HORSES 101

E-book for horse owners & care takers

EQUINE GUELPH
helping horses for life™

STABLE MANAGEMENT AND GENERAL CARE

The Five Freedoms

The concept of the internationally recognized Five Freedoms, providing animals with good welfare, originated with the 1965 UK Brambell report. The Five Freedoms were later expanded upon by the Farm Animal Welfare Council (FAWC) of the UK and represents the welfare of an animal in both its physical and mental state. These codes have been formally recognized by the World Organization for Animal Health (OIE), including Canada.

1. Freedom from Hunger and Thirst
2. Freedom from Discomfort
3. Freedom from Pain, Injury, or Disease
4. Freedom to Express Normal Behaviour
5. Freedom from Fear and Distress

Top Five Goals for Equine Welfare

Through the science of animal welfare combined with the Five Freedoms, great improvements have been made in recognizing the needs of a horse for a high quality of life, such as:

1. Provide access to fresh water, forage and feed to ensure proper health. It's a necessity in life.
2. Make available an appropriate environment, including access to shelter, to protect them from the elements throughout the year.
3. Provide a rapid diagnosis for sickness or injury and proper medical treatment. This would include an appropriate parasite program, inoculation against disease, and dental care.
4. Allow sufficient space, turnout, and companionship thus allowing the horse to express normal behaviour.
5. Ensure proper conditions and treatment that avoid mental suffering to protect from fear and distress. Highly stressed horses suffer an increased susceptibility to disease.

Be a responsible horse owner. Should you decide that you can no longer properly care for your horse, consider rehoming it to a knowledgeable horse enthusiast, a therapeutic riding center, horse rescue or sanctuary. Should your horse become incapacitated and cannot recover, ensure it a humane end through euthanasia by a licensed veterinarian.

Explore controversial and sensitive issues surrounding the use of horses and gain awareness of welfare issues with the next online offerings of Equine Guelph's Equine Welfare courses.

The Horse Health Check - A Systematic Method of Examination

(Written by Dr. Art King and Gayle Ecker. Not to be copied without written 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. A complete examination involves two parts: an examination of the horse at rest and in motion.

The Horse at Rest

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? Since a temperature reading with a conventional mercury bulb thermometer takes about 1 minute, time can be saved if the thermometer is placed in the rectum and restrained there with the clip attached to the tail while continuing with the examination.

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. 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 discharges. 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 of the horse 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 cause for concern. 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 grove with enough pressure to squeeze the blood from the vein. The refilling 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. Heart rates of 25-40 beats per minute are normal in resting horses. A fit horse should recover to a rate of 64 to 68 beats per minute within 10 minutes of the exercise. After exercise, the heart rate should drop steadily. Higher rates during recovery from exercise may indicate over-work, fatigue, heat stress, dehydration, pain or illness.

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 every 5-10 seconds. The owner should practice listening to normal horses to get an 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.

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

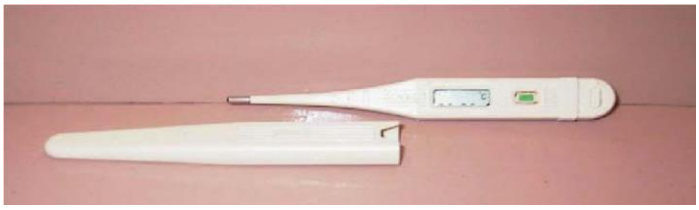
The withers, shoulders, back, croup/rump and girth areas should be palpated for evidence of sores, pain, bumps and tight musculature. The aim is to detect any pain, sensitivity, or tightness that would impair the horse's athletic ability or cause pain and suffering during exercise. The left foreleg is 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 is serious. If the horse has been exercising it may increase to 3˚9C.6 but should not exceed 40.5˚C 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.

The Horse in Motion

The next part of the examination is to assess the horse while trotting. Have an assistant trot the horse away from you on a loose lead and then back towards you again so you can assess the parameters described in the sections below.

