

ONTARIO CARE GUIDELINES FOR EQUINE RESCUE, RETIREMENT AND ADOPTION/REHOMING FACILITIES



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INTRODUCTION

Rescue and retirement facilities play a vital role in providing lifelong care and/or finding new owners for horses, or other equidae that may be considered “unwanted” or have been subjected to neglect or abuse. NOTE: For the purposes of this document the term “horse” is used to refer to all equidae (this includes horse, pony, donkey, mule, etc.).

Recognizing the importance of equine rescue and retirement facilities, the Ontario Care Guidelines for Rescue and Retirement Facilities have been developed in order to provide guidance about the care of a horse throughout its life. While principles of basic horse care and management apply to all horses regardless of their situation, those horses entering rescue or retirement facilities may arrive with unique health challenges. For these reasons, employees and volunteers should understand and appreciate basic horse care as well as be able to recognize health conditions that may require medical attention from a veterinarian.

Equine veterinarians play an important role in the care of the animals at rescue and retirement facilities. They can offer valuable advice on many aspects of equine management, including disease prevention, basic nutrition, emergency medical attention and routine health maintenance procedures. It is important that facilities establish a good relationship with an equine veterinarian and a farrier, the OSPCA and other rescue facilities.

The guidelines presented in this manual are for informational use only and should not be considered legally binding. Because appropriate horse care practices may vary due to climate, region, use and many other factors, the guidelines are intentionally broad. It is important that all facility owners become familiar with the **Canadian Code of Practice for the Care and Handling of Equines** to ensure standards are met and to which they are consistently adhered. Owners, employees and volunteers with specific questions are encouraged to consult their veterinarians and to pursue educational initiatives on horse care and management.



It is critical that owners of rescue farms understand their financial capacity for caring for new horses before accepting new arrivals. Taking in more animals than can be cared for is putting all animals at risk as well as the sustainability of the facility.

I. BASIC HEALTH MANAGEMENT

The facility owner should ensure that all telephone numbers for the veterinarian, the farrier, the feed store and emergency services are displayed in a prominent location. Documentation should be kept on all horses for medication, feeding and health conditions. This information should be kept in a central location familiar to all staff. Emergency plans and evacuation procedures should be posted and staff trained in the event of an emergency situation.

Caring for New Arrivals

Every horse entering a rescue/retirement facility should receive a complete physical examination upon its arrival and be separated from the rest of the resident horses. Permanent identification (e.g., microchip, lip tattoo, freeze brand) of each horse is an economical, humane and unalterable tracking mechanism for a horse, and is included as part of the admissions procedures for many facilities (however this can only be considered if the rescue facility has full, legal ownership of the horse). A health record must be established for each horse, clearly identifying the horse by name and/or number, age, gender and physical description including Body Condition Score, colour, markings and other distinguishing features including hot brands, freeze-brands and microchips. Medication and treatments should be given only under the direction of a veterinarian and recorded in the horse's health record.

Horses may be susceptible to transportation stress and disease following transport to a rescue/retirement facility. On arrival, new horses should be separated from resident horses to prevent the possible spread of disease, preferably for 2-3 weeks. Handlers should carefully monitor recently transported horses for several days after long-distance transport. The rectal temperature of these horses should be recorded daily for several days, and if not normal, the temperature

should be recorded at least twice daily, i.e. morning and evening. If a horse's temperature exceeds the normal range, a veterinarian should be consulted. Caution must be exercised when taking rectal temperatures from unknown animals.

Monitoring Your Horses

Frequent observation of the horses in a rescue/retirement facility is paramount to ensure that they remain healthy. Horses should be observed routinely for health and well-being, at least twice every 24 hours, paying particular attention during high risk periods (e.g., inclement weather, foaling, and introduction of new animals). The table below provides vital signs for an adult 1,200-pound (545 kg) horse at rest at 15°C (60°F). These criteria will vary according to age, physical fitness and environmental conditions. Younger horses tend to be at the higher end of the range. See appendices for foals, and donkeys.

Vital Signs for a 1,200 Lbs. (545 Kg) Horse at Rest at 16°C (60° F)

Vital Sign	Normal Range
Rectal Temperature	37-38.5° C
Pulse	28-44 beats/ minute
Respiration Rate	10-14 breaths/ minute

(source: Equine Code of Practice)

Parasite Control

A parasite control program, one of the most important management matters to be considered, must be established in consultation with a veterinarian. An effective program will include the administration of chemical deworming agents for targeted treatments based on parasite species and load, as well as manure and pasture management.

Indiscriminate use of deworming agents is not advisable, as it adds to the growing problem of parasite resistance to such agents. With veterinary guidance, utilizing such tools as fecal egg counts to optimize use of dewormers, an effective and economical parasite control program can be designed while minimizing parasite resistance. Donkeys may require a different deworming program than is used for horses. Proper manure and pasture management can greatly reduce the parasite problem, and stalls must be cleaned at least every 24 hours.

External parasites (e.g., lice and ticks) are a common problem affecting neglected horses. Incoming horses should have a visual check of

the hair coat to detect if lice or ticks are present. A veterinarian should be immediately consulted for direction on an effective and safe control program. See signs of parasitism in the appendices.

Vaccination

Administering appropriate vaccinations assists in controlling common infectious diseases of the horse. The specific immunizations needed by a particular group of horses depends upon several factors, including environment, age, breed, sex, pregnancy, use, exposure risk, geographic location, emerging diseases and general management. Consult your veterinarian to determine the most effective vaccination program for your facility's horses. Overall infection control practices need to be maintained for all horses. Correct storage of vaccinations and appropriate administration of the vaccine must be considered.

When possible, find out the vaccination status of new horses and keep records for vaccinations (vaccine, date, and any adverse reactions).



Photo Credit: OAEP

Dental Care

Dental conditions are not uncommon in neglected horses and can lead to painful and dangerous health issues. A veterinarian should examine a horse's teeth following arrival to the facility and at least annually thereafter. Uneven wear and other dental abnormalities should not be allowed to interfere with normal eating habits. Dental care will depend on age, nutrition and environment and may be required more often for horses with ongoing dental issues. Dental care must be performed by a veterinarian or under veterinary supervision. See signs of dental issues in the appendices.

Lameness

Lameness is a common finding in abused or neglected horses as the "value" of the horse decreases with chronic or recurring lameness issues. Lameness is defined in the Canadian Code of Practice as "any alteration in the horse's gait that appears to be caused by pain or discomfort". The degree of lameness is assessed by either walking or when possible trotting the horse away from the examiner, then turning and walking/trotting the horse back to the examiner. Lameness observed at the walk is generally more severe. When lameness is suspected or detected, it must be addressed in consultation with your veterinarian as prompt assessment can save time and money and may improve the long-term prognosis for the horse. Early assessment of lameness by your vet may help to ensure good Quality of Life for the horse. Founder (laminitis) is a serious welfare concern as it can lead to permanent and painful changes in the foot that may require ongoing pain medication and hoof care under veterinary supervision. Euthanasia may be required for humane reasons. (See signs of acute laminitis in the appendices).

Be Prepared for an Emergency

Caregivers at rescue/retirement facilities must know how to recognize serious and potential problems, respond promptly, and take appropriate action while awaiting the arrival of the veterinarian. It is advisable to keep a list of available veterinarians in case of an emergency. Rescues should also maintain a list of contacts and protocols for fire, theft and natural disaster and post these in accessible and obvious places. Develop an emergency plan that is appropriate for your area and review this periodically with staff and volunteers.

All rescue/retirement facilities should prepare an equine first aid kit and store it in a clean, dry and readily accessible place. While a first aid kit can be simple or elaborate, the following items are highly recommended:

- Cotton roll
- Contact bandage
- Gauze or cotton secondary dressing
- Gauze pads, assorted sizes
- Gauze wrap
- Adhesive wrap and adhesive tape
- Leg wraps
- Bandage scissors
- Hemostats
- Steel cup or container
- Rectal thermometer
- Surgical scrub and antiseptic solution
- Latex gloves
- Flashlight and spare batteries
- Permanent marker pen
- Sterile pads
- Shoe pullers (to pull loose shoes, or imbedded nails only on the advice of the veterinarian or farrier)

Special Considerations

The Ontario Care Guidelines for Rescue and Retirement Facilities encourages the castration of all stallions entering a rescue/retirement facility (only once legally owned by the rescue farm). Castration and other surgical procedures must be conducted by licensed veterinarians using accepted surgical techniques and pain control medication in accordance with provincial veterinary acts and regulations.

Distressed horses must be dealt with humanely, effectively and promptly to prevent suffering. Sick or injured horses must receive veterinary attention as quickly as possible. Downer horses (unable to rise) need immediate veterinary attention. Veterinary consultation must be sought prior to any attempt to move a downer. (See the Transport Decision Tree from the Canadian Code of Practice, p 76)

What is "Distress"?

"distress" means the state of being in need of proper care, water, food or shelter or being injured, sick or in pain or suffering or being abused or subject to undue or unnecessary hardship, privation or neglect;
(OSPCA)

Evidence of any federally reportable disease, such as West Nile virus, Eastern Equine Encephalitis, Vesicular Stomatitis, Equine Piroplasmosis, Equine Infectious Anemia, Rabies or provincially immediately notifiable diseases such as Equine Herpesvirus -1 should immediately be brought to the attention of a veterinarian. Any disease that appears to spread from a horse to a human must also be reported to your veterinarian and/or to Public Health Ontario.

Signs of disease that should be discussed with your veterinarian include but are not limited to:

- Severe, unexplained, persistent or recurrent fevers
- Unexplained weight loss or progressive weakness
- Thick vaginal discharge, diarrhea or abnormal urination
- Abortion
- Neurological signs such as incoordination, erratic behavior, abnormal postures or hypersensitivity
- Inability to rise or difficulty getting up
- Difficulty or laboured breathing, spasmodic coughing or thick or frothy nasal discharge
- Soft swelling of the face or neck
- Lameness
- Wounds
- Eye problems
- Colic
- Blisters or open sores on the lips, mouth, genitalia or above the hooves.

Separate housing should be provided for any sick horse(s) to prevent spread to the rest of the herd. Since manure, urine, nasal discharges and other bodily secretions can carry and spread infectious disease, biosecurity procedures should be followed. Useful references include the National Farm and Facility Level Biosecurity Standard for the Equine Sector (www.equinecanada.ca), the Alberta "Equine Biosecurity and Best Practices", Saskatchewan "Horse Biosecurity Guidebook." and the Equine Guelph Biosecurity calculator (www.EquineGuelph.ca).

Control of flying insects, rodents and birds within any equine facility must be a priority. Flying insects such as biting flies and mosquitoes not only create a nuisance and interfere with grazing activity, but can transmit infectious disease-causing pathogens between horses and between horses and humans. A sanitation program must also be developed to

effectively remove manure and other waste in order to prevent accumulation of pests and environmental contamination of water. Dead horses must immediately be removed and disposed of in an appropriate manner, as required by municipal, provincial or federal regulations.

II. NUTRITION

Formulating a diet for a horse must take into account the horse's state of health, geographic location, medical history, exercise/use, and individual metabolism. Special recommendations for feeding a starved horse are found at the end of this chapter. A veterinarian, perhaps assisted by an equine nutritionist, should be consulted to ensure current feeding programs are meeting each animal's needs.

Water Requirements

"Clean, palatable water is the single most important nutrient in the management of horses."

Every horse must have access to a sufficient amount of fresh, clean water to meet its individual maintenance and activity needs. A horse's daily water requirements may range from 20 to 70 liters (5 to 20 gallons), depending on air temperature, humidity, body weight, level of activity and health and physiological status (e.g., pregnant, lactating or growing).

