

Causes of weight loss or poor body condition in geriatric horses, include (12):

- underfeeding or giving feeds of insufficient nutritional content
- reduced feed intake (e.g., due to competition for feed)
- inability to eat (e.g., due to painful dental problems)
- lack of appetite due to health conditions
- increased nutrient requirements (e.g., due to health conditions)
- parasitism.

REQUIREMENTS

Geriatric horses must receive a diet that is adequate for maintaining a state of good health. Refer to* Section 5.5 – Body Condition Scoring *for other relevant Requirements.

RECOMMENDED PRACTICES

a. have a veterinarian perform a dental examination on geriatric horses at least annually or if there is a dramatic decline in Body Condition Score

b. work with a nutritionist or veterinarian to establish an appropriate feeding program for geriatric horses

c. monitor the weight and body condition score of geriatric horses regularly—identify animals that are too thin or fat, ascertain the specific cause and employ effective strategies to correct the problem

d. horses that are less than a 3 out of 9 body condition should be segregated during mealtimes and provided with appropriate supplemental feed, being mindful of social dynamics (i.e., being able to see and be close to herd mates while eating without interference)

e. consult with a veterinarian if there fails to be an improvement in body conditions and other strategies have been unsuccessful

f. ensure geriatric horses have sufficient access to feed (e.g., increase the number of feed locations or the amount of feed space at any single location, rearrange the groups such that competition is minimized)

g. ensure changes to the type or quantity of feed are done gradually over 7–10 days to avoid gastrointestinal upset.

4.4.7 Refeeding Syndrome in Horses

When refeeding a malnourished, emaciated, or starved horse, our first instinct is to feed the horse in sufficient quantities to regain the lost weight. Unfortunately, this is the wrong approach and can result in severe complications and possible death within days to a week of initiating the feeding process.

When all feed is withheld from a horse, it takes approximately 60–90 days for an adult horse to lose 40% of their body weight and once the horse becomes weak and recumbent (unable to rise) death is expected within 3–4 days. Once a horse has lost 45% of body weight, it is unlikely the horse will be able to survive. Most commonly, emaciation in horses is due to lack of feed, poor quality feed, or feed being provided in insufficient quantity to maintain an optimal body condition score (4-6/9).

Managing an emaciated horse is a complex process and the horse should be examined by a veterinarian and have appropriate bloodwork and other diagnostic tests performed as

recommended. The feeding management of the horse is complex and needs to be done in a slow and methodical manner with appropriate feedstuffs under the guidance of a veterinarian or nutritionist. The initial reintroduction to feed is a crucial part of the horse's rehabilitation program, and when done correctly will help prevent refeeding syndrome.

Refeeding syndrome is a complex process that occurs in several species including humans and horses. This occurs when a diet is fed that is high in carbohydrates which leads to a spike in insulin because of the starch content in the feed. Insulin stimulates glucose uptake from the bloodstream to be stored in cells and stimulates the uptake of electrolytes, including magnesium and phosphate into cells. Since the horse already has depleted electrolytes stores, this can affect the ability of organs to function properly and ultimately can lead to kidney, heart, and respiratory failure, resulting in death. The death of the horse does not occur after one meal, but it is the repeated cycle of high carbohydrate meals that leads to the depletion of electrolytes and death which may take several days to a week.

RECOMMENDED PRACTICES

a. establish feeding protocols for starved horses in consultation with a veterinarian or nutritionist

b. feed a low carbohydrate and higher protein diet to reduce the risk of refeeding syndrome (e.g., alfalfa hay)

c. recommended feeding instructions:

    - days 1–3: feed 0.5 kg of alfalfa hay every 4 hours, totaling 3 kg per day
    - days 4–10: gradually increase the amount so that by day 6, the horse receives 2 kg every 8 hours, totaling 6 kg per day
    - after day 10: transition to free-choice alfalfa hay and provide a salt block once electrolytes are balanced.

Section 5: Health Management

5.1 Health Management Plans

A health management plan is a proactive and preventative program to maintain the health of your horse. It can have many components but generally includes:

- Biosecurity Protocols
- Pest and Insect Control
- Vaccination
- Parasite Management.

The health of horses is a key component of their welfare. Horses should be regularly assessed for health and fitness relative to any work or activity they perform. Caregivers should maintain the health of their animals through appropriate nutrition, housing, and disease prevention, detection, and treatment.

Veterinary Oversight

Veterinarians and other veterinary health professionals should be involved in developing a health management plan to meet these animal health obligations. Depending on the circumstances, it may only be possible to seek veterinary advice via phone or other contact.

A Veterinarian-Client-Patient Relationship (VCPR) is the basis for interaction between a veterinarian, their client, and their client's animals. The exact definition for a VCPR varies between provinces, but generally the relationship has been established when the veterinarian has examined the animals or visited the farm (to gain a close knowledge of the health status and management of the animals), the veterinarian has assumed responsibility for making clinical judgments related to the health of the animals, and the client has indicated a willingness to follow the veterinarian's instructions. Some provinces allow for a VCPR to be established via telemedicine, which may be necessary for horse owners that are not within the service area of a veterinarian.

According to the Canadian Veterinary Medical Association, telemedicine is defined as "the provision of specific veterinary medical advice and treatment of an animal or animals based on the remote diagnosis of disease and injury by means of

telecommunications technology where no physical examination of animals by the veterinarian takes place. It does not include consultation between veterinarians where colleagues in different physical locations consult remotely with each other, or the provision of general, non-specific, advice. There are multiple ways that veterinarians can offer telemedicine including, but not limited to, telephone, email (text, videos, pictures), live video streaming, online communication platforms (e.g., Microsoft Teams, Zoom), and specialized telemedicine applications." (81)

It should also be noted that some veterinarians will not provide emergency services to horse owners with whom there is no established VCPR, which increases the risk that timely care cannot be provided in the case of emergency, injury, or severe illness. It is essential that horse owners living in an area without timely veterinary access establish a euthanasia plan to ensure humane end-of-life care (refer to *Section 12 – Euthanasia*).

Veterinary Medications

A VCPR is necessary to obtain all prescription medication. Medications, especially prescription medications, should not be administered unless under the advice of a veterinarian. Some medications or remedies may be ineffective or even unsafe. These include medications and remedies that are unlabeled, untested, or unregulated, and medications used in a way that differs from the originally intended and licensed use (i.e., extra-label). Regulated sources of medication include a veterinarian, pharmacy, veterinary pharmacy, and licensed animal medicines outlet. **Before administering any medication or remedy, read the label carefully and discuss its safety and proper use with a veterinarian**. It is also important to store medications correctly, as incorrect storage can affect their efficacy and safety, as well as to respect the expiration date.

Extensive use of antimicrobials in humans and animals has increased the emergence of antimicrobial resistance, making existing antimicrobials less effective in the prevention and treatment of illnesses. Veterinarians play an important role in overseeing when and how antimicrobials are used in animals, which can help avoid their inappropriate and unnecessary use while still protecting animal health and food safety.

REQUIREMENTS

Establish a working relationship with a practicing veterinarian (Veterinarian-Client-Patient Relationship or VCPR). If not possible due to animal location or lack of veterinary service providers, establish a health management plan, including a euthanasia plan.

Purchase medications and veterinary pharmaceuticals from regulated, reputable sources. Refer to provincial and federal regulations.

RECOMMENDED PRACTICES

a. work with a veterinarian and other experts to develop a written health management plan and review the plan in advance of making major changes to the farm

b. include the following in your health management plan:

    - protocols for biosecurity
    - protocols for the prevention, detection, and treatment of disease
    - protocols for pest and insect control
    - vaccination and deworming schedules
    - staff training
    - veterinary contact information for emergencies

c. use veterinary products that are approved by Health Canada and have a valid Drug Identification Number (DIN), and supplements registered through the Veterinary Health Products program

d. treatment records or receipts should be maintained

e. ensure treatment records include a record of the animal(s) treated, date, reason for treatment, dosage, withdrawal time, if applicable, and any adverse reactions

f. schedule regular preventive care veterinary visits to minimize emergencies

g. outline conditions for when to call a veterinarian

h. obtain veterinary advice on appropriate treatment for diseases

i. ensure a competent handler is present during a veterinary visit

j. inspect stabled or group housed horses at least twice a day for health and well-being; observe horses on open range or pasture on a routine basis

k. assess the horse's health and fitness for work/competition on a routine basis. *Appendix S – Resources for Further Information* provides a resource on assessing fitness for competition

l. separate new arrivals from resident horses for at least 14–21 days (from the date of newest arrival) and monitor their health status

m. test new arrivals as appropriate and based on discussion with a veterinarian and risk (e.g., origin of animal, destination of animal, time of year).

5.1.1 Biosecurity

Biosecurity is the term used to describe the measures needed to protect against the introduction and spread of diseases. An effective biosecurity program is based on two main concepts: i) Exclusion (keeping disease out of the farm) and ii) Containment (preventing disease spread within premises or to other animals). Consultation with a veterinarian or a qualified advisor can assist with developing a biosecurity program to suit specific situations.

Biosecurity protocols reduce the risk of introduction or spread of diseases within a farm or to other farms. These biosecurity protocols should be in writing.

Horses that are newly introduced, returning to the farm, or infected with a pathogen in the carrier state present the greatest risk for infectious disease on farm. For some pathogens, such as EHV-1 and *Streptococcus equi* (Strangles), a horse can be a carrier without showing signs. These carrier animals can play a significant role in disease transmission. Infectious pathogens can also be transmitted by people (e.g., via clothing or footwear); other animals (e.g., dogs and wildlife); and objects not adequately cleaned and disinfected (e.g., tack, grooming equipment, halters, water buckets, and trailers). *Appendix S – Resources for Further Information* provides several resources to assist with biosecurity planning.

The horse sector, in partnership with the Canadian Food Inspection Agency, has developed comprehensive biosecurity standards, which include detailed sections on disease prevention that horse owners should follow (refer to *Appendix S – Resources for Further Information*).

Biosecurity protocols can include:

- separating new horses from resident horses for a period of time to determine freedom from disease (e.g., 14 to 21 days)
- housing horses of similar risk groups (health status, use and age) together
- isolating sick horses
- creating a perimeter around the area where horses are housed to limit the spread of disease
- cleaning facilities and equipment to prepare for receiving new or visiting horses
- developing a sanitation program for the premises, buildings, equipment, and vehicles

- ensuring visitors are in compliance with the farm disease prevention or biosecurity protocols
- minimizing the movement of equipment and personnel between buildings
- washing hands before handling animals
- changing footwear and clothing when moving between farms/facilities
- vaccination and deworming schedules.

It is important to be aware of general clinical signs of disease in horses. Early detection can limit the impact of a disease outbreak.

RECOMMENDED PRACTICES

a. establish a biosecurity plan with advice from a veterinarian and other knowledgeable service providers

b. ensure that all farm personnel are aware of and understand their responsibilities in adhering to the disease prevention or biosecurity plan.

5.1.2 Pest and Insect Control

Controlling pests and flying insects is an important component of an overall health management plan. Pests and insects can transmit diseases and cause discomfort.

RECOMMENDED PRACTICES

a. implement procedures to monitor and control pests. The ideal program prevents the entry of wildlife and pests where horses are housed and eliminates sites on the farm that provide shelter and food for pests

b. protect horses from excessive insect burden (e.g., stable horses at sunrise and sunset, the peak insect feeding hours; apply repellant products to the horse; use a fly sheet)

c. implement protocols to reduce insect breeding sites (e.g., remove or cover manure piles, remove standing water where possible, mosquito control in water troughs and other water sources).

5.1.3 Vaccinations

Vaccinations offer horses protection from some infectious diseases but do not completely eliminate disease risk. Good overall management directed at infection control remains

important even for vaccinated horses. Vaccination guidelines vary by region and should consider the risk for pathogen exposure. *Appendix S – Resources for Further Information* provides a link to the Canadian Animal Health Surveillance System (CAHSS) website where owners or caregivers can check the regional occurrences of different horse diseases in Canada. This resource can be used as guidance and/or in preparation for travel between regions to ensure that horses are protected and up to date on required vaccinations.

While there are costs associated with vaccines, those costs are generally much lower than the costs associated with an infectious disease. Vaccinations are especially important for horses that are exposed to other horses with an unknown health history (e.g., at shows, public events).

Appendix S – Resources for Further Information provides a reference to the vaccination guidelines of the American Association of Equine Practitioners.

REQUIREMENTS

Comply with vaccination requirements to attend or participate in shows or events.

In consultation with your veterinarian, adhere to applicable provincial, national, and international requirements for vaccination.

Rabies vaccines must be administered by a veterinarian or under veterinary supervision. (Refer to provincial legislation.)

RECOMMENDED PRACTICES

a. consult a veterinarian to develop a vaccination program, including correct on-farm storage and administration of the vaccines
b. ensure broodmares receive regionally appropriate vaccines
c. ensure foals are properly immunized with primary and booster vaccines, as this affects their response to vaccines later in life
d. keep a record of the vaccinations that were administered (i.e., a record identifying the animal(s) vaccinated, date and any adverse reactions)
e. know the vaccination status of new arrivals and ensure they are properly vaccinated.

5.1.4 Parasite Management

While this section focuses on internal parasites, external parasites (e.g., lice, ticks, mites) also affect horses. A veterinarian should be consulted for advice on controlling external parasites.

Control of internal parasites is key to maintaining feed efficiency and horse health (3). Signs of severe parasitism include poor body condition, rough hair coat (especially in foals), weight loss, mild to moderate abdominal distension ("pot-bellied" appearance), colic, diarrhea, and stunted growth. Foals and geriatric horses are particularly susceptible to internal parasites as are horses with lowered immunity (3).

Research shows that parasite resistance to several dewormers may be related to the traditional approach of deworming all horses every 6–12 weeks with rotating products (3). A more effective alternative may be targeted treatments based on the worm burden specific to individual horses and farms combined with effective pasture management (3). Fecal examination for parasite eggs is an important component of a parasite control program, but results must be interpreted based on a thorough understanding of parasite life cycles. For example, immature (larval) stages of worms can cause disease before egg shedding is detected.

Parasite control programs will vary but may include the following (3):

- fecal examinations (to identify worm burden and estimate levels of shedding of strongyle eggs of individual horses)
- regular deworming of all horses or targeted treatments of horses known to have a high parasite burden
- fecal egg count reduction tests (to assess the efficacy of individual drugs used)
- good pasture management (e.g., prompt manure removal, composting to kill parasite eggs, pasture rotation).

REQUIREMENTS

A parasite control program to prevent or mitigate parasite related disease must be in place for internal and external parasites.

RECOMMENDED PRACTICES

a. consult a veterinarian to develop a control program for internal parasites. The plan should take into consideration risk factors such as the age of the horse, stocking

density, the presence of drug-resistant parasites, seasonal and geographical factors, and additional management practices such as pasture hygiene

b. consult a veterinarian to develop a control program for external parasites

c. ensure records of parasite treatments include a record identifying the animal(s) treated, date, dosage, and any adverse reactions.

5.2 Sick, Injured, or Compromised Horses

The list of topics covered in Section 5.2 (including 5.2.1 and 5.2.2) is not exhaustive but provides information on topics that are particularly relevant to horses.

It is essential that those responsible for horse care be able to recognize normal behaviour, signs of sickness or injury and have basic knowledge of first aid for horses. It is important to frequently check horses carefully in order to identify problems that may not be apparent from a distance. These inspections can be done during feeding or other chores.

The most common signs of illness include:

- change in the horse's behaviour (e.g., lethargic, depressed, anxious)
- reduced feed intake
- change in water intake
- change in consistency of manure
- unexplained change in weight (loss or gain)
- signs of pain or discomfort (e.g., reluctance to move, increased rate of respiration and sweating)
- signs of colic (refer to *Section 5.2.2 – Colic*)
- lameness
- swelling
- discharge from the eyes, ears or nose
- coughing or difficulty breathing
- fever (refer to *Appendix H – Vital Signs in Horses and Donkeys*).

Compared to horses, donkeys and mules are stoic animals and are less likely to show behavioural signs indicative of illness. In donkeys and mules, a reduction or loss of appetite is a significant concern.

Take action immediately if any horse is injured or appears ill or distressed. If you are in doubt about the animal's health or the most effective treatment, consult a veterinarian without delay.

Provincially and Federally Regulated Diseases

In Canada, many infectious horse diseases are provincially and/or federally regulated. Individual provinces identify the process for reporting these diseases, many of which are reportable by veterinary health laboratories or veterinarians in certain situations. For some federally reportable diseases, horse owners are included in the list of individuals responsible for reporting. For example, ***horse owners must report to the Canadian Food Inspection Agency (CFIA) any suspected cases of Equine Infectious Anemia.*** ***Contact a CFIA office by telephone (phone numbers available at inspection.canada.ca***)

For a list of provincially and federally regulated diseases please visit the Canadian Animal Health Surveillance System website at www.cahss.ca/

For a complete list of federally reportable diseases, for which horse owners must report suspect cases to the Canadian Food Inspection Agency, visit inspection.canada.ca.

REQUIREMENTS

Horses that are sick, injured or in pain must receive appropriate treatment without delay or be euthanized without delay. Refer also to Section 12 – Euthanasia.

For sick, injured or compromised horses that are not showing improvement, horse owners or caregivers must, without delay, obtain veterinary advice on appropriate care and treatment or euthanize without delay.

Suspect cases of federally or provincially reportable diseases must be reported to the appropriate regulatory body.

RECOMMENDED PRACTICES

a. learn how to take a horse's vital signs. Refer to *Appendix H – Vital Signs in Horses and Donkeys*

b. consult a veterinarian when vital signs are abnormal for an unknown reason or when a horse shows signs of illness

c. post veterinary contact information, including after-hours contact, where staff will easily see the information

d. know in advance the route to the nearest veterinary hospital and have a plan in place for transport (refer to *Section 10 – Transport*)

e. keep a horse first aid kit on farm and in the transport vehicle. Ensure staff know its location and how to use it

f. consult an experienced horseperson or other expert for advice on safe restraint when treating a horse and provide an appropriate means of restraint when a veterinarian attends the horse (refer to Section *7.2.1 – Handling and Restraint Equipment*)

g. have sheltered, segregated and well-bedded sick pens/stalls for horses that are sick, injured, or recovering

h. have isolation facilities available on the farm

i. monitor sick, injured, and/or recovering horses at least twice daily depending on the severity of their condition

j. records or receipts of treatments should be maintained

k. ensure treatment records include a record of the animal(s) treated, date, reason for treatment, dosage, withdrawal time, if applicable, and any adverse reactions

l. assign responsibility for health management decisions to a competent individual if you will be away from the farm for an extended period.

5.2.1 Pain

Horses have the potential to experience many painful conditions throughout their lifetime. Both acute (immediate, short-term) and chronic (long-term) pain conditions negatively impact an animal's quality of life.

Identifying pain in horses can be quite challenging, and when caregivers are unable to recognize and appropriately respond to pain it presents a significant welfare issue. As prey animals, most horses only display subtle signs of pain. In addition, human presence has been shown to reduce the expression of pain behaviours, and no one behaviour is singularly indicative of discomfort. Instead, pain is best evaluated by the presence of "clusters" of behaviours. Awareness of the common behavioural indicators of pain is an

important skill for caregivers to acquire. Although not an exhaustive list, some of the most common behaviour indicators of pain are summarized in Table 1.

If you suspect your animal may be experiencing pain, a veterinary examination is recommended. Depending on the severity, expected duration, and prognosis for the condition, a variety of pain mitigation options exist. These may include veterinary medication, surgery to resolve the underlying issue, or numerous management changes such as re-fitting tack, implementing controlled weight loss and/or exercise, a change of career, or euthanasia.

Table 1 – Common behavioural indicators of pain

Sign	**Explanation**
General abnormal behaviours	e.g., standing off alone from the group, depressed, hanging head low, lying down for longer than normal, getting up and down repeatedly, rolling more than normal in a short time frame, yawning, stomping, kicking at their belly, looking around at their belly, rapid shallow breathing, pawing the ground, unusual aggression towards handler (bite or kick)
Abnormal facial expression	e.g., curling upper lip, wrinkled nares, wrinkles above eye
Abnormal locomotion	e.g., reluctance to move, shifting weight from limb to limb, non-weight bearing on hoof (holding it up), limping or hopping, stumbling or dragging toes
Abnormal posture	e.g., sawhorse stance (camped out), goat on a rock (camped in)
Inappetence	Horses in pain often stop eating or significantly reduce their intake.
Sweating excessively	Horses in pain may sweat excessively from an over-stimulated nervous system
Less responsive to handler's cues	When in pain, horses are less likely to respond to signals given by handlers as they are too distracted by their pain
Mutilations	Horse may bite, rub, chew, or scratch a painful area or wound. Stallions may chew their own body out of frustration or boredom

REQUIREMENTS

Any person responsible for a horse must be able to recognize the common causes and behavioural indicators of pain.

Horses that are in pain must receive appropriate management changes or treatment without delay.

5.2.2 Colic

Colic is a sign of a painful condition in the horse's abdomen. While episodes of colic vary in their severity, every case should be taken seriously.

The most common signs of colic are:

- repeated lying down, rolling, and getting up, or attempting to do so
- turning the head toward the flank, kicking or biting at the belly, pawing at the ground
- stretching out as if to urinate, without urinating
- depression and/or loss of appetite
- diarrhea or any change in manure output
- sweating with minimal physical exertion.

To reduce the risk of colic:

- provide safe, palatable and clean water at all times
- maintain a consistent daily schedule for feeding, exercise, and turnout
- feed a high quality diet comprised primarily of forage (limit the amount of grain-based feeds)
- divide the daily concentrate ration into two or more meals
- avoid putting feed directly in contact with the ground especially on sandy soils (3)
- ensure feed sources are free from mould and spoilage
- maintain a parasite control program in consultation with a veterinarian.

5.2.3 Communicable Diseases

Infectious Respiratory Diseases

Young horses and horses that commingle with others (such as at a horse show or living in high-traffic barns) are at particular risk for respiratory diseases such as strangles and those caused by Equine Influenza Virus and Equine Herpesviruses. These pathogens can be spread in the air, by nose-to-nose contact, or by contaminated hands, clothing, equipment, and tools (e.g., feed buckets, water troughs, and grooming tools). With some diseases, the pathogen can be spread by horses not showing clinical signs.

Signs include fever, lethargy, nasal discharge, cough, and swollen lymph nodes under the jaw (especially with strangles). Testing is necessary to obtain a definitive diagnosis. The time between exposure to infection and the occurrence of signs (known as the incubation period) varies from a few days to two weeks. Prolonged rest periods after infection are often needed to prevent chronic problems. While many horses recover uneventfully if managed properly, some horses can develop life-threatening complications. **Horses showing signs of respiratory infection should be isolated and should not be worked until a diagnosis and a treatment/management plan have been established.**

Equine Infectious Anemia (EIA, Swamp Fever)

Equine Infectious Anemia (EIA) is a contagious viral blood borne disease. The most common signs are fever and anemia; however, horses can appear healthy but still be carriers of the infection. The most common source of infection is other horses via blood feeding insects. Transmission may also occur via contaminated equipment (e.g., needles) or transfusions of untested blood or blood products.

There is no licensed vaccine or treatment for EIA. In order to prevent the spread of EIA, testing is strongly encouraged, particularly in areas where there are known cases. Infected animals are identified by a positive blood test (the official test is known as the EIA AGID / ELISA test (Coggins test). A negative EIA test is required for export of horses and to enter many competitions and stables. EIA is a federally reportable disease—all suspected or confirmed cases must be reported to the CFIA. **Horses that test positive for EIA must be euthanized**. Refer to *Appendix S – Resources for Further Information*.

Infectious Neurologic Diseases

Viral neurologic diseases can cause serious disease and often be fatal to horses. They include: equine herpes myeloencephalopathy (EHM) caused by equine herpesvirus-1 (EHV-1), rabies, West Nile virus encephalopathy (WNV), and Eastern Equine Encephalitis (EEE). Rabies, WNV, and EEE are zoonotic diseases (diseases which can be transmitted between humans and animals).

Clinical signs for these four diseases, such as incoordination and inability to rise from a down position, can be very similar. These signs can mimic those of other neurologic or systemic diseases and, therefore, affected horses should be examined by a veterinarian as soon as possible.

Rabies, WNV, and EEE vaccines are highly protective when administered according to the manufacturer's recommendations. Vaccines designed to protect against EHV-1 infection will reduce the amount of virus shed from the nose and the amount of virus in the blood, but, presently, will not protect horses from developing EHM.

RECOMMENDED PRACTICES

a. isolate a horse with a suspected or confirmed communicable disease, get a diagnosis, provide treatment, and alert any owners of horses that may have come in contact with that horse.

5.3 Dental Care

Most dental conditions are painful and lead to other welfare issues, such as weight loss. Horses should have their teeth examined at least annually and receive appropriate dental care as needed (e.g., teeth floating). Young and old horses, as well as those with dental problems, may need to be examined more frequently. Proper dental care helps horses eat better, perform better, and be healthier.

Signs of dental problems include:

- unexplained weight loss
- quidding (dropping feed while chewing)
- reluctant or slow to eat
- unusual tilting of the head while chewing
- unusually high amounts of long fibres in the manure
- resistance to the bit or bridle due to pain

- swelling in the cheeks or the upper or lower jaw
- excessive salivation (drooling or slobbering)
- unpleasant odour from the mouth or nostrils.

REQUIREMENTS

Horses showing signs consistent with dental problems must be examined and treated without delay.