Gait / Attitude/ Impulsion

The examination in motion is done with the assistance of the handler who will trot the horse in a straight line for approximately 40 meters (125') away from and then toward the owner. The footing in the trotting area should be level, even and reasonably firm. Trot the horse on a loose rein at a steady slow trot, taking care to travel to the left of the horse, rather than in front of the horse. This ensures that the view is not obstructed. Do not hold the horse with a short lead as this exaggerates or restricts normal head motion.

Note any of the following motions in the **gait**: hiking, head bobbing or swaying, hopping, as well as head, back and tail carriage. Listen for any unevenness of hoof beats on the ground.
Learn the normal **attitude** of your horse. Step back and look at the whole horse. The horse should be bright and alert and willing to trot. A horse that seems sour, disinterested, dull or unwilling to move may not be feeling well.

Impulsion is shown when the horse pushes off energetically from the ground. The horse's movement should be free, willing and eager. Stride length and height should also be noted as this relates to quality of gait.

Cardiac Recovery Index (CRI)

The cardiac recovery index is a useful indicator of a horse's condition, especially if it is used at rest intervals during or after exercise/competition. The owner takes the horse's heart rate immediately prior to trotting the horse a distance of 38 meters (125') away and then back to the starting point (76m/250' total). The heart rate is re-taken exactly 60 seconds (one minute) from the **start** of the trot. The two heart rates are compared and should be within a few beats of one another. If the post-trot reading is eight or more beats/minute higher than the pre-trot reading, the horse should be carefully evaluated. Assuming that excitement did not cause the higher reading, one should consider injury, fatigue, dehydration or other causes that may be the underlying cause of the elevated reading.

- Equal or lower than 1st reading = Fit to continue
- 4 bpm higher than 1st reading = Not fully recovered/repeat test after additional 10 minutes of rest.

- 8 bpm higher than 1st reading = Not recovering/cease exercise or workout

A horse that does not pass the CRI test within 30 minutes of rest should cease all exercise and be carefully monitored by a veterinarian.

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 be 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 becoming an educated horse owner who will be able to pick up warning signs before they become more serious.

(Information provided in the horse health check article is intended to assist the horse owner and is not for medical diagnosis. Discuss your findings with your veterinarian.)

Body Condition Score – Obese

Don't settle for anything less than ideal: Consequences of being too fat

Obesity is a rising health concern

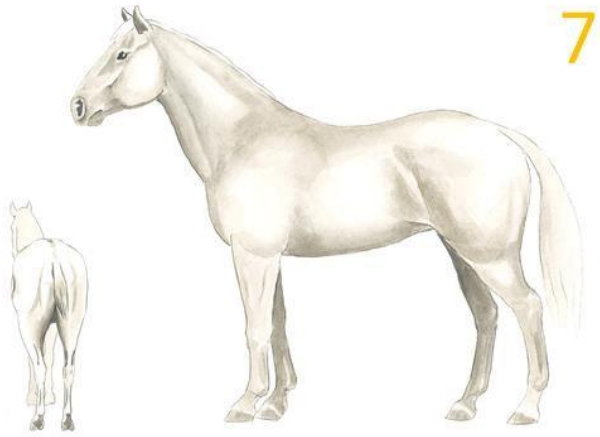
23% - 51% of horses are reported to be overweight or obese[1-5]. Since owners can sometimes underestimate a horse's body condition score[4,5], obesity rates may be even higher. Obesity is associated with many negative health consequences. Take a preventive stance against obesity by reviewing the Henneke Body Condition Score[6] (BCS) system and use it on a regular basis. Equine Guelph has developed a barn poster to help horse owners keep accurate track of their horses BCS.

What is an overweight or obese horse?