As a general guide, horses need 5L (1.32 gal) for every 100 kg (220 lbs.) of body weight in moderate weather. This requirement increases with increasing air temperature; for example, an increase in ambient temperature from 55°F to 77°F (13°C to 25°C) increases water required by 15 to 20%.

As a practical matter, a horse should always have unlimited access to fresh water year round. Water troughs and containers must be regularly cleaned to prevent algae buildup (this will need to be done more during the warm months). They should be located where they are protected from electrical problems, fouling, and freezing. In cold climates, horses preferentially consume warm water; if warmer water cannot be provided in cold climates then watering systems should be examined regularly to ensure that the water is not frozen. Automatic watering systems should be checked daily to ensure they are dispensing water properly. Water intake should be monitored. Do not depend on snow to meet the water requirements of horses, as water requirements may increase during cold weather along with increased forage intake. In most situations, horses will not be able to meet their water needs with snow alone.

General Feed Requirements

“As forage is important to maintain proper gut function, it is crucial that forage forms the majority of the ration.”

(Canadian Equine Code of Practice)

A horse's daily diet must be adequate to maintain health and normal body functions, and should be fed on a regular daily schedule. In its natural state, the horse eats a variety of forages (mainly grasses) to meet its nutritional needs. Due to the small size of its stomach, the horse will normally consume its daily intake over 16 to 20 hours. When confined, horses should be fed at least twice daily; however, 3 or 4 times per day is preferred or at least with access to forage provided for most of the day.

Horses should be fed a forage-based diet (hay or pasture). Purchase the best quality hay that you can, based on the needs of the horse. An investment in good quality hay can save substantial amounts in feed costs as it may reduce the need for more costly items such as grains and concentrates. For most mature horses that are not competing or exercising, a forage-based diet is usually adequate to meet caloric needs when good quality forage is supplied at a rate of 1.5 to 2 percent of their body weight. Grain supplementation should be rarely needed however a vitamin/mineral supplement may be necessary depending on the quality of the forage. Fresh forage (e.g. well-maintained pastures) can seasonally provide most of the horse's needs, but the diet should be supplemented with dry forage (hay) if more dietary fiber is required.

Loose sodium chloride (salt) and fresh, clean water should always be provided along with a forage diet. Other supplements such as vitamin/mineral balancers may be necessary for specific horses or during specific times of the

year (see Supplementary Feeds below) and based on the nutrient content of the forage.

Pasture provides additional health benefits to horses, allowing them to move and exercise as they normally do, and regular pasture turnout should be part of a horse's daily routine, unless otherwise directed by a veterinarian. Maximize turnout whenever possible as this is healthier for the horse. In certain areas, minerals and trace minerals may be lacking (e.g., selenium and sodium) and supplementation may be required, ideally as directed by an equine veterinarian or equine nutritionist in order to provide a balanced ration. Consult the Equine Code of Practice for more information on nutritional management and requirements.

There is rarely a need for horses in rescue and retirement facilities to be fed high-energy diets (oats, corn, barley, high fat). If such diets are selected, attention should be paid to avoid nutrition related health problems, such as grain overload, laminitis (founder) or obesity. To avoid problems such as colic, abrupt changes in diet must be avoided. To avoid major health problems, any changes in the type and quantity of feed should be introduced gradually over a period of several days (7 - 14 days is the ideal transition period for optimal gut health and to avoid digestive tract upsets). Feeds used in the horse's diet should be fresh, free of spoilage, toxic insects or contaminants, dust and molds. When horses are fed in groups, some horses may "bully" others, and prevent other horses from eating. This may lead to some horses overeating and becoming obese, while others may become thin and malnourished, even if adequate feed is being supplied. To prevent such problems, adequate manger space or separate feeding areas should be available to minimize competition for feed (Ideal spacing and area requirements are covered in the

Equine Code of Practice). All horses should have simultaneous access to feeders so that all can eat at one time. Horses that “bully” others must be separated from less dominant horses to ensure that the less dominant horses receive adequate feed and risk of injuries is reduced.

All feeds and supplements should be properly labeled and stored appropriately in a secure manner to avoid misuse, contamination or horses getting into the feed. Owners and operators of retirement facilities would be well-advised to consult with their veterinarians or equine nutritionists prior to implementing nutritional supplements; such supplements may significantly increase the cost of care for the horses, but may not provide significant nutritional benefit and can actually be dangerous when used in the wrong circumstances or amounts. Feeds designed for other species, particularly medicated feeds and those containing urea are unsuitable for horses. Feed troughs and buckets should be cleaned regularly.

Supplementary Feeds

Supplementary feeds must be used according to the specific needs of each individual horse and balanced with the forage. Overfeeding of supplementary feeds can create nutritionally-related problems such as over-supplementation of certain vitamins or minerals, or incorrect ratios (e.g. the Calcium:Phosphorus ratio). Choose only supplements that are designed for horses as products for cattle or other livestock can cause serious health issues and may even cause death.

Young and growing horses have

increased protein requirements compared to older horses. There are many ways to increase protein in a horse’s ration, including feeding alfalfa hay and commercial products specifically designed for growing horses. Meals such as soybean meal are often included in rations for young and growing horses to increase the protein content of the ration. They should be fed in small amounts and introduced gradually. Linseed meal is not an appropriate protein supplement for growing horses because it is low in the amino acid lysine, which is essential for normal development.

Many brands of blended horse feeds are on the market. The manufacturer’s feeding guidelines



Photo Credit: OAEF

should be followed to provide a simple method of dietary supplementation recommendations (however, all horses should be fed in accordance to their body score) (this information should be printed on the label, along with an analysis of ingredients). In operations where small numbers of horses have similar supplementary feeding needs, premixed balanced feeds can save the facility work and ensure continuity of diet. When feeding commercially blended feeds, care should be taken to ensure the horse has access to its minimum daily forage (fiber) requirement of 0.5 to 1 pound dry matter/100 pounds bodyweight. Ensure this minimum has been met for all horses. Most do much better with higher than minimum amounts of forage.

When horses are working and sweating, salt (sodium chloride) and possibly other electrolytes may need to be supplemented. Hand-fed horses should have salt supplemented daily, or have free choice access to a trace mineral/salt block. Advice on mineral deficiencies peculiar to any grazing area should be sought from a veterinarian or local extension nutritionist, and addressed accordingly.

Calculating Horse Bodyweight

Before accurate feed calculations can be made, the bodyweight of the horse should be measured or estimated. Bodyweight assessment is also required when medicines, including dewormers, are administered.

The most accurate method of determining bodyweight is the use of electronic scales. To get the most accurate weight for a horse when using scales, weigh the animal just before feeding and watering. This will help avoid variations caused by different gut-fill levels, and will allow subsequent weight measurements to be more standardized, and thus more meaningful.

Weight tapes also can be useful in estimating a horse's body weight. While they may not give an accurate absolute measurement, they can be used to see if a horse is gaining or losing weight over time. For those without scales, the Henneke Body Scoring System can help the average horseperson, with practice, to establish and track changes in a horse's body condition. The "ideal" body condition is in the range of 4-6 on the Henneke 9 point. See the appendices for this scoring system.



Determining Feed Requirements for Each Horse

The amount of feed required by a horse is made up of two factors:

1. Maintenance needs, that is, the amount of feed that is required to keep the horse in good health.
2. Activity needs which include rate of work, growth, lactation and pregnancy

For the rescue horse, one also has to keep in mind the "healthy" weight of the animal and slowly increase the diet towards the feed amount that would be required for ideal weight.

Both requirements must be satisfied in order to maintain ideal body condition and weight. Every horse should be offered a sufficient and appropriate ration of feed daily to maintain its body condition between 4 and 6 points on the Henneke condition score chart (For mules and donkeys, see the 5 point scale in the Equine Code of Practice).

Maintenance Needs

Maintenance feed is the amount of food required to maintain the normal horse's body condition at rest. "At rest" means that physical activity is no more than is expected of a healthy horse grazing freely in a paddock. Examples of horses with no more than maintenance nutritional requirements include horses being rested from their usual work, most horses at rescue/retirement facilities, learners' horses that rarely get into a canter, and pleasure

horses ridden carefully at a relaxing pace for no more than one hour per day. The average horse should consume approximately 1.5 - 2% of its bodyweight daily, as dry matter of a palatable feed, in order to meet daily maintenance requirements. Regular body condition scoring, weighing or using a weight tape will help identify any variation from these guidelines. Individual horses may be subjected to circumstances that affect their dietary maintenance requirements. For example, periods of extremely cold weather may increase maintenance needs by up to 30%.

Nutrition of the Pregnant Mare

When a pregnant mare is received at a rescue/retirement facility, the non-working, non-lactating pregnant mare with a BCS of 4-6 does not require an increase in feed above maintenance during the first eight months of pregnancy. It is important to ensure that the mare is getting adequate vitamins and minerals throughout pregnancy. During the last three months of pregnancy there is an

extra energy requirement, due to fetal growth. The amount of feed required on a dry matter basis, based on the added foal weight and energy requirements is 2.2% of bodyweight. Management of very thin (1-3) pregnant mares should be done with advice from the veterinarian and equine nutritionist. Low body condition scores are a health risk to both the foal and the mare during all stages of pregnancy.

Pregnant mares may also have additional health needs, such as vaccination against equine herpesvirus-1 infection causing

The average horse should consume approximately 1.5 - 2% of its bodyweight daily, as dry matter of a palatable feed, in order to meet daily maintenance

abortion. Rescue and retirement facilities are encouraged to contact their veterinarians for advice on caring for pregnant, postpartum, and lactating mares. A full health check should be done as soon as possible upon arrival to the facility to give the mare and foal the best chance of a healthy life.

Nutrition of Growing Horses

Growing horses need feeding above that which would be required to simply maintain their body weight because they need additional “building blocks” for growth. The feed required will vary with factors such as the expected mature weight, growth rate, age, and exercise. Young horses have a higher protein requirement than do mature horses. Their feed should contain 13 to 15% protein as weanlings. Yearlings may require 12 – 13% dietary protein, and two-year-olds require about 11% dietary protein. Young horses need approximately 3% of their bodyweight as dry matter intake, depending on dietary ingredients. High quality balanced feeds should be provided for proper growth and skeletal development. The ideal feed to use is one that is a) formulated for growing horses and b) complimentary to the forage, after consultation with an equine nutritionist. Monitoring foals for any growth abnormalities is essential and consultation should be sought with your veterinarian if there are any concerns.

Special Needs of Aged, Sick and Injured Horses

When horses are underweight, or are losing weight, despite being fed a diet that provides additional calories beyond those required for maintenance, a veterinarian’s advice should be obtained and followed. A veterinarian, working together with an equine nutritionist, can examine the horse to see if there are any

medical problems that may need attention, as well as address special feed requirements that may be needed for sick and injured horses.

Horses with abnormalities of the mouth may find normal grazing and chewing difficult. They should be examined by a veterinarian and have appropriate corrective action taken once the horse is able to tolerate the dental procedures. (Refer to Chapter IV for special considerations for the geriatric horse.) These horses may not be able to process normal forage and may require supplemental feeds, such as complete pelleted rations to maintain bodyweight. This problem is more prevalent in older horses.

Overfeeding, Obesity and Laminitis (Founder)

Excessive energy intake, both acute and chronic, is one of the causes of a common and crippling disease: laminitis. Laminitis affects the feet of horses and disrupts the sensitive and insensitive laminae, which secure the coffin bone to the hoof wall. “Founder” is a commonly used name for this condition and it is a significant welfare issue due to the severe pain. It is important to note, however, that there are many causal agents of laminitis, including stress, grain overload, obesity, excessive concussion on the hooves, as well as severe infections and other disease conditions.