Dental care procedures must only be performed by a veterinarian or competent individual working under direct veterinary supervision. Refer to provincial regulations.

RECOMMENDED PRACTICES

a. have a dental examination done at least annually or as frequently as may be needed for individual horses. In particular, broodmares, foals, geriatrics, and horses entering training should be examined for dental abnormalities

b. observe horses regularly for signs of dental problems.

5.4 Lameness

Lameness is a significant welfare concern. For the purpose of this Code, lameness, as it pertains to horses on-farm, is defined as any alteration in the horse's gait that appears to be caused by pain or discomfort. Lameness can manifest in many ways, including a change in performance or willingness to move, head nodding, or hip hiking. Gait can be evaluated from a walk, moving in a straight line and turning in both directions; increasing speed (e.g., trot or pace) may be necessary if the lameness is less severe (3).

Identifying the source of the lameness is essential to proper treatment. Prompt examination and diagnosis improves the welfare of the horse and can save time and money and prevent further damage (refer also to *Section 7.6 – Hoof Care* and *Section 11 – Change or End of Career*).

There are various forms of treatment for lameness, including rest, medication, surgical procedures, corrective trimming and shoeing, manual therapies, rehabilitation exercises, and pain management.

REQUIREMENTS

Lameness must be addressed either through specific therapies or changes in management or workload.

RECOMMENDED PRACTICES

a. reduce the risk of lameness by:
    - considering the horse's age, physical condition, and soundness when determining the type and amount of work the horse will be asked to do
    - providing horses with adequate rest periods between work sessions
    - ensuring good footing in exercise and turnout areas
    - ensuring regular hoof care
    - allowing low-grade injuries to heal by giving horses appropriate lay-ups (longer rest periods)
b. obtain a veterinary diagnosis of the cause of lameness and veterinary advice on appropriate treatment.

5.4.1 Laminitis (Founder)

Laminitis is a serious condition that causes inflammation in the foot that may result in severe pain, abnormal foot growth, and lameness. If untreated or if treatment is unsuccessful, laminitis can lead to permanent structural changes in the foot, gait abnormalities, and continual or recurrent bouts of foot pain (3). **The pain from laminitis can become severe enough to necessitate euthanasia on humane grounds** (3).

Known or suspected causes of laminitis include grain overload, consumption of toxic plants, obesity, severe infections (such as severe diarrhea), Equine Metabolic Syndrome, "Equine Cushing's" (PPID, see glossary), and excessive concussion of the hooves. Diet plays a key role in triggering laminitis, particularly the consumption of pasture or feeds high in simple sugars, starches, and fructans (3).

Signs of acute laminitis include:

- lameness (including a cautious, stilted gait)
- increased heat in the feet and/or a bounding pulse in the feet (felt at the pastern or fetlock)
- shifting weight to the hind end and front feet stretched out
- reluctance to pick up the feet

- laying down more or longer than normal.

REQUIREMENTS

Horses with laminitis must receive appropriate management and treatment, which may be lifelong and include medications, dietary management and hoof care. Severe cases or those that do not respond to treatment may require euthanasia.

RECOMMENDED PRACTICES

a. reduce the risk of laminitis through the following strategies:

   - do not let horses become overweight–ensure they are at an ideal body condition score and are not overfed relative to their energy needs (3) (refer to *Section 5.5 – Body Condition Scoring*)
   - ensure any changes to the diet are gradual
   - restrict at-risk horses from grazing on lush pasture (i.e., plentiful, bright green grass) (3)
   - store grains securely such that horses cannot gain access. **In the case where a horse gains unrestricted access to grain, call a veterinarian immediately—do not wait for signs of laminitis to appear**

b. consult a veterinarian to determine special care that may be needed for a horse that has had laminitis. Horses that have had laminitis are at increased risk of developing the disease again and the condition can become chronic

c. ensure communication between the veterinarian and farrier to determine whether corrective trimming or therapeutic shoeing may be needed.

5.5 Body Condition Scoring

Body condition scoring (BCS) is a tool for determining if an animal is too thin, too fat, or in ideal condition. In order to be done correctly, BCS involves both a physical palpation and visual assessment of specific anatomical sites that are most responsive to a change in body fat.

Appendix I provides the 1–9 scale for body condition scoring horses and ponies. Appendix J provides the 1–5 scale for body condition scoring donkeys and mules. **For the purpose of this Code, all body condition scores refer to the scales shown in either Appendix I or J**.

Be aware of the following when evaluating BCS:

- as horses increase BCS, they appear thicker and more solid; as donkeys and mules increase BCS, they get lumps of fat under the skin
- thoroughbred conformation naturally has more prominent withers and back; the conformation of ponies and draft breeds is naturally more fleshy
- the flank and tail head area may be less reliable sites when assessing the BCS of pregnant mares/jennets in late gestation (the weight of the foal makes the flank area appear thinner and hormone changes make the tail head area appear flatter)
- a thick winter coat can make a horse appear to be in better condition than it actually is. Palpation is essential to assess body condition.

Depending on the animal's purpose, breed, and life stage, a BCS of 4 to 6 (out of 9) is recommended for horses, miniature horses, and ponies. For mules and donkeys, a BCS of 3 (out of 5) is recommended.

Poor Body Condition

Excessively thin horses may be underfed, ill, heavily parasitized, or have dental problems. Horses in poor body condition are less able to cope with cold temperatures—they should be given additional shelter and may not even tolerate living outside in the winter.

Excessive Body Condition

Obesity in horses is most often caused by allowing animals to overfeed. Horses that are fat (BCS 8) are prone to overheating during warmer temperatures and experience strain to the legs and feet. Obesity is also a risk factor associated with laminitis (3). Overweight donkeys, ponies, and miniature horses are at severe risk of hyperlipemia if starved; therefore, any feed restrictions to reduce BCS must be gradual.

BCS and Reproduction

Reproductive efficiency is maximized by maintaining broodmares at a BCS of 5 to 7 throughout breeding, gestation, and lactation (14, 15). Mares that are too thin (BCS <5) at the beginning of the breeding season or at foaling have lower conception and pregnancy rates. They are also at risk of excessive weight loss at lactation. Increasing the energy fed to thin mares during lactation can improve rebreeding efficiency. An excess store of body fat (BCS 7) at foaling is not associated with foaling problems (16).

Horses in Work

Inadequate or excessive body condition adversely affects performance of horses doing physical, competitive work. Horses at a BCS >6 doing moderate to hard work may need more time to recover compared to horses at a BCS of 5 (17). A working horse that is too thin (BCS <4) may not have sufficient stored energy reserves for the work period (16, 18).

Refer also to *Section 4 – Feed and Water* and *Appendix S – Resources for Further Information*.

REQUIREMENTS

For horses and ponies: corrective action must be taken at a BCS of 3 or lower and at a BCS of 8 or higher (on the 1–9 scale). Veterinary advice must be obtained if animals do not respond to the corrective action. Refer to Appendix I.

For donkeys and mules: corrective action must be taken at a BCS of 2 or lower and at a BCS of 4 or higher (on the 1–5 scale). Veterinary advice must be obtained if animals do not respond to the corrective action. Refer to Appendix J.

Veterinary advice must be obtained for geriatric horses that are emaciated (i.e., BCS of 1 or 2 out of 9 for horses and ponies; BCS of 1 out of 5 for donkeys and mules).

Horses must not be starved or prevented from eating for prolonged periods in order to reduce BCS—the change in feed to reduce BCS must be gradual.

RECOMMENDED PRACTICES

a. use Appendices I and J to regularly assess BCS
b. aim for the following ideal BCS ranges for horses:
    - weanlings and foals, 4 to 5
    - broodmares (throughout breeding, gestation, and lactation), 5 to 7
    - stallions (at the beginning of the breeding season), 5 to 7
    - work and performance horses (farm work, racing, endurance), 4 to 6
c. keep records—identify animals that are outside their ideal BCS range, ascertain the cause, and take corrective action.

To increase BCS to an ideal level:

a. seek advice from a nutritionist, a knowledgeable, experienced horseperson, or a veterinarian

b. ensure the increase in energy intake does not exceed 10–15% per week (4)

c. put the horse on a weight gain program that first involves an increase in forage before concentrates are added (4)

d. provide "poor doers" with forage containing high digestible energy and additional energy in the form of concentrates, including added fat.

To reduce BCS to an ideal level:

a. seek advice from a nutritionist, a knowledgeable, experienced horseperson, or a veterinarian

b. ensure the decrease in energy intake does not exceed 10–15% per week (4)

c. put the horse on a weight loss program that first involves the reduction/elimination of concentrate (3). A reduction in energy intake should be accomplished without decreasing total daily dry feed intake below 1.5% of ideal body weight

d. provide more mature hay to an "easy keeper" that is maintained on a hay diet (3)

e. increase the horse's activity level. Any such increase should be gradual

f. prevent overeating (e.g., limit pasture access, keep the horse on a dry lot for part of the day, use a grazing muzzle) (3).

5.6 Fitness for Work or Competition

Regardless of whether the horse works or competes at a recreational or elite level, its fitness needs to be at an appropriate level for the work required. It is also important for competition horses to have regular periods of rest to recover from low grade competitive injury and mental stress.

Prior to any increase in exercise level, it is recommended that:

- a farrier assess the health and balance of the hooves and, if shod, apply appropriate shoeing for the sport
- a dental examination has taken place and appropriate treatment provided
- a veterinary examination has taken place to ensure the horse is in good health and is physically and mentally able to perform the desired tasks. The equipment (e.g., bit, bridle, saddle, harness) fits well and is not causing discomfort

- the diet is appropriate for the amount of work and for the individual's needs. Consult with a veterinarian or an animal nutritionist. Body condition score (BCS) should be appropriate for competition with an ideal BCS of 4–5 out of 9
- medications that are needed are at a minimum and everyone involved with the horse is aware of the withdrawal times for competition if the sport is regulated. Pain medications and therapies relieving pain should not be used in close association with an event where their use will mask lameness
- a team approach is recommended with all care providers including veterinarians, farriers, dentists (if working under a veterinarian), manual therapists, behaviourists and nutritionists. These team members should collaborate on a plan to allow the horse to reach optimum health for successful competition.

Increasing Fitness Level

The horse's level of exercise should be gradually increased to improve fitness while also conditioning the musculoskeletal system (muscles, tendons, bones, joints, fascia) and nervous system, as well as being mindful of the horse's mental health. The time it takes to reach competition fitness depends on the individual horse and the sport. As a general guideline, a horse that has been out of work for 12 weeks (or more) will take 12 weeks to reach a general level of cardiac fitness. The level of musculoskeletal fitness will depend on various factors including the discipline, age of animal, and type of exercises being performed.

During this time of conditioning, monitoring of the horse's health should be ongoing, the conditioning plan should be frequently revisited with the horse's team and any injuries or health issues addressed promptly.

Prior to Attending a Competition

- evaluate the horse for lameness and cardiovascular and respiratory health
- do not take horses to a competition that have a fever, cough, purulent (pus) nasal discharge, diarrhea, infectious skin conditions or open, draining wounds for example
- do not take a horse to a competition that is obviously lame or that has heat, pain, or swelling in a limb

- review biosecurity protocols at the event, including vaccination requirements, and those in place for horses returning from competition to mitigate the risks of becoming infected or bringing an infectious pathogen back to the home facility. There should be a plan in place to separate returning horses from resident horses where appropriate. Refer to *Section 5.1.1 – Biosecurity*
- do not use medications/substances/therapies that are prohibited by the sport or that mask signs of pain
- some horses develop behaviours during training that indicate an underlying source of pain. All people involved in the care of horses should be familiar with recognizing signs of pain in the sedentary and working animal and should investigate the source of pain where possible. Resorting to the use of equipment that prevents the unwanted behaviour(s) represents a welfare risk. Refer to *Section 5.2.1 – Pain*.

REQUIREMENTS

Horses must be sound and healthy to work or compete.

Horses that become sick or lame during work must be removed and appropriate care provided.

Medications/substances/therapies that are prohibited by the sport or that mask signs of pain must not be used or used only in accordance with the rules of the sport.

Equipment must not be used to mask behaviours that are as a result of pain.

RECOMMENDED PRACTICES

a. ensure a veterinary examination takes place prior to competition to ensure that the horse is healthy and in a suitable condition to withstand exercise
b. regularly assess horses' fitness to compete. Arrange for periodic veterinarian examinations in accordance with the level of intensity of your sport
c. in preparation for competition, gradually increase the level of exercise to improve fitness while also conditioning the musculoskeletal system and nervous system, as well as being mindful of the horse's mental health
d. arrange periodic veterinary examinations during the competitive season as the demands on the horse increase (e.g., higher level competitions).

Section 6: Loose Horse Management

This section outlines the additional requirements and recommended practices specific to horses that are raised in groups and handled loosely. This includes the handling of horses through temporary, intermediatory sites such as sale barns. Refer to other sections of this Code, which also apply to loose horses unless otherwise specified.

In Canada, there are thousands of horses that are not trained to halter or ride and are managed in herd settings. This includes feedlot horses, rodeo bucking stock, feral horses, horse sanctuaries, and young horses such as yearlings that have not yet been trained. The management and handling of these horses can differ significantly from that of halter trained horses.

It is important to remember that when underweight, ill, lame, or neglected horses arrive at the feedlot or processor the blame for the animal's condition lies with the previous owner, not the receiver of the animals.

6.1 Handling

Properly designed facilities are key to low-stress handling. The ground in the holding pen must be well- drained and non-slip as horses can become injured when they slip or fall. Examples of non-slip surfaces include sand, dirt (but not mud) and stamped or grooved concrete. Refer also to *Sections 2.3.3 – Indoor Flooring*, *7.2 – General Behaviour and Handling of Horses* and *10.4 – Loading and Unloading*.

Activities such as hoof trimming, vaccination or treatment, microchipping, and branding will require special equipment to effectively restrain the horses.

With proper handling, animals experience less stress and fear, and the risk of injury to the handler and the animals is greatly reduced. Handling should accommodate the animal's behaviour and should be done in a calm manner. Refer to *Appendix L – Handling Horses and How Horses Learn*.

REQUIREMENTS

The ground in the holding pen must be well-drained and non-slip.

Horses must be handled in a manner that does not subject them to avoidable pain or avoidable injury.

Facilities must be designed and have equipment available to effectively and humanely handle horses that are not halter trained.

Handling equipment must be designed specifically for horses and cannot be used in a manner that will cause them injury or undue stress.

RECOMMENDED PRACTICES

a. ensure temporary holding pens (i.e., pens that horses are held in for less than 24 hours) allow a minimum of 7.6–9.1 m^2 (25–30 ft^2) of area per horse (19)

b. ensure gates, alleyways, and holding pens are smooth and free from protrusions

c. build alleyways to the same height and spacing as corral and pen fencing (1.7–1.8 m [5.6–5.9 ft] high and to a width of 3.7–4.9 m [12–16 ft]) (19)

d. build single file chutes that have the following: solid sides; a minimum width of 81 cm (32 in); a minimum height of 1.8 m (6 ft); and a gap of approximately 30 cm (12 in) at the bottom to allow for drainage (19).

6.2 New Arrivals

Horses arriving at feedlots, intermediary sites and rescues come from a variety of backgrounds and with varying degrees of training or no training at all; therefore, they should be handled calmly and with caution (19).

New arrivals at all farms and facilities may be tired, hungry, thirsty and stressed due to transport, mixing with unfamiliar animals and new surroundings (20).

REQUIREMENTS

Upon arrival, horses must be individually assessed for health and well-being and must be provided with water and good quality forage.

Horses in groups must be managed in a way to minimize the risk of injury.

Stallions must be segregated from mares at feedlots, intermediary sites and rescues.

Ensure feed and water is easy to find as new arrivals will not be familiar with its location and may only be familiar with natural water sources.

Monitor new arrivals at least twice daily to ensure they are healthy and are eating and drinking.

If a mare appears to be pregnant, an examination by a veterinarian is needed so that plans can be made to segregate her for foaling or re-homing.

RECOMMENDED PRACTICES

a. segregate horses into compatible groups. Where necessary, take into consideration the nutritional needs, age, sex, and size of the horses. Separate animals that prove to be incompatible

b. remove shoes from shod horses arriving to the feedlot.

6.3 Special Feeding Considerations

Feedlot horses can be fed a ration of 60–70% grain; however, overfeeding grain without gradual adjustment is associated with laminitis and other health conditions.

Special consideration must be given to feral horses and rescue horses to ensure they are slowly introduced to new diets and rations. Mismanagement of feed introduction can lead to digestive upset, illness and even death. Special attention needs to be paid for starved horses when introducing feed to prevent refeeding syndrome (refer to *Section 4.4.7 – Refeeding Syndrome in Horses*).

REQUIREMENTS

Individuals or organizations who take custody of a malnourished or emaciated horse (BCS <3 for horses; BCS <2 for donkeys) must consult with a veterinarian before beginning a feeding program to prevent refeeding syndrome, which is a life-threatening condition.

Group horses must receive a diet that is adequate for maintaining and supporting health.

Group horses must have daily access to forage that is free from visible mould, offensive odours, and has minimal dust.

Ensure group horses have sufficient feed space (e.g., increase the number of feed locations or the amount of feed space at any single location, rearrange the groups such that competition is minimized).

RECOMMENDED PRACTICES

a. consult with a nutritionist or veterinarian to develop a feed management plan

b. provide continuous access to forage

c. feedlot horses have a specific diet with a high percentage of grain. Introduce feedlot horses to their ration gradually over a minimum of 30 days and preferably 60 days.

6.4 Health Management for Group Horses

Health management and disinfection are particularly important in feedlots. Refer also to *Section 5 – Health Management*.

REQUIREMENTS

Individuals and organizations must establish and maintain a Veterinary-Client-Patient Relationship (VCPR) with a practicing veterinarian.

A written biosecurity and disease management plan must be in place and developed with a veterinarian for all facilities.

Horses must be observed at least once a day for health and well-being.

All horses requiring medical treatment must receive such treatment and be identified.

Segregation pens with appropriate fencing and bedding must be available for housing expectant mares and mares with foals.

All foals arriving or born at the facility must be segregated with their dam and receive necessary care and attention.

Feedlot horses to be held over for a drug residue withdrawal period must be sufficiently healthy and sound to withstand this period without undue suffering.

Drug withdrawal periods must be observed. For information on drug withdrawal periods, consult a veterinarian or the Equine information document (Appendix S – Resources for Further Information ***provides a reference for this manual).***

Hospital pens must be available and must provide shelter, bedding, dryness, and a source of feed and water. Hospital pens must also be cleaned between uses. Refer also to the Requirements in **Section 5 – Health Management.**

RECOMMENDED PRACTICES

a. build hospital pens that can be easily cleaned and disinfected

b. situate hospital pens such that contact is not possible between horses in adjoining pens (21)

c. ensure hospital pens are at least 4.88 m (16 ft) from pens used by healthy animals (21)

d. segregate animals immediately if they show signs of illness.

6.5 Pen Condition and Shelter

Mud management is especially important in the feedlot and can be a challenge, particularly during certain seasonal conditions (e.g., before winter freeze). The following factors contribute to poor pen condition: insufficient bedding, poor drainage and overcrowding (22). Good mud management includes having well-drained sites, appropriate stocking density, shelter and a routine schedule for bedding changes and removal of manure. In high rainfall areas, it may be very difficult to achieve the Requirements below without the provision of overhead shelter.

Muddy conditions negatively impact horse welfare and weight gain in the following ways:

- dirty and wet coat condition will lower the insulation capacity of the hair coat and may increase energy needs of the animal for maintenance (3)
- the animal will have reduced feed intake if reluctant to venture through muddy conditions to reach feed bunks (22)
- more energy is required for the animal to pull its hoof out of the mud or to spend more time standing if uncomfortable lying in the mud (22)
- donkeys are very susceptible to issues with hoof health when exposed to mud.

REQUIREMENTS

Facility or farm owners must have a plan for mud management and access to any equipment and materials necessary to implement the plan.

A dry lying or standing area must be available in each pen.

RECOMMENDED PRACTICES

a. ensure there are solid, non-slip surfaces around feed and water sources

b. ensure drainage is away from the feeding and watering areas and at a slope of between 2 and 4%

c. clean pens seasonally or more often as needed for individual facilities

d. ensure bedding is kept clean

e. provide protection from wind, such as a three-sided shed or wind-break fencing (20% porosity).

6.5.1 Stocking Density

Horses are social animals that establish a hierarchy within a group. The risk of injury to horses increases when they are overcrowded and competition for food, water and space leads to aggression.

REQUIREMENTS

***At a minimum, each horse must have enough space to move easily, walk forward, turn around with ease and lie down in a normal resting posture. There must also be sufficient space for subordinate horses to escape aggression. Refer to* Section 2 – Facilities and Housing.**

Section 7: Husbandry

7.1 Turnout, Social Opportunities, and Enrichment

Horses are kept in a range of environments, from open grazing to individual stalls. While stalls may be suitable for short-term housing, for long-term use horses should have regular access to turnout, social interaction, and mental stimulation.

Turnout

Turnout, defined by this Code as unstructured free time in a space large enough to allow horses to move in their gait of choice, is vital for horses' physical and psychological well-being. Horses evolved as grazing herbivores, engaging in continuous cycles of walking and browsing that support digestive health, reduce the risk of colic and gastric ulcers, and prevent injuries caused by overexcitement after confinement (47). Scientific evidence consistently shows that restricted turnout, such as stabling for 21–24 hours per day, increases the risk of stereotypic and abnormal behaviours, heightened emotional reactivity, and stress-related health problems, while regular turnout supports natural behaviours, social interaction, and greater behavioural diversity (48, 49). For both the general horse population and sport horses, turnout improves brain activity, gut microbiota, bone density, soft tissue health, and overall soundness, while reducing lameness, equipment-related injuries, and resistance under saddle (50, 51, 52, 53). Providing as many hours as possible of turnout each day is important for equine well being.

Importantly, exercise cannot replace turnout: while training provides physical exertion, it does not fulfil the fundamental needs for freedom of movement, choice, agency, and social contact (49). Evidence further indicates a clear correlation between longer turnout durations and better welfare outcomes, with permanent outdoor access representing the gold standard and half-day access already conferring significant improvements (52). Similarly, it has been shown that thoroughbred foals given more outdoor turnout time and weaned later had greater success as racehorses (54). Horses themselves show a strong preference for turnout (55), spending only about three hours indoors when given the choice (49), and some elite competition riders successfully manage near-permanent outdoor housing, proving that this practice is both feasible and essential (50, 51, 52, 53).

Equestrian facility renovation and the design of new equestrian facilities should include group turnout paddocks, enough paddocks to allow daily turnout of all horses and/or stall design that includes adjoining paddocks that allow horses to go in and out at will.

Social Opportunities

Social opportunities refer to instances when horses can interact with other horses via sight, sound and/or physical touch. Horses are naturally social animals that live in stable groups with strong and lasting bonds between individuals (56, 57). Physical contact (grooming each other) has been referred to as a basic behavioural need (58). For a small percentage of horses, turnout (especially group turnout) may bring a risk of injury depending on temperament and whether they are accustomed to turnout. These horses may need to be transitioned to turnout gradually (e.g., transition from a stall to a small paddock and then to pasture). With group turnout, keeping the groupings the same will minimize risk of injuries. Horses form strong social bonds and rely on companions for a sense of security, which is particularly important to facilitate periods of sleep. Horses in stalls that are unable to see other horses may not lay down and will suffer from a condition called sleep deprivation. The value of social opportunities also extends into training and handling, horses learn tasks more efficiently and perform fewer undesirable behaviours (e.g., biting, kicking, separation anxieties) when their social needs are met. Whether through group turnout or allowing physical contact between stalls, providing regular opportunities for social interaction leads to horses that are less prone to stress, more adaptable in training, and overall, more resilient.

Horses should not live alone. Another equine companion is preferred however a donkey or another farm animal would be other options.

Enrichment

Enrichment refers to providing horses with mental stimulation that they find enjoyable. Equine enrichment includes: access to other horses (either in group turnout or ability to see and touch each other between stalls), toys (e.g., hay balls), diverse feeding options (e.g., slow feed hay nets, hay spread out over a large area to simulate grazing, salt lick stations), purpose-built places to roll in the pasture, shelter options (e.g., trees), olfactory enrichment (scent stations), and/or providing places to scratch themselves. Horses living in stalls should have ample enrichment opportunities that are changed out frequently.

Stallions and jacks have the same turnout, exercise, and social opportunity requirements. This can be facilitated by renovating existing structures to allow for socialising between stalls. In some cases, stallions can be group housed with other stallions, geldings, or mares outside of the breeding seasons.

REQUIREMENTS

Horses must have some form of exercise or turnout unless under stall rest for medical reasons or severe environmental conditions make this temporarily impossible. Refer to above explanations for the terms exercise and turnout.

RECOMMENDED PRACTICES

a. create permanent groups of horses living in group housing and group turnout outdoors
b. turnout size should allow horses to move freely in their gait of choice and allow them to escape from aggression (Refer to *Section 2 – Facilities and Housing* for dimensions of spaces)
c. stallions and jacks should have daily turnout offering visual and physical contact with other horses and have enough space to move at their gait of choice
d. provide stall-bound horses (or those in a small pen) with physical and visual access to another horse in the adjacent stall/pen
e. provide and rotate enrichment regularly to promote engagement and prevent habituation or tailor enrichment to the individual horse's needs and preferences
f. solitary turnout should be discouraged, except in extenuating circumstances (e.g., biosecurity threats, behavioural issues, rehabilitation)
g. turnout should not be replaced by controlled exercise unless under veterinary direction or for other circumstances that are temporary in nature.