- Overweight and obese horses are those with body condition scores of greater than 7 on the Henneke BCS system
- A score of 7 may be too high for some horses (e.g. athletic horses), but acceptable for others (e.g. a broodmare going into winter)

Risk factors

- Certain breeds, such as pony breeds[5]
- Overfeeding
- Primary use[7]
    - Pleasure riding or non-ridden horses are more likely to be obese than
- competition horses
- Easy keepers[7]
- Summer season[8]
- Dominant position in the herd[9]
- Blanketing



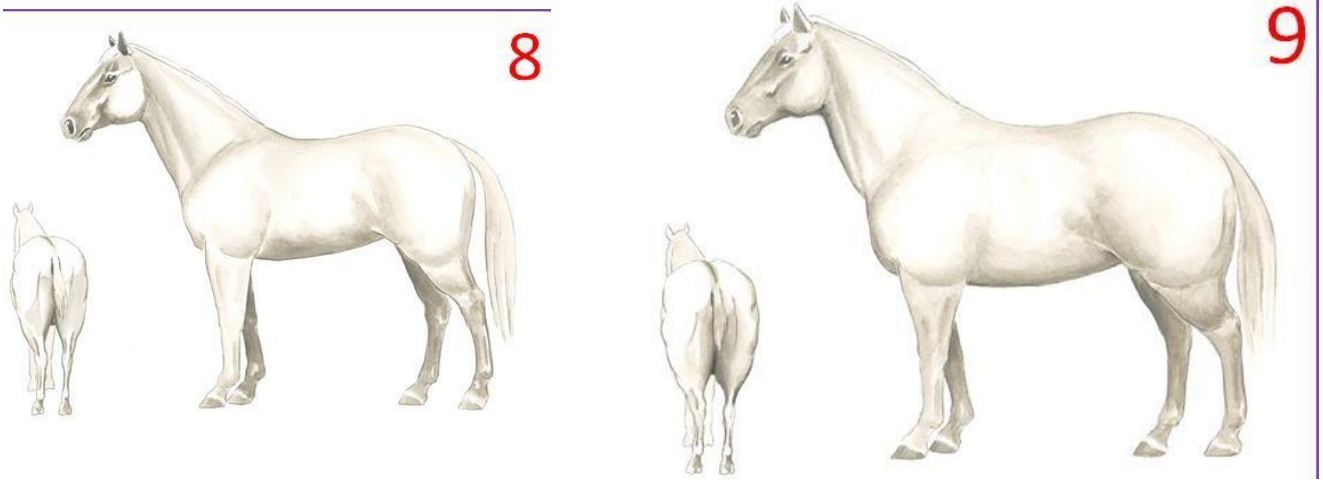
Consequences[10]

- Exercise intolerance
    - Longer post-exercise recovery time
- Less effective at thermoregulation
- Decreased reproductive performance
    - Altered estrous cycles
    - Changes to the follicle and oocyte[11]
    - Problems with follicle development and oocyte release
- Benign lipomas, which can cause obstructions in the digestive tract
- Increased production of inflammatory molecules in the body
- Altered metabolism[12] (e.g. insulin resistance), resulting in increased risk of:
    - Equine Metabolic Syndrome
    - Laminitis

- Pituitary Pars Intermedia Dysfunction
- Osteoarthritis and osteochondrosis
- Hyperlipidemia and hepatic lipidosis
- Diabetes mellitus
- Systemic inflammation

Management tips

- Schedule a veterinary visit to address any underlying causes
- Consult with veterinarian and/or equine nutritionist to develop a weight loss plan, which may involve restricting feed intake (especially through pasture) and/or eliminating concentrate feed the horse is receiving
- Reducing weight by starvation is not viable or lawful. Consequences are dire.
- Provide free access to water and loose salt. A good quality forage balancer is essential when restricting feed.
- Increase the amount of exercise
- Prevent boredom between meals by:
  - Hay nets and slow feeders to increase time spent foraging
  - Divide forage in piles to encourage movement
  - Provide a play ball with a small handful of high-fibre pellets between feedings. This feed should be included as part of the horse's calculated feed allowance for the day.



This Equine Obesity fact sheet and references can be found here.