In order to avoid laminitis, horses should not be permitted to become overly fat (8 and 9 on the Henneke scoring system). Some equines, particularly ponies and donkeys, are able to utilize energy in feeds very efficiently; other obese horses may be affected with a condition known as insulin resistance/equine metabolic syndrome. Horses and ponies that tend towards obesity (“easy keepers”) are considered to be more susceptible to laminitis, and should have restricted access to grains (if

grains are fed at all), as well as spring and autumn pasture, which is low in fiber, and high in sugars. Low-energy forages such as grass-type hays should be fed in preference to higher energy legume hays (e.g., alfalfa).

Controlling the weight of horses using starvation diets is unacceptable. Such horses should first be examined by a veterinarian to rule out disease conditions that might affect weight, and then supplied with a balanced, reduced calorie diet, increased low level exercise, as well as free access to water. The use of small opening hay nets can be helpful in such cases as it slows the intake of the forage and spreads it out over many hours. In some disease conditions, such as severe diarrhea, rapid loss of water and essential body salts (electrolytes) can result. Fluid replacement necessary to overcome fluid loss should be administered by a veterinarian.

Re-feeding the Starved Horse

Unfortunately, some horses that arrive at rescue/retirement facilities have been subjected to long-term neglect and may suffer from starvation. Rehabilitating a starved horse presents many challenges for caregivers. In both horses and humans, the abrupt re-feeding of a starved horse can cause dysfunction of the body's metabolic system, which can lead to failure of the heart and lungs and ultimately death. A veterinarian is vital to the recovery of these animals and should be consulted as soon as a starved horse arrives at the facility. Even under the best of care, horses subjected to prolonged malnutrition may die, even after having been placed with a responsible caregiver and having been provided an appropriate diet. Owners and operators of rescue and retirement facilities should realize that the financial costs of stabilizing malnourished horses may significantly exceed

their market price, and that responsible management of chronically starved horses should include the option of euthanasia.

What Happens during Starvation

During starvation, the horse initially uses any fat and carbohydrate stores in his body to supply energy for metabolism and normal body functions. This is the normal process for any healthy horse: fat and carbohydrates are used for energy, exercise, brain function, circulation, etc., and are then replaced with nutrients from food. The cycle is constant and never-ending, even during sleep.

In a starved animal, once this source of fat and carbohydrate is gone, energy is derived from the breakdown of protein. While protein is a component of every tissue, excess protein is not stored in the body, as is the case for fat and carbohydrates. Consequently, the starved body uses protein for energy not only from muscles, but also from vital tissues such as the heart and even gastrointestinal tissues – tissues that are necessary for life.

As time goes by and starvation continues, the horse's survival becomes precarious. When a horse loses more than 50% of its body weight, the prognosis for survival is extremely poor.



Photo Credit: OAEF

The Re-feeding Problem

Re-feeding starved animals, including humans, is not an easy process and one that requires medical supervision. Humans suffering from starvation caused by illnesses such as anorexia, cancer or gastrointestinal obstruction, can

develop “re-feeding” syndrome when they are given concentrated calories, and this in turn can lead to heart, respiratory and kidney failure. This usually occurs three to five days after the initial meal. This same syndrome has been reported in the literature for horses.

he Best Diet

The feeding approach from Day’s End Farm, Woodbine, Maryland

The following is a summary of the refeeding program that has been in use at Days End Farm Horse rescue and developed and refined as a result of over 25 years of experience with starved horses.

- Upon arrival, horses are given access to water and depending on BCS and current health status, quality soft grass hay through a “Nibble Net”, a slow-feeder system of placing hay into nets to slow down and prolong intake. If the horse is showing signs of colic or is metabolically unstable, hay is withheld pending veterinary advice.
- For the first three days hay is given a flake at a time throughout the day and night, as it is consumed while vitals and health are evaluated.
- By day three, most horses are ready for free choice hay and begin offerings of mineral blocks 3 x’s daily. On day three, refeeding

begins with between 4 to ½ lb. senior feed (10% fat, 13%-15% protein) BID that is watered down heavily.

- Feed changes are made every three days by either ¼ lb. or ½ lb. increments depending on condition and the acceptance of the horse. Pounds per feeding maximums are 2 lbs. for ponies and 3 lbs. for horses. We will feed up to 5 x’s daily if needed but typically max at QID. Feed is always fed very wet and horses are given access to free choice hay in the winter and in warm months, given turn out in grass paddocks.
- Refeeding continues until the horse has reached a BCS of 3, at which point we begin to back down on the amount of grain offered to encourage the body to build muscle instead of fat. Once a BCS of 5 is reached, most horses are receiving grain BID or SID and are likely receiving full turn out on grass.
- The deworming program is also carried out when the attending veterinarian deems the horse’s system is capable of tolerating the medication during this refeeding process and is key to a successful rehabilitation. Dentals are performed when a horse has reached a BCS of 2.5-3 which is when they are determined to be able to be safely sedated.



III. BASIC HOOF CARE

The age-old saying “no foot, no horse” applies to every discipline in the horse industry and is equally important to the horse that enters a retirement/rescue facility. The foot is a common source of lameness; therefore hoof care is imperative to the well-being of a horse in these facilities.

Hoof Growth

As a general rule, adult horse hoof growth is approximately 3/8 of an inch (9 millimeters) per month, while hoof growth in a foal is approximately 5/8 of an inch (15 millimeters) per month. With that in mind, as a general guideline, an adult horse should be trimmed (or shod) approximately every 5-8 weeks in accordance with the needs of the horse. Foals should be trimmed every four weeks, or as needed. It is important to observe the foot regularly as the growth of the hoof can vary during different seasons and with different diets.

Start with a Thorough Examination

Upon entering a facility, the horse should be moved into a quarantine area separate from other horses and a complete physical examination performed. As part of the examination, the feet should be evaluated carefully to identify any hoof wall cracks, bruises, lacerations or any other pathology that needs the attention of the farrier or veterinarian. Any history of disease should be discussed at this time to help facilitate proper trimming/shoeing for the horse. It is important to note that some horses will show different degrees of tenderness when shoes are removed. They will require a period of adjustment if, after veterinary/farrier consultation, the decision is made to go barefoot.

Special Considerations

Horses entering retirement/rescue facilities come in all shapes and sizes and often require the involvement of the veterinarian and the farrier to address hoof concerns specific to individual horses.

For example, retired Thoroughbred racehorses may have been shod in aluminum shoes with toe grabs; American Saddlebred horses may have been shod in stacks of pads. For retired horses, it may be best to remove these shoes, balance the foot according to conformation and shoe/trim and/or leave the horse barefoot, according to its individual needs.

Some other items to consider are:

1. **Hoof Wall Cracks/Quarter Cracks:** A farrier should evaluate and address the crack for infection, necrotic tissue and, most importantly, stability. Stability of a hoof wall crack is necessary for the crack to heal, and for normal hoof growth to resume.
2. **Navicular Syndrome:** If a history of this syndrome exists or a diagnosis is made, veterinarian and farrier involvement is necessary to facilitate the comfort and shoeing needs of the horse.
3. **Laminitis:** An accurate diagnosis, which may require radiographs, is necessary to determine the shoeing needs of the horse. Proper shoeing, good management and nutrition all play a vital role in foot care

relative to laminitis. “The pain from laminitis can become severe enough to necessitate euthanasia on humane grounds” upon consultation with an equine veterinarian (Equine Code of Practice).

4. **Corrective Shoeing:** May sometimes be necessary depending upon injury and conformation. Consultation with a veterinarian, working in conjunction with a farrier, is recommended.
5. **Environment:** Hoof care can be affected by the environment in which the horse lives. Moisture can soften hooves, and can lead to thrush and other problems, particularly if horses are standing in mud/manure. Cold weather slows hoof growth. Shoeing and trimming considerations must be addressed for each individual horse as an individual depending on , environmental conditions; for example, recommendations may be different for a frozen pasture versus a rocky pasture.
6. **Management:** Basic horse husbandry considerations such as good nutrition, shelter and dry bedding are all important in maintaining good, healthy feet. Some people advocate the use of feed additives for healthy hoof growth; these should be considered on the advice of a veterinarian.
7. **Use Qualified Caregivers:** When a horse is to be shod, a qualified farrier who is collaborating with a veterinarian, should be consulted.



IV. CARING FOR THE GERIATRIC HORSE

The proportion of the equine population living into their 20s and 30s and beyond is growing. Proper care is vital to maintain the active, healthy life of geriatric horses. Rescue/retirement facilities must have knowledge of conditions common to geriatric horses, be able to identify early signs of disease, distress and injury, and work closely with veterinarians in order to provide for the special needs of these animals.

It is imperative to recognize that caring for the geriatric animal is labor-intensive and may involve considerable expense. Despite all efforts, some geriatric horses are unable to have a satisfactory Quality of Life. (At times, difficult decisions concerning euthanasia must be made in consultation with your equine veterinarian, see "Euthanasia," Chapter VII).

Older horses are more likely to experience colic, dental disease, parasitism, tumors, lameness and metabolic disease than younger horses. They tend to have lower body condition scores on the Henneke system than younger horses and may have greater difficulty recovering from injury, starvation or disease.

Dental problems, such as the wearing down of tooth grinding surfaces, may cause a decreased ability to crush whole grains and forage. This may predispose the geriatric horse to colic, choke or reduced intestinal absorption of nutrients. A thorough dental examination should be performed in the older horse at least annually and more frequently depending on the dental issues that arise.

An increased prevalence of metabolic and endocrine diseases in geriatrics, including Equine Cushing's Disease (ECD), places them at higher risk for chronic infections, eye problems and laminitis (founder). Canada has a licensed medication that can improve the quality of life for a horse with Equine Cushing's

Disease (Note: At time of publication, the only licensed medication in Canada is Prascend® from Boehringer Ingelheim).

Musculoskeletal problems are also common in the older horse are often an expression of past injuries and wear and tear. Under direction of a veterinarian, management of arthritis through regular exercise, nutritional supplements and medications can significantly improve comfort for the geriatric horse. Even in the oldest group of horses, movement in a pasture is generally preferred to stall confinement.

Providing Proper Shelter

Standards described in Chapter VI, "Shelter, Stalls and Horse Facilities," should be applied to geriatric horses as necessary to accommodate the older horse's decreased ability to regulate body temperature susceptibility to extremes of heat and cold.

It is essential to protect older horses from heat and/or humidity by providing shade and ventilation. Pastures and paddocks should include natural shade or properly constructed well-ventilated shelters. Stables may require fans. Body clipping may be necessary to promote dissipation of heat from the body. Provision of fresh water and a salt source (loose or salt blocks) are important in hot weather.

Likewise, protection of older horses from extremes of cold through the appropriate

combination of shelter, wind breaks and blanketing is essential. Pastures and paddocks should include natural or constructed shelter to provide a dry environment and protection from wind. Soft footing and deep bedding (but not too deep, as it's harder to move around in) should be considered for older horses with arthritic conditions and other lameness. It can be beneficial to have the horse at a slightly higher BCS of 6-7 during the winter to help provide energy reserves to stay warm. Be aware that blankets left on for prolonged periods of time can hide problems. When blanketing the horse, ensure that you monitor the horse to avoid overheating (for example during the day, compared to drops in temperatures overnight) and to observe any changes in skin condition or body condition over time. It is important to use weight tapes and regular BCS scoring in winter as winter coats can hide weight loss. Once weight loss starts in an older horse, it can be difficult to stop.



Photo Credit: OAEP

A pasture environment is an excellent option for older horses, as turnout promotes beneficial activity. Consistent light exercise regimens are recommended and may improve range of motion and muscle strength. Pasture turnout with friends is preferred over stall rest, because stall rest generally results in increased stiffness and pain. Stall rest should only be used as

directed by a veterinarian. Body weight should be reduced to normal or slightly lighter levels (BCS of 4-5, never less than 4) to minimize mechanical stress on the limbs, and on the recommendation of the veterinarian.