7.1.1 Stereotypies

A stereotypy (formerly referred to as a vice) is a repetitive behaviour that has no function and is usually performed as a consequence of frustration, repeated attempts to cope, or dysfunction of the central nervous system (59). Stereotypies only occur in domesticated horses, and include weaving (side-to-side swaying of the head, neck and forequarters); cribbing/windsucking (the horse grasps an object with its teeth and makes a grunting sound); and stall-walking (circular or patterned route-tracing inside the stable). Wood chewing, not usually classified as a stereotypy, involves stripping and ingesting wood surfaces (3).

Working to prevent stereotypies is better than trying to "cure" the behaviour once developed. Unfortunately, the term "vice" has created a focus on the horse misbehaving and the need for the behaviour to be "corrected." Once apparent, stereotypic behaviour is most effectively dealt with through management changes that address the underlying cause of the stereotypy (3). This could include providing social opportunities by redesign of stalls and barns, increasing group turnout time, and providing foraging for most of the day.

Using devices to prevent horses from performing stereotypies without addressing their cause may lead to further stress, frustration, and the emergence of other stereotypies (3). A horse may continue to perform stereotypies out of habit even after the predisposing factors have been addressed (3). **This does not necessarily indicate their current welfare status is poor** (3).

REQUIREMENTS

If a horse begins to display stereotypic behaviour, the owner/caregiver must take steps to identify and address the underlying cause of the problem.

RECOMMENDED PRACTICES

a. minimize the risk of stereotypies by ensuring horses have their basic needs met, including social opportunities (group housing or social stall designs), ample foraging opportunities, and turnout for several hours each day in a space large enough to run
b. avoid using devices (cribbing collars, electric fence) that physically prevent stereotypies
c. for horses with pre-existing stereotypic behaviour consult with an equine behaviourist or veterinarian to ensure the best management system is being provided to minimize that behaviour.

7.2 General Behaviour and Handling of Horses

Handling should be based on the concepts of equine behaviour and understanding what their field of vision, flight zone and point of balance are. Refer to *Appendix L – Handling Horses and How Horses Learn*.

When handlers understand horse behaviour, animals experience less stress and fear, and the risk of injury to the handler and the animals is greatly reduced. Handling should leverage the horses' natural responses and should be done in a calm manner.

Horses evolved as prey species and have a strong fight-or-flight response. When frightened, horses will generally flee. If they feel they cannot flee, they may become aggressive. Compared to horses, donkeys and mules are less likely to flee when frightened. Instead, they tend to study the situation before reacting (this is often incorrectly interpreted as stubbornness).

Equine welfare and handler safety are improved when handlers respond promptly to signs of fear, distress or pain in horses (refer to *Appendix M – Pain Recognition in Horses*). Some examples include:

- tail swishing/wringing, in the absence of flies
- the whites of the eyes are more visible
- sweating with minimal physical exertion
- flared nostrils or wrinkling at the mouth or nose
- both ears laid flat back
- pawing or striking
- running away from or charging at the handler

- vocalizations (e.g., snorting, squealing, calling)
- head held very high
- kicking or turning the hindquarters towards the handler.

REQUIREMENTS

Handlers must be familiar with equine behaviour and competent in low stress handling techniques either through training, experience or mentorship.

Horses must be handled in a manner that does not subject them to avoidable pain or avoidable injury.

Punishment must never be used for handling.

RECOMMENDED PRACTICES

a. understand and apply the concepts of field of vision, flight zone, and point of balance, but also take into consideration equine behaviour, how horses learn and recognition of pain behaviours (refer to *Appendix L – Handling Horses and How Horses Learn* and *Appendix M – Pain Recognition in Horses*)
b. avoid sudden actions or noises that may startle or frighten horses. Horses have sensitive hearing
c. provide adequate lighting so that horses do not balk at shadows or poorly lit areas
d. approach an unfamiliar horse carefully and at the shoulder (not the rear). Generally, horses are accustomed to riders/handlers approaching, mounting and leading on the left side of the horse.

7.2.1 Handling and Restraint Equipment

Horses can be trained to calmly accept routine procedures with minimal restraint (halter and lead rope). This is safer for handlers and for the animal. Horses benefit from being introduced to basic training and positive handling techniques that will instill confidence in them and positively influence their relationship with their handlers.

If equipment is used, it should be effective without causing stress to the horse and should be designed for maximum safety of the handler and horse. Any restraint method used to assist normal management or treatment of the horse should be the most mild and effective method available and should be applied for the minimum amount of time necessary to carry out the task. Caution must be taken as intense/severe methods can provoke an even more dangerous response as the horse tries to escape.

A halter and lead rope are the most common form of restraint. When tying a horse, the safest knots are those that can be quickly untied even if the horse has pulled on it. Other forms of restraint include hobbles, twitches, stocks, chutes, and nose chains but should

only be used by knowledgeable handlers. The use of lip or gum chains is not a recommended form of restraint. Twitches should be constructed of soft rope (not chain) and never be used for longer than 3–5 minutes (when the effects of the endorphins wear off) (60). Sedation or chemical restraint administered by a veterinarian or oral forms given by the handler is very effective when the horse is anxious (e.g., dentals, wound management) or in emergency situations. For some procedures using sedation will minimize fear and pain and will be the safest option for both the horse and its handler. Fear memories are long-lasting and can make future procedures more difficult and more dangerous (61).

Tethering is a form of restraint that brings a high risk of injury to horses unless used correctly. For the purpose of this Code, tethering means attaching a long rope or chain to the halter or leg hobble so the horse can graze. Tethering does not refer to tie stalls or briefly tying a horse to a fixed object.

REQUIREMENTS

Restraint of horses must never cause avoidable injury or pain.

Tethering must not cause injury and must only be used if the horse is under supervision. The person applying the tether must be knowledgeable in its use. Refer to the above explanation of tethers.

Horses confined to tie stalls must be tied in such a way that allows them to lie down in a normal sleeping posture.

Electric prods must only be used to assist the movement of horses when animal or human safety is at risk or as a last resort when all other humane alternatives (e.g., flags) have failed. They must only be used by suitably trained personnel.

Electric prods must never be used repeatedly or used on the face, anus or reproductive organs of horses.

RECOMMENDED PRACTICES

a. train horses to lead easily and to calmly accept routine husbandry and veterinary procedures
b. minimize the use of restraint methods that can be painful (e.g., lip chains, nose chains, and twitches)
c. do not turn horses loose in a pasture or stall with a halter on unless the halter has a break-away design
d. ensure handling equipment is engineered to minimize noise. Loud noises are disturbing to horses

e. ensure chutes or stocks used to restrain horses have break-out walls to assist horses that go down during handling (refer to *Section 6 – Loose Horse Management*).

7.3 Methods of Identification

Identification of horses is needed for reasons of animal and public health, proof of ownership, identification at competitions, when buying or selling horses, and in emergency evacuations. Methods that are traceable and incorporated into a database are important for food safety and animal health. Identification methods can be permanent or temporary and visible or non-visible.

The best method is one that is recordable, traceable, and not painful to the animal. The iris scan is the least invasive although not widely available. Microchips are implanted with a needle into the crest of the neck or upper lip and cause short-lived pain similar to an intramuscular injection. Horses are easily distracted from the injection with firm scratching on the neck or feeding a treat at the same time as the procedure. Horses may be sedated and local anesthetic used if necessary for implanting the microchip. A microchip scanner is required to read the chip—these are inexpensive and easy to use. Some models allow scanning from a distance; some monitor body temperature and others have GPS tracking. Electronic collars developed for dairy cow identification, could potentially be used for horses as well. Wherever possible, painful identification methods should be avoided including hot iron branding and freeze branding. Freeze branding causes less pain and discomfort than hot-iron branding (3).

Industry and government are strongly encouraged to develop more humane visible permanent identification methods. Until a reliable form of permanent, visible marking is available, branding remains necessary in some sectors of the horse industry. Hot-iron branding is strongly discouraged and if a permanent, visible mark is needed, freeze branding is recommended over hot-iron branding. When branding is necessary, it is critically important to use the correct technique as well as effective pain control which includes sedation, local anesthesia, and analgesia.

REQUIREMENTS

Animal identification must be performed in a manner that causes the minimum of stress and pain.

Both hot and freeze branding are painful. When branding must be used, it must meet the following requirements:

- ***It must be performed with the proper equipment and restraint***
- ***Personnel must be trained or have a sufficient combination of knowledge and experience***
- ***Horses must never be branded on the jaw/cheek***
- ***Horses must never be branded when they are wet.***

Effective for horses branded after January 2029: Pain control must be provided unless prohibited by regulatory requirements.

RECOMMENDED PRACTICES

a. microchips are the preferred method of identification
b. horse owners are strongly encouraged to avoid branding but If branding is required, then freeze branding should be used over hot iron branding
c. ensure that the method of identification is done by skilled personnel which may include sedation, local anaesthesia and pain medication administered by a veterinarian
d. ensure the horse has been trained to be handled before administering a microchip except in industries where horses are not handled individually and a chute system is used
e. discuss sedation and pain control options with a veterinarian especially where branding is used
f. sectors utilising branding as a permanent visible identification need to develop and adopt alternative methods of identification.

7.4 Castration

Castration is a surgical procedure that causes pain and inflammation that persists for several days (3, 24, 25). Horses are castrated to make them safer to handle, easier to manage, and easier to turn out in groups. In most provinces equine castration can only be done by a veterinarian, as it is a specialized procedure requiring considerable skill and expertise and has a significant complication rate (3, 24, 25). Complications can include bleeding, evisceration, infection and death (3, 24). Additionally, castration of donkeys, mules and mature horses has a higher risk of complications and must only be performed by a veterinarian.

The CVMA strongly recommends that all provincial regulatory authorities regard the castration of horses, donkeys, and mules as an act of veterinary practice and regulate accordingly. Veterinarians have formal surgical training to perform the procedure to a

professional standard, access to drugs to reduce pain, and access to sedatives and anesthetics to provide optimal conditions for the procedure. The Canadian Veterinary Medical Association considers it animal cruelty to castrate a horse without anesthetic and pain control.

Although equine castration by non-veterinarians may be exempt from certain provincial Veterinary Acts, this does not exclude non-veterinarians from being held accountable under animal welfare protection laws. If horses are subjected to unnecessary pain and distress by a non-veterinarian performing this procedure, these individuals are at risk for legal action.

REQUIREMENTS

Provincial regulations that restrict castration of horses to licensed veterinarians must be followed.

Due to the higher risk of complications, castration of donkeys, mules and mature horses must only be performed by a veterinarian.

Horses with one or more retained testicle or other scrotal abnormalities (e.g., hernias) must only be castrated by a veterinarian.

Where it is not prohibited by law, castration by a person who is not a licensed veterinarian must only be performed by a skilled operator and must meet the following requirements:

- ***there is a valid Veterinary-Client-Patient Relationship with a licensed veterinarian who is willing to supply training (on the procedure and pain management), prescribe the required drugs for pain control and provide interventions if needed***
- ***the scrotal area must be examined to ensure normal scrotal anatomy. If there is evidence of an abnormality, castration must only be performed by a veterinarian***
- ***the handling and restraint methods must not cause injury or unnecessary suffering***
- ***local anesthetic must be used at the castration site and a non-steroidal anti-inflammatory drug must be given for pain control. Castration must not begin until the local anesthetic has taken effect***
- ***the horse must be monitored carefully during and after the procedure and, if complications occur, a veterinarian must be contacted without delay.***

Pre- and post-operative pain control must be provided.

RECOMMENDED PRACTICES

a. horse owners are **strongly encouraged** to arrange for castration to be done by a veterinarian. Veterinarians can provide a combination of sedatives, anesthetics and analgesics along with optimal surgical care
b. horses should have basic halter training and be trained to calmly accept an injection by a veterinarian before the castration procedure (refer to *Appendix L – Handling Horses and How Horses Learn*)
c. casting and restraining a horse with ropes as the only form of restraint for a castration is not acceptable.

7.5 Alterations of the Tail

Tail docking involves the removal of part of the horse's tailbone, leaving it significantly shorter (3). Tail docking was originally done to prevent the tails from interfering with the harness equipment and machinery, impairing the driver's ability to control the horses and potentially causing the horses to bolt (3).

Depending on the amount of tail that is removed, docking can compromise the horse's ability to swish the tail at flies and communicate with other horses or humans (3). Tail docking can also lead to serious health risks, such as infections. Research in other species suggests that both surgical and rubber ring methods of tail docking are painful; however, this has not been studied in horses (3). Any potential safety benefit of tail docking has also not been scientifically studied in horses.

Tail nicking involves cutting the horse's tail muscle to achieve an artificially high tail carriage for show purposes (3). Horses that have undergone this procedure wear a tail brace during their show career and their ability to use their tail is compromised (3).

Tail blocking is a procedure whereby the major nerves of the tail are injected with a substance that affects the horse's ability to lift, swish or control its tail (3). This procedure causes the horse to temporarily lose the use of its tail for any function (3). It is also associated with serious health risks and complications.

REQUIREMENTS

Tail nicking and blocking are unacceptable and must not be performed.

Tail docking for cosmetic purposes is unacceptable and must not be performed. Refer also to provincial regulations on tail docking, if applicable.

7.6 Hoof Care

Regular hoof care is essential towards achieving overall horse health and longevity through hoof and leg soundness (26). **All equines, including donkeys and mules, need regular hoof care but not all equines will need shoeing**. Shoes are necessary when wear exceeds growth, or for correction of conformation or gait (3). Horse boots are a potential alternative to shoeing. Trimming to correct leg and hoof deviations is most effective when done as early as possible in the foal's life. All hoof and leg deviations worsen with neglect and excess growth (26).

Cleaning the foot is important, particularly to prevent thrush and to inspect the foot for any foreign materials that may cause injury (3). Thrush is an infection caused by bacterial and fungal yeast-type organisms (3). Signs of thrush include a foul odour and a black putty-like appearance of the frog (the frog is located at the heel of the foot and forms a "V" into the centre). Regular cleaning of the hoof prevents thrush from developing by aerating the exposed area (3). Refer also to *Appendix S – Resources for Further Information*. Additionally, donkeys are more susceptible to hoof conditions resulting from excessive moisture.

Strategies to maintain the hoof health of horses (26):

- keep hooves free of defects through regular trimming and/or shoeing
- keep corrals clean, dry and free from mud
- provide adequate nutrition and exercise
- clean out hooves regularly, ideally on a daily basis, and before exercise or riding
- avoid extended use of hoof polishes
- use hoof moisturizers or hoof hardeners as needed.

REQUIREMENTS

Hooves must be trimmed and/or shod as often as is necessary to maintain hooves in functional condition. Whether shod or unshod, hooves must not be allowed to grow to excessive lengths causing injury or discomfort to the horse.

RECOMMENDED PRACTICES

a. ensure the farrier or other personnel is skilled and uses recognized techniques (exercise due diligence researching the qualifications/experience of farriers, ask for references and continuing education practices)
b. train horses to stand for trimming and shoeing
c. provide the farrier with a clean, safe and well-lit area (26)
d. ensure the first hoof examination for foals takes place within the first month of life and regularly monitor the foal's feet for deviations
e. ensure proper trimming or shoeing (which includes trimming and resetting) is done every 5–8 weeks or as may be needed for individual equines (depending on factors such as age, activity level, nutrition and breed) (3). Donkeys may require a different trimming schedule
f. clean out hooves before riding
g. consult a farrier or veterinarian for advice on how to control thrush.

7.7 Grooming

Grooming is a good opportunity to form and maintain the bond between horse and handler and can be calming to horses. It is also a good opportunity to inspect horses for injuries. Grooming loosens dirt and mud, which can cause skin irritation and infections. If allowed to accumulate, dirt and mud can reduce the insulating effect of the hair coat in cold environments. Debris (e.g., mud, burdocks) on the horse where the saddle and harness are placed or on the tack itself can cause injury and discomfort. Donkeys may have a light dust layer in their coat to help with thermoregulation but should still be brushed and groomed regularly to help maintain coat health.

REQUIREMENTS

Horses must be free of debris where the saddle and harness are placed. The tack must also be free from debris before being placed on the horse.

Burdocks causing discomfort or injury must be removed without delay.

Section 8: Exercise and Training

8.1 Exercise in Horses

Exercise refers to physical activity (indoors or outdoors) and includes, but is not limited to, walking in hand, hand grazing, driving, riding, and lunging. Exercise provides physical fitness, mental enrichment, and benefits the human animal bond. For horses used in sport, exercise should be carefully planned using discipline-specific conditioning programs. To help prevent fatigue and injury when training and exercising horses, refer *to Section 5 – Health Management*, which provides guidelines for the fitness to compete.

8.1.1 Young Horse Development

In their natural environment, horses travel long distances while searching for feed and other resources. When foals are born, they must be capable of standing and traveling with their mothers for distances of up to 10 km/day as young as nine days old (62). On the other hand, domestic horses provided with adequate resources and an opportunity to exercise freely at pasture, show considerable variation in an individual desire for locomotor activity (63).

Exercise in foals (turnout or living outdoors) and young horses is necessary for proper development since the bones, tendons, cartilage, and muscular tissues are most responsive to external stress such as exercise while they're growing (62, 64). Specifically, bones and joints respond well to mechanical loading from light, controlled movement. Early, controlled training at speed can also help tendons and ligaments adapt as they mature, potentially reducing the risk of future injuries. Similarly, cartilage health benefits from motion like weight-bearing exercise, which maintains joint health and prevents degeneration. Even short, controlled periods of forced exercise (e.g., leading, walking over poles, groundwork) can help build balance and proprioception. However, there is no current ideal training regimen for young horses.

Horses who are expected to have athletically demanding careers have been shown to benefit from training at an early age (e.g., before 24 months of age) with evidence that early training when well managed may decrease the risk of injury and prolong the career of young racehorses. Early training has also been shown to increase balance, coordination and athletic ability when jumping over fences. There is evidence that racehorses who start at an older age may be more prone to injury due to decreased adaptability of tendons (65, 66). Injuries such as "bucked shins" in young Thoroughbred racehorses can be decreased through adaptations in training regimen.

While the ideal training regimen for young horses remains undefined, there is strong evidence that appropriately timed, and carefully managed exercise is essential for healthy musculoskeletal development and long-term soundness. Early, controlled physical activity supports the maturation of bones, joints, tendons, and ligaments, and helps lay the foundation for coordination, balance, and resilience in later athletic work. However, this must be balanced with caution to avoid overloading immature structures or introducing training too intensively or inconsistently. A thoughtful approach, grounded in current science and adapted to each horse's individual development, is key to promoting both welfare and performance in the growing horse.

RECOMMENDED PRACTICES

a. young horses destined for a sport horse career should be started in a training program that is appropriate for the breed, age, stage of musculoskeletal development, temperament and fitness level
b. training of young horses should be performed by an individual with experience in the horse's intended discipline or sport
c. begin light, controlled exercise in foals and young horses (e.g., leading, walking over poles, groundwork) to support musculoskeletal development and coordination
d. allow daily free exercise in safe outdoor environments to promote bone health and reduce injury risk associated with stall confinement
e. pay special attention to the footing used during exercising horses. Avoid hard or deep footing and try to mimic footing that is typical of the horse's discipline
f. follow a consistent and progressive training schedule adapted to each horse's developmental stage to support neuromuscular adaptation and long-term soundness.

8.2 Guidelines for Training Horses

Training is an important investment in a horse, and the level of training (from basic skills to specialized work) will depend on the intended purpose of the horse. Horses well trained in ground skills, under saddle skills and/or in harness skills are safer to work with and more likely to have good welfare their entire life (3).

"An ethical training method is one which minimizes negative welfare effects and maximizes positive welfare effects and results in the horse demonstrating desired behaviours over an extended period of time without the use of physical force" (67).

Forceful training methods can cause behavioural problems, which predisposes horses to neglect, rough handling, euthanasia, and often multiple temporary owners attempting to

manage an untrained or poorly trained horse. When the trainer understands their natural behaviours and how horses learn, horses are capable of learning very quickly.

The best training outcomes and learning occur when the horse is free of pain, confusion or stress. The trainer must be able to recognize and distinguish the body language of the animal in order to recognize these three states (refer to *Appendix M – Pain Recognition in Horses*). Interpreting behavioural signs can be difficult and may require the help of equine behaviourists or equine veterinarians. Traditionally, equine behaviours have been incorrectly labelled with terminology that leads to punishment rather than correcting the underlying issue.

Pain

Detecting and measuring pain in horses is challenging and currently researchers use physiological signs (heart rate and blood pressure), facial signs, and behavioural signs during riding to identify and quantify pain. Pain scales have been developed to allow easier identification of pain by observing the horses' behaviours both under saddle and in hand. There are also artificial Intelligence powered models that are currently being developed to measure facial signs in horses to objectively measure the horses' mental state. The inability to recognize pain in horses is a significant welfare issue.

Horses may experience different types of pain in their lifetime (e.g., injuries, colic) but there is also pain related to being ridden. Examples include back pain from heavy riders and bit related pain such as bruising, pinching and compromised circulation of the tongue (68). Research has indicated that the weight of the rider including tack should not be more than 20% of the weight of the horse (69).

Tack and equipment for training must be maintained in good repair and must fit the horse correctly. Ill-fitting or improperly used equipment may cause sores, irritation, and may cause the horse to display unwanted behaviours due to pain. Examples of this are overly tight nosebands, leverage-style bits (e.g., shank bits) that may fit incorrectly and be used roughly, boots overheating legs, tight martingales, and tight side reins. Correct saddle fit is critical to a horse's comfort and long-term soundness.

Horses may also experience pain from bits, spurs, and whips when used inappropriately. Forceful, aggressive or excessive hitting and spurring horses during training or competition does not improve performance and creates a negative welfare state.

Confusion

When horses are being given conflicting signals, multiple cues at once, strong pressures, or punishment they often react out of confusion and fear. Fear-based behaviours, also known as escape behaviours, are commonly perceived as "bad" or "naughty behaviours." These behaviours can include bucking, rearing, bolting, and shying/spooking. Every time a handler/trainer interacts with a horse, the horse is learning something. If trainers understand the processes of how horses learn, confusion will be minimized, and the horse will be given the best opportunity to give the desired responses. When training is done correctly, there should be no fear or anxiety, and the horse should remain calm. Understanding these learning processes is important for both safety and welfare of the horse. Refer to *Appendix L – Handling Horses and How Horses Learn* for more details on how horses learn. Some of the principles of learning theory can be applied to any training context and are listed here (23, 3):

- use cues or aids that are easy for the horse to understand. Multiple cues or aids used together can confuse the horse, so it is essential that signals are applied clearly and consistently
- train and shape responses one-at-a-time. Each response should be broken down into its smallest possible components and then put together in a process called "shaping"
- train only one response per cue
- strive to minimize fear during training. When horses experience fear, they can come to associate everything about that environment with the fear, and fear can inhibit learning
- benchmark relaxation - observe the horse for aggressive or defensive behaviours and modify training methods to minimize them. Horses that stay relaxed during training are better able to learn
- include a system of reward to the training as it can make the task safer and easier for the horse and trainer (a reward can be a food treat, wither scratching or the release of pressure) (refer to *Appendix L – Handling Horses and How Horses Learn* for an explanation of positive and negative reinforcement)
- minimize the time between the horse's trained response and its reward (1–3 seconds). Horses do not learn well when there is a delay in reward.

For more information on learning theory and a list of the First Principles of Horse Training, consult *Appendix L – Handling Horses and How Horses Learn* and the *Code of Practice for the Care and Handling of Equines: Review of Scientific Research on Priority Issues* (2025).

Stress

Contemporary animal welfare science has made it possible to understand and recognize the mental impact of actions and events experienced by the horse during their interactions with humans. Minimizing any element of stress in the horses' interactions with humans will enhance training. Stress can be more than just a moment in time, and management practices that prevent access to "friends, forage, and freedom" (70) impede a horse's ability to express highly motivated behaviours and can lead to chronic stress. Horses suffering from chronic stress of this type were found to have higher incidence of stereotypies, gastric ulcers and poor trainability (71, 72).

REQUIREMENTS

Horses must be trained in a manner that has positive outcomes and does not subject them to pain or fear as a direct result of the training method used. They must never be subjected to training methods or equipment which are abusive or intentionally injure the horse.

Whips, spurs, and bits must only be used to give light cues and not be used to inflict pain through excessive force and frequency for discipline or encouragement.

Horses must only undergo training that matches their physical capabilities and level of maturity.

Equipment in use must be maintained in good repair and must fit the horse correctly.

RECOMMENDED PRACTICES

a. use the First Training Principles when training and handling horses (refer to *Appendix L – Handling Horses and How Horses Learn*)
b. pain should always be considered if a horse is exhibiting unwanted behaviours (e.g., bucking, head tossing) and a veterinarian consulted
c. ensure the horse has its natural behavioural needs being met (friends, forage and freedom to move) to avoid unwanted behaviours when training and riding
d. ensure you are familiar with the correct use and fitting of all tack and training equipment
e. have a veterinarian examine the horse's mouth for any dental problems that may interfere with comfortable bitting and bridling
f. ensure that, at a minimum, the horse is trained to lead, load into a trailer and stand for farriery, veterinary care and grooming (refer to *Section 10.4.1 – Training to Load*)

g. consult an experienced trainer/coach and attend training clinics (exercise due diligence researching the qualifications of trainers/coaches and ask for references).