Body Condition Score – Thin

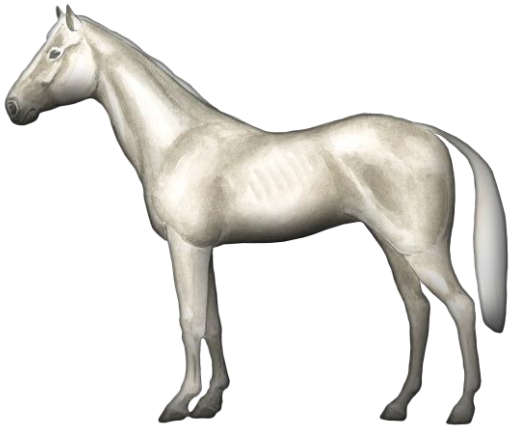
Don't settle for anything less than ideal: Consequences of being too thin

The importance of body condition scoring your horse

When beauty is in the eye of the beholder, even experienced horse owners are often guilty of inaccurately assessing their horse for ideal body weight and condition. The Henneke Body Condition Score (BCS) system[1] is an in-depth and hands-on valuable scientific tool where physical palpation is used to find an overall BCS between 1-9. Equine Guelph has developed a barn poster to help horse owners keep accurate track of their horses BCS.

What is an underweight horse?

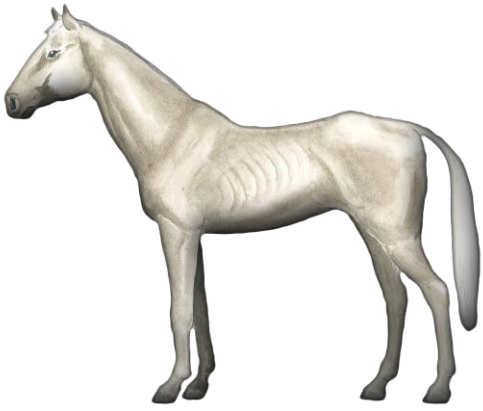
- Underweight horses are those with scores of less than 4 on the Henneke Body Condition Score system
- A score of 4 means the horse has the minimum acceptable amount of body fat. This may be acceptable for some (e.g. a performance horse), but may not be suitable for others. For instance, this level of body fat may be too low for a senior horse headed into the winter, who will have to deal with the stress of cold temperatures.



Body condition score 4

Risk factors[2]

- Poor dental health
- Poor parasite control program
- Inadequate nutrition
- Low dominance position in the herd[3]
- Disease



Body condition score 3
- A score of 3 or less requires intervention

Consequences

- Troubles with thermoregulation (generating enough heat to stay warm in the winter)
- Loss of muscle mass
- Varying degrees of malnutrition
- Decreased athletic performance[4]
- Decreased reproductive performance[5]
    - Lower pregnancy rate
    - Increased number of cycles/conception
    - Delayed estrous and ovulation
- Disease

Management tips

- Schedule a veterinary exam (including dental exam and discussion of parasite programs) to address any underlying causes
- Increase dietary intake with input from veterinarian and nutritionist
- Including sweet smelling/tasting feed toppings may increase feed intake.[6] Including odours that the horse already knows may increase the acceptance of new foods.[7]
- Monitor the herd and the horse's behaviour
    - A companion may encourage appetite in horses housed individually o Separate the horse during feeding time if he is being bullied or is stressed
- Ease the stress of cold temperatures by making sure your horse has everything it needs this winter.
- Offer frequent small meals
- Dividing hay into small piles may increase interest in feeding by requiring the horse to move around and simulate foraging
- Soaked feed for easier digestion and to help with hydration
- Horses BCS 4 and under will need appropriate shelter and blankets in winter to maintain warmth. See the Blanketing tool.

Equine Guelph BCS barn poster for $9.99 plus shipping.

Artwork courtesy of Ruth Benns.

Equine Obesity Factsheet and references can be found here.