Feed and Water

Standards described in Chapter II, "Nutrition," should be adapted to the special needs of geriatric horses. The body condition and/or actual body weight of older horses should be monitored carefully, because loss of condition is the most common problem in older horses. Loss of body condition, which is harder to regain in older horses than in younger horses, can indicate abnormal and often treatable conditions such as parasitism, dental disease or other underlying illnesses. It is important to realize that "old age itself is not a cause for weight loss" (Equine Code of Practice). Thus, integrated health care for the geriatric horse includes analysis of nutrition.

Current recommendations from the National Research Council's

Nutrient Requirements of Horses for mature adult horses (updated last in 2007) are influenced by several circumstances of the aging horse, including slower metabolism, decreased digestive efficiency and decreased level of energy expenditure. Nutrient requirements of geriatric horses more closely approximate those of weanlings in terms of protein, calcium and phosphorous.

Protein requirements are higher in older horses than in younger adult horses as the ability to digest crude protein is less in geriatric horses. Subsequently, it is suggested that geriatric horses are fed diets containing 14% to 16% crude protein. Loss of muscle mass is a common characteristic of geriatric horses. Although this has been attributed to decreased levels of activity, nutrition has also been

implicated. Leucine, which may stimulate protein synthesis and is relatively high in alfalfa hay, may be useful in preventing loss of muscle mass in geriatric horses.

Fat is an excellent source of calories for older horses and is well utilized with almost no increase of digestive upset compared to energy dense rations containing primarily cereal grains. Commercial grain rations with fat added are available (5 to 8% crude fat content). Another way to increase fat is to add vegetable oil (up to 2 cups per day, by slowly increasing the amount) or rice bran. If protein is insufficient in the diet, soybean meal is an excellent, high-quality protein source for older horses.

While calcium absorption remains consistent with age, phosphorous absorption may be

impaired in older horses, such that phosphorous requirements are relatively higher. In an otherwise healthy but underweight geriatric horse, the ratio of calcium to phosphorous should remain at approximately 1.5:1. The ration typically should be between 0.4 - 0.65% phosphorus and not more than 1% calcium on a dry matter basis. Consult with an equine nutritionist for assistance to ensure the nutritional needs and required balance are met.

Commercial rations designed for geriatric horses are available, and can provide a highly digestible fiber and higher fat content to meet their increased energy needs. An extruded or pelleted feed is more likely than sweet feed or grain to improve body condition, weight gain and blood protein levels. Due to a natural reduction in saliva and dental issues, these

Nutrient requirements of geriatric horses more closely approximate those of weanlings in terms of protein, calcium and phosphorous.

diets may need to be pre-soaked to prevent esophageal obstruction or choke. Fat, rice bran or soybean meal can be added to these diets to further improve fat and protein content. Attention to a dust-free diet can be helpful in managing chronic respiratory conditions in older animals.

Older horses should receive high-quality roughage because of their decreased ability to digest fiber and to chew forage properly. Sweet, young grass is ideal, supplemented with hay for additional fiber. However, access to carbohydrate rich grass may need to be monitored closely in those individuals with a predisposition to founder, as can occur with Cushing's disease or other metabolic conditions.

Hays should be less mature and free of coarse stems, such as mixed hay with 60% legume content. A 100% legume hay, such as straight alfalfa, is not ideal because the protein content may be too high and the phosphorous content is very low, although phosphorous could be supplemented. If chewing is impaired, chopped hay, hay cubes or roughage-containing pellets are alternatives. Soaking hay cubes and pellets in water will make them easier to chew, while decreasing the risk of choke (obstruction of the esophagus with impacted feed). Another roughage alternative for older horses is beet pulp, because of its digestibility and calcium content. It also can be soaked to make chewing easier.

Feed supplements, such as glucosamine and chondroitin sulfate, are sometimes utilized for older horses with arthritic conditions, but lack scientific support. Electrolytes may be appropriate in the performing geriatric horse, as they sweat more at lesser intensity exercise. Probiotic products may also be advocated to

help digestion, however, scientific support for the effectiveness of these products is also lacking.

Water intake should be monitored in geriatric horses. Increased water intake is a sign of some of the more common medical conditions of geriatric horses, along with increased urine production. Older horses may be less inclined to drink excessively cold water; in cold weather, warming the water has been shown to increase water consumption. Feeding water-soaked feeds (at least 2 gallons of water per feeding) will also help increase fluid intake. Addition of 1 to 2 ounces of salt to the feed may also encourage increased water intake but should be done only if the horse has unlimited access to water. Provision of loose salt or salt block is recommended.

Special attention should be given to older horses pastured with other horses to avoid problems arising from age-associated decreasing aggressiveness. Access to feed, water and shelter should be ensured without the need for competition. Ideally, older horses should be pastured with their peers rather than with younger, more aggressive horses.

For Additional Information on Feeding Geriatric Horses, see:

Pugh, D.G. Feeding the Geriatric Horse. AAEP Proceedings 2002; 48, 21-23.

http://www.aaep.org/health_articles_view.php?id=224

"The Aging Horse." Horse Report, 2006, 23(3), 2006.

<http://www.vetmed.ucdavis.edu>

V. SHELTERS, STALLS AND HORSE FACILITIES

Many different types of housing and shelters are used at retirement/rescue facilities; therefore, multiple factors should be taken into account when designing shelters, including individual and diverse climatic and geographic conditions. Local sources of information, such as veterinarians and extension agencies, can be extremely valuable in considering such factors.

Shelters

A shelter, natural or man-made, is mandatory and should provide relief to each individual animal from direct sunlight, wind, precipitation and other inclement weather. The design and use of shelters should promote the health, well-being and good performance of horses throughout all stages of their lives.

All constructed shelters should be structurally safe for horses and personnel. Shelters where horses are located should be constructed with no exposed surfaces or projections likely to cause injury. Shelter design should promote easy and safe handling of horses, as well as ease of cleaning and care. Horses should be provided with a clean, dry area on which to lie. Crowding should be avoided as this increases the risk of injury to horses and there must be room for a subordinate horse to escape any aggression from a more dominant horse (see Code of Practice for specific requirements on space).

Ceilings and support beams in horse-housing facilities should be high enough to permit the horse to stand naturally with a full range of motion of the head and neck without touching the ceiling. Floors in horse stables should be constructed and maintained to provide traction and drainage and prevent injury. Ventilation should be designed to provide adequate air circulation.

Electrical wiring and panels should not be

accessible to horses and should be installed in accordance with applicable electrical codes. Lighting should be provided in a manner to permit effective observation of stabled horses. Alleyways and work areas should be uniformly illuminated. Natural lighting should be provided wherever possible. It is not permissible to keep a horse in darkness in a barn.

Manure and soiled bedding should be removed daily and handled and stored in a manner that has as little negative impact on the surrounding area and the environment as is reasonably possible.

Rescue/retirement facilities should have a designated area for quarantine or isolation purposes. This area should be separated from other holding areas.

An emergency action plan should be developed and posted in the barn, and all staff/volunteers should be aware of the directions. All toxic materials should be stored safely and away from all horses. Further information on developing an emergency plan can be obtained from your local fire department, from the Canada Code of Practice or from your local municipal emergency response planning staff.

Stalls

Stalls or portable corrals should be available to contain horses that may be sick or injured. The stall must be large enough to permit the horse

to move around, lie down and stand up with ease. For a 15 hand horse, the space should be a minimum of 9 m². Bedding should be provided and kept clean, with stalls being cleaned at least once every 24 hours. Horses must have a dry area for lying down and the bedding must be of a type that will not result in

bruising, cuts, toxicities or other injuries. Concrete or hard rubber without bedding is not an acceptable surface for stalls. Good ventilation is always necessary, and it is important in the prevention of respiratory problems (See further requirements on air quality and humidity in the Code of Practice).

VI. PASTURES, PADDOCKS AND FENCING

Pastures are an important aspect of many rescue/retirement facilities. Pastures allow horses to have access to grass as needed, give them room for exercise, and allow them normal socialization. The size and number of pastures and/or paddocks at a facility should be appropriate for the number of horses intended to be kept. Important factors to consider are safety and injury prevention as well as sufficient room to allow plenty of exercise.

Stocking requirements of pastures will vary depending on feed and quality of the pastures. Generally, one or two acres per horse are required, but this varies tremendously. Horses have a natural herd instinct, and as such, will prefer to be with other horses. In addition, pasture containment with proper shelter will serve a facility better than stalls only.

Outdoor Shelter and Shade

Healthy, mature horses are very adaptable and can adjust to different outdoor conditions. Keeping horses outside or provided with frequent hours of outdoor time is encouraged as it improves their health and/or mental well-being. Shelters must be provided to protect them from adverse or extreme weather conditions. If open front shelter or shed is provided, it must provide a minimum space allowance per horse of 11.1 m² (120 ft²) each for the first two horses and an additional 5.6 m² (60 ft²) for every other horse in that paddock or field. Wastes and soiled bedding in the shelter should be removed frequently (Refer to the Code of Practice for more details).

Pasture Management

Horses on pasture or range should have an adequate quantity and quality of feed and

water. Properly maintained pastures may provide all or most of the nutrient requirements of grazing horses. Nutrient content of pastures should be closely monitored and supplemental feed provided when necessary. Salt and mineral supplements should be provided when necessary to supplement specific nutrient deficits in grasses and forage.

To prevent digestive and health problems, horses should be introduced to pasture gradually or cautiously, especially in heavy growing periods such as spring in some areas. Horses on pasture should be inspected regularly, paying close attention during high-risk periods (seasonal changes, introduction of new horses, foaling, etc.).

The pasture size should allow adequate space for horses to canter (unless health issues preclude this).

Application of fertilizers, pesticides, herbicides and manure to pastures should be planned and conducted to minimize risk to grazing horses and the environment. In addition, pastures and range land should be inspected regularly for poisonous plants. Overgrazed land is more likely to have poisonous plants and noxious weeds, increasing the risk to horses. Good pasture management includes rotation, weed control and consideration of stocking density relative to the condition of the pasture. Mud management is important and all horses must be able to have access to a mud-free and well-drained area in the pasture/yard.

Pasture and Paddock Fencing Safety

Pastures and paddocks should be properly fenced to safely confine horses. The suitability of type of fence varies according to the disposition of the horses, as well as stocking density and pasture/paddock size. Horses should be introduced to unfamiliar fenced areas during daylight hours and be monitored to reduce the risk of injury.

All fencing must be properly constructed and strong enough to keep horses confined and fencing and gates must be maintained to minimize risk of injury and to minimize the risk of horses gaining access to public roadways. Barbed wire and narrow gauge high tensile wire, because of their cutting properties, can cause severe injury to horses. These materials are not ideal, even though they are sometimes used for fencing extensive pasture areas. However, they should generally be avoided in closely confined paddocks or small pastures.

Height of fencing should be an appropriate height for the type of horse. This is particularly important for stallion paddocks.

Pastures, paddocks and range should be free

from equipment, machinery, binder twine, debris and refuse that have the potential to cause serious injury. Gates in pastures should be at least 1.22 m (4 ft) wide if they are to be used for horses.

Paddock and Small Pasture Management

Every property in which horses are kept should have a sufficient number of paddocks or pastures to permit separation of incompatible animals. The risk of injury increases when horses are overcrowded. Competition for food, water and space often leads to fighting and subsequent injury.

The number of horses and their grouping in each paddock or small pasture should be appropriate for compatibility and for the ground conditions, taking into account the climatic conditions at the time. For example, rocky areas and steep hills/stream banks/ditches should be avoided for geriatric and debilitated horses.