Section 9: Reproductive Management

Horses are bred for multiple purposes. Established breeders generally follow a specific breeding program producing quality offspring for a specific market. The term "purpose-bred" describes horses bred for a specific industry, including meat production.

9.1 Responsible Breeding

Many welfare problems can be prevented through responsible breeding. Responsible breeding:

- is purposeful rather than accidental or indiscriminate
- is managed by owners and handlers that are trained and knowledgeable
- is conducted by those who own or have access to appropriate facilities
- involves careful selection of a mare/jennet and sire that are proven in their field, have good conformation and temperament, are healthy and free from known hereditary conditions that will impact on the welfare of the offspring
- in the case of live cover breeding, involves careful selection of stallion/jack which do not endanger handlers and mares /jennets
- is based on comprehensive criteria for breeding, including past reproductive performance, age, size of the sire and mare/jennet
- produces offspring that has a known market or purpose.

Mares and jennets have special care requirements during pregnancy, foaling and the post-foaling period. A young foal also requires special care early in its life, as well as training later in life which takes time and experience and costs money. **The decision to breed should be carefully considered** (refer to *Section 1 – Duty of Care)*. Breeding can be very expensive and is not without risk to the mare/jennet. If there are complications during gestation, costs can increase substantially. The horse market is unpredictable, and there is frequently an oversupply of average horses for sale. It may take many years to sell a young horse. If you do not wish to sell the offspring, it is important to be aware that horses can live in excess of 30 years, which may be longer than your ability to care for the animal.

REQUIREMENTS

Individuals must not breed horses unless they are familiar with and able to provide the standards of care as outlined in this Code for both the mares/jennets and foals.

RECOMMENDED PRACTICES

a. seek advice from a veterinarian or experienced breeder prior to breeding a horse and throughout gestation

b. ensure careful selection of a mare/jennet and sire that are proven in their field, have good conformation and temperament, are healthy and free from known hereditary conditions that will impact on the welfare of the offspring

c. plan for what you will do if you are unable to sell the foal or if you are no longer able to care for the foal

d. breed only if the foal has a known market or purpose.

9.2 Evaluating Soundness for Breeding

It is important to ensure that the mare/jennet is assessed by a veterinarian, professional breeder, or technician at a breeding facility prior to breeding to ensure she is physically fit and healthy for the pregnancy. It is also important to ensure that the stallion/jack is assessed for soundness prior to breeding.

A breeding soundness examination is recommended in order to detect reproductive abnormalities. The examination is particularly important for mares/jennets that have never been bred before, have previously lost a foal, or have failed to conceive in the past.

REQUIREMENTS

When natural breeding methods are used, stallions/jacks must be selected with an appropriate body weight and size for the physical development and size of the mare/jennet.

RECOMMENDED PRACTICES

a. seek advice for breeding soundness from a veterinarian, professional breeder, or technician at a breeding facility prior to breeding a horse (stallion or mare). Breeding animals should be animals that are of good temperament/handleability and of good soundness/conformation

b. ensure mares have a body condition score of at least 5 out of 9 before breeding (refer to *Section 5.5 – Body Condition Scoring*). Additionally, mares in thin or obese body condition are less likely to get pregnant/have lower fertility

c. ensure jennets have a body condition score of at least 3 out of 5 before breeding (refer to *Section 5.5 – Body Condition Scoring*)

d. treat mares/jennets for reproductive abnormalities (e.g., Caslick's procedure, hormonal supplementation) before they are considered again for breeding in subsequent seasons.

9.3 Care of the Pregnant Mare or Jennet

Attentive management will help ensure the birth of a healthy foal with no injury incurred by the mare/jennet. The average length of gestation for mares is 341 days (+/-15 days). The average length of gestation for jennets is 11–14 months (a range of 335–426 days) (74).

Appropriate vaccinations and biosecurity planning helps to protect the mare/jennet and fetus during gestation. They also help to protect the foal after foaling through the immunity transferred from the mare/jennet to the foal via colostrum. Vaccinations should be boosted three to four weeks before the projected foaling date to optimize the antibody concentrations in colostrum.

REQUIREMENTS

Mares/jennets requiring medical care during gestation must receive such care.

Pregnant mares/jennets must have some form of exercise or turnout, unless under stall rest for medical reasons or severe environmental conditions make this temporarily impossible.

Mares and jennets that are in the last 10% of their gestation periods or have given birth during the preceding 48 hours must not be transported, unless on the advice of a veterinarian for care or treatment (75).

RECOMMENDED PRACTICES

a. consult a veterinarian to develop a health management plan tailored to the mare/jennet (e.g., pregnancy examination, pre-foaling instructions, contact information for emergency care during gestation or foaling). Refer to *Section 5 – Health Management*

b. pregnant and lactating mares/jennets must receive a diet that is adequate for maintaining a state of good health and that allows the mares/jennets to provide adequate nutrition to the foal

c. ensure the mare/jennet is appropriately vaccinated and dewormed

d. consult a veterinarian or experienced breeder for appropriate levels of exercise during late gestation

e. pregnant mares/jennets should not be exposed to new arrivals or horses that represent a high biosecurity risk (e.g., horses that frequently leave the property)

f. ensure the mare/jennet receives endophyte-free hay (e.g., fescue-type hay) as this can cause complications and abortions.

9.4 Foaling

The physical changes indicative of impending parturition (foaling) may include (27):

- development of an udder
- distended teats
- softening of the tail head
- the presence of a waxy substance on the end of the teats
- elongation of the vulva.

Some mares/jennets will foal without showing any of the above signs; therefore, it is essential that mares/jennets close to foaling are closely observed.

Most mares/jennets will foal unassisted; however, it is critically important to be knowledgeable about the **normal** foaling process so that a problem can be promptly identified and addressed. Survival of the foal and/or the mare/jennet is improved by rapid intervention when foaling difficulties arise. Contact a veterinarian or experienced personnel promptly when abnormalities during foaling occur, and be prepared to report relevant timelines (e.g., minutes since water broke). A normal foaling takes less than 20 minutes from the time the water breaks. **If after ten minutes of active labour the foal is not visible, provide appropriate intervention without delay**.

Individual mares/jennets tend to show similar signs of impending parturition and follow similar timelines from one breeding season to another. When reviewed in subsequent breeding seasons, the records also provide valuable information to better predict foaling of

individual mares/jennets. *Appendix S - Resources for Further Information* provides a reference to a template foaling record.

REQUIREMENTS

A plan must be in place for the foaling process, including a plan for getting prompt expert advice or help if needed.

Mares and jennets must be moved to the place of foaling prior to active labour.

Mares and jennets close to foaling must be observed at least twice a day for health, well-being and signs of foaling. Frequency of monitoring of mares/jennets needs to increase as foaling becomes imminent.

RECOMMENDED PRACTICES

a. consult a veterinarian or experienced breeder to become knowledgeable in the foaling process and how to provide appropriate assistance when the mare/jennet is having difficulty foaling

b. ensure mares/jennets foal have appropriate housing and foaling facilities (refer to *Section 2 – Facilities and Housing*)

c. ensure a veterinarian or experienced breeder is available to attend the foaling at the first sign of difficulty

d. arrange for the veterinarian to examine the post-partum mare/jennet, primarily if they did not follow the normal foaling progressions. The placenta should pass within three hours and be saved so it can also be examined

e. whenever possible, utilize technology (e.g., cameras, alert systems) to observe mares and jennets without disturbing them.

9.5 Care of the Newborn Foal

A healthy foal will be active, alert and responsive, and will keep the mare or jennet's udder empty. The most common signs of abnormalities in foals include:

- lethargy
- inability to rise within one hour after birth
- not nursing within two hours of birth

- not passing its first feces (the meconium) within three hours of birth
- straining to defecate or urinate
- excessive salivation or milk appearing in the nostrils
- grinding its gums
- signs of colic (e.g., rolling on its back)
- milk staining on the face (due to a sick foal standing at a full udder and not sucking).

REQUIREMENTS

Newborn foals must be monitored to ensure they can rise and suck unassisted.

Appropriate care must be provided without delay if abnormalities in the foal are observed.

RECOMMENDED PRACTICES

a. treat the navel stump during the first 24 hours using an appropriate product, such as 0.5% chlorhexidine (dip the navel for 30 seconds each time) (28). The use of caustic substances (e.g., 7% iodine) is harmful

b. clean and dry the udder and inner thighs of the mare/jennet before the foal sucks (28) (note: this may not be possible when foaling takes place on pasture or range)

c. have a veterinarian evaluate the foal and include a test for adequate colostrum intake. A veterinary evaluation is strongly advised in cases where the foal does not suck adequately in the first six hours of life (refer to *Section 9.5.1 – Colostrum* for more details).

9.5.1 Colostrum

Colostrum is the first milk produced by the mare/jennet at parturition. It contains high concentrations of antibodies, which protect the newborn foal from infection until its own immune system is fully functional. Failure to receive adequate colostrum is one of the main risk factors for severe infection in foals.

The newborn foal's ability to absorb colostrum antibodies is highest immediately after birth and decreases by 6–8 hours after birth. A veterinarian can perform a blood test to assess whether a foal has received sufficient colostrum.

Mares and jennets produce colostrum only once in each pregnancy, approximately within the last 2–3 weeks prior to foaling. If mares/jennets stream colostrum prior to foaling, the

colostrum can be collected by milking and frozen for later administration to the foal. If colostrum is not available from the mare/jennet, plans should be made to provide an alternative antibody source. When supplementation is necessary, provide the foal with frequent feedings of colostrum as soon as possible after birth. In donkeys, foal absorption of antibodies from colostrum drops rapidly to less than 25% after 3 hours of age so this timing is critical (73).

REQUIREMENTS

Foals must receive colostrum or alternative care to maintain their health and vigour.

RECOMMENDED PRACTICES

a. discuss colostrum management with a veterinarian or experienced breeder before the foal is born

b. keep a frozen store of (or have access to) high quality colostrum

c. thaw stored colostrum in warm water (not a microwave)

d. use good hygiene practices when collecting, storing, and feeding colostrum.

9.5.2 Orphan Foals

In the event that you have an orphaned foal or one rejected by their dam, immediate attention is required especially if a newborn foal. A veterinarian or experienced breeder or horseperson should be contacted and consulted if you are unfamiliar with their needs. Newborn foals require colostrum to acquire antibodies (refer to *Section 9.5.1 – Colostrum*) and also nurse frequently for short periods of time in the beginning. It is difficult to maintain this continual feeding schedule around the clock. Foals also learn about herd behaviour and their environment from their dams and so, without a substitute, they lack certain skills that can affect their socialization and later training.

RECOMMENDED PRACTICES

a. seek advice from veterinarians or other experienced breeders

b. obtain nurse mares/jennets or consult with a veterinarian about the possibility of inducing lactation in a dry mare/jennet

c. feeding requirements:
   - consult with a nutritionist
   - obtain colostrum

- obtain milk replacer
- feed small amounts often
- creep feed (Refer to *Section 4 – Feed and Water*)

d. ensure social interaction with other horses to avoid behavioural issues caused by the lack of parental guidance or absence of normal herd dynamics.

9.5.3 Prematurity

A length of gestation of less than 320 days in a horse is a premature foal and will likely require more supervision and possibly intensive care in order to survive.

There is no defined premature period for donkeys, but premature donkey /foal may exhibit the following behaviours (74):

- general weakness
- low birth weight
- reduced suckling reflex
- delay in standing
- inability to maintain body temperature
- ears flopped downward and backward.

9.5.4 Weaning

Weaning is necessary in order to facilitate more handling and training of the foal and to allow the mare/jennet to regain lost body condition.

In a natural setting, mares and jennets wean their foals around 9–12 months of age when the next foal arrives. This natural weaning allows the foal to develop confidence as it slowly explores and learns about its environment with its mother nearby. Under managed conditions, however, foals are weaned as early as 4–6 months and consequently may experience one or more of the following stressors: separation from the mare/jennet, a change in diet, exposure to new surroundings, and the expectation for more handling than what the foal has previously experienced (29). Therefore, weaning of foals should be done as late as possible to promote the development of a healthy, confident, and secure young horse.

Foals should be exposed to all aspects of an adult horse's life, such as stalls, trailers, veterinary procedures, people, other animals, etc., while in the company of their dams. This enables the foal to have diverse positive experiences with less or no anxiety. These

young horses will be less susceptible to stereotypies and are also less likely to display dangerous escape behaviours as adult horses.

There are several weaning methods. Each method has advantages and disadvantages, and the method chosen will depend on past experiences and the facilities available on the farm.

REQUIREMENTS

Facilities or fencing used during weaning must be safe and made of strong materials free from protrusions.

Corrective action must be taken if the foal or mare/jennet injures themselves attempting to reunite during weaning.

Weaned foals must be kept in the company of other equines, such as other weaned foals or older, calm horses.

RECOMMENDED PRACTICES

a. weaning should not occur earlier than 6 months of age. Whenever possible, weaning should occur after 9 months of age

b. consult a knowledgeable and experienced horseperson for advice on how to wean gradually in a safe manner. Consider facility layout and fencing

c. consult a veterinarian regarding early weaning decisions if there are concerns about the mare/jennet or foal (e.g., milk production, body condition, health status)

d. wean foals in a manner that minimizes stress to the foal and mare/jennet. Weaning must be done gradually unless under extreme circumstances (e.g., death of mare)

e. plan weaning so it does not coincide with other stressful events or times when the foal's immune system may be compromised (e.g., adverse environmental conditions and painful practices)

f. if creep feeding is to be provided, introduce foals to creep feed at least one month before weaning (refer to *Section 4 – Feed and Water)*

g. ensure foals have access to a high quality, high fibre diet (e.g., grass, hay, or haylage) before, during, and after weaning.

Section 10: Transport

Humane transport of horses is important for their health, welfare, and safety. Transport is a stressful experience for animals and those involved in, or causing, the transport process (loading, confinement, transport, or unloading) must takes steps to prevent avoidable pain and suffering of animals to ensure their wellbeing and positive animal welfare outcomes. *Section 10 – Transport* applies to both commercial haulers and individual transporters (e.g., producers, private haulers). Where necessary, specific provisions for either loose or halter loaded horses have been included. The scope of the equine Code of Practice ends at the farm gate but includes Requirements and Recommended Practices that affect the transport process.

The federal requirements for animal transport are covered under the *Health of Animals Regulations,* Part XII – Transport of Animals (75). They are enforced by the Canadian Food Inspection Agency (CFIA) with the assistance of other federal, provincial and territorial authorities. Some provinces have additional animal transport regulations. Anyone with responsibilities during any part of the transport process (i.e., loading, confinement, transport, unloading, or causing the loading/confinement/transport/unloading) must be familiar with, and follow, all applicable requirements. As these regulations may change over time, ensure that you have the most current information.

If you do not comply with the regulations, you could be fined or prosecuted. If your actions or neglect are considered animal abuse, you could also be charged and convicted under the *Criminal Code* of Canada and/or provincial legislation.

10.1 Fitness for Transport

Horse owners and persons transporting horses have a primary responsibility for determining if an animal is fit for the expected duration of the trip. While the driver should not be relied upon to determine whether the animal is fit for transport, they have the right and responsibility to refuse to load an animal that they recognize as unfit. Fit animals are those in good health that are expected to reach their intended destination in the same condition. Animals not considered to be fit are either “compromised” or “unfit” (refer to *Appendix N – Transport Decision Tree*). These terms are not interchangeable:

a. a fit animal is one that is deemed to be able to withstand the intended journey and can be transported without suffering

b. a compromised animal, generally, is one with a condition that impairs its ability to tolerate transport. However, with special provisions, it can be transported short distances to the nearest place (not an assembly centre), where it can receive care or be humanely killed without causing unnecessary suffering
c. an unfit animal is an animal that is likely to suffer during transport (or continued transport if they become unfit after transport begins). Unfit animals cannot be loaded or transported unless it is to receive care recommended by a veterinarian (such as an animal requiring surgery), and with special provisions. This includes non-ambulatory animals or animals likely to become non ambulatory. "Non-ambulatory" means unable or unwilling to rise, stand, or walk unassisted or unable to move.

Do not load horses with a reduced capacity to withstand transport. These animals may show signs of infirmity, illness, or injury (75). Never transport an animal unless you are sure it is healthy to withstand the stress of the entire expected trip (including intermediate stops). Each case must be judged individually, and the welfare of the horse must be the first consideration. **If you are not sure whether a horse is fit for the trip, do not transport—contact a veterinarian**.

Special provisions required if transporting a compromised or unfit animal:

- individually loaded and unloaded without having to negotiate ramps inside the conveyance
- isolated during transport (a compromised animal may be segregated with one familiar animal if unlikely to result in injury or suffering) and
- additional measures as needed for the specific journey and animal condition (e.g., extra bedding for comfort or protection from cold).

For animals that cannot be transported in their current state, transport must be delayed, and either appropriate health intervention provided until the animal is fit for the trip, or the animal is euthanized (refer to *Section 12 – Euthanasia*).

REQUIREMENTS

Horses' fitness for transport must be individually assessed prior to loading. Evaluate fitness for transport in the context of each trip and all relevant factors that may impact the animal's capacity to withstand loading, transport, and unloading (e.g., maximum feed, water and rest provisions, and prevailing weather conditions).

Unfit animals must not be transported, unless it is to receive care on the advice of a veterinarian and only if special provisions are met (75).

***Compromised animals may only be transported with special provisions directly to the nearest suitable place where they can receive care or be humanely killed (75). Refer to* Appendix N – Transport Decision Tree.**

RECOMMENDED PRACTICES

a. consult a veterinarian if uncertain about the animal's fitness for transport

b. clearly identify and provide documentation for animals showing signs of an infirmity/current health condition at time of loading if transporting for care (e.g., a veterinary note explaining the condition and treatment given, video on smartphone).

10.2 Pre-Transport Preparation

Preparation for transport starts long before the trip actually begins and is a key factor affecting the welfare of horses during transport. Preparing for, and managing, variables such as assessing fitness for transport, necessary nutrition, potential delays, and animal compatibility can have a collective impact on the animal's ability to withstand transport and should be considered as a whole. Those involved in arranging transport need to know how long the animals will be in transit until their final destination, and any additional services that may be required under Part XII of the *Health of Animals Regulations* (e.g., feed, water, rest). Risk factors need to be assessed prior to transport and include, but are not limited to:

- animal compatibility
- vulnerable animals (e.g., compromised, heavily pregnant mares, young animals)
- weather conditions
- traffic delays
- the expected time that the animal will be without feed, safe water, and rest. Maximum intervals horses may be without feed, water, and rest are outlined in the *Health of Animals Regulations*, Part XII – Transport of Animals. The interval begins:
    a. when the animal was last fed;
    b. when the animal was last given safe water; and
    c. when the animal was last rested for a minimum of eight consecutive hours (75).

REQUIREMENTS

Risk factors regarding the horses and the conditions of transport prior to loading must be assessed to prevent animal injury, suffering, or death (75).

Mares and jennets that are in the last 10% of their gestation periods or have given birth during the preceding 48 hours must not be transported, unless on the advice of a veterinarian for care or treatment (75).

Every mare with its suckling offspring must be segregated from unfamiliar or incompatible animals during transport.

Every mature stallion must be segregated from unfamiliar or incompatible animals during transport.

Fit horses must not be without feed, safe water, or rest for more than 28 hours (75).

Compromised horses must not be without feed, safe water, or rest for more than 12 hours (75).

RECOMMENDED PRACTICES

a. check the vaccination and health status requirements for your destination well in advance of the transport date, particularly for transport to another country or province

b. avoid changes in diet immediately before or during a trip (76)

c. ensure you pack extra feed and water in case there are unanticipated delays during transport

d. when possible, arrange stops every 6 hours during transport to allow horses to have access to forage, water, and rest

e. ensure the animals are properly identified prior to transport

f. keep a first aid kit for the animals in the transport vehicle

g. ensure animals travelling together are pre-socialized.

If using protective equipment (e.g., wraps and shipping boots):

h. seek advice from a veterinary professional

i. ensure protective equipment fits the animal correctly and comfortably

j. acclimate the animal to wearing protective equipment before training to load or transport.

10.3 Arranging Transport

It is essential that those involved in arranging transport or loading/unloading (or causing to load/unload) of horses (e.g., owners, managers, transporters, farm hands) have experience transporting horses and are knowledgeable of their behaviour and care and understand that animals to be transported are fit to withstand the entire journey (75). Horse owners and managers have a responsibility to ensure that the transporter is trained and qualified.

It is also essential that those involved in arranging transport ensure the conveyance being used is suitable for each animal in the load. This includes ensuring proper ventilation, protection from exposure to harsh environmental conditions, and appropriate stocking densities. Environmental conditions impact the humane transport of animals, as those exposed to the effects of harsh weather may experience suffering, injury or death due to heat exhaustion, dehydration, frostbite, etc. Adequate space in a conveyance is also important to prevent physical and behavioural stress. When determining stocking densities, it is essential to consider the anatomy and behaviour of the specific animals in question, the temperature and environmental conditions, body conditions, health status of the animals, and duration of confinement.

Before transport, ensuring a contingency plan is in place to anticipate and proactively address unexpected transport events, such as potential delays, accidents, inclement weather, an animal becoming compromised or unfit during transport, or a labour disruption, is important. Contingency plans should be realistic, practical, and prevent the suffering of animals.

REQUIREMENTS

Conveyances used to transport horses must be suitable for the species, provide adequate ventilation, provide a floor that prevents the animal from tripping, slipping and falling, and provide absorbent bedding (e.g., pellets, shavings) to prevent the pooling or escape of water, urine and liquid manure (75).

Horses must be able to maintain their preferred position with sufficient space to permit a full range of head movement without coming into contact with the surface overhead (75).

Horses must not be transported in trailers with more than one deck (75).

Every animal must be protected from temperature extremes (cold or hot), especially for foals and geriatrics, during all phases of transport (75).

Those transporting horses in the course of business or for financial benefit must have a contingency plan in place and implement as needed (75).

Ensure all required paperwork is completed and provided to the transporter. The required paperwork varies—refer to the provincial authority and the Health of

Animals Regulations (some information required upon arrival, i.e., Transfer of Care, Records).

RECOMMENDED PRACTICES

a. ensure loading facilities are compatible with the type of trailer being used
b. ensure the following information is discussed and agreed upon between the driver and consigner:
    - number of animals to be transported
    - class of horses to be transported (e.g., yearlings, mature stallions)
    - date, time, and place of loading
    - destination
    - any special considerations for the horses being transported
    - contact details for veterinarians and local authorities along the route
    - information on rest stops where animals may be unloaded, rested, fed, and watered
    - maps or other navigation systems for alternate route planning.

10.4 Loading and Unloading

Understanding animal behaviour and using low-stress handling techniques during loading and unloading of horses will facilitate animals' movement and reduce stress and injury for both the handlers and animals. Research on farm animal transport shows that loading and unloading are stressful components of transport (77). A combination of stressors can occur in a short period of time, including exposure to unfamiliar surroundings and animals (77). Injuries may occur when animals slip or fall during loading and unloading, thus, the importance of using low-stress handling techniques.

REQUIREMENTS

Personnel involved in loading, unloading, or transporting horses must have the necessary knowledge and skills to conduct these activities in compliance with Part XII of the Health of Animals Regulations.

The requirements for loading and unloading procedures and equipment as described in Part XII of the Health of Animals Regulations must be complied with.

Those involved in loading, unloading, or transporting horses must not:

- ***beat, strike, whip or kick the animal;***
- ***use a prod;***
- ***use a whip or any other driving device that is likely to cause injury, suffering or death;***

- ***drag the animal; or***
- ***handle the animal in any way that is likely to cause the animal injury, suffering or death (75).***

Horses must be loaded calmly, quietly, and patiently.

Instances of inhumane handling or transport must be documented and immediately reported to proper authorities (e.g., Provincial Animal Welfare Authority, local CFIA).

Ramps used for loading/unloading must be able to bear the weight of the horses, have secure footing to prevent the animals from tripping, slipping and falling, be placed with no gap between the ramp and vehicle, and have a slope that does not exceed 30 degrees (75).

Those involved in loading, unloading, or transporting horses must determine appropriate loading densities to ensure the animals will not be overcrowded in the conveyance (75), particularly loose loaded horses.

***The right of the transporter to refuse to load horses that they deem compromised or unfit for transport must be respected. The reason for refusal must be addressed by the owner/consigner. Refer to* Appendix N – Transport Decision Tree.**

RECOMMENDED PRACTICES

a. ensure handlers are trained in humane loading and unloading practices

b. ensure roads and loading areas are accessible in all kinds of weather

c. ensure loading facilities have gentle ramps and are uniformly lit (avoid sharp contrasts and shadows)

d. clean and sanitize vehicles between uses, especially if transporting horses of different origin (refer to *Section 5.1.1 – Biosecurity*)

e. for vehicles requiring horses to step up: use a rubber bumper to prevent injuries as the animal steps up.

10.4.1 Training to Load

Horses well trained to the halter should be taught loading procedures well before the anticipated date of transport. Horses that have had a positive experience loading are often less fearful than horses loaded for the first time. Training to load also facilitates loading during an emergency.

Horse owners are encouraged to obtain reliable information on methods for training horses to load into trailers. Access to accurate and well-informed guidance is essential for

applying low-stress techniques that support animal welfare and safe handling during training to load.