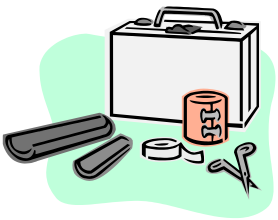
You can also check out the Interactive Body Score tool to find what your horse's body score is!

HORSE FARM SAFETY CHECKLIST

Take the time to minimize the various hazards found on your property. Get in the habit of performing a walkthrough of your stable and around the farm on a regular basis to create a safer environment for your family and horses.

In the Stable

- ☐ Stable is ventilated and slick floors are minimized
- ☐ Stalls have exterior doors
- ☐ Aisles and traffic areas are clear of clutter, obstructions and debris
- ☐ Stable has adequate lighting and all electrical cords or wiring are enclosed in PVC conduit
- ☐ Permanent ladders are in good condition, are properly stored away when not in use, and checked before handling
- ☐ Low ceilings, beams etc. are clearly marked
- ☐ Stored materials are properly stacked and labelled
- ☐ Sharp protrusions such as nails, splinters or sharp edges are removed from surfaces
- ☐ Large doors open smoothly
- ☐ Tractors and other fuel burning equipment are stored in a separate building
- ☐ Flammable liquids are properly labelled and stored in a separate building
- ☐ Hay and bedding are stored in a separate, well-ventilated building and stacked on pallets



- ☐ Stable has at least two entrances/exits
- ☐ Tools and equipment are well organized and stored properly
- ☐ First aid kits are stocked, maintained and accessible for emergencies
- ☐ The stable has trained (and up to date) first aiders
- ☐ There is a phone in the stable with emergency numbers posted clearly nearby

- ☐ Emergency evacuation plan is prepared and posted
- ☐ The stable has a new worker orientation training and job instruction procedure
- ☐ Health & Safety policy is posted for employees

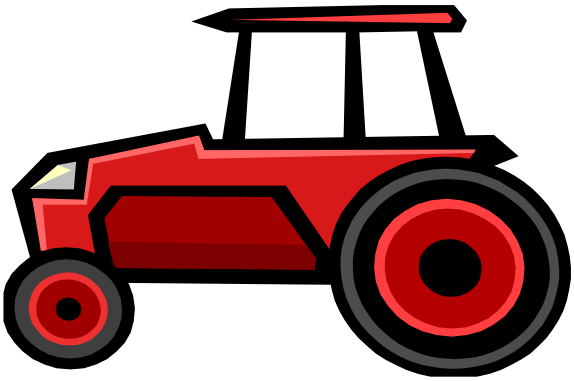
Around the Farm

- ☐ Ensure that there is an assigned, fenced-in play area for children and a separate area for dogs
- ☐ Remove any clutter or debris including old boards, hay roll netting and hay bale twine
- ☐ Uncovered water tanks, wells, cisterns, ponds etc. are protected (fenced) and clearly marked with DANGER signs
- ☐ Any ponds or open water are fenced off during the winter Gates are wide enough for trucks
- ☐ Gates are wide enough to allow trucks to move through
- ☐ All obstacles that can be snow covered are removed before winter

- ☐ Walkways are kept in good repair and clear of snow and ice
- ☐ Both sides of fencing and gates are kept in good repair
- ☐ Laneway is in good repair and entrance is wide enough to allow trucks and emergency vehicles
- ☐ Trees are checked on a regular basis for diseases and dead limbs are removed
- ☐ Toxic plants are identified, dug out and disposed of properly
- ☐ Underground utilities are marked or diagramed to prevent them from being cut
- ☐ Utility poles are protected from vehicles and there are no low-hanging wires
- ☐ Trailers are safely stored and chocked
- ☐ Right angles in pasture fences are blocked for safety of turned out horses

Tractor (and ATV's)

- ☐ Enforce the rule "No riders" on the tractor - always
- ☐ The tractor is equipped with a roll over protective structure (ROP) and seatbelts
- ☐ Always wear seatbelts with ROPs when available
- ☐ A slow moving vehicle (SMV) sign is fixed to the rear of the tractor
- ☐ A first-aid kit and fire extinguisher are mounted on the tractor
- ☐ When operating a tractor in a building, always open doors and windows or start ventilation fans



Minimizing hazards is the responsibility of every horse caretaker. Stable Management of the Equine Environment is the first online course in the journey of most Equine Guelph students.