Paddocks and small pastures should be cleaned regularly and inspected for noxious weeds. Horses will not eat pasture grass or forage that is contaminated with manure. Without regular cleaning the effective grazing area is decreased. Regular clipping of the grass can be beneficial for optimal pasture growth.

Effective parasite control is more difficult in paddock or small pasture environments. Pasture rotation, manure removal and internal parasite control with effective deworming programs are a part of an integrated program of management. Your local veterinarian can help in the development of a specific program to fit individual conditions.

VII. EUTHANASIA

The term euthanasia is derived from the Greek terms “eu” meaning good and “thanatos” meaning death. A good death would be one that occurs quickly with minimal pain and at the appropriate time in the horse’s life to prevent unnecessary pain and suffering.

Justification for euthanization of a horse for humane reasons should be based on both medical considerations as well as current and future quality of life issues for the horse. Although by no means a replacement for consultation with the veterinarian, the appendices contains additional discussion on the decision making process for euthanasia. If the horse is not the legal property of the horse rescue a veterinarian must make the recommendation to have the horse euthanized as per the Ontario SPCA act.

Code of Practice for the Care and Handling of Equines, 2013- Euthanasia Guidelines

www.nfacc.ca/pdfs/codes/equine_code_of_practice.pdf

www.canadianveterinarians.net/documents/euthanasia

The National Farm Animal Care Council (NFACC) has developed the following Euthanasia Guidelines which are identified *within the Code of Practice for the Care and Handling of Equines - 2013*

Owners and managers are responsible for euthanasia decisions, and these decisions should never be made without careful consideration. Horses, donkeys and mules serve their owners in many ways and deserve an end of life that is humane.

Euthanasia can be performed on farm or at an appropriate off-farm facility. When caring for a sick or injured horse, consult a veterinarian to determine when to stop treatment and instead euthanize, taking the following into account:

- what is the likelihood of recovery or return

to an acceptable quality of life?

- how long should the animal be given to recover?
- has the horse become depressed or lethargic? 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?
- have the chances of recovery improved or declined over the course of treatment?

Recommended Practices

- 1) Work with a veterinarian to develop a plan for euthanasia. The written plan should be kept in a known location and include:
 - a) 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
 - b) a schedule for proper maintenance of any equipment
 - c) the protocols for disposal, in accordance with provincial and/or municipal regulations

- 2) 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 behavioral 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 for which the cost of treatment is prohibitive
 - has a transmittable disease, which is a serious health hazard to other horses or humans
 - Or when you are unable to care for the horse and cannot find it a suitable new home.

Timelines for Euthanasia

A key component of euthanasia is timeliness. It is not acceptable to delay euthanasia for reasons of convenience or cost. When euthanasia is deemed necessary, it must be performed without delay, particularly in the case of a severe, traumatic injury. Leaving a suffering animal to die of natural causes (what is known as “letting nature take its course”) is **not** acceptable.

Methods of Euthanasia

The euthanasia method used must be quick, cause minimal pain and distress, and render the horse **immediately** unconscious. (see the Canadian Veterinary Medical Association Position Statement on Euthanasia)

- The following are the only acceptable methods for euthanasia of equines:
 - lethal injection administered by a veterinarian
 - free bullet deployed by a skilled individual
 - penetrating captive bolt deployed by a skilled individual (depending on the model used, a secondary step will be required)
- 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
 - disposal options
 - potential need for sample collection for diagnostic testing
 - the emotional comfort with the procedure for the owner, the person performing euthanasia and any bystanders
- Consider disposal options well in advance as they may impact on the method and location for euthanasia. Refer to the relevant provincial and/or municipal regulations.

Special Considerations for the Insured Horse

Each insurance policy for a horse is a contract between the horse owner and the insurance company and will dictate the specific terms and conditions concerning the payment of a mortality claim. Careful consideration should be given to possible “conflicts of interest” as referenced in the Ethical and Professional Guidelines in the AAEP Resource Guide and Membership Directory.

Special Considerations for Cases Involving Multiple Practitioners

The attending, consulting and referring veterinarians should follow the Ethical and

Professional Guidelines under section IV, "Attending, Consulting and Referring," as described in the AAEP Resource Guide & Membership Directory. Consult the College of Veterinarians for updated information.

VIII: THE BOTTOM LINE –PROTECTING THE HEALTH AND WELFARE OF THE HORSE

Ultimately, the best indicators of proper management of an equine rescue/retirement facility are the physical and emotional health of the horses and the overall improvement in horses previously suffering from disease, trauma or neglect. Unless there is a medical explanation, all horses should regain and maintain an acceptable state of health and well-being with proper care.

Allowing rescued horses to deteriorate as a result of inadequate care, resources or space is no favor to them and can progress to the point of cruelty. Those who take in every animal, regardless of ability to provide care or refusal to recognize when an animal is suffering, are hoarders, not rescuers. All rescue and retirement organizations should periodically re-evaluate their principles, practices,

capabilities and goals with the help of objective, knowledgeable outsiders, especially their equine veterinarians.

The management of each horse must be considered carefully to ensure its Quality of Life and all management procedures for the horse should be designed to increase the chance for a long-term home and successful adoption.

APPENDICES

Appendix 1: Vital Signs

Appendix 2: Horse Health Check

Appendix 3: Recognizing Pain

Appendix 4: Signs of Parasitism

Appendix 5: Signs of Dental Issues

Appendix 6: Signs of Acute Laminitis

Appendix 7: Body Condition Scoring

Appendix 8: Euthanasia and Quality of Life Decisions

Appendix 9: Equine Retirement/Rescue Facility Description

Appendix 10: Veterinary Checklist for Rescue/Retirement Facilities

Appendix 11: Evaluation of Stages of Disability

**Appendix 12: Organizations represented on the Equine
Welfare Information Group**

Appendix 1: Vital Signs in Horses and Donkeys

(from the Canadian Code of Practice, Appendix C)

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
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
Adult donkeys	
Heart rate	36-68 beats per minute
Respiratory rate	12-44 breaths per minute
Rectal temperature	36.2°C-37.8°C
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
General	
The gums should be pink and moist, and should return to that color 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 2: Horse Health Check: A Systematic Method of Examination

(Modified from an article written by Dr. Art King and Gayle Ecker. Copied with permission of the authors)

Every horse person should learn how to check a horse's physical condition for any tell-tale signs of illness, injury, or fatigue. The health check is a critical factor with all competitions, and it is very useful in day to day management as well. Many potentially serious conditions can be picked up at an early stage by this simple series of tests. No sophisticated equipment is required.

A stethoscope, a watch capable of indicating seconds and a thermometer (preferably with clip attached) is all the equipment one needs, along with a basic understanding of the difference between what is normal and abnormal for the various areas of the horse that can be examined. With a little practice, one can examine the horse in less than 5 minutes using a systematic method of examination. Choose an open area such as a large box stall or wide alley way. If the horse is quiet, it can be tied or have an assistant hold the horse for you. You should approach the horse's head from the front and to the left of the horse. First of all, note the horse's general condition and attitude. Is the horse over or underweight? You should be able to feel the ribs when you run your fingers across, but the ribs should not be obvious. Is the hair coat sleek or dull? Is the horse alert or lethargic?

Eyes/Ears/Nose

Check the eyes for redness, puffiness or discharge as this indicates a problem. A glassy-eyed or sunken eyed look is also an indication of a problem as is a partially closed eye. The ears should be alert and moving. Ears



that are slow to respond or that are hanging loosely out to the sides can indicate a problem in the awake horse. The nose should be free of nasal discharge and the lining of the nasal passages should not be red. Check the nostrils for discharge. Normally there is no discharge, or a slight watery, clear discharge may be present. Any bloody, purulent, yellowish, creamy white or greenish coloured discharge is abnormal and should be investigated.

Mucous Membranes/Capillary Refill

Lift the upper lip and look at the gums above the teeth (also called the mucous membranes). Mucous membranes should be a healthy pink, shiny, moist and slippery. If they are pale, dry or tacky this can indicate dehydration. Colours such as pale white, jaundiced, brick red, bluish, purplish, or muddy are indicative of a serious problem.



Next, press your thumb or finger on the gum to “blanch” the area (push the blood out from under the finger) to determine capillary refill time. Upon release of the pressure, count the seconds that elapse while the colour returns. Normal time is up to 1.5 seconds. Delays for 2 to 3 seconds are of concern and delays beyond 4 seconds are serious. Delayed capillary refill time is an indication of reduced blood circulation due to reduced volume (blood loss or dehydration) and/or decreased blood pressure (shock).

Jugular Refill

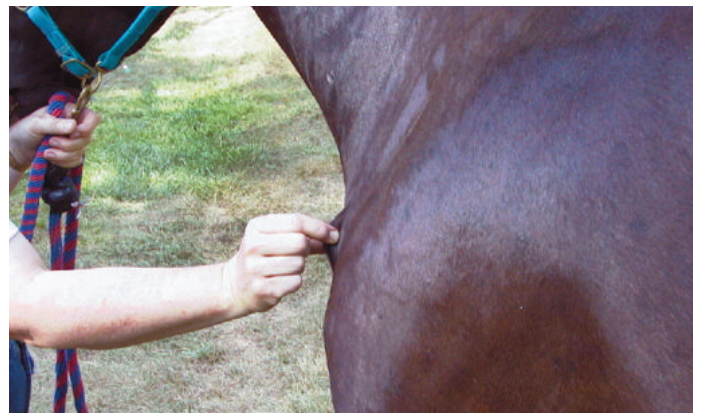


The jugular refill time, like the capillary refill

time, is an indicator of the status of the circulatory system. Find the jugular groove on the side of the neck. Run your thumb along the groove from the top to two-thirds down then gently press your thumb on the jugular groove with enough pressure to squeeze the blood from the vein. The “refill” is seen as the collapsed vein becomes distended as it refills. Watch how fast it “fills”. A refill time of up to one or two seconds is normal. As with capillary refill time, a delay beyond four or five seconds is cause for concern.

Skin Pinch

While dehydration leads to changes in a number of the areas examined, the most common means to quickly check hydration is the skin pinch test. As the animal becomes dehydrated, the skin elasticity decreases due to loss of water from the skin. When the skin on the point of the shoulder is pinched and pulled gently away, it should then snap back quickly upon release. Take a fold of skin between the thumb and forefinger, lift it away from the underlying tissues, twist slightly and release. A skin fold or “tent” that remains for over two seconds indicates dehydration. A delay of 5 seconds is serious. It is important to know the normal skin pinch results on your horse as there can be a variation due to age and breed. For this reason it is important to test the same area of the skin each time to maintain consistency of results.



Heart Rate/Pulse

To take the heart rate or pulse, place the bell of the stethoscope on the chest wall, just behind the elbow. The heart rate is heard as “lub-dup”. Listen for the lub-dup which is one beat. You should hear a clear two-beat sound for each heartbeat. Count the beats for 15 seconds and multiply by 4 to get beats per minute (bpm). Heart rates of 25-40 bpm are normal in resting horses. A persistent elevated resting heart rates (i.e., not from temporary excitement as may happen when the vet comes in the stall) would be cause for concern. A fit horse should recover to a rate of 64 to 68 bpm within 10 minutes of the exercise (extreme exercise may take longer for the heart rate to recover). After exercise has stopped, the heart rate should drop steadily. Higher rates during recovery from exercise may indicate over-work, fatigue, heat stress, dehydration, pain or illness.



understanding of normal gut sounds. Abnormal sounds such as pinging, ringing, or echoes of water dripping into a well would be cause for concern. The sounds can vary not only in quality and character but also in frequency. The absence of gut sounds is very serious and usually warrants treatment if no improvement is noted within 30 minutes.