RECOMMENDED PRACTICES

a. seek assistance on training to load from a qualified horse behaviour or training professional that will provide humane, low stress training for loading.

10.4.2 Post-Transport Management

Research suggests that transport itself, or the simultaneous management changes associated with transport (e.g., new surroundings, physical constraint, and deprivation of water and feed), can predispose horses to colic and respiratory disorders (78).

REQUIREMENTS

Horses must be provided with water, forage, and rest upon arrival to the farm or rest station.

The condition of animals must be individually assessed at unloading.

RECOMMENDED PRACTICES

a. avoid changes in feed shortly before or after transport

b. monitor recently transported horses carefully for dehydration, wounds, signs of colic, fever, or respiratory disease, particularly after long distance transport or when horses of different origin were mixed (78)

c. segregate new arrivals from resident horses (refer to *Section 2.1.2 – Mixing and New Arrivals* and *Section 5.1.1 – Biosecurity* for more details).

Section 11: Change or End of Career

Horses can have multiple careers in their working lives. Responsible ownership includes making decisions for horses that are no longer able to carry out the work desired of them as a result of age, injury, or illness.

11.1 Change or End of Career Options

Potential options include:

- retirement from current discipline
- transition to a different role or easier job on the farm
- use as a companion to another horse
- sell to a new owner or consign to a quality or specialized horse sale
- donate to a reputable facility, such as a university
- consult with a veterinarian to determine a reputable rescue organization or sanctuary
- arrange for euthanasia (refer to *Section 12 – Euthanasia*)
- arrange for humane slaughter.

Select an option based on the horse's physical condition, soundness, temperament, demeanor, socialization (with both humans and horses), and tractability. Euthanasia is a legitimate consideration and may be the desired or required course of action depending on the condition of the horse and availability of other options. Refer also to *Section 10 – Transport* and *Section 12 – Euthanasia*. Horses serve humans in a variety of ways. All horses deserve to be treated with equal care and consideration at the end of their career as during work.

Sale by private treaty enables the seller to learn more about the buyer, their facilities, and intended use for the horse. Refer to *Appendix S – Resources for Further Information*.

Transport to a Processing Facility

Meat processing facilities for horses are available in Canada and, for some owners, transporting their horse to one of these facilities is the preferred end-of-life option for a variety of reasons, including the provision of meat for human or animal consumption

and/or mitigating the environmental impacts of chemical euthanasia, burial, rendering, and cremation. Owners should be aware that horses may need to be transported for a significant period of time to reach these facilities, mixed with unknown horses, and held for a short period (e.g., overnight) while awaiting processing. Only fit horses can be transported under the *Health of Animals Regulations*, Part XII – Transport of Animals (refer to *Appendix N – Transport Decision Tree*). Additionally, horses must not be treated with prohibited medications for a significant period of time prior to slaughter, which may result in painful medical conditions being left untreated.

Donation to Research

Some academic institutions accept donations of a horse or donkey to their research program. Often the animal is euthanized after donation and the body used for further scientific investigations into equine related health issues. Some owners find comfort in knowing their horse provided information that may help other horses. These arrangements are usually made through the owner's veterinarian.

REQUIREMENTS

The welfare of the horse must be of paramount importance when making change or end of career decisions.

RECOMMENDED PRACTICES

a. ensure appropriate consultation with a licensed veterinarian to best determine physiological needs during next phase
b. get a specific diagnosis of the horse's condition—this is the best way to identify acceptable uses for the horse and future care needs
c. ensure the horse is transitioned to a responsible caregiver (e.g., perform a site visit, request references)
d. consider re-training/transition period for change of career
e. consider mental health/behaviours/bonded companions when making decisions.

Section 12: Euthanasia

Horses can live well into their thirties or beyond, thus their care is a long-term commitment. At some time during this life, owners and caregivers will be responsible for end of-life decisions, and these decisions should never be made without careful consideration. Horses serve their owners in many ways and deserve an end of life that is humane.

Euthanasia means a humane death and must be done in a timely manner and by a skilled person. Deciding to euthanize a horse on the farm or facility is often one of the most humane acts an owner can do particularly when the animal is suffering from a declining quality of life (see below).

Quality of Life Assessment

Some end-of-life decisions must be made quickly as during an emergency. For some, these decisions are more easily made as obvious suffering is being relieved. In other situations, however, the decision to end a life is far more difficult because the suffering is less obvious. This is when the horse's quality of life should be considered.

Quality of life involves determining the horse's welfare over time. When assessing quality of life, determinants of welfare are used such as evaluating aspects of the horse's nutrition, environment, health, behaviour and, importantly, their mental and emotional state. This is not a one-off evaluation but should occur on a regular schedule (e.g., daily). These assessments will help the owner in determining if the horse's quality of life is declining, improving, or staying the same. They will also aid the owner in making a timelier end-of-life decision.

For horses that are diagnosed with a medical issue, such as an illness or injury, there are further things to consider:

- is the horse suffering? A veterinarian will be able to evaluate this, help the owner recognize the signs of pain and suffering and if treatment will provide relief. Refer to *Section 5.2.1 – Pain* for help with recognizing pain in your horse
- what is the likelihood of recovery or return to an acceptable quality of life?
- how long should the animal be given to recover?
- have the chances of recovery improved or declined over the course of treatment?

There are also aspects the owner needs to consider:

- what kind of special care will the animal require and are you able to meet those needs in terms of your skill level, time, and available facilities?
- do you have the financial resources to continue to provide for the animal?
- will you and your family be able to manage the stress associated with care?

Euthanasia Plan

Deciding to euthanize an animal can be emotional for everyone involved. In an emergency situation, some aspects of the euthanasia will be decided for the owner, however owners can still have input on some aspects such as method of disposal. Having a plan beforehand can alleviate some of the stress and is particularly helpful for planned euthanasia when the horse's quality of life has deteriorated.

There are several things to consider when designing a plan such as:

- What method of euthanasia will you choose?
- Who will perform the euthanasia and are they qualified?
- Do you have a backup if your primary person performing the euthanasia is unavailable?
- If there is more than one owner, do all owners agree? If not, is someone appointed to make the final decision?
- Do you want to be there yourself for the procedure or do you want someone to go in your place?
- Who else will be present at the euthanasia (family, barn manager, handler)?
- Who will make the decision to euthanize if you are away or incapacitated?
- Do you want a keepsake, such as tail or mane hairs?
- Will you leave the body for a short time for other horses to acknowledge the death (e.g., mare to their foal)?
- How will you dispose of the body?

RECOMMENDED PRACTICES

a. work with a veterinarian to develop a plan for euthanasia. The written plan should be kept in a known location, made available to those looking after the horse if not the owner and include:

- the name, and, if applicable, contact information of the person(s) responsible for making euthanasia decisions on farm and the person responsible for performing the procedure
- a schedule for proper maintenance of any equipment
- the protocols for disposal, in accordance with provincial and/or municipal regulations (refer *to Appendix P – Equine End-of-Life Plan* for an example of a euthanasia plan)

b. discuss euthanasia with a veterinarian when the horse:
   - is enduring continuous or unmanageable pain from a condition that is chronic and incurable
   - has a medical condition that has a grave prognosis without surgery, and surgery is unavailable or unaffordable
   - possesses dangerous behavioural traits that renders it a hazard to itself, other horses or handlers
   - is suffering from a severe, traumatic injury (e.g., broken leg or wound significantly impacting a major organ, muscle or skeletal system)
   - has a disease or condition and the cost of treatment is prohibitive
   - has a contagious disease, which is a serious health hazard to other horses or humans
   - has a declining quality of life
   - you are unable to care for the horse and cannot find it a suitable new home.

12.1 Timeliness of Euthanasia

The lives of horses are often intertwined with the lives of their owners and thus may be associated with life's important moments (e.g., graduation, birth of a child, death of a spouse). This relationship can be very emotional making it difficult to make a timely end-of-life decision. For situations where the quality of life is declining, a friend, family member, or someone who knows the horse can support you in your decision to euthanize and prevent unwarranted delay. When euthanasia is deemed necessary, it must be performed as soon as possible, particularly in the case of a severe, traumatic injury. It is not acceptable to postpone euthanasia for reasons of convenience or cost (40). Leaving a suffering animal to die of natural causes (what is known as "letting nature take its course") is not acceptable (40).

REQUIREMENTS

Equines that are sick, injured, or in pain must receive appropriate treatment without delay or be euthanized without delay. Leaving a suffering animal to die is not acceptable.

Equines that are not responding to treatment and/or have an untreatable condition that compromises welfare must be euthanized.

12.2 Methods of Euthanasia

The euthanasia method used must be quick, cause minimal pain and distress, and render the horse immediately unconscious. Steps should be taken to keep the horse calm prior to the procedure and an experienced handler used. The following are the only acceptable methods for euthanasia of equines (41):

- lethal injection administered by a veterinarian intravenously, intrathecally (in the cerebrospinal fluid) or intracardially (in the heart) after general anesthesia
- gunshot deployed by a skilled individual
- penetrating captive bolt deployed by a skilled individual (depending on the model used, a secondary step will be required) (42). *Appendix Q – Anatomical Landmarks for Euthanasia* and *Appendix R – Technical Guidelines for Euthanasia Methods* provide important further guidelines.

REQUIREMENTS

An acceptable method of euthanasia must be used.

Euthanasia must be performed by persons knowledgeable in the method used for equines.

Horses that are unfit for transport must not be sold or sent to a processing facility, auction or an assembly centre in lieu of euthanasia (Refer to Appendix N – Transport Decision Tree).

RECOMMENDED PRACTICES

a. when choosing a method of euthanasia consider:
    - the medical condition of the horse being euthanized
    - ability to restrain the animal
    - human safety and the safety of other animals
    - potential need for sample collection for diagnostic testing
    - the emotional comfort with the procedure for the owner, the person performing euthanasia and any bystanders.

12.3 Confirmation of Death

In order to achieve a humane death, the horse must be rendered immediately unconscious and must go on to die without regaining consciousness. Death does not occur immediately; it may take several minutes.

Reflex motor activity or muscle spasms may follow the loss of consciousness and should not be mistaken as an indication of pain or distress. Following the use of the captive bolt or gunshot, the initial involuntary movements do not begin immediately, but approximately 5–20 seconds later. If lethal injection is used, there may be variable amounts of movement associated with deepening anesthesia.

There are several reasons why a secondary step may be needed. In some cases, the euthanasia tool may only be capable of temporarily stunning the animal; therefore, a secondary step is required to euthanize the animal (40). A secondary step is always required if the first step fails. *Appendix R – Technical Guidelines for Euthanasia Methods* provides important information on acceptable secondary steps.

An animal has not been rendered unconscious if the animal (40):

- vocalizes
- attempts to rise
- lifts its head
- blinks like an alive animal
- responds to a painful stimulus
- has rhythmic breathing.

Death must be confirmed by using the following indicators:

- absence of all movement
- absence of a heartbeat and pulse
- fixed, dilated pupil
- absence of all reflexes including the corneal reflex (i.e., no blinking when the eyeball is touched)
- absence of rhythmic breathing.

REQUIREMENTS

Confirm unconsciousness immediately when it is safe to do so.

***Have a secondary euthanasia step or method available. Refer to* Appendix R – Technical Guidelines for Euthanasia Methods.**

Confirm death before moving or leaving the animal.

12.4 Common Disposal Methods

If a disposal method is not immediately used after euthanasia or death, the body should be stored (e.g., use of a tarp) in a manner that protects it from farm dogs and scavengers, particularly if the horse was euthanized using pentobarbital, from sight of people who may be emotionally disturbed by it (e.g., children), and where there is easy access for removal. Deadstock should be disposed of as soon as possible which may be dependent on weather conditions and may be prescribed by provincial legislation.

As part of the euthanasia plan, owners should consider the method they prefer for disposal of the body. Permitted disposal methods are regulated by the province and/or municipality. The horse owner's choice of method is usually dependent on available resources (land, equipment, finances), aesthetics (how the owner wants to remember the animal), and whether the horse had an infectious disease.

- licensed **deadstock removal** service providers transport deadstock from the farm to a disposal facility (renderer, approved landfill, crematorium, composter, etc.) or veterinary practice for postmortem examination (autopsy). Owners can also transport their deadstock to disposal facilities but must obey provincial regulations
- on-farm **burial** is regulated by the province and/or municipality to protect ground and surface water and prevent scavenging. Winter conditions prohibit burial in many areas
- **composting** can be done on farm by the owner or by a composting service and according to provincial/municipal regulations. Composting provides excellent organic matter for planting, however, if not done correctly, it can attract scavengers and potentially be environmentally damaging
- **cremation** involves the provincially-regulated incineration of the body at extremely high temperatures. Few areas of the country provide this service and it may be cost restrictive for some.

REQUIREMENTS

Disposal must be in accordance with provincial and municipal regulations.

RECOMMENDED PRACTICES

a. consider disposal options well in advance as they may impact the method and location for euthanasia. Refer to the relevant provincial and/or municipal regulations.

12.5 Mental Health and Grief

Owners have varying relationships with their horses and thus, during death they will have a range of emotions. How people handle these emotions is just as variable. If you or someone you know is in crisis, please reach out to your local emergency mental health support line.

REFERENCES

References 1-42 available here.

43. Stephen J.O., Baptiste K.E. & Townsend H.G. (2000) Clinical and pathologic findings in donkeys with hypothermia: 10 cases (1988–1998). *Journal of the American Veterinary Medical Association* 216:725–9.

44. Mid-Rivers Equine (2025) *Hypothermia in Horses: Recognizing and Combating the Cold*. Available at: https://www.midriversequine.com/hypothermia-in-horses-recognizing-and-combating-the-cold/.

45. Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) (2021) *Electrical systems in barns*. Available at: https://www.ontario.ca/page/electrical-systems-barns.

46. Pitt, R.E. (1990) *Silage and Hay Preservation*. Natural Resource, Agriculture, and Engineering Service. Department of Agricultural and Biological Engineering, Cornell University. Available at: https://ecommons.cornell.edu/server/api/core/bitstreams/7b38d461-3524-4238-a778-8f7902e4ea0d/content. Accessed: September 2025.

47. Lansade L., Hartmann E., Minero M. & Ruet A. (2024) Review–Confinement, restriction of social contacts and movement in domestic horses. *EURCAW Ruminants & Equines*. https://doi.org/10.5281/zenodo.13785436.

48. Hockenhull J. & Creighton E. (2015) The day-to-day management of UK leisure horses and the prevalence of owner-reported stable-related and handling behaviour problems. *Animal Welfare* 24:29–36.

49. Lansade L., Lemarchand J. & Ruet A. (2025) Shelter use in horses: Time spent indoors and factors of variation–results from a one-year longitudinal study. *Applied Animal Behaviour Science* 106699.

50. Lesimple C., Fureix C., LeScolan N., Richard-Yris M. A. & Hausberger M. (2011) Housing conditions and breed are associated with emotionality and cognitive abilities in riding school horses. *Applied Animal Behaviour Science* 129: 92–99.

51. Lesimple C., Poissonnet A. & Hausberger M. (2016) How to keep your horse safe? An epidemiological study about management practices. *Applied Animal Behaviour Science* 181:105–114.

52. Lesimple C., Reverchon-Billot L., Galloux P., Stomp M., Boichot L., Coste C., Henry S. & Hausberger M. (2020) Free movement: A key for welfare improvement in sport horses? *Applied Animal Behaviour Science* 225:104972.

53. Phelipon R., Hennes N., Ruet A., Bret-Morel A., Górecka-Bruzda A. & Lansade L. (2024) Forage, freedom of movement, and social interactions remain essential fundamentals for the welfare of high-level sport horses. *Frontiers in Veterinary Science* 11:1504116.

54. Mouncey R., de Mestre A.M., Arango-Sabogal J.C. & Verheyen K.L. (2025) Born to run? Associations between gestational and early-life exposures and later-life performance outcomes in Thoroughbreds. *Equine Veterinary Journal* 40851510.

55. Lee J., Floyd T., Erb H. & Houpt K. (2011) Preference and demand for exercise in stabled horses. *Applied Animal Behaviour Science* 130:91–100.

56. Kolter L. (1984) Social relationships between horses and its influence on feeding activity in loose housing. *Proceedings of the International Congress on Applied Ethology in Farm Animals, Kiel 1984*. 151–155.

57. Linklater W.L., Cameron E.Z., Stafford K.J. & Veltman C.J. (2000). Social and spatial structure and range use by Kaimanawa wild horses (*Equus caballus: Equidae*). *New Zealand Journal of Ecology* 24:139–152.

58. van Dierendonck M.C. & Spruijt B.M. (2011). Coping in groups of domestic horses–Review from a social and neurobiological perspective. *Applied Animal Behaviour Science* 138:194–202.

59. Mason G. (2006). Stereotypic behaviour: Fundamentals and applications to animal welfare and beyond. Chapter 11 in Mason G. & Rushen J. (Eds.), *Stereotypic Behaviour in Captive Animals: Fundamentals and Applications to Welfare* (4th ed, pp. 325–356). Rushen, CAB International, Wallingford.

60. Flakoll B., Ali A.B. & Saab C.Y. (2017) Twitching in veterinary procedures: How does this technique subdue horses? *Journal of Veterinary Behavior* 18: 23–28.

61. LeDoux J.E. (1994) Emotion, memory and the brain. *Scientific American* 270:50–57.

62. Rogers C.W., Bolwell C.F., Tanner J.C. & van Weeran P.R. (2012) Early exercise in the horse. *Journal of Veterinary Behavior* 7:375–379.

63. Rogers C.W. (2022). Kinetic Behaviour and Athletic Performance. Chapter 6 in Riley C.B., Cregier S.E. & Fraser A.F. (Eds.), *The Behaviour and Welfare of the Horse*. CAB International, Wallingford.

64. Rogers C.W., Bolwell C.F., Gee E.K. & Rosanowski S.M. (2020) Equine musculoskeletal development and performance impact of the production system and early training. *Animal Production Science* 60:2069–2079.

65. Dowling B.A. & Dart A.J. (2005) Mechanical and Functional Properties of the Equine Superficial Digital Flexor Tendon. *The Veterinary Journal* 170:184–192

66. Docking S.I., Daffy J., van Schie H.T.M. & Cook J.L. (2012) Tendon Structure Changes after Maximal Exercise in the Thoroughbred Horse: Use of Ultrasound Tissue Characterization to Detect in Vivo Tendon Response. *The Veterinary Journal* 194:338–342.

67. FEI (2025, July) FEI Equine Welfare Action Plan [Presentation]. FEI Sustainability Forum Session 3. Fédération Equestre Internationale. Available at: https://inside.fei.org/system/files/FEI%20SF%202025_Session%203_FEI%20Equine%20Welfare%20Action%20Plan_FINAL.pdf.

68. Tuomola K., Mäki-Kihniä N., Valros A., Mykkänen A. & Kujala-Wirth M. (2021) Bit-Related Lesions in Event Horses After a Cross-Country Test. *Frontiers in Veterinary Science* 8:651160.

69. Cook W.R. & Kibler M. (2019) Behavioural assessment of pain in 66 horses, with and without a bit. *Equine Veterinary Education* 10:551–560.

70. Gustafson S. (2013, January 19). The Language of Horses [Conference presentation.] British Columbia Horse Council Kamloops, BC, Canada.

71. McBride S. & Hemmings A. (2009). A Neurologic Perspective of Equine Stereotypy. *Journal of Equine Veterinary Science* 29:10–16.

72. Rivera E., Benjamin S., Nielsen B., Shelle J. & Zanella A. J. (2002). Behavioral and physiological responses of horses to initial training: The comparison between pastured versus stalled horses. *Applied Animal Behaviour Science* 78: 235–252.

73. Aronoff N. (2010) The Donkey Neonate. In Matthews N. & Taylor T. (Eds.), *Veterinary Care of Donkeys*, USA: International Veterinary Information Service.

74. The Donkey Sanctuary (2017) *Donkey Foaling: Preparation for birth and aftercare advice*. Available at: https://www.thedonkeysanctuary.org.uk/for-owners/owners-resources/mares-and-foals.

75.Canadian Food Inspection Agency (CFIA) (2020) *Health of Animals Regulations: Part XII* (Transport of Animals). Available at: https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._296/index.html.

76. Woods J. (2010) *Horse Hauling Course: Take a Responsible Approach to Horse Hauling*. Cochrane AB: Horse Welfare Alliance of Canada.

77. Scientific Committee on Animal Health and Welfare (2002) *The Welfare of Animals During Transport (Details for Horses, Pigs, Sheep and Cattle)*. Brussels BE: European Commission Health & Consumer Protection Directorate-General.

78. Nielsen S.S., Alvarez J., Bicout D.J., Calistri P., Canali E., Drewe J.A., Garin-Bastuji B., Gonzales Rojas J.L., Gortázar Schmidt C., Michel V., Miranda Chueca M.A., Padalino B., Pasquali P., Roberts H.C., Spoolder H., Stahl K., Velarde A., Viltrop A., Winckler C., Earley B., Edwards S., Faucitano L., Marti S., Miranda de La Lama G.C., Nanni Costa L., Thomsen P.T., Ashe S., Mur L., Van der Stede Y. & Herskin M. (2022) Welfare of equidae during transport. *EFSA Journal* 20:7444.

79. Equine Code of Practice Scientific Committee (2025) Code of Practice for the Care and Handling of Equines: Review of Scientific Research on Priority Issues. Lacombe AB: National Farm Animal Care Council.

80. Fabian E.E. (2016) Riding Arena Footing Material Selection and Management. Available at: https://extension.psu.edu/riding-arena-footing-material-selection-and-management.

81. Canadian Veterinary Medical Association. (2021) Position Statements: Telemedicine. Available at: https://www.canadianveterinarians.net/policy-and-outreach/position-statements/statements/telemedicine/. Accessed: September 2025.

APPENDIX A – Template Budget for Horse Ownership

This template is intended to assist prospective horse owners in developing a budget so they can plan for the short- and long- term costs of horse ownership. Actual costs depend on several factors; therefore, it is important to consult with experts in your area to establish your actual costs. Depending on the individual context, some costs listed below may not apply: other costs may need to be added.[1]

	Initial Costs	
Pre-purchase exam		
Purchase of the horse		
Costs associated with transport (e.g., trailer)		
Tack: - Saddle and pad - Bridle - Halter		
Grooming supplies		

These are estimates depending on geographic location, horse breed, and/or other factors. Consult costs of care with your local boarding facilities, veterinarians, farriers, and insurance.

Minimum Ongoing Costs			
	Approximate Cost/Unit	**Actual Cost/Unit**	**Annual Total**
Boarding (or) On-Farm Care[2]	$500–$2000/month $6000–$24000/year		
Basic Routine Veterinary Care (e.g., annual wellness exams, annual vaccinations, dental float)	$300–$1000		

[1] The costs listed are not intended as suggestions for prices but rather a reflection of average expected costs based on 2025 dollars.

[2] Assumes basic facilities are in place on farm and in good condition (e.g., shelter and water are set up).

On-farm Emergency Veterinary Care	Minimum $1,000		
De-worming/Fecal Examinations	$100/year		
Farrier Expenses	$50–$90 trimming/6–8 weeks (or) $150–$350 shoeing/3–8 weeks		
Insurance (optional)	3% of horse's value + $400/year for medical/surgical coverage		
Liability insurance (in case your horse causes human or property damage)	Varies		

APPENDIX B – Emergency Telephone List

Facility address:

_____

_____

People to Contact in Case of Emergency	Phone Number	Emergency Phone Number
Owner		
Manager		
Trainer		
Veterinary clinic		
Police		
Fire department		
Electrical company		
Poison control centre		
Company performing maintenance and repair of ventilation and heating systems		
Company performing maintenance and repair of the gas heating system		
Company repairing the watering system(s)		
Company performing maintenance and repair of the feeding system(s)		
Plumber (water outage or broken pipe)		
Electrician		
Alarm system company		
Feed supplier		
Livestock hauler in case of evacuation		

APPENDIX C – Mapping Barns and Surrounding Areas for Fire Services

A map of the facility and its surroundings must be drawn and kept readily accessible for emergency crews. A copy of the farm map should be sent to your local fire service and another one should be put in a sealed container near the road upon evacuation from the farm. The map should include:

- all buildings, including fan openings, windows, doors, floor drains and their outlets
- location of animals on the site
- supplies (e.g., fire extinguishers, first aid kits, tools, protective clothing, absorbent materials)
- electrical service panels
- hydro, gas, and water shutoffs
- generator(s), hookups for generator(s)
- all fixed outside equipment
- compressed gas storages (e.g., oxygen, acetylene, and air tanks)
- propane and fuel tanks
- anhydrous ammonia storage
- location of firearms, ammunitions, and/or captive bolt cartridges
- water well location(s), including abandoned and unused wells
- water source for firefighting (may be the nearest tank fill location)
- possible contamination sources (e.g., pesticide storages, fertilizer storages, petroleum products storage, septic systems, manure storages, barnyards, pesticide mixing facilities)
- expected pathways for water runoff (e.g., where will the water flow when a fire is put out?)
- perimeter fences, gates, tile inlets, catch basins, surface water
- access routes to outdoor containment areas where animals can be moved if evacuated (i.e., pastures or lots).

Source: Adapted from the Code of Practice for the Care and Handling of Goats *(2022). Available at https://www.nfacc.ca/codes-of-practice/goats.*

APPENDIX D – Assessing Facility Buildings for Fire Prevention

Use the checklist to identify fire risk in facility buildings.