Testimonials reveal the courses can help you start any equine venture, save money and make sound decisions for the horses in your care.

Pasture Management

There are few things more beautiful than a herd of horses grazing in a green, thriving pasture on a sunny summer day. However, maintaining that pristine pasture is not always an easy task. To sustain a horse on pasture alone, at least two to three acres of pasture per horse is recommended. If you have limited pasture, a combination of hay and pasture can be fed. Proper management is necessary to keep your pastures healthy, lush and able to provide for your horses.

Sacrifice Paddocks

A sacrifice paddock is an area where horses are kept during wet or drought conditions and periods where there is insufficient pasture growth. The use of a sacrifice paddock prevents pastures from being destroyed by mud and overgrazing. Sacrifice paddocks do not have enough plant growth to support horses, so it is important to provide sufficient forage in the form of hay.

Rotate and Rest

By rotating your horses into different pastures (or from pasture to sacrifice paddock) gives the grass time to rest and recover from grazing. A horse can begin grazing a paddock at 6 – 8 inches. Horses can continue grazing until the pasture is at 3-4 inches. If you only have one large pasture, a useful tactic is to divide it using portable fencing (strip grazing).

Give each pasture a rest period. The length of rest period will depend on the speed of growth. For example, the rest period may be only two weeks in the spring, but six weeks in the summer. **If you can see your horse's hooves in the grass – It's definitely time to rotate!**

If you can't rotate your horses to another pasture, contain the horses in a sacrifice paddock and feed hay until the pasture has recovered.


Photo: Kathleen Kocmarek

This horse is in sacrifice paddock. Note that while there is some grass available, it is not enough to sustain the horse. Hay must be fed.

Maintain

While your pasture is resting, you can help it thrive by mowing and dragging. Mowing weeds before seed-heads are produced will reduce the number of weeds in your pasture. Horses prefer shorter grass, so mow your pasture to about three inches. Dragging a resting pasture will spread out and break up manure, depositing nutrients evenly across the pasture and exposing parasites to the sun, killing them. This should be done while the horses are rotated out of the paddock.

Reseed

Even the best maintained pastures will thin over time, allowing weeds to take over. Reseeding your pastures will help prevent this. If the pastures are well managed and not overgrazed, it may not always be necessary.


Photo: Kathleen Kocmarek

Test and Fertilize

Your pasture is alive, and like any living being, it needs to be fed. Fertilizing your pasture will ensure that your pasture will thrive. All plants need nitrogen, potassium and phosphate, and these nutrients may need to be added to your pasture. A basic soil test that measures pH, potassium and phosphate is sufficient for most pastures. While it may seem like an unnecessary expense, soil testing can actually save you money:
You will only be purchasing the amount of potassium and phosphate that your pasture needs.

For more information on how to manage pastures, check out Equine Guelph's Management of the Equine Environment course.

Equine Guelph would like to extend thanks to the Ontario Veterinary College veterinarians and Joel Bagg from Ontario Ministry of Agriculture and Food for input and content review of this fact sheet.

More information on Pasture Management on the Equine Guelph YouTube Channel
Don Kapper expert nutritionist discusses maintaining pasture (6 min video)
Paul Sharpe discusses 6 Steps to better pasture (1hr 12 min video)

Manure Management

Introduction – A 1000 pound horse = at least 9 tons of manure each year.

Without a well-thought out plan for collection, storage and disposal of manure, you could be faced with many issues such as: parasites, bacteria-harboring mud, water pollution, odour problems, flies and a host of health care concerns.