Gut Sounds

Gut sounds are evaluated with the stethoscope by listening over the upper and lower flank on both left and right sides. Normal gut sounds are heard as bubbling and gurgling roughly every 5-10 seconds. The owner should practice listening to normal horses to get an

Respiration Rate

To measure the respiratory rate, watch the flank movement or the flare of the nostrils. Count the number of breaths the horse has taken in 15 seconds and multiply by 4. Normally, the respiratory to heart rate is one to four at rest (about 8 - 15 breaths per minute). Elevated respiratory rates may be observed in excitable horses or during hot/humid weather when the horse is trying to cool itself by panting. Breathing in and out should be regular and without effort or sound. Laboured breathing, wheezing, grunting, groaning, coughing or other sounds indicate a problem. The rate and depth of respiration can vary widely among horses. Because so many factors affect the respiratory rate at any one time, it is not possible to correlate respiratory rate and depth to physical fitness.

Checking the Body



The withers, shoulders, back, croup/rump and girth areas should be palpated for evidence of sores, pain, bumps and tight musculature.

The aim is to detect any pain, sensitivity, or tightness that would impair the horse's athletic ability or cause pain and suffering during exercise. The left foreleg is palpated for pain, swelling or heat, especially in the joints, ligaments and tendons, and splint area. Lift the foot and check the condition, type, and general fit of the shoe. Note any cracks, founder lines, etc. that may be evident on the hoof. Repeat this examination on the left hind limb and then go to the right fore and right hind limb.

Heat/Pain/Swelling

Evidence of heat or swelling evident in any area on the body is cause for concern. If the horse is in pain or exhibits a response such as pulling away due to pain, this needs to be investigated by a veterinarian.

Temperature

To take the temperature, place the lubricated thermometer into the anus and gently press it against the wall of the rectum. Normal temperature for a resting horse is 37.5 to 38°C (99.5 to 100.5°F). Rectal temperature of > 40.5°C (104.9 F) is serious. If the horse has been exercising, it may increase to 39.6°C (103.3 F) but should not exceed 40.5°C (104.9 F) and

should fall quickly when exercise has stopped. Remove the thermometer, note the temperature, and check the tail and anal tone. The anus should constrict immediately in response to slight digital pressure. The tail should clamp in reflex when first touched. A flaccid tail and loose anus are found in exhausted horses as well as in some nervous system diseases.



Appetite and Water Consumption

Normal horses eagerly anticipate the daily feeding. Horses that exhibit disinterest in their food, become picky eaters or go off feed completely may be developing a problem and this needs to be investigated. The horse will generally drink roughly equivalent amounts of water daily, with adjustments for temperature, diet, seasonal and exercise changes. It is important to monitor water consumption daily for optimal health.

Manure/Urination

The manure should be formed into moist balls. If the manure is too dry, or too loose, this may be an indication of a problem or change in diet, water consumption, or other factors. The amount of manure passed each day is also important to notice. The amount, colour and frequency of urination should be noted as well as posture while urinating.

Skin/Mane/Tail

The skin should be observed for flaking, oozing or signs of irritation. Hair loss should also be noted. Look for signs of tail rubbing.

Conclusion

Compare the results of your assessment to the colour-coded chart called The Horse Health Check. When all the parameters are in the green zone, then you have a healthy horse with no signs of a problem. If any of the parameters are in the Yellow zone, then you need to slow down and/or stop your horse so that it can be further assessed or to give it appropriate recovery time. If any of the parameters are in the red zone, you need to contact a veterinarian as soon as possible so the horse can medically assessed, as there could be a serious condition present and medical assistance is required. Have the complete results of the Horse Health Check written down and available so you can report this to the veterinarian.

You are now on your way to being an educated horse owner who will be able to pick up warning signs before they become more serious.

(Information provided in this article is intended to assist the horse owner and is not for medical diagnosis. Discuss your findings with your veterinarian. For further information, please contact Equine Guelph. Phone: 519-824-4120, ext. 56678 or e-mail: gecker@uoguelph.ca. This material is protected and may not be reproduced without permission of the authors. For more learning opportunities, see www.EquineGuelph.com).



EQUINE GUELPH
helping horses for life

The Horse Health Check



Eyes

Bright, clear
Glassy
Fixed stare,
sunken eye

Wounds/Saddle/Girth

No visible marks
Heat/swelling/tenderness
Pain/raw/bleeding

Muscles/Back

Relaxed
Tight or tender
Very tight or tender



Jugular Refill

1-2 seconds
2-3 seconds
4+ seconds

Skin Pinch

0-1.5 seconds
2-3 seconds
4+ seconds

Respiratory Rate

Relaxed/regular
Panting, inversion
Laboured, abnormal

Capillary Refill

0-1 seconds
2-3 seconds
4+ seconds

Mucous Membranes

Pink, moist
Pale, tacky
Dry, purple, blue

Attitude

Bright/eating/drinking
Depressed/lethargic
Dull, not interested, absence of thirst,
appetite, urination or defecation

Gut Sounds

Normal sounds
Reduced/increased
Absent or abnormal sounds

Heart Rate

(after stresses exercise)
<68 in 10 minutes
68 in 10-30 minutes
>68 in 30 minutes

Gait

No abnormal gait
Slight gait change
Consistent gait change
or non-weight bearing

Rectal Temperature

<38.6 °C pre-ride
<39.6 °C during ride
39.5-40.4 °C during ride
>40.5 °C

Anal Tone

Tight
Slightly loose
Anus/pens relaxed

Joints/LEGS

No heat or swelling
Heat/swelling
Pain/raw bleeding

Impulsion

Free, willing, eager
Stumble/short stride
Stiffness/flopping

For more information please visit, www.equineguelph.ca & www.equineveterinarians.ca

Developed by Art King, DVM and Gayle Ecker, not to be copied without written permission

Appendix 3: Recognizing Pain

(adapted from the OSPCA training manual for equine welfare assessment)

Horses that are injured, abused, suffering from disease or neglect may be in pain, however, as the horse is a prey animal, they may instinctively “hide” the pain. Injury and colic may cause acute pain whereas chronic pain is likely in cases of neglect, starvation or longer term abuse or lameness, long standing disease or illness and other scenarios. Many horses that are in pain may not show it in an “obvious” manner until the pain becomes severe, making it difficult to detect pain and the degree. A nervous or fearful horse may show few or no signs of pain when humans are near.

A horse in pain may show some or all of the following behavioural signs:

- appear anxious, restless or lethargic and unwilling to move, or isolating itself from others
- squinty eyes or wider eyes
- have dull or unfocussed eyes
- “protective” behaviour of the injured/painful area
- show limp ears and little response to sounds or movements

Other behavioural cues may include:

- pain in the head region may result in head tossing, head shaking, head pressing against a wall, or avoidance when a human reaches towards the head
- pain in the stomach region (a sign of colic) may result in the horse looking anxious, restless, pawing with front legs, looking at belly, kicking up at stomach with the back legs, an awkward tail carriage, “stretching” as if about to urinate, rolling and thrashing, and there may be abdominal distension

- pain in a leg may be seen as the horse moving with a slight limp that may be irregular to a definite limping where the horse is attempting to minimize weight bearing on the affected leg, to “three-legged” lame where the horse will not put the foot down. The horse may also “guard” the leg if you move your hands near the painful leg by lifting it away or moving away from you (See the AAEP Grades of Lameness in the Appendix for description of degrees of lameness). Abnormal motion can be seen at a walk or a trot. A typical lameness assessment may include the veterinarian trotting the horse away and then towards him/her, or on a circle to assess the gait, if it is not obvious at the walk.
- pain in the back may be exhibited by the horse moving away or attempting to bite the handler when the back is touched or girth is tightened, flinching down or away if pressure is placed on the withers, back or rump area, an abnormal carriage of the tail, and apparent lameness in a leg as the horse attempts to shift its movement to avoid the pain. The horse may also stand in an awkward position with the back arched or the hind legs stretched out or tucked under, and the head may be held up higher or lower than usual.
- a horse in pain may also exhibit signs of sweating (inappropriate to the conditions such as sweating in a cool barn, or without previous exercise) and the heart rate may be slightly or significantly elevated above resting (generally 25-40 bpm is normal at rest). Resting heart rates of 60 indicate that pain/distress is present and rates closer to or above 80 are of grave concern.

Respiratory rate may be elevated, panting, irregular or laboured.

- a horse that is lying down and is reluctant to get to its feet (persistent recumbency) is also in serious condition and may be ill, in pain, or in shock. A horse that is unwilling to move, or does not move away as you would expect for normal behaviour, may also be exhibiting signs of pain.
- a horse in pain is often off feed and water and shows little or no interest in eating, or may eat very slowly.

LAMENESS

The lame horse may exhibit varying degrees of gait change depending on the severity and pain of the lameness. It can be very subtle with a minor “head bob” to a complete gait change or refusing to bear weight on the affected leg. Any lameness will be most easily observed while the horse is trotting however it is important to note that lameness obvious at the walk is generally a more serious condition. The

following is a description of the severity of lameness, developed by the American Association of Equine Practitioners.

Lameness Scale developed by the AAEP: (0-5 scale)

0. Lameness not perceptible under any circumstances.
1. Lameness is difficult to observe and is not consistently apparent, regardless of circumstances (e.g. under saddle, circling, inclines, hard surface, etc.).
2. Lameness is difficult to observe at a walk or when trotting in a straight line, but it is consistently apparent under certain circumstances (e.g. weight-carrying, circling, inclines, hard surface, etc.).
3. Lameness is consistently observable at a trot under all circumstances.
4. Lameness is obvious at a walk.
5. Lameness produces minimal weight bearing in motion and/or at rest or a complete inability to move.

Appendix 4: Signs of Parasitism

Parasitism is a common problem for horses that have been neglected. Veterinarian intervention is required to help assess and treat parasitism in horses. Great care must be taken when treating for parasitism as improper treatment can increase the risks for the neglected horse.

The following may indicate parasitism:

- dull, dry hair coat
- weight loss and decreasing body condition score
- broken tail hairs and rubbing of the tail area
- “pot belly” appearance, especially in foals
- watery stool/diarrhea

- neurological issues
- skin conditions (sores, loss of hair, scabs, etc.)



Appendix 5: Signs of Dental Issues

(adapted from the OSPCA training manual for equine welfare assessment)

Horses arriving at rescue facilities frequently have dental issues.. The teeth in the horse continuously erupt, pushing up through the gum (or down in the top set of teeth - i.e., they do not “grow longer”).

Dental problems in horses are common and can cause great pain. Sharp edges on the teeth from uneven wear can cause sores on the tongue or cheeks. Teeth can become infected and packed with feedstuffs. Any suspicion of dental issues should be reported to the equine veterinarian, as they can be very painful and quickly result in other problems if left unattended.