Structure		Yes	No
1	The largest, separate fire compartment size is less than 4,800 m^2 (51,672 ft^2)?		
2	Buildings are located at least 30 m (100 ft) from each other or have properly constructed (minimum fire-resistance rating of 1 hour) fire rated walls separating the individual fire compartments?		
3	Properly constructed fire stops exist in the attic at 30 m (100 ft) intervals?		
4	Are all attic fire stop gaps or passageways properly sealed?		
5	Interior sheathing materials have low Flame Spread Ratings and Smoke Developed Classifications?		
Electrical System			
6	Electrical inspection completed within the past year?		
7	Thermographic inspection of the entire electrical system, completed when the barn is at its peak electrical demand, completed within the past year?		
8	Any wiring passing through concealed spaces is enclosed in conduit?		
9	All electrical connections are hard wired (no extension cords)?		
10	An electrical/mechanical room contains components, including the main electrical panel, and is separated from the livestock air space with properly constructed fire rated walls (1 hour minimum)?		
11	All electrical equipment used in the barn displays a Canadian electrical approval stamp (e.g., CSA, ULC)?		
12	Animals are kept from direct access to electrical wiring. Outlets should be above animal head height or where they can not be reached?		
13	Electrical fixtures are properly protected and mounted?		
14	Fan motors are totally enclosed?		
Heating System			

15	Open flame box heaters or radiant tube heaters (that draw combustion air or exhausts directly into the barn space) are not used in a barn where methane gas can accumulate in significant concentrations?		
16	Sufficient space exists between all heating appliances and combustible building features (minimum clearance requirements maintained)?		
17	Heat shields for all heaters are in place (if required)?		
18	Maintenance checks of all heating devices have been completed as per the manufacturer's recommendations (minimum once per year)?		
19	Bollards are used to protect propane and liquid fuel tanks and gas valves from vehicle impact?		
20	Animals are kept from direct access to heat sources?		
Stored Products			
21	Less than a two-day supply of hay, straw, sawdust, feed, or similar products are stored within barn?		
22	Separate buildings are used to store larger quantities of hay, straw, sawdust, feed, or similar products?		
23	Buildings are separated by a minimum distance of 30 m (100 ft) or by using a fire separation with a minimum rating of 1 hour (i.e., providing exterior walls)?		
24	Clutter and combustible products are removed from the barn on a regular basis?		
25	Flammables (e.g., diesel, gas, propane) are stored in approved containers that are regularly inspected (minimum once per year)?		
26	Flammables (e.g., diesel, gas, propane) are stored in a separate storage room outside of the main building?		
27	Pesticides should be stored in a separate building and clearly identified with a warning sign?		
Laneway and Water Supply (verify these items with local fire department)			
28	An all-weather laneway provides adequate fire truck access to the building?		
29	Roadway is regularly maintained (e.g., snow removed, adequately graded)?		
30	Adequate, year-round accessible water is available on-farm for fighting fires?		
31	A standard remote connector (i.e., hydrant) is installed adjacent to the water supply for direct connection by the local fire department?		

Safety, Exit, and Lighting			
32	Enough exits are available to allow safe exit from all storeys and rooms?		
33	Emergency lighting and signage is available to mark the location of all exits?		
34	Proper ladders and stairs are used for exterior exit from upper storeys?		
35	Fire extinguishers are in place and all employees are trained for proper use?		
36	A clear path of travel to and through all exits is in place?		
37	The farm possesses fire alarm systems (e.g., smoke detectors) that can be heard and acted upon at any time of the day and night?		

Source: Adapted from Ontario Ministry of Agriculture, Food and Rural Affairs. Reducing the Risk of Fire on Your Farm. *Publication 837, 2011. Available at:* https://files.ontario.ca/omafra-reducing-the-risk-of-fire-on-your-farm-pub-837-en-03-22-2022.pdf.

APPENDIX E – To Prepare in Case of Evacuation

To Do		Yes	No
1	Contact local emergency management authority to become familiar with at least two possible evacuation routes.		
2	Arrange for a place to shelter animals (e.g., fairgrounds, other farms, racetracks, exhibition centres).		
3	Ensure that at least 72 hours worth of feed and medical supplies are available at the location.		
4	Contact potential carriers to arrange transportation in the event of an emergency. May need access to a portable loading ramp depending on trailer type.		
5	Make sure animals have identification (e.g., tags, tattoos, neck bands).		
6	Have adequate and safe fencing or pens to separate and group animals appropriately.		
7	Prepare an emergency kit that will follow the animals. The kit should include: • current list of all animals • basic first aid kit • handling equipment such as halters • water and feed • buckets • tools and supplies for sanitation • flashlights • portable radios (with weather radio band) and/or Weather radio • batteries • other safety and emergency items for your vehicles and trailers.		
8	Plan enough food, water, and emergency supplies for you and your family to last for at least 72 hours.		
9	Create a written order of evacuation that includes what animals or groups of animals will be evacuated first if not all animals can be transported at once.		

Source: Adapted from Public Safety Canada (2011) Emergency Preparedness for Farm Animals. *Available at: www.getprepared.gc.ca/cnt/rsrcs/pblctns/frm-nmls/frm-nmls-eng.pdf*.

APPENDIX F – Sample Water Intakes

The table below provides guidelines on expected water intakes for horses[1]:

Class	Ambient Temperature	Average Total Water Intake (L/day)	Estimated Range of Water Intakes (L/day)
Idle, mature (500 kg, 1100 lbs)	20°C	25	21–29
Idle, mature (500 kg, 1100 lbs)	30°C	48	42–54
Idle, mature (500 kg, 1100 lbs)	-20°C	42	37–47
Pregnant (500 kg, 1100 lbs)	20°C	31	27–35
Lactating (500 kg, 1100 lbs)	20°C	51	40–63
Moderate exercise (500 kg, 1100 lbs)	20°C	41	36–46
Moderate exercise	35°C	82	72–92
Yearling (300 kg, 660 lbs)	20°C	19	17–21
Yearling (300 kg, 660 lbs)	-10°C	18	16–20

[1] National Research Council (2007) *Nutrient Requirements of Horses*. 6th rev. ed. National Academies Press, Washington, DC, p. 131.

APPENDIX G – Signs of Dehydration

Percent Dehydration	Clinical Signs
< 5%	Not clinically present
5–7%	• Tacky to dry mucous membranes or gums that are pale coloured • Prolonged Capillary Refill Time • +/- mild depression
8–10%	The above, and: • prolonged skin tenting + decreased skin elasticity • weak peripheral pulses • dark or purple gums • cool extremities • tucked up abdomen (drawn up flanks) • sunken eyes • slow jugular refill • moderate tachycardia • depressed mentation
10–12%	The above, and: • moribund/comatose • recumbent • severe tachycardia or bradycardia

Horse Dehydration Pinch Test

When a horse loses water, his skin becomes less elastic. We can check this by performing the pinch test:

- grasp a fold of the horse's skin at the shoulder
- pull it gently up into a slightly raised tent
- then let go
- if the skin flattens back immediately, then the horse is hydrated. But if it takes 1 or 2 seconds, he is moderately dehydrated, and if 4 or more seconds, he is seriously dehydrated.

Horse Dehydration Capillary Refill Test

Another way to check if your horse is dehydrated is to perform the capillary refill test:

- push your horse's upper lip back to show the gums

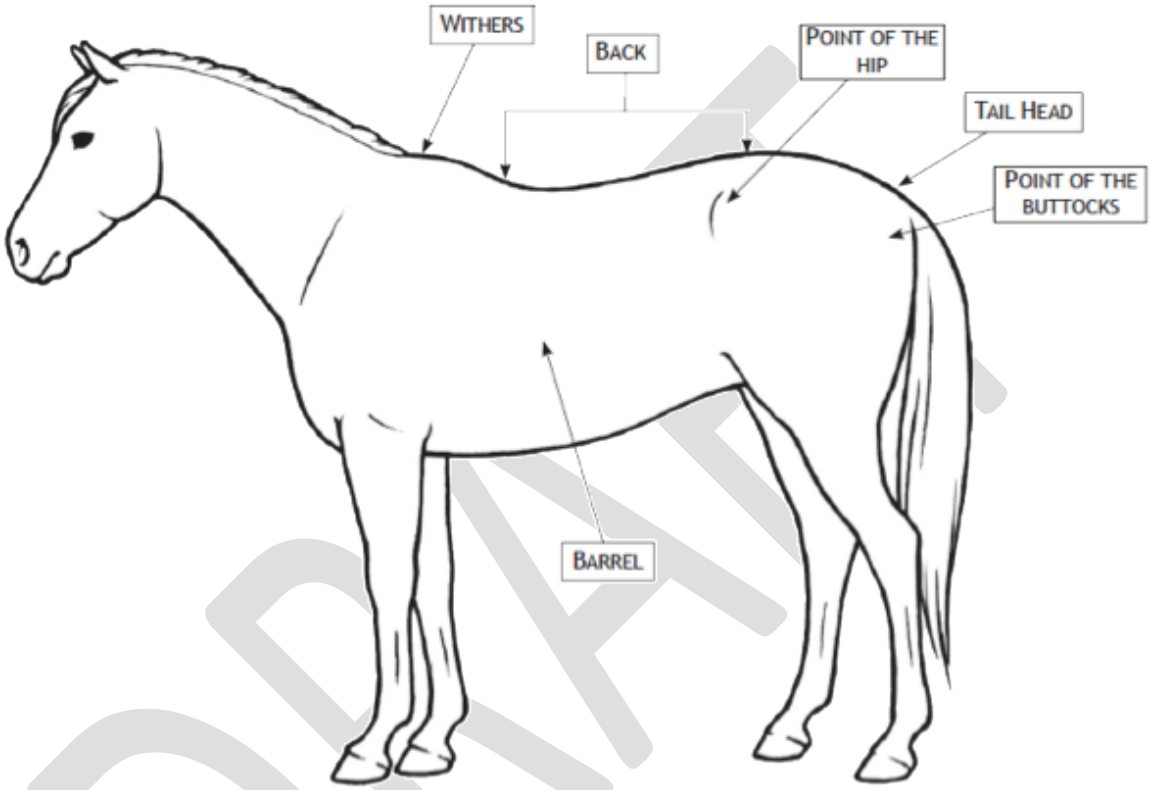
- push your thumb into the gum for one or two seconds
- remove your thumb
- there will be a pale spot where your thumb squeezed the blood out of the capillaries
- if the horse is in good condition and hydrated, the blood capillaries will refill quickly within 1 or 2 seconds. The pale spot will return to its pink colour
- if your horse is dehydrated, it will take longer for the blood vessels to refill, and the spot will remain pale for a longer time.

APPENDIX H – Vital Signs in Horses and Donkeys

Normal ranges for vital signs in horses and donkeys when at rest and relaxed:

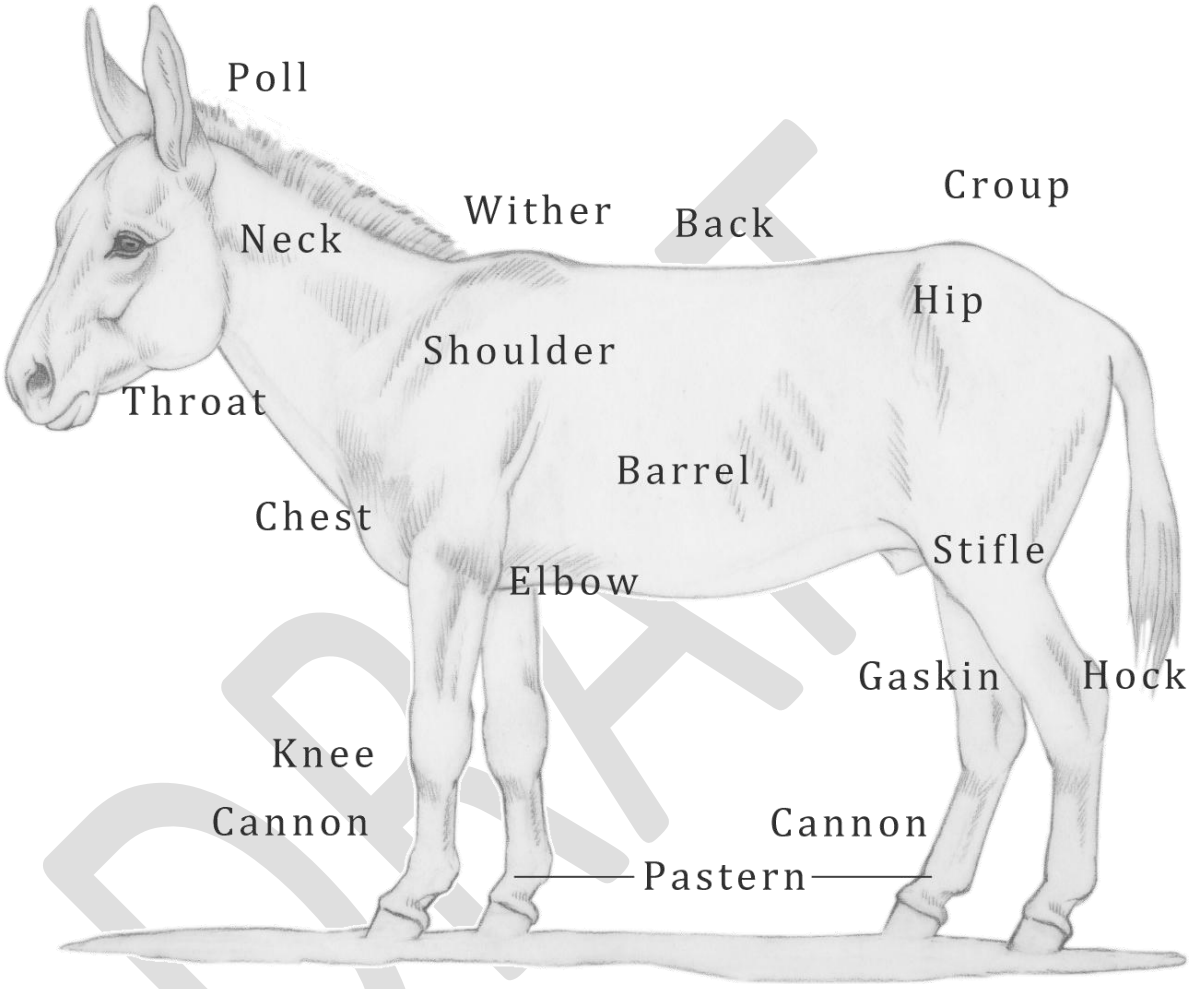
Adult Horses	
Heart rate	28–44 beats per minute
Respiration rate	10–14 breaths per minute
Rectal temperature	37°C–38.5°C (99.5°F–101.3°F)
Foals	
Heart rate	60–110 beats per minute
Respiration rate	25–60 breaths per minute
Rectal temperature (resting)	Increases for first 4 days and plateaus at 37.2°C–38.6°C (99°F–101.5°F)
Adult Donkeys	
Heart rate	36–68 beats per minute
Respiratory rate	12–44 breaths per minute
Rectal temperature	36.2°C–37.8°C (97.2°F–100°F)
Young Donkeys (up to 2 years)	
Heart rate	36–68 beats per minute
Respiration rate	12–20 breaths per minute
Rectal temperature	36.5°C–38.9°C (97.8°F–102.1°F)
General	
The gums should be pink and moist and should return to that colour within 2 seconds of pressing with your finger on the gum line above the teeth and then releasing (this is known as the capillary refill time).	

APPENDIX I – Body Condition Scoring: Horses and Ponies



The full appendix can be viewed here.

APPENDIX J – Body Condition Scoring: Donkeys and Mules



The full appendix can be viewed here.

APPENDIX K – Key Points for Owners of Donkeys and Mules

Donkeys and mules require the same good animal care for their health and well-being as do horses. Several key points are listed below, including how these equines differ from horses.

Facilities and Housing

Donkeys and mules need shelter from rain, snow, and windy conditions. The thick, dense hair coat of donkeys makes them particularly vulnerable to cold, damp weather. Donkeys do not have the extra protective undercoat that horses have to repel moisture. Most mules, however, have a coat like a horse, including the protective undercoat. In winter, donkeys should be provided with an enclosed shelter and ample bedding. Donkeys are more susceptible to hoof issues when they are frequently exposed to wet ground conditions.

Donkeys are social animals and benefit from the company of other equines. Some donkeys and mules may become depressed or apathetic when isolated from a former companion. This can have health implications, particularly if they go off feed.

Feed and Water

To maintain donkeys in good condition, they should be fed grass types of hay. Lush pastures and high quality legume hay is not recommended for these equines. Donkeys can be prone to obesity and certain conditions, such as laminitis and hyperlipemia, which can be fatal if not properly treated.

Concentrates are seldom needed except for young donkeys, nursing jennets and older donkeys. Salt and minerals are necessary for donkeys and mules to maintain good health and vigour.

It is essential that clean water is provided. Donkeys and mules are likely to limit their water intake to the point of dehydration unless clean drinking water is provided.

Health and Reproduction

Donkeys tend to be stoic. They often do not show behavioural signs indicative of illness until the condition is advanced. In donkeys and mules, a reduced or loss of appetite is a significant concern.

Like horses, donkeys and mules need routine care. Ensure proper trimming is done every 8-12 weeks or as may be needed for individuals. The time between hoof trims will depend on factors such as ground conditions, activity level, nutrition and age. Consult a veterinarian for advice on vaccinations and deworming.

The average length of gestation for jennets is 11–14 months (a range of 335–426 days).

Jacks should only be handled by experienced horsepeople and can be very aggressive during breeding. Jacks should also have good basic ground skills and understand commands prior to being used for hand breeding. For pasture breeding, it is important to be aware of the breeding behaviour of jacks and mares/jennets. For instance, jacks typically bite the jennet/mare - while it may be possible to minimize this with training the behaviour is part of the animal's breeding behaviour.

Handling

Historically, donkeys lived in rugged regions. When they were threatened, they simply stood still and tried to blend into the landscape rather than bolt. To this day, when a donkey or mule feels threatened, they are likely to stop and assess the situation. This is often incorrectly interpreted as stubbornness. By contrast, the horse relies on "flight" and its instinct is to run away from perceived threats. Donkeys and mules are extremely intelligent. They respond well to positive training methods.

APPENDIX L – Handling Horses and How Horses Learn

Handling of Loose Horses not on a Halter

This requires some knowledge of how to manoeuvre around them for them to move in the direction you would like.

i. Relying on the Senses

As prey animals, horses possess highly developed senses—hearing, sight, smell, and touch—that differ significantly from our own and are essential to their survival, dictating how they perceive and react to their environment. Their superior hearing (180-degree ear rotation), panoramic vision (with limited depth perception and sharpness), dog-like olfactory sense, and sensitivity to touch mean their "normal" reactions often frustrate handlers who mistakenly assume human perception. Recognizing these sensory differences, such as their heightened ability to detect rapid movements or their preference for scratching over patting (which lowers heart rate), is central to training horses ethically to protect their welfare and ensure the safety of both humans and horses.[1]

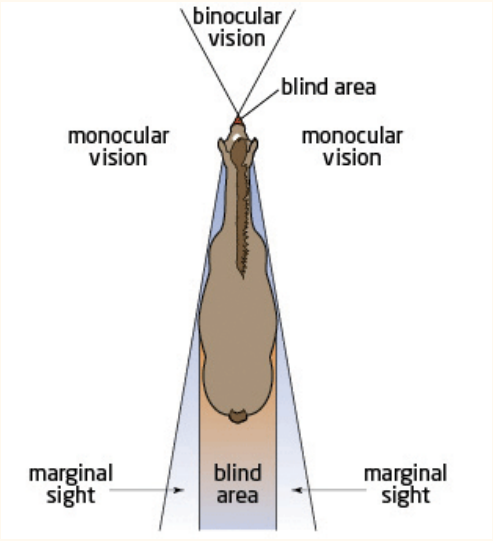
ii. How Horses Learn

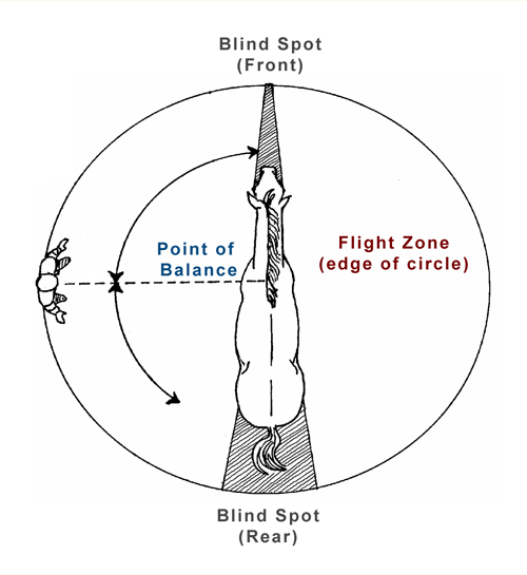
Combining the knowledge of a horse's natural behaviour with how it senses and learns allows us to train them most effectively while at the same time protecting their welfare. All livestock can learn behaviours we want very quickly, either as individuals or as a group, if we use methods that are motivating and force-free. Handlers must understand basic learning concepts to perform this task effectively. Pressure can be a powerful motivator, but if used too strongly or **if the release is not immediate**, it will quickly become punishment. Food is also a powerful motivator but must be used correctly to encourage animals to learn a behaviour.

Pressure **must be removed the instant** the desired response occurs (this applies for animals in a group or individually). **Without immediate and precise timing** of the release of pressure, the animal is unable to learn. The **pressure motivates** and **immediate release rewards**. Adding food rewards as well as a clear release of pressure will accelerate learning even further. Using punishment to correct unwanted behaviours does not teach the animal the desired response and creates fear, stress, and mistrust of the handler.

[1] Spalding Labs (2013) "10 Equine Behaviors Explained by Dr. Robert M. Miller." Accessed October 2025. Available at: https://www.youtube.com/watch?v=bUiTv-ZzthQ.

iii. Understanding Flight Zone, Point of Balance, and Field of Vision





Flight Zone[2]: This is the space surrounding a horse that, when penetrated, causes the horse to move to reestablish a comfortable distance. Low-stress handling is based on applying and releasing pressure on the edge of the flight zone ideally never penetrating the zone so aggressively that the horse becomes frightened and "takes flight". You have entered a horse's flight zone the moment your approach causes the horse to move away. As a horse becomes more fearful, its flight zone will increase.

Point of Balance[2]: The point of balance is located in the shoulder area of the horse. The handler should stand behind the point of balance at the shoulder to make the horse go forward and stand in front of the point of balance at the shoulder to make an animal back up.

Field of Vision[3]: When looking to the side, horses have monocular vision (each eye can operate independently). When looking forward, they have binocular vision (eyes operate in tandem). Horses take longer than humans to adjust to changes in light intensity and they have poor depth perception so may baulk at shadows or puddles.

Left image source: Developed by the Alberta Equine Welfare Group for the booklet "Humane Handling Guidelines for Horses – Standards for the Care of Unfit Animals" available for download under Resources at www.horsewelfare.ca.

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[2] Grandin T. (2010) How to improve livestock handling and reduce stress. In Grandin T. (Ed.), *Improving Animal Welfare: A Practical Approach*. CAB International, Oxfordshire, UK, pp. 64–87.

[3] Woods J. (2010) Recommended handling guidelines and animal welfare assessment tool for horses. Horse Welfare Alliance of Canada.

Right image source: Woods J. (2010) Recommended handling guidelines and animal welfare assessment tool for horses. Horse Welfare Alliance of Canada.

Low Stress Handling for Husbandry Procedures

Responsible horse ownership includes training horses to be comfortable with routine veterinary and farrier procedures. It is safer for everyone involved if the horse is easily caught, led, tied up, and comfortable with having its hooves handled, temperature taken and all of its body touched. Similarly, if the horse is difficult to work with from previous experiences, the owner should attempt to re-train their equid(s) to accept basic husbandry calmly.

When horses are trained to stand quietly for procedures with just a halter and a lead rope, we refer to this as cooperative care. When handlers use methods that do not create fear or stress, we refer to this as low stress handling.[4] A recent study showed that veterinarians that do not understand learning principles and science-based behaviour modification techniques had a higher risk of injury to veterinary personnel (Pearson 2012). It is important for owners and handlers to take responsibility for training their horses to accept procedures calmly.

The First Principles of Horse Training

No matter the training technique used, following the **International Society for Equitation Science (ISES) First Principles of Training** will protect the horse's welfare while promoting rider and handler safety. For more information or to download the summary poster use this link: www.equitationscience.com.

[4] Dr. Gemma Pearson from the UK demonstrates how to train your horse for veterinary procedures in her series called "Don't Break Your Vet". This series can be viewed online here: https://youtube.com/playlist?list=PLZLor1KlzkI9X1UpvbOxwllS1BNoLvcmR&si=6R2CgQOL0UzEGXCa

Image Source: [ISES] 'Principles of learning theory in equitation.' *International Society for Equitation Science*, https://www.equitationscience.com/ises-training-principles.

APPENDIX M – Pain Recognition in Horses

The first step in recognizing pain in a horse is understanding their normal body language. Recognizing a change from these normal behaviour patterns and observing small and often subtle changes in the muscles of the face is the second step. Below are some images to help understand the changes in facial muscles when a horse is in pain. There are also characteristic behaviours that will help indicate the source of the pain. These are listed in the tables below. The first table describes a horse on its own while the second table describes a horse being ridden. Veterinarians are trained to identify the source of pain in horses and should be consulted if you feel your horse is in pain.