Some Considerations

1. Certain species of worm eggs hatch as often as every three days. Regular removal of manure from stalls and paddocks helps prevent worm re-infestation in horses.
2. If you use stalls, your bedding adds approximately another 4 tonnes of material to your manure disposal. Select bedding with your disposal method in mind. E.g. wood chips or shavings are not ideal if you are composting or spreading raw fertilizer as it will reduce the nitrogen content of the manure/compost.
3. Storage methods employing concrete pads and 3-sided roofed structures combat mud, disease and runoff of pathogens and nutrients into waterways.
4. Plantingabufferstripofvegetationdownslopefromyourmanurestoragecanalsohelp filter that run off, which would be greater if you do not store manure on a concrete pad or covered container.
5. If you are using a manure broker, a covered storage container increases the ease of removal, makes the manure denser (decreases the volume to be taken away decreasing your cost of removal) and helps retain more nutrients making it appealing for use on crops.
6. Situate manure storage downwind of any residences and in a visually remote location.

Conclusions

Check in with your local stewardship councils, conservation authorities and extension services to learn of incentive programs and grants available to help land owners protect natural resources and improve the health and productivity of their land. References for this information sheet

For more details on manure management and best management practices on composting and more, check out Equine Guelph's online course offerings including Management of the Equine Environment and Stewardship of the Equine Environment. Meet the instructor: Dr. Susan Raymond

Winter Management - Outdoor Horse

"The stable environment invariably presents challenges of dust, mould and proper ventilation," says Dr. Susan Raymond, instructor of Equine Guelph's Management of the Equine Environment online course. *"Most horses are well equipped for living outdoors and thrive, provided certain provisions are met."* Dr. Raymond completed her PhD in investigating the effects of exposure of horses to mycotoxins. She has also been involved in air quality research which provided practical recommendations to the horse industry on stable design and management.
The ideal environment for most horses is to live outside with herd mates 24/7. This satisfies their need for locomotion and provides their digestive system with the optimal conditions to function as nature intended.

Here are just a few tips for managing the horse's environment through the winter season:

1. **Provide a heated water source**. Horses need to consume large volumes of water to keep forage traveling through the gut. Reduce your risk of colic by ensuring water sources do not freeze.
2. **Provide the best quality hay** and be cognizant that horses will need more forage in the winter to meet their energy needs for thermoregulation. Avoid round bales which can become havens for dust and mould, increasing the risk of respiratory ailments.
3. **Shelter** provides a windbreak and can be natural or manmade. Location is very important. Constructed shelter
   considerations include, sturdy construction with rounded edges (pressure treated 4x4 or thicker), built on a sight grade (2 – 3 degrees) for moisture runoff, situated so prevailing winds blow against the walls not the entrance. Ample room should be allotted for the amount of horses (e.g. a 3 sided structure for 2-3 horses would be a minimum of 12 x 36 feet and high enough that a rearing horse would not be endangered).
4. **Maintain highly visible, safe fencing of durable construction**. Gate width is important for safe leading and the ability to bring in machinery. Gates should be made well with well-supported posts and placed in a location that will drain well. Mud management systems are also available to minimize mud in high traffic areas.
5. **Safe footing.** Keep pathways clear with a handy mix of wood chips, sand and rock salt. Stock up on supplies before the storm when these items can become scarce. In the paddock watch for unsafe footing, ice and uneven ground. It is good to have a small turn out area available in case the larger one becomes unsafe. Discuss with your farrier the options of going barefoot for the winter or putting on snow pads. Regular steel shoes do not have traction and allow snow and ice to ball up inside turning everyday moving around into an uncomfortable and hazardous venture.

6. **Daily checks.** It is recommended to give horses a daily once over in the winter including hoof picking, wound checks and checking under that blanket for weight loss or gain. If the horse is blanketed, you will also want to check it hasn't slipped and is not rubbing.

Emergency Preparedness

While one can't plan for every form of disaster, it's important to familiarize yourself with any potential risks that could occur in your area and plan for them accordingly. Planning ahead can allow horse owners the opportunity to stay composed and act quickly in an emergency situation.