The most common indicators of pain in the mouth or other dental issues may include:

- change in eating behaviour including difficulty eating, very slow eating
- “quidding” or dropping food, avoiding hard feed, excessive “mouthing” of feed
- repetitive or aversive behaviours
- weight loss despite good feeding program
- longer hay pieces than normal in the manure
- discharge from eyes or nostrils or excessive drooling and bad breath
- lumps on jaw, and sensitivity in the jaw/cheek area, and may be able to feel heat/warmth
- unusual movement of the jaw/head while eating, such as extending and/or twisting the head while chewing

Appendix 6: Signs of Acute Laminitis

Laminitis can be extremely painful for the horse and requires veterinary assistance if there is any suspicion of laminitis. Signs of laminitis may include:

- heat can often be felt in one or both front and/or hind hooves
- the horse may stand with the back legs tucked under and the front legs stretched out may be trying to reduce weight on the front feet; the back muscles over the loin are often tense and may be painful upon palpation
- reluctance to move forward, shifting of weight from one front foot to the other to relieve the pain or moving gingerly when walking or short-strided when walking or trotting
- lying down more frequently to get weight

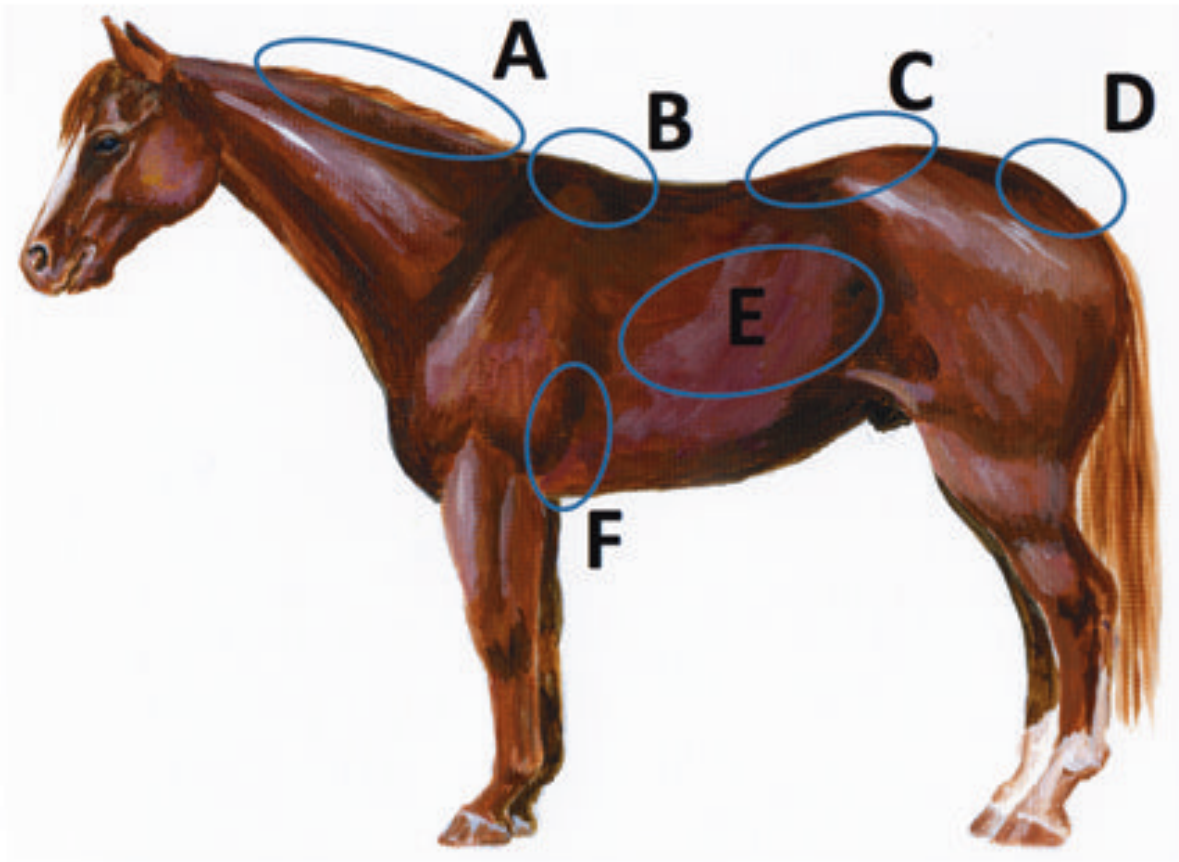
off the painful feet

- elevated digital pulse (strong or “bounding” pulse)
- a distorted hoof shape or “rings” may indicate past and/or chronic laminitis
- increased heart rate at rest due to pain



A horse that stands in the above position, or with the back legs tucked under, is showing signs of pain, and should be fully evaluated by a veterinarian at the first possible opportunity.

Appendix 7: Body Condition Scoring



Key to 6 Areas outlined in the diagram:

A – Along the neck

B – Along the withers

C – Loin Area and Crease down the back

D – Tailhead (area above and around the attachment of the tail)

E – Ribs

F – Area behind the shoulder/elbow

This numerical condition scoring system provides a consistent measure of the degree of body fat in horses of various breeds and sizes.

Condition Descriptions Score

- 1 **Poor:** Animal extremely emaciated. Spinous processes, ribs, tail head and hooks and pins projecting prominently. Bone structure of withers, shoulders and neck easily noticeable. No fatty tissues can be felt.
- 2 **Very thin:** Animal emaciated. Slight fat covering over base of spinous processes, transverse processes of lumbar vertebrae feel rounded. Spinous processes, ribs, tail head and hooks and pins prominent. Withers, shoulders and neck structures faintly discernible.
- 3 **Thin:** Fat build-up about halfway on spinous processes, transverse processes cannot be felt. Slight fat cover over ribs. Spinous processes and ribs easily discernible. Tail head prominent, but individual vertebrae cannot be visually identified. Hook bones appear rounded, but easily discernible. Pin bones not distinguishable. Withers, shoulders and neck accentuated.
- 4 **Moderately thin:** Negative crease along back. Faint outline of ribs discernible. Tail head prominence depends on conformation, fat can be felt around it. Hook bones not discernible. Withers, shoulders and neck not obviously thin.
- 5 **Moderate:** Back level. Ribs cannot be visually distinguished but can be easily felt. Fat around tail head beginning to feel spongy. Withers appear rounded over spinous processes. Shoulders and neck blend smoothly into body.
- 6 **Moderate to fleshy:** May have a slight crease down back. Fat over ribs feels spongy. Fat around tail head feels soft. Fat

beginning to be deposited along the sides of the withers, behind the shoulders and along the sides of the neck.

- 7 **Fleshy:** May have crease down back. Individual ribs can be felt, but noticeable filling between ribs with fat. Fat around tail head is soft. Fat deposited along withers, behind shoulders and along the neck.
- 8 **Fat:** Crease down back. Difficult to feel ribs. Fat around tail head very soft. Area along withers filled with fat. Area behind shoulder filled in flush. Noticeable thickening of neck. Fat deposited along inner buttocks.
- 9 **Extremely fat:** Obvious crease down back. Patch fat appearing over ribs. Bulging fat around tail head, along withers, behind shoulders and along neck. Fat along inner buttocks may rub together. Flank filled in flush.

Recommendations for Assigning Scores

- Scoring is based on visual appraisal and hands on scoring (particularly in scoring horses with long hair) of horses.
- Age, conformation differences between breeds or types do not affect scoring when all criteria are applied.
- Muscle tone should not be confused with fatness. Scores can be assigned in half-point increments.

Each area should be scored separately, then all six values added up and divided by 6 to get the overall score. Horses can vary in score within the six areas so it is necessary to obtain the average score for higher accuracy and monitoring over time.

(Source: Henneke et al Texas A&M 1983)

Important Notes on Body Condition Scores:

BCS 1 - Horses in a body condition score of 1 are critical cases of prolonged starvation, neglect and/or disease. No fatty tissue can be felt on the body and all reserves have been used up. Immediate veterinary care is required to determine the next steps. It is highly likely that this horse is in immediate danger of dying. A horse in this condition should not be moved unless with consultation or supervision by a veterinarian.

BCS 2 - A horse in a condition score of 2 is in serious shape, from long-term malnutrition, dehydration, disease and/or illness. Immediate veterinary assistance is required.

BCS 3 - All ribs can be seen on a horse with a score of 3. Veterinary consultation is required for a horse in a condition score of 3 as the horse does not have adequate fat stores to be healthy. Stallions may drop to a score of 3 by the end of the breeding season if not carefully managed, and below 3 there will be impairment of the reproductive capacity. Horses on winter pasture will lose condition and they have not enough reserves to maintain body temperature.

BCS 4 - This is the minimum acceptable scores for horses, but they will not be able to handle any illness or stress safely. Horses that are 4 or less if not working will have varying degrees of malnutrition. Broodmares at 4 or less will have problems with reproduction and producing adequate milk, and, if lactating, will quickly lose more weight with a nursing foal at side. Horses in race training or endurance competition may be a 4.5, as they are fit and muscled but will not have much fat on the body due to the training schedule, and will not be able to thermoregulate in the winter or in cold/rainy conditions. A highly-fit muscled horse at a BCS

of 4 is very different from a malnourished, underfed or sick horse that has become a BCS of 4, so it is important to learn to differentiate.

BCS 5 - This is the ideal BCS for most horses, including broodmares and stallions and most performance horses. The average performance horse is usually in this range with a blended overall smooth body.

BCS 6 - Breeding stallions can be at a 6-7 at the start of the breeding season as they generally lose weight over the season. Horses on pasture over the winter may start at a score of 6 or 7 as there may be loss over the winter depending on access to feed/forage. This is the ideal for mares going into the breeding season and a typical good score for horses on pasture or for pleasure horses. It is not ideal if higher athletic performance is expected.

BCS 7 - This is adequate condition for mares going into the foaling season, as they will lose condition with foaling and nursing. Horses in work should not be at this level as it imposes more stress on the supportive tissues and thermoregulation in the heat becomes more challenging, particularly with humidity. It can be acceptable for horses that are wintering outside.

BCS 8 - The ribs are difficult to feel and the crease down the back is easily viewed (think of it having the ability to "hold water" as the crease is deep). Inner thighs are rubbing together. Broodmares should not be allowed to reach this score as this is unhealthy for the mare and increases joint and skeletal stress due to the added weight on top of the foal weight. Breeding performance for the stallion can be compromised at 8 or higher. This puts a great deal of stress on the locomotor structures and predisposes a horse to lameness as well as greater heat stress.

BCS 9 - All definition of muscles and contours have been lost. A horse in a BCS of 9 is at very high risk of disease, injury and thermoregulatory issues in the summer heat/humidity. The crease down the back will actually "hold" water (frequently resulting in "rain rot" in the skin) and the inner thighs are pressed together when standing square. This is the result of little or no exercise and extreme overfeeding of calories and predisposes the horse to many health risks from the extreme obesity.

(Notes compiled from several sources and extension notes and adapted from the **OSPCA training manual for equine welfare assessment**.)

Note: Body Condition Score posters are available from Equine Guelph and make an excellent reference source for the staff or new owners.

Appendix 8: Euthanasia and Quality of Life Decisions

(adapted from the *OSPCA training manual for equine welfare assessment*)

As a caretaker of horses, one of the most important responsibilities that you take on is the responsibility for the humane ending of life. When a horse is suffering when quality of life is compromised or when proper care cannot be provided, a decision for euthanasia may be necessary in consultation with the attending veterinarian.

The term 'euthanasia' is derived from Latin, "eu" = good, "thanatos" = death. It means inducing humane death in an animal. The primary goal of euthanasia is to quickly and humanely end the suffering of the animal. Safety of those attending the procedure is also of the utmost importance. Techniques for euthanasia should result in rapid loss of consciousness and loss of brain function followed by cardiac or respiratory arrest. They should occur with minimal pain and distress (AVMA, 2007).

Transportation of Horses

There are times when it may seem appropriate to move horses to a different location. Before a horse is moved from the premises, the horse must be assessed to see if it is suitable for transport. If in any doubt, consult with an equine veterinarian.

The transport of horses is covered by the Health of Animals Regulations and enforced by CFIA (more detailed information about the transportation of horses can found in the Equine Code of Practice).

There will be situations when it is not recommended to move horses.

Moving a non-ambulatory horse (one that cannot stand or move unaided) is a difficult task to do humanely. If moving the horse is necessary for veterinary treatment, it must only be done with consultation of the attending veterinarian using specialized equipment. If this cannot be achieved or if the horse has little chance of recovery and freedom from pain, then onsite euthanasia is the humane and only acceptable course of action.