Common Indicators of Pain in Horses

Behavioural Signs	Explanation
General abnormal behaviours	e.g., standing off alone from the group, depressed, hanging head low, lying down for longer than normal, getting up and down repeatedly, rolling more than normal in a short time frame, yawning, stomping, kicking at their belly, looking around at their belly, rapid shallow breathing, pawing the ground, unusual aggression towards handler (bite or kick)
Abnormal facial expression	e.g., curling upper lip, wrinkled nares, wrinkles above eye
Abnormal locomotion	e.g., reluctance to move, shifting weight from limb to limb, non-weight bearing on hoof (holding it up), limping or hopping, stumbling or dragging toes
Abnormal posture	e.g., sawhorse stance (camped out), goat on a rock (camped in)
Inappetence	Horses in pain often stop eating or significantly reduce their intake.
Sweating excessively	Horses in pain may sweat excessively from an over-stimulated nervous system
Dull haircoat	A dull haircoat reflects a poor systemic state (e,g. not absorbing nutrients properly, fever)
Less responsive to handler's cues	When in pain, horses are less likely to respond to signals given by handlers as they are too distracted by their pain
Mutilations	Horse may bite, rub, chew, or scratch a painful area or wound. Stallions may chew their own body out of frustration or boredom

Behavioural Signs when Ridden	Explanation
Bucking	Horse is either in pain or confused about training. This is an escape behaviour
Bolting	Horse is either in pain or confused with the training of the stop response. This is an escape behaviour
Rearing	Horse is either in pain or confused about the rein aids. This is an escape behaviour
Refuses jump repeatedly	Horse may be reluctant due to pain from limbs especially if this is a new behaviour or the horse may be confused about the training
Not responding to cues from rider	When horses are in pain or anxious they will be distracted and less responsive to their riders' cues
Tongue lolling	Horses experiencing mouth pain or confusion about the bit cues will sometimes display their tongue outside of the mouth
Tossing head	Horses in pain from their mouth, back or limbs may toss their head when ridden or may be confused about the rein aids
Wringing tail	Horses with pain or confusion may display this behaviour
Irregular gait	Horses in pain will often have an irregular rhythm to their gait or will speed up and slow down frequently. This behaviour also occurs when horses are confused about their training or in early stages of training under saddle.
Rooting reins from rider	Horses mostly do this when riders do not release the pressure of the reins appropriately and the horse learns to pull on the bit to find relief
Ears pinned	This behaviour is frustration or anger directed at something rider is doing when confused or in pain during riding
Open mouth	This behaviour is most often in response to pressure from the bit but may also be displayed when experiencing musculoskeletal pain
Eye lids closed or half closed	May be an indication of musculoskeletal pain
Shuttling the bit in mouth	May be an indication of either pain or confusion about the bit cues
Tail held off to one side or tail clamped tightly	May be an indication of pain
Exposure of sclera	May be an indication of either pain or anxiety/fear
Ears back for >5s	Indicates pain or anxiety
Hindlimbs don't follow the forelimbs	Horse may be trying to create a more comfortable way of going by moving hindquarters one direction or the other.
Unwilling to pick up canter lead or canter easily	Horse may be in pain especially if this is a new behaviour or may be confused about its training if this is a young animal just learning

The Equine Pain Face

With Karina Bech Gleerup

The facial expressions that can indicate your horse is in pain

Highlights:

- Certain facial expressions can indicate a horse is in pain.
- You can use these features to score a 'pain face' as a simple yes/no
- The intensity of the expression can help you determine the intensity of pain.
- Learning to recognise the equine pain face in horses can help you identify chronic or low grade pain earlier.
- It is relatively easy and feasible for everyone to learn. In a study, after a 20 minute lesson, participants were able to successfully score a pain face (yes/no) and the pain intensity as 'low', 'medium' and 'high' with, on average, 82% accuracy.

Five key areas to watch out for:

- ears,
- eyes,
- nostrils,
- muzzle and
- facial muscles.

Behaviourally, some horses may become less social when they are in pain, whereas others may seek contact with a person they trust.

Did you know?

Research in the 'Equine Pain Face' area is ongoing and, in future, we will have a facial recognition app to do the work for us!

'Relaxed Face'

IMAGES A & B: When a horse is not in pain, there is less tension in the facial expressions. Compare these images with the pain face opposite, paying attention to the ears, eyes, nostrils, muzzle and facial muscles.

Read the study titled: An Equine Pain Face by Karina B Gleerup, Björn Forkman, Casper Lindegaard and Pia Andersen it is open access and available online: http://onlinelibrary.wiley.com/doi/10.1111/vaa.12212/pdf.

Illustrations by Andrea Kilintjer ©Karina Bech Gleerup

horses:people magazine

'Pain Face'

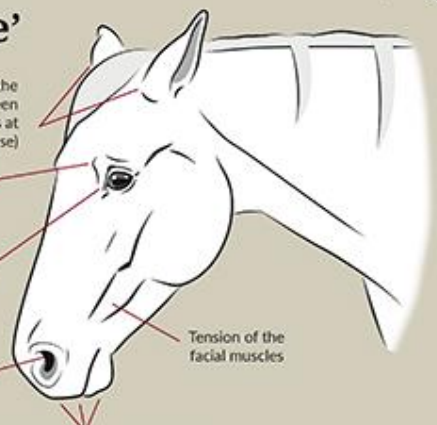


IMAGE C: Can you spot the facial expressions of pain described in the illustration? This horse is in pain.

IMAGE D: The nostril dilated in the medio-lateral direction (from the midline to the outside) is one of the facial expressions of pain.

IMAGE E: 'Worried eyes'. Can you spot the contraction of the levator anguli oculi muscle above the eye and the tense stare? This horse is in pain.

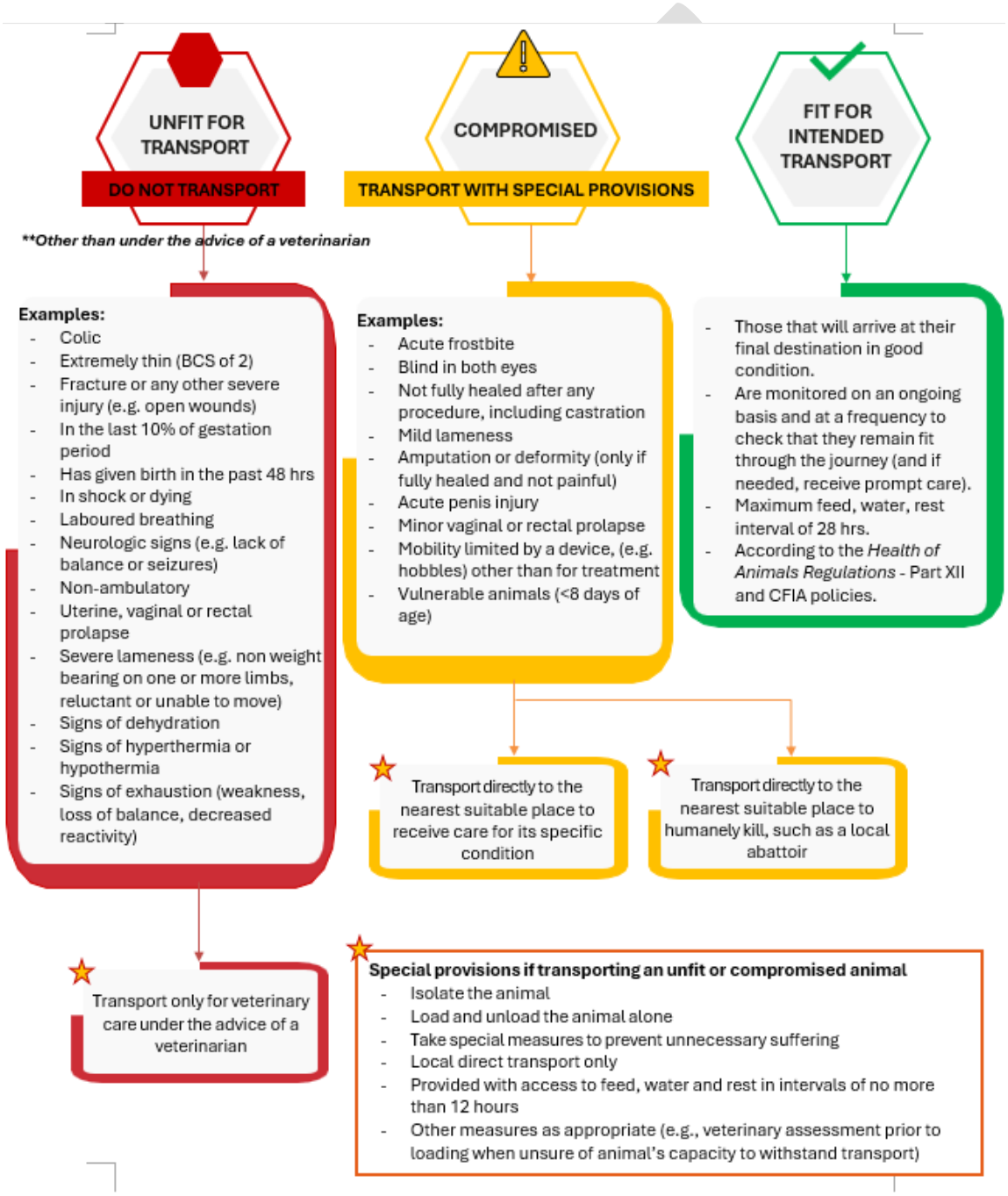
Photos courtesy Karina Bech Gleerup.

Find more horse welfare resources at: www.horsesandpeople.com.au

Image Source: Karina Bech Gleerup, courtesy of Horses and People.

APPENDIX N – Transport Decision Tree

The transport decision tree is a tool used to help make animal transport decisions and determine the animal's fitness for transport. It is a summary based on Part XII of the *Health of Animals Regulations* (HAR) and provides some examples of each scenario. If ever in doubt, do not load the animal(s) and contact your veterinarian. Refer to Part XII of the HAR for official wording and guidance.



APPENDIX O – Change or End of Career Consideration Checklist

The welfare of equines throughout all stages of their lives—including during transitions of use or at the end of their careers—is a fundamental component of responsible horse ownership and management. Whether a horse is transitioning out of competitive sport, recreational use, or breeding, thoughtful planning is critical to ensure their continued well-being. These transitions often involve changes in environment, management, or level of human interaction, all of which can impact the horse's health and quality of life. In cases where a suitable new role is not possible, owners and caregivers must be prepared to make humane end-of-life decisions.

When to Make a Change? Use the below markers to assist with consideration of any change.

Assess Physical Needs

1. Changes in Physical Ability and Health

- Decline in athletic performance due to age-related changes, wear and tear, or chronic conditions that cannot be safely or comfortably managed.
- Ongoing pain or discomfort even with veterinary care, suggesting the horse is no longer suited for its current work or lifestyle.
- Significant injury or illness where prognosis is poor or recovery would not allow a return to previous function or quality of life.
- Frequent or prolonged recovery periods between activities, indicating that continued performance may be placing undue strain on the animals.

☐ Veterinary relationship
☐ Ongoing medications/chronic disease (heaves, Cushing's, etc.)
☐ Ongoing rehabilitation
☐ Dental requirements (frequency, specialty care)
☐ Farrier requirements (frequency, specialty care, removal of shoes)
☐ Facility (layout and accommodations)
☐ Logistics and travel

Assess Behavioural Needs

2. Behavioural and Psychological Indicators

- Increased stress, anxiety, or resistance during work or handling that may reflect discomfort, confusion, or burnout.
- Changes in temperament that are uncharacteristic or unmanageable, and that cannot be addressed through training or medical intervention.
- Loss of interest or engagement in activities that the horse previously enjoyed or performed willingly.

☐ Temperament
☐ Familiarity with training (saddle, type of handling, etc.)
☐ Bonding/friendships with others
☐ Stereotypies
☐ Facility (layout and accommodations)
☐ Logistics and travel

Facility & Caregiver Needs

3. Owner or Caregiver Life Changes

- Financial constraints that affect the ability to provide appropriate care, training, or veterinary support.
- Changes in personal circumstances, such as relocation, illness, or family commitments, that reduce the owner's capacity to maintain the horse's welfare.
- Shifting goals or interests where the horse's current role no longer aligns with the owner's plans, and a new role or home may be more appropriate for the horse.
- Lack of appropriate future use: If the horse cannot be safely rehomed or repurposed, end-of-life decisions may need to be considered to prevent neglect or suffering.
- Potential for rehoming or retirement: Evaluate whether the horse can be transitioned to a lighter workload, pasture retirement, or a suitable companion role, depending on its health and temperament.

☐ Interview/facility visit or inspection
☐ Mandate (rescues/sanctuaries)
☐ Financial considerations
☐ Veterinarian relationship
☐ Location/climate

APPENDIX P – Equine End-of-Life Plan

Equine end-of-life Plan

Owner information

Name:_____
Address: _____
Phone: :_____
Other Ph:_____

Emergency contact if owner is unavailable:
_____
Relationship to owner:_____
Phone: _____

I want to be there for the euthanasia

☐ Yes ☐ No

I want _____to be there for the euthanasia.

Horse Information

Name:_____
Sex:_____ Breed:_____ Colour:_____
Microchip # / Freeze Brand_____
Insurance policy coverage:_____
Insurance policy number:_____
Insurance company and address:_____
_____
Insurance phone #:_____
Do you need to contact the insurance company ahead of time?

☐ Yes ☐ No

I would like _____ to be taken as a keepsake.

Veterinarian information

Name:_____
Phone:_____
Other Ph:_____

Method of Euthanasia

Injection by veterinarian ☐
Bullet by veterinarian ☐
Bullet by qualified person ☐
Captive bolt with secondary method by qualified person ☐

Intended method provider

Name:_____
Address: _____
_____
Phone/cell:_____

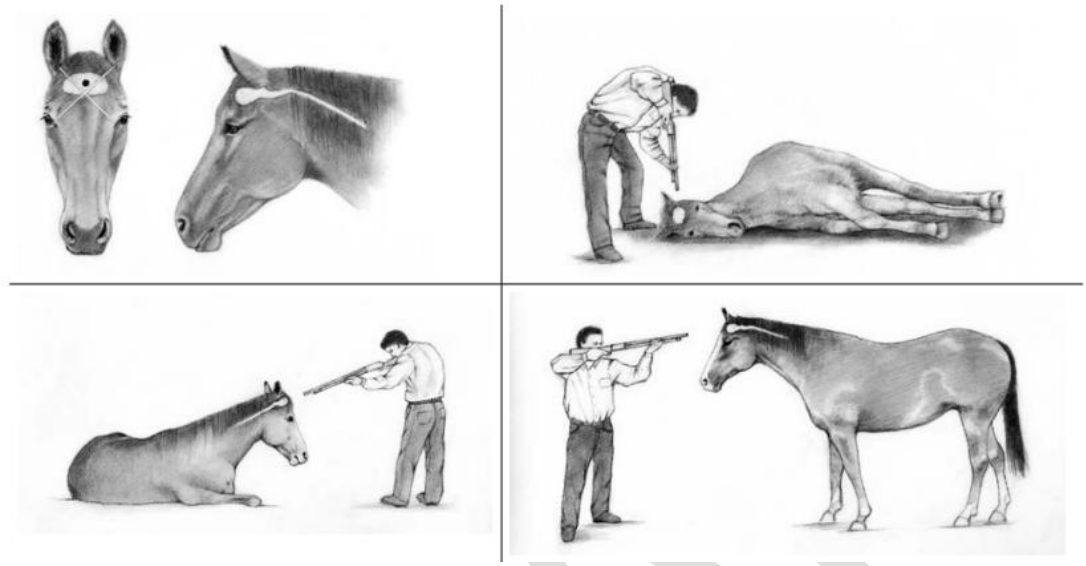
Deadstock management

Burial ☐ Composting ☐
Cremation ☐ Other ☐
Removal by collector ☐

Intended method provider

Name:_____
Address: _____
_____
Phone/cell:_____

APPENDIX Q – Anatomical Landmarks for Euthanasia



Not between the eyes but above the eyes as illustrated!

In horses, the brain is situated high in the head. The correct point of entry of the bullet or captive bolt is approximately 2.5 cm (1 in) above the intersection of two diagonal lines each running from the inside corner of the eye to the base of the opposite ear (see top photo). Ideally, the firearm or captive bolt should be angled so the bullet follows the angle of the neck or the spine.

Proper positioning of the firearm or penetrating captive bolt is essential in order to ensure a quick death. When euthanasia is performed by gunshot, the firearm should be held within 15–30 cm (6–12 in) of the point of entry. When performed by penetrating captive bolt, the device must be held in contact against the head at the correct anatomical site.

Horses may require restraint in order to facilitate safe and effective euthanasia, particularly if using a penetrating captive bolt (options include a halter and lead rope or bridle).

Refer also to Appendix R – Technical Guidelines for Euthanasia Methods for other important details.

Image Source: Images adapted from the Horse Welfare Alliance of Canada document "Equine Euthanasia: A Humane End-of-Life", available for download under Resources at http://www.horsewelfare.ca .

APPENDIX R – Technical Guidelines for Euthanasia Methods

Important Safety Guidelines

- Be aware that if euthanizing a standing horse by gunshot, the horse may lunge forward or rear up when shot.
- **If euthanizing a horse by gunshot, the bullet may ricochet or pass through the horse. Therefore, it is very important to ensure no person or other animal is within range.**

Guidelines for Euthanizing a Horse by Free Bullet

- **It is imperative to use a sufficiently powered firearm**. For horses heavier than 180 kg (400 lb) select a gun that provides a minimum of 1,000 ft lbs of muzzle energy. This information can be found on the box of the ammunition used with your firearm. Most handguns are NOT sufficient. A .22 calibre gun may not be a sufficiently powered firearm for horses. Appropriate options for horses include the 20, 16, and 12 gauge shotgun. Slugs are the best choice, No. 4, 5, or 6 birdshot is ONLY acceptable for close-range. Woods et al. (2010), listed in the References, provides further details.

Guidelines for Euthanizing a Horse by Penetrating Captive Bolt Gun

- **It is imperative to use a penetrating captive bolt gun that is designed to euthanize horses and is the correct caliber**. Some models are NOT designed to euthanize a horse - they merely stun the horse and a secondary step is required. There are captive bolt guns on the market now designed specifically for euthanasia on farm. A .25 calibre with an extended bolt is the most effective captive bolt gun for single-step euthanasia. If a less powerful captive bolt gun is used, there is a risk that the horse may only be temporarily stunned and a secondary method will be required. Woods et al. (2010), listed in the References, provides further details.
- Proper maintenance in accordance with the manufacturer's instructions is also essential.

Secondary Steps

- Acceptable secondary steps include: a second shot by free bullet or penetrating captive bolt and a second injection (administered by a veterinarian). Cardiac

puncture, bleeding, and pithing (insertion of a rod into the hole created by the captive bolt and agitation of the rod to destroy the brain) are acceptable secondary steps ONLY if the animal is confirmed unconscious.

- If using a penetrating captive bolt gun, the requirement for a secondary step depends on the model used.
- Secondary steps performed on an unconscious animal should be performed within 30 seconds of the first step (with the exception of a second injection, which is at the discretion of the veterinarian).

APPENDIX S – Resources for Further Information

BIOSECURITY

Alberta Veterinary Medical Association and Alberta Equestrian Federation. *Equine Biosecurity Principles and Best Practices*. Available at: https://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/cpv13243/$FILE/2014_Equine_Biosecurity_book.pdf

Ontario Ministry of Agriculture, Food and Rural Affairs. *Preventing disease spread – Personal hygiene and disinfectants around horse barns*. Available at: https://www.ontario.ca/page/personal-hygiene-and-disinfectants-around-horse-barns

Saskatchewan Horse Federation & Saskatchewan Ministry of Agriculture. Horse Biosecurity Guidebook. Available at: https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/agribusiness-farmers-and-ranchers/livestock/animal-health-and-welfare/horse-biosecurity-guide

EDCC: Biosecurity | Equine Disease Communication Center

University of Guelph and Equine Guelph. Biosecurity Risk Calculator Tool – The Horse Portal

Canadian Food Inspection Agency. *National Farm and Facility Level Biosecurity Standard for the Equine Sector*. Available at: https://inspection.canada.ca/en/animal-health/terrestrial-animals/biosecurity/standards-and-principles/equine-sector

Canadian Food Inspection Agency. *Reportable diseases: Terrestrial animals*. Available at: https://inspection.canada.ca/en/animal-health/terrestrial-animals/diseases/reportable

Canadian Animal Health Surveillance System (CAHSS). *Reportable & Notifiable Disease*. Available at: https://cahss.ca/cahss-tools/reportable--notifiable-diseases

DONKEYS AND MULES

Hodges M. (1993) *Training Mules and Donkeys: A Logical Approach to Longears*. Loveland CO: Alpine Publications.

Svendsen E.D., Duncan J. & Hadrill D. (2008) *The Professional Handbook of the Donkey, 4th ed*. Whittet Books Limited.

FACILITIES, PASTURE MANAGEMENT, AND EMERGENCY PREPAREDNESS

Alberta Agriculture, Food and Rural Development (2003) *Manure and Pasture Management for Horse Owners*. Agdex 460/27-1. Available at: https://open.alberta.ca/publications/2810416

Horse Council British Columbia. *Disaster Preparedness Guidelines for Horse Owners*. Available at: https://hcbc.ca/wp-content/uploads/2016/01/Disaster-Preparedness-Guidelines-2015.pdf

Horse Council British Columbia (2005) *Fire Prevention for your Barn: Barn Safety Checklist*. Available at: https://hcbc.ca/wp-content/uploads/2015/07/Barn-Safety-Checklist-2015.pdf

Ontario Ministry of Agriculture, Food and Rural Affairs (2023) *Horse Barn Ventilation*. Agdex 717/460. Available at: https://www.ontario.ca/files/2023-11/omafra-horse-barn-ventilation-23-063-en-2023-11-28.pdf

HORSE HEALTH AND REPRODUCTIVE MANAGEMENT

American Association of Equine Practitioners. *Horse Health Articles*. Available at: https://aaep.org/guidelines-resources/horse-owner-resources/#horsehealth

American Association of Equine Practitioners (2012) *Vaccination Guidelines*. Available at: https://aaep.org/guidelines-resources/vaccination-guidelines/

Canadian Food Inspection Agency. *Equine Infectious Anemia – Factsheet*. Available at: http://www.inspection.gc.ca/animals/terrestrial-animals/diseases/reportable/eia/fact-sheet/eng/1329554028418/1329554166646

Canadian Food Inspection Agency. *Equine information document (EID)*. Available at: https://inspection.canada.ca/en/food-guidance-commodity/meat-products-and-food-animals/equine-information-document

McKendrick S., Evans P. & Bagley C. (2010) *Proper Basic Hoof Care*. Utah State University Extension. AG/Equine/2006-03. Available at: http://extension.usu.edu/files/publications/publication/AG_Equine_2006-03.pdf

HUSBANDRY PRACTICES AND TRAINING

Alberta Equine Welfare Group (2006) *Humane Handling Guidelines for Horses: Standards for the care of unfit horses*. Available at https://horsewelfare.ca/wp-content/uploads/2024/03/Humane-Handling-Guidelines-for-Horses-2015.pdf

International Society for Equitation Science. *Principles of Learning Theory in Equitation*. Available at: https://www.equitationscience.com/ises-training-principles

Equestrian Canada (2022) Return to competition guidelines for the sport horse following a break in training. Available at: https://equestrian.ca/wp-content/uploads/2024/01/Return-to-Competition-Guidelines-for-the-Sport-Horse-Following-a-Break-in-Training-Due-to-COVID-19.pdf

NUTRITION AND FEED MANAGEMENT

Equi-Analytical Laboratories (n.d.) *Profiling Feed for Better Nutritio*n. Available at: http://www.equi-analytical.com/

Safergrass.org (n.d.) *Are You Feeding your Horse like a Cow?* Available at: http://www.safergrass.org

Stull C. (2012) Nutrition for Rehabilitating the Starved Horse. Available from: https://ceh.vetmed.ucdavis.edu/sites/g/files/dgvnsk4536/files/local_resources/pdfs/pubs-July2012-bkm-sec.pdf

RESPONSIBLE OWNERSHIP

Horse Welfare Alliance of Canada and Alberta Farm Animal Care (n.d.) *Caregivers' guide to rehabilitating neglected horses*. Available at: https://horsewelfare.ca/caregivers-guide-to-rehabilitating-neglected-horses/

Unwanted Horse Coalition (n.d.) *Own responsibly: Guidance for current and potential horse owners from the Unwanted Horse Coalition*. Available at: www.unwantedhorsecoalition.org/resources/book_web.pdf

TRANSPORTATION

Canadian Food Inspection Agency (2020) Health of Animals Regulations: Part XII (Transport of Animals). Available at: https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._296/index.html

Canadian Food Inspection Agency (n.d.) Humane transport and animal welfare. Available at: https://inspection.canada.ca/en/animal-health/terrestrial-animals/humane-transport

Canadian Food Inspection Agency (n.d.) Regulatory guidance and resources for the humane transport of animals. Available at: https://inspection.canada.ca/en/animal-health/terrestrial-animals/humane-transport/guidance-and-resources

Canadian Food Inspection Agency. Transporting horses. https://inspection.canada.ca/en/animal-health/terrestrial-animals/humane-transport/horses

Canadian Livestock Transport (n.d.) *Certified Livestock Transport Training Program*. Information on this course is available at: http://www.livestocktransport.ca/

Woods J. (2010) *Horse Hauling Course: take a responsible approach to horse hauling*. Cochrane AB: Horse Welfare Alliance of Canada. Information on this course is available at: https://horsewelfare.ca/training/

World Organisation for Animal Health. Chapter 7.12 "Welfare of working equids", *Terrestrial Animal Health Code*. https://www.woah.org/en/what-we-do/standards/codes-and-manuals/#chapter/?rid=87&volume_no=1&ismanual=false&language=102&standard_type=5&animal_type=7

EUTHANASIA

Horse Welfare Alliance of Canada. *Equine Euthanasia: A Human End-of-Life* https://horsewelfare.ca/end-of-life/

Canadian Veterinary Medical Association. *Position Statement on Euthanasia* https://www.canadianveterinarians.net/policy-and-outreach/position-statements/statements/euthanasia/

APPENDIX T – Participants

Code Committee members

The Code Committee is populated in accordance with Step 1 of NFACC's Code development process.