Preplanning Checklist:

- Survey your property and map out the location of all dwellings and animal barns, along with the amount and type of livestock.
- Outline and practice emergency evacuation/fire escape plans (emergency action plans) and ensure that evacuation routes include containment areas for any evacuated animals.
- Provide your emergency action plans in a prominent location (i.e. whiteboard) and confirm individuals that assist if needed, especially if you are unable to get to your property.
- Keep an up-to-date emergency contact list, which would also include individuals who would be able to assist with transporting and sheltering your horses.
- Ensure that your address (fire number) is prominently displayed and visible from both directions for emergency responders.
- Make sure that all your horses have some form of identification (i.e. livestock markers etc.)

- Photograph your horses from all angles and keep three printed copies; one in barn in waterproof pouch (Ziploc bag), one with you and one off site.
- Safely store a two-week supply of feed/hay (with feeding instructions) and ensure a minimum three day supply of water stored in covered containers.
- Store any medications and supplements in an airtight, waterproof container. Always read labels and store at appropriate temperatures.
- Assemble and maintain an equine emergency care kit that includes vet wrap, bandages, medications (stored in correct temperature range), flashlights, batteries, etc., and keep it with up-to-date records on your horse's vaccinations and medications, etc.

- Make sure that insurance coverage on your property and horses is up to date.

Around the Barn:

- Post emergency phone numbers in a prominent location in your barn.
- Keep at least one well-maintained generator on site and have enough fuel to keep it running for several days.
- Familiarize yourself with the location and operation of all emergency shutoff valves and containment measures and be sure that information is readily available to responders.
- Keep all hazardous material labeled and secured in a safe place.
- Check wiring to ensure it is safe and in good condition and not a fire hazard.
- Make sure all doors are working properly and are able to open or shut in an emergency situation.
- Make sure your laneways and gates to paddocks are large enough that emergency vehicles such as a fire truck can access your property.

- Keep all fire extinguishers fully charged and easily accessible for immediate use.
- Always keep a sufficient number of halters and leads ropes for every horse on the property ready and easily accessible.
- Have designated areas to keep flashlights, first-aid kits, etc.
- When in doubt, consult with your local Fire Department for advice on how to effectively keep your horses safe on the farm.

Learn more about safety and planning with the next online offerings of Equine First Aid and Fire & Emergency Preparedness!

Reducing the Risk of Respiratory Ailments

Fresh Air is the best Air

Horses are naturally designed to live outside. With shelter from the wind and elements and access to fresh water and good quality hay most horses can live quite comfortably surrounded by their companions without a stable. This is not always a convenient option for their human counterparts.

The life of a domestic horse requires consumption of hay and often grain to provide enough energy for the tasks we ask. The domestic horse is frequently stabled and ridden on sandy surfaces which can introduce many dusts and moulds that increase the chances of respiratory ailments.

What can you do to improve air quality and reduce dust in your stable?

Ventilation

Fresh air without drafts will go a long way to minimizing a horse's exposure to harmful environmental irritants. A combination of inlets (i.e. vents) and outlets (i.e. cupolas) help provide ventilation especially once barn windows and doors are closed up to provide warmth in the winter. Mechanical ventilation is another consideration.

Insulation

Minimizes temperature fluctuations caused by warm days and cold nights. Proper insulation not only keeps the barn warm in the winter but when combined with good ventilation, a barn will avoid condensation problems which can make for cold, clammy and damp conditions.

Bedding

Choose high quality, absorbent bedding with low dust levels. If you can smell ammonia – your horse's airways are at risk. Ammonia can also increase mucus production. More turn-out time equals less urine in the stall. Daily, proper cleaning of stalls is of course a must and use of an ammonia control product can prove useful in eliminating this noxious gas. It is recommended to turn out horses prior to cleaning the stable as bedding is the 2nd most common source of dust in the barn. Savvy stable workers wet down floors before sweeping and also wear a dust mask.

Drainage

Floors that allow urine to be absorbed and travel