Do NOT Transport A Horse if:

- it cannot be treated for any reason (a horse that has little chance of recovery should be euthanized)
- it cannot stand unaided or is non-ambulatory, unless under direct supervision of an attending veterinarian who is able to facilitate the humane movement of the horse for treatment
- the journey will cause undue suffering due to illness, injury or any other infirmity
- a pregnant mare is likely to start foaling during the transporting (veterinary consultation may be needed)

Further resources:

Canadian Veterinary Medical Association
Position Statement on Euthanasia
Equine Code of Practice – Chapter 10
Euthanasia

Appendix 9: Equine Rescue/Retirement Facility Description

BUSINESS CONTACT INFORMATION			
Name & Title:			
Organization Name:			
Phone:	Fax:	E-Mail:	
Address:			
City:		Prov:	Postal Code:
Date Organization Commenced:			
Sole Proprietorship:	Partnership:	Corporation: Not For Profit: Neither of the Above:	Charitable No.:
MANDATE/OBJECTIVES			
FARM PROPERTY INFORMATION			
Rented:		Owned:	Donated:
Landlord/Property Owner Name:			
Telephone:	Fax:	E-Mail:	
Address:		Phone:	
City:		Prov:	Postal Code:
Acreage:	Paddocks:	Stalls:	
Liability Insurance Coverage:			
Insurance Company Name:			
BUSINESS/TRADE REFERENCES			
Veterinarian Name:			
Address:			
City:		Prov:	Postal Code:
Phone:	Fax:	E-Mail:	
Farrier Name:			
Address:			
City:		Prov.:	Postal Code:
Phone:	Fax:	E-Mail:	
Feed Supplier:			
Address:			
City:		Prov:	Postal Code:
Phone:	Fax:	E-Mail:	

FINANCIAL

How is the Rescue/Retirement Facility Financially Supported?

Public Donations:

Adoption Fees:

Corporate Funding:

Fundraising:

Other:

OPERATIONS

Who are the caregivers for the animals?

Volunteers:

Employees:

Other:

ADDITIONAL INFORMATION

SIGNATURE

Signature:

Name:

Title:

Date:

Appendix 10: Veterinary Checklist for Rescue/Retirement Facilities

Note: This checklist is provided for use by a veterinarian when evaluating the facilities available at an individual rescue or retirement.

Scoring System for Checklist:

Excellent – 5

Good – 4

Adequate – 3

Fair – 2

Inadequate – 1

(Add specific comments as needed.)

Name of Facility: _____

Address: _____

Primary Contact: _____

Telephone: _____ Fax: _____

Name of Veterinarian: _____ Phone: _____

Name of Farrier: _____ Phone: _____

I. Equids

Number at facility: _____ Maximum capacity: _____

Overall appearance and health: _____

II. Preventative Care and Basic Health Management

___ Parasite Control Program *(Please list protocol and products used)* _____

___ Vaccination Program *(Please list protocol and products used)* _____

___ Dental Care *(Please provide plan)* _____

___ Emergency First Aid Kit *(Please list contents)* _____

___ Health Records System _____

___ Injury Protocol _____

III. Feed Program

- ___ Hay _____
- ___ Pasture _____
- ___ Grain _____
- ___ Supplements _____
- ___ Storage of Hay, Grain & Supplements _____
- ___ Free Access to Hay _____

IV. Water

- ___ Indoor water supply: ___ Buckets ___ Automatic Waterers
- ___ Availability _____
- ___ Cleanliness _____
- ___ Outdoor water supply: ___ Tanks ___ Automatic Waterers ___ Naturally Occurring
- ___ Availability _____
- ___ Cleanliness _____
- ___ Please list all indoor/outdoor water sources: _____

V. Pastures and Paddocks

- ___ Cleanliness _____
- ___ Available for Turnout _____
- ___ Access to Feed and Water _____
- ___ Size _____
- ___ Division of Horses _____

VI. Fencing

- ___ Type _____
- ___ Condition _____
- ___ Safety _____

VII. Facility

- ___ Barns _____
- ___ Stalls _____
- ___ Size _____
- ___ Number _____
- ___ Isolation/Quarantine Area _____
- ___ Run-in Sheds _____

___ Living Quarters for Workers _____
___ Personnel Present at Facility at All Times _____

VII. Farrier

___ Regular Visits _____
___ Quality of Care _____

VIII. Horse Transportation

Please describe modes of transportation for horses available at this facility (van, truck trailer, etc.):

IX. Equipment Condition

___ Tack _____
___ Buckets _____
___ Brushes _____
___ Hoses _____
___ Hay Racks _____
___ X. Environment _____
___ Safety _____
___ Cleanliness _____
___ Bedding _____
___ Manure Removal _____
___ Fly Control _____

Additional Veterinary Comments:

Farm Veterinarian Print Name : _____ Date: _____

Signature: _____

(Source: The Humane Society and Animal Welfare Institute)

Appendix 11: Evaluation of Stages of Disability

(Sourced From: <http://www.vetmed.ucdavis.edu/ceh/docs/special/pubs-Sanctuary-bkm-sec.pdf>
**EQUINE SANCTUARY & RESCUE FACILITY GUIDELINES, SCHOOL OF VETERINARY MEDICINE
UNIVERSITY OF CALIFORNIA, August 2009)**

Evaluation of Stages of Disability

In general, horses that have normal ambulatory movement (M) capability, are eating (E) and drinking (D), and have stable body weight (W) are considered healthy. Observation should also be made within the horse's environment for their ability to lie down and get up in the pasture or area of confinement. Short-term conditions which can produce illness or lameness need to be diagnosed and those conditions with a favorable prognosis for cure should be treated by the attending veterinarian. Their guidance should determine whether on-site short-term treatments or hospitalization with acute care measures are appropriate for the resolution of each individual case. Rescue facilities should have a small treatment area and individual stalls assigned for medical treatments to insure the proper care of horses treated on-site.

The health status of geriatric or medically compromised horses may sometimes degenerate to levels which are inconsistent with humane care and sustenance of life. Consequently, a predetermined experienced and knowledgeable individual should be identified who can work in conjunction with a veterinarian to assess horses when there is a question raised as to their ability to live a life without pain and/ or severe physical restrictions. Each case must be evaluated carefully and individually as a degree of subjectivity is often an unavoidable part of the decision making process. Often a horse may have to be closely observed and monitored for a period of time with multiple and sequential

evaluations to determine the magnitude of a disability and its consequences. An equine sanctuary or rescue facility should never become a hospice for horses that are severely infirmed, in chronic pain or for those where their humane continuance of life is not sustainable. Animals whose health status puts them in such a category should receive careful consideration for a humane end of life. Modern veterinary medicine has the ability to humanely end the life of an animal whose pain and suffering cannot otherwise be alleviated. "While medicine aims at restoring or maintaining healthy living, similarly, it is also conceptually part of the veterinarian's duty to end suffering totally erosive of the animal's quality of life." (Rollins, 2006).

Long-term Survival Evaluation and Care of Geriatric Horses

Regardless of the horse's age in years, the physical criteria of normal movement, eating, drinking, and normal weight (MEDW) should be the basis of evaluation of a horse's general state of well-being. Additionally, the ability to lie down and get back up without significant difficulty is especially important in the older horse. Geriatric horses may lose some weight or appear, physically different due to redistribution of fat and the normal ventral curvature of the spine that occurs with aging, but if the other components of MEDW are present then quality of life is presumed to be adequate for their continued maintenance within the rescue facility or sanctuary. Regular assessments of these basic criteria should be used. In general older horses need more

attention to hoof care, dental care, parasite control, and segregation from aggressive horses which may prevent them from eating hay placed in group feeders or pasture. Signs that an older horse has reached an end point vary but the use of MEDW is the basic assessment criteria. Additionally, frequent veterinary health examinations must be part of the routine care with geriatric animals so that early signs of metabolic organ failure or disease will be recognized and adequately addressed. Failure to attend promptly to diseases common to older horses can lead to unnecessary suffering and premature loss of life.

Decision Tree for the Timing and Need for the Humane End of Life

There are two instances where euthanasia of a horse needs to be considered. The first is an emergency setting involving a painful, acute-onset condition such as a fracture, head or spinal trauma and recumbency, severe colic, severe body wound, or penetrating wound to a joint. The second is a chronic longer-term problem which may be progressing to a situation that is erosive to the quality of life or involves uncontrollable pain.

The emergency situation requires an immediate veterinary response and prompt evaluation and consideration for euthanasia. If immediate veterinary attendance is not possible, experienced farm managers, animal control officers, or others who have had training to certify them in the use of emergency euthanasia of horses may perform euthanasia on an animal if it is a clear cut situation with massive suffering and/or the impossibility for recovery.

**Specific information regarding emergency euthanasia procedures can be found at: www.vetmed.ucdavis.edu.

[edu/vetext/animalwelfare/euthanasia/emergencyEuth_horses2-2pdf](http://www.vetmed.ucdavis.edu/vetext/animalwelfare/euthanasia/emergencyEuth_horses2-2pdf)

In chronic conditions, the decision to end the life of a horse which has slowly progressed is much more difficult. While quality of life is always the primary consideration economic factors can also have influence. If a very old or infirm animal cannot be maintained properly due to lack of the financial ability to sustain care, then euthanasia, may be a reasonable option. There is no standard flow chart or set of rules for decision making other than attempting to answer the following questions:

How much suffering is the horse going through? What, if any, are the chances for recovery? What will be the veterinary costs of recovery? How much will it cost to maintain the debilitated animal?

Can the care needed for the horse's condition be provided and maintained? Will other animals under the care of the facility be negatively affected by the commitment of time and expense to this one horse?

Does the horse not meet MEDW standards for normal life in spite of the fact that it has been adequately treated for an extended period of time?

Table 4 MEDW Criteria Expanded for Chronic Conditions

Movement (M)

Horses are able to walk, trot, lie down and get up without substantial lameness or lack of weight bearing on all four limbs. In veterinary medicine, lameness is graded on a 5-point scale with mild conditions starting at a grade of 1 progressing to total lack of weight bearing graded a 5. When a given horse must constantly struggle to move, its condition may

very well have progressed to a point where euthanasia should be considered.

Eating (E)

Horses must be able to eat long stem hay, processed feed pellets or cubes, and/or supplements. A loss of appetite, a general disinterest in feed or the physical inability that prevents chewing and swallowing are all signs for concern. If eating desire or ability is severely compromised and dental or other conditions cannot be corrected, then euthanasia may be considered.

Drinking (D)

Horses must be able to easily seek, move towards, and consume appropriate amounts of water daily for proper fluid balance and digestive function. Failure to consume adequate amounts of water leads to a rapid and dangerous degeneration of health. Horses with a physical or neurological impairment which prevents them from obtaining adequate water consumption should be considered for euthanasia.

Weight (W)

Horse's body condition scores (BCS) will vary with time of year, age, and response to a medical condition. An older, skinny horse that is eating, drinking and moving is not a reason for euthanasia. Deteriorating body weight and condition as the result of old age or an ongoing medical condition will lead to weakness and inability to comfortably survive. Horses which arrive at this state should be considered for euthanasia.

(**Note: More information on euthanasia can be found in the Canadian Code of Practice)

Appendix 12: Organizations represented on the Equine Welfare Information Group

Equestrian Canada
Equine Guelph, University of Guelph
Ontario Equestrian Federation (OEF)
Ontario Association of Equine Practitioners (OAEP)
Ontario Harness Horse Association
Ontario Horse Racing Industry Association (OHRIA)
Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA, Health and Welfare Branch, Horse Racing Industry Transition Branch)
Ontario Ministry of Community Safety and Correctional Services
Ontario Racing Commission (ORC)
Ontario Society for the Prevention of Cruelty to Animals (OSPCA)
Ontario Veterinary College (OVC)
Ontario Veterinary Medical Association (OVMA)
Whispering Hearts Horse Rescue