Role	Committee Member	Organization
Veterinarian	Bettina Bobsien (Chair)	Canadian Veterinary Medical Association
Producer representative	Glen Flewelling	Feedlot sector representative
	Charlotte Nagy	Canadian Sport Horse Association
	Calandra van Massenhoven	Donkey representative
	Geoff Maltby	Racing representative
	Renée Lévesque	Cheval Québec
Animal welfare advocacy association	Susi Cienciala	Humane Canada
Provincial animal protection enforcement authority	Lisa Joachim	Manitoba Agriculture
Provincial government representative with responsibilities in animal welfare	Alison Moore	Ontario Ministry of Agriculture, Food and Rural Affairs
Federal government	Angela Rouillard	Agriculture and Agri-Food Canada
	Corrie Rot	Canadian Food Inspection Agency

Technical expert	Jennifer Woods	Horse Welfare Alliance of Canada
	Erica Cheung	Nominated by Equestrian Canada
	Allister Gray	Nominated by Equestrian Canada
Researcher/academic	Kathleen MacMillan (Chair of the Scientific Committee)	University of Prince Edward Island

Scientific Committee members

The Scientific Committee is populated in accordance with Step 2 of NFACC's Code development process.

Name	Named by
W. Michael Scott, DVM, MVSc, DACVS & DACVSMR	Canadian Veterinary Medical Association
Kathleen MacMillan, MSc, DVM, DABVP (Eq)	Canadian Veterinary Medical Association
Katrina Merkies, PhD	International Society for Applied Ethology & International Society for Equitation Science
Carissa Wickens, PhD	International Society for Applied Ethology & International Society for Equitation Science
Robert J. (Bob) Coleman, PhD, PAS	American Society of Animal Science

APPENDIX U – Summary of Code Requirements

SECTION 1: DUTY OF CARE

- Owners must have the resources for and knowledge of the basics of care as stated in this Code and ensure such care is provided.
- Principal caregivers must be familiar with and provide the basics of care as stated in this Code.

SECTION 2: FACILITIES AND HOUSING

2.1

- At a minimum, each horse must have enough space to move easily, walk forward, turn around with ease and lie down in a normal resting posture. There must also be sufficient space for subordinate horses to escape aggression.
- In muddy conditions, horses must have access to a well-drained area, on which they can stand and lie down, that offers relief from mud in the pasture/yard.
- During periods of high precipitation there must be an ongoing mud management plan implemented.
- To ensure safe pasture management, the application of fertilizers, pesticides, herbicides and farm manure must be timed to prevent any health risks to grazing horses or contamination of ground water.

2.1.1

- Horses must have access to shelter (constructed or natural) that protects them from the harmful effects of extreme weather conditions. The shelter(s) must be large enough to accommodate all horses in a given area at the same time.
- Promptly assist individual horses that are showing signs of heat or cold stress.
- If blankets are used, the condition of the horse beneath the blankets must be examined at least weekly and frequently enough to recognize changes in body condition and keep the horse free from ill effects.
- Blankets must be appropriate for the weather conditions and not result in heat stress.

2.1.2

- Horses kept in groups must be managed in a way that minimizes the risk of injury.

- Newly formed groups must be monitored daily at minimum and interventions made as necessary.
- New arrivals must have access to feed and water, especially in situations where other horses may prevent access.

2.1.3

- Fences must be constructed and maintained to minimize the risk of injury, be strong enough to contain horses, and be otherwise appropriate for the horses it contains. Refer to municipal fencing by-laws, if applicable.
- Electric fences must be installed according to the manufacturer's specifications, grounded properly, and be energized.
- All power units for electric fences must be maintained to prevent short circuits and/or stray voltage.
- Temporary electric fences used for strip grazing or pasture rotation are not an acceptable permanent perimeter fence for horses.

2.2.2

- Ensure fencing for stallions is safe and strong enough to contain them.

2.2.3

- Owners must have the ability to segregate sick or injured horses for treatment.
- If sick pens or stalls are used, they must be equipped with a source of feed and water and be cleaned and disinfected before use by a new horse.

2.3

- Facilities must be designed and maintained to minimize the risk of injury to humans and animals.
- The stall area must also be of a design or texture that will not bruise, cut or otherwise injure the horse.

2.3.1

- For indoor facilities: each horse must have enough space to lie down in a normal resting posture, stand with the head fully raised, walk forward and turn around with ease.
- For tie stalls: each horse must have enough space to lie down in a normal resting posture, stand with the head fully raised and step forward in comfort.

- For group housing: there must also be sufficient space for subordinate horses to escape aggression.

2.3.2

- For horses kept indoors without natural light, artificial lighting must be provided, at minimum, for a period of six hours per day. Keeping horses in continuous light or darkness is not acceptable.

2.3.3.

- Provide non-slip surfaces in stalls and alleyways to reduce the risk of horses slipping or falling.

2.3.4

- Ensure stalls are kept clean. Horses must be provided with a dry lying area.
- Stalls must have a depth of bedding sufficient to absorb urine, prevent sores, and encourage the horses to lie down. Bedding must be non-toxic.
- Concrete or hard rubber mats in stalls without adequate bedding are not acceptable surfaces.

2.3.5

- Air quality in barns must be maintained to prevent the buildup of noxious gases, dust and moisture.
- Ventilation must effectively maintain good indoor air quality.
- The concentration of ammonia in the air must not exceed 15ppm. Refer to the above information on options for assessing ammonia concentration.
- Leaf blowers must not be used while horses are in enclosed facilities.

SECTION 3: EMERGENCY PREPAREDNESS

3.1

- An emergency telephone list must be readily available for the horse owners, managers, farm hands, caretakers, and emergency crews. Refer to Appendix B – Emergency Telephone List.
- Facility-specific emergency plans must be prepared for emergencies such as fires, equipment or power failures, extreme weather events, and evacuations. The procedures must be written and communicated to all horse owners, managers, farm hands, caretakers, and emergency crews.

- A map of the barn or facility and its surroundings must be drawn and kept readily accessible for emergency crews. Refer to Appendix C – Mapping Barns and Surrounding Areas for Fire Services.
- Emergency plans must include specific actions and those designated to conduct specific actions.
- Plans must be easily accessible at the onset of an emergency.
- Plans must ensure that the welfare of the horses is safeguarded in any potential emergency event.

3.1.1

- All electrical connections to equipment must be hard-wired. Extension cords must only be used temporarily and unplugged when not in use.
- All electric wiring, outlets, and fixtures must be out of reach of horses.
- Fire extinguishers must be available at the entrances and high-risk areas in the facility and maintained according to manufacturer's instructions. Caretakers must know where they are located and must be competent in their use.

3.1.3

- If the systems cannot be run manually, an alternative method or power source must be available to run critical systems (e.g., watering system, ventilation, feeding).
- Owners or caretakers must have enough feed and safe, clean, and palatable water to meet the needs of their animals for at least 72 hours.
- All electrical and mechanical equipment and services including water bowls and troughs, ventilating fans, heating and lighting units, and alarm systems must be inspected at least annually and kept in good working order.

3.1.4

- Create a written evacuation and/or shelter in place plan(s).

SECTION 4: FEED AND WATER

4.1

- Horses must have regular access to safe, palatable and clean water in quantities to maintain health and hydration.
- In extreme weather conditions (cold or hot), special attention must be paid to ensure water availability, access and intake.

- Water troughs, containers and any automatic watering devices must be cleaned regularly and maintained in working order with no sharp or abrasive edges.
- Snow is not an acceptable sole source of water for horses.

4.2

- Horses must have daily access to forage that is free from offensive odours, visible mould and has minimal dust.
- Horses must only receive feedstuffs that are appropriate for the species.
- Concentrates must be stored in a secure manner that prevents horses from overeating.

4.3

- Feeding practices must allow for natural feeding posture and must not negatively impact health.
- Horses that do not have access to pasture or continuous hay supply must be fed, at minimum, twice daily.

4.4

- Horses must receive a diet that is adequate for maintaining a good state of health .
- The daily ration must address the horse's maintenance and activity needs and other factors relevant to the individual horse and the environment.
- Horses must have access to salt either provided in the ration or free access (a block or loose salt).

4.4.2

- Growing horses must receive a diet that is adequate for maintaining a state of good health and development.
- Weaned foals must have access to a suitable diet before, during, and after weaning.

4.4.3

- Horses in work and competition must receive a diet that is adequate for maintaining a state of good health.

4.4.4

- Breeding stallions must receive a diet that is adequate for maintaining a state of good health.

4.4.5

- Pregnant and lactating mares/jennets must receive a diet that is adequate for maintaining a state of good health and that allows the mares/jennets to provide adequate nutrition to the foal.

4.4.6

Geriatric horses must receive a diet that is adequate for maintaining a state of good health. Refer to Section 5.5-Body Condition Scoring for other relevant Requirements.

SECTION 5: HEALTH MANAGEMENT

5.1

- Establish a working relationship with a practicing veterinarian (Veterinarian-Client-Patient Relationship or VCPR). If not possible due to animal location or lack of veterinary service providers, establish a health management plan, including a euthanasia plan.
- Purchase medications and veterinary pharmaceuticals from regulated, reputable sources. Refer to provincial and federal regulations.

5.1.3

- Comply with vaccination requirements to attend or participate in shows or events.
- In consultation with your veterinarian, adhere to applicable provincial, national, and international requirements for vaccination.
- Rabies vaccines must be administered by a veterinarian or under veterinary supervision. (Refer to provincial legislation).

5.1.4

- A parasite control program to prevent or mitigate parasite related disease must be in place for internal and external parasites.

5.2

- Horses that are sick, injured or in pain must receive appropriate treatment without delay or be euthanized without delay. Refer also to Section 12-Euthanasia.
- For sick, injured or compromised horses that are not showing improvement, horse owners or caregivers must, without delay, obtain veterinary advice on appropriate care and treatment or euthanize without delay.

- Suspect cases of federally or provincially reportable diseases must be reported to the appropriate regulatory body.

5.2.1

- Any person responsible for a horse must be able to recognize the common causes and behavioural indicators of pain.
- Horses that are in pain must receive appropriate management changes or treatment without delay.

5.3

- Horses showing signs consistent with dental problems must be examined and treated without delay.
- Dental care procedures must only be performed by a veterinarian or competent individual working under direct veterinary supervision. Refer to provincial regulations.

5.4

- Lameness must be addressed either through specific therapies or changes in management or workload.

5.4.1

- Horses with laminitis must receive appropriate management and treatment, which may be lifelong and include medications, dietary management and hoof care. Severe cases or those that do not respond to treatment may require euthanasia.

5.5

- For horses and ponies: corrective action must be taken at a BCS of 3 or lower and at a BCS of 8 or higher (on the 1–9 scale).* Veterinary advice must be obtained if animals do not respond to the corrective action. Refer to Appendix H.
- For donkeys and mules: corrective action must be taken at a BCS of 2 or lower and at a BCS of 4 or higher (on the 1–5 scale). Veterinary advice must be obtained if animals do not respond to the corrective action. Refer to Appendix I.
- Veterinary advice must be obtained for geriatric horses that are emaciated (i.e., BCS of 1 or 2 out of 9 for horses and ponies; BCS of 1 out of 5 for donkeys and mules).
- Horses must not be starved or prevented from eating for prolonged periods in order to reduce BCS - the change in feed to reduce BCS must be gradual.

**With the exception of horses in feedlots that are free from health conditions associated with obesity.*

5.6

- Horses must be sound and healthy to work or compete.
- Horses that become sick or lame during work must be removed and appropriate care provided.
- Medications/substances/therapies that are prohibited by the sport or that mask signs of pain must not be used or used only in accordance with the rules of the sport.
- Equipment must not be used to mask behaviours that are as a result of pain.

SECTION 6: LOOSE HORSE MANAGEMENT

6.1

- The ground in the holding pen must be well-drained and non-slip.
- Horses must be handled in a manner that does not subject them to avoidable pain or avoidable injury.
- Facilities must be designed and have equipment available to effectively and humanely handle horses that are not halter trained.
- Handling equipment must be designed specifically for horses and cannot be used in a manner that will cause them injury or undue stress.

6.2

- Upon arrival, horses must be individually assessed for health and well-being and must be provided with water and good quality forage.
- Horses in groups must be managed in a way to minimize the risk of injury.
- Stallions must be segregated from mares at feedlots, intermediary sites and rescues.
- Ensure feed and water is easy to find as new arrivals will not be familiar with its location and may only be familiar with natural water sources.
- Monitor new arrivals at least twice daily to ensure they are healthy and are eating and drinking.
- If a mare appears to be pregnant, an examination by a veterinarian is needed so that plans can be made to segregate her for foaling or re-homing.

6.3

- Individuals or organizations who take custody of a malnourished or emaciated horse (BCS <3 for horses; BCS <2 for donkeys) must consult with a veterinarian before

beginning a feeding program to prevent refeeding syndrome, which is a life-threatening condition.

- Group horses must receive a diet that is adequate for maintaining and supporting health.
- Group horses must have daily access to forage that is free from visible mould, offensive odours, and has minimal dust.
- Ensure group horses have sufficient feed space (e.g., increase the number of feed locations or the amount of feed space at any single location, rearrange the groups such that competition is minimized).

6.4

- Individuals and organizations must establish and maintain a Veterinary-Client-Patient Relationship (VCPR) with a practicing veterinarian.
- A written biosecurity and disease management plan must be in place and developed with a veterinarian for all facilities.
- Horses must be observed at least once a day for health and well-being.
- All horses requiring medical treatment must receive such treatment and be identified.
- Segregation pens with appropriate fencing and bedding must be available for housing expectant mares and mares with foals.
- All foals arriving or born at the facility must be segregated with their dam and receive necessary care and attention.
- Feedlot horses to be held over for a drug residue withdrawal period must be sufficiently healthy and sound to withstand this period without undue suffering.
- Drug withdrawal periods must be observed. For information on drug withdrawal periods, consult a veterinarian or the Meat Hygiene Manual of Procedures (Appendix S – Resources for Further Information provides a reference for this manual).
- Hospital pens must be available and must provide shelter, bedding, dryness, and a source of feed and water. Hospital pens must also be cleaned between uses. Refer also to the Requirements in Section 5-Health Management.

6.5

- Facility or farm owners must have a plan for mud management and access to any equipment and materials necessary to implement the plan.
- A dry lying or standing area must be available in each pen.

6.5.1

- At a minimum, each horse must have enough space to move easily, walk forward, turn around with ease and lie down in a normal resting posture. There must also be sufficient space for subordinate horses to escape aggression. Refer to Section 2 – Facilities and Housing.

SECTION 7: HUSBANDRY

7.1

- Horses must have some form of exercise or turnout unless under stall rest for medical reasons or severe environmental conditions make this temporarily impossible. Refer to above explanations for the terms exercise and turnout.

7.1.1

- If a horse begins to display stereotypic behaviour, the owner/caregiver must take steps to identify and address the underlying cause of the problem.

7.2

- Handlers must be familiar with equine behaviour and competent in low stress handling techniques either through training, experience or mentorship.
- Horses must be handled in a manner that does not subject them to avoidable pain or avoidable injury.
- Punishment must never be used for handling.

7.2.1

- Restraint of horses must never cause avoidable injury or pain.
- Tethering must not cause injury and must only be used if the horse is under supervision. The person applying the tether must be knowledgeable in its use. Refer to the above explanation of tethers.
- Horses confined to tie stalls must be tied in such a way that allows them to lie down in a normal sleeping posture.
- Electric prods must only be used to assist the movement of horses when animal or human safety is at risk or as a last resort when all other humane alternatives (e.g., flags) have failed. They must only be used by suitably trained personnel.
- Electric prods must never be used repeatedly or used on the face, anus or reproductive organs of horses.

7.3

- Animal identification must be performed in a manner that causes the minimum of stress and pain.
- Both hot and freeze branding are painful. When branding must be used, it must meet the following requirements:
    - It must be performed with the proper equipment and restraint
    - Personnel must be trained or have a sufficient combination of knowledge and experience
    - Horses must never be branded on the jaw/cheek
    - Horses must never be branded when they are wet.
- Effective for horses branded after January 2029: Pain control must be provided unless prohibited by regulatory requirements.

7.4

- Provincial regulations that restrict castration of horses to licensed veterinarians must be followed.
- Due to the higher risk of complications, castration of donkeys, mules and mature horses must only be performed by a veterinarian.
- Horses with one or more retained testicle or other scrotal abnormalities (e.g., hernias) must only be castrated by a veterinarian.
- Where it is not prohibited by law, castration by a person who is not a licensed veterinarian must only be performed by a skilled operator and must meet the following requirements:
    - there is a valid Veterinary-Client-Patient Relationship with a licensed veterinarian who is willing to supply training (on the procedure and pain management), prescribe the required drugs for pain control and provide interventions if needed
    - the scrotal area must be examined to ensure normal scrotal anatomy. If there is evidence of an abnormality, castration must only be performed by a veterinarian
    - the handling and restraint methods must not cause injury or unnecessary suffering
    - local anesthetic must be used at the castration site and a non-steroidal anti-inflammatory drug must be given for pain control. Castration must not begin until the local anesthetic has taken effect
    - the horse must be monitored carefully during and after the procedure and, if complications occur, a veterinarian must be contacted without delay.
- Pre- and post-operative pain control must be provided.

7.5

- Tail nicking and blocking are unacceptable and must not be performed.
- Tail docking for cosmetic purposes is unacceptable and must not be performed. Refer also to provincial regulations on tail docking, if applicable.

7.6

- Hooves must be trimmed and/or shod as often as is necessary to maintain hooves in functional condition. Whether shod or unshod, hooves must not be allowed to grow to excessive lengths causing injury or discomfort to the horse.

7.7

- Horses must be free of debris where the saddle and harness are placed. The tack must also be free from debris before being placed on the horse.
- Burdocks causing discomfort or injury must be removed without delay.

SECTION 8: EXERCISE AND TRAINING

8.2

- Horses must be trained in a manner that has positive outcomes and does not subject them to pain or fear as a direct result of the training method used. They must never be subjected to training methods or equipment which are abusive or intentionally injure the horse.
- Whips, spurs, and bits must only be used to give light cues and not be used to inflict pain through excessive force and frequency for discipline or encouragement.
- Horses must only undergo training that matches their physical capabilities and level of maturity.
- Equipment in use must be maintained in good repair and must fit the horse correctly.

SECTION 9: REPRODUCTIVE MANAGEMENT

9.1

- Individuals must not breed horses unless they are familiar with and able to provide the standards of care as outlined in this Code for both the mares/jennets and foals

9.2

- When natural breeding methods are used, stallions/jacks must be selected with an appropriate body weight and size for the physical development and size of the mare/jennet.

9.3

- Mares/jennets requiring medical care during gestation must receive such care.
- Pregnant mares/jennets must have some form of exercise or turnout, unless under stall rest for medical reasons or severe environmental conditions make this temporarily impossible.
- Mares and jennets that are in the last 10% of their gestation periods or have given birth during the preceding 48 hours must not be transported, unless on the advice of a veterinarian for care or treatment (75).

9.4

- A plan must be in place for the foaling process, including a plan for getting prompt expert advice or help if needed.
- Mares and jennets must be moved to the place of foaling prior to active labour.
- Mares and jennets close to foaling must be observed at least twice a day for health, well-being and signs of foaling. Frequency of monitoring of mares/jennets needs to increase as foaling becomes imminent.

9.5

- Newborn foals must be monitored to ensure they can rise and suck unassisted.
- Appropriate care must be provided without delay if abnormalities in the foal are observed.

9.5.1

- Foals must receive colostrum or alternative care to maintain their health and vigour.

9.5.4

- Facilities or fencing used during weaning must be safe and made of strong materials free from protrusions.
- Corrective action must be taken if the foal or mare/jennet injures themselves attempting to reunite during weaning.
- Weaned foals must be kept in the company of other equines, such as other weaned foals or older, calm horses.

SECTION 10: TRANSPORT

10.1

- Horses' fitness for transport must be individually assessed prior to loading. Evaluate fitness for transport in the context of each trip and all relevant factors that may impact the animal's capacity to withstand loading, transport, and unloading (e.g., maximum feed, water and rest provisions, and prevailing weather conditions).
- Unfit animals must not be transported, unless it is to receive care on the advice of a veterinarian and only if special provisions are met (75).
- Compromised animals may only be transported with special provisions directly to the nearest suitable place where they can receive care or be humanely killed (75). Refer to Appendix N-Transport Decision Tree.

10.2

- Risk factors regarding the horses and the conditions of transport prior to loading must be assessed to prevent animal injury, suffering, or death (75).
- Mares and jennets that are in the last 10% of their gestation periods or have given birth during the preceding 48 hours must not be transported, unless on the advice of a veterinarian for care or treatment (75).
- Every mare with its suckling offspring must be segregated from unfamiliar or incompatible animals during transport.
- Every mature stallion must be segregated from unfamiliar or incompatible animals during transport.
- Fit horses must not be without feed, safe water, or rest for more than 28 hours (75).
- Compromised horses must not be without feed, safe water, or rest for more than 12 hours (75).

10.3

- Conveyances used to transport horses must be suitable for the species, provide adequate ventilation, provide a floor that prevents the animal from tripping, slipping and falling, and provide absorbent bedding (e.g., pellets, shavings) to prevent the pooling or escape of water, urine and liquid manure (75).
- Horses must be able to maintain their preferred position with sufficient space to permit a full range of head movement without coming into contact with the surface overhead (75).
- Horses must not be transported in trailers with more than one deck (75).

- Every animal must be protected from temperature extremes (cold or hot), especially for foals and geriatrics, during all phases of transport (75).
- Those transporting horses in the course of business or for financial benefit must have a contingency plan in place and implement as needed (75).
- Ensure all required paperwork is completed and provided to the transporter. The required paperwork varies - refer to the provincial authority and the Health of Animals Regulations (some information required upon arrival i.e., Transfer of Care, Records).

10.4

- Personnel involved in loading, unloading, or transporting horses must have the necessary knowledge and skills to conduct these activities in compliance with the Health of Animals Regulations.
- The requirements for loading and unloading procedures and equipment as described in the Health of Animals Regulations must be complied with.
- Those involved in loading, unloading, or transporting horses must not:
    - *beat, strike, whip or kick the animal;*
    - *use a prod;*
    - *use a whip or any other driving device that is likely to cause injury, suffering or death;*
    - *drag the animal; or*
    - *handle the animal in any way that is likely to cause the animals injury, suffering or death.(1)*
- Horses must be loaded calmly, quietly, and patiently.
- Instances of inhumane handling or transport must be documented and immediately reported to proper authorities (e.g., Provincial Animal Welfare Authority, local CFIA).
- Ramps used for loading/unloading must be able to bear the weight of the horses, have secure footing to prevent the animals from tripping, slipping and falling, be placed with no gap between the ramp and vehicle, and have a slope that does not exceed 30 degrees (75).
- Those involved in loading, unloading, or transporting horses must determine appropriate loading densities to ensure the animals will not be overcrowded in the conveyance (75), particularly loose loaded horses.
- The right of the transporter to refuse to load horses that they deem compromised or unfit for transport must be respected. The reason for refusal must be addressed by the owner/consigner. Refer to Appendix N-Transport Decision Tree.

10.4.2

- Horses must be provided with water, forage, and rest upon arrival to the farm or rest station.
- The condition of animals must be individually assessed at unloading.

SECTION 11: CHANGE OR END OF CAREER

11.1

- The welfare of the horse must be of paramount importance when making change or end of career decisions.

SECTION 12: EUTHANASIA

12.1

- Equines that are sick, injured, or in pain must receive appropriate treatment without delay or be euthanized without delay. Leaving a suffering animal to die is not acceptable.
- Equines that are not responding to treatment and/or have an untreatable condition that compromises welfare must be euthanized.

12.2

- An acceptable method of euthanasia must be used.
- Euthanasia must be performed by persons knowledgeable in the method used for equines.
- Horses that are unfit for transport must not be sold or sent to a processing facility, auction or an assembly centre in lieu of euthanasia (Refer to Appendix N – Transport Decision Tree).

12.3

- Confirm unconsciousness immediately when it is safe to do so.
- Have a secondary euthanasia step or method available. Refer to Appendix R - Technical Guidelines for Euthanasia Methods.
- Confirm death before moving or leaving the animal.

12.4

- Disposal must be in accordance with provincial and municipal regulations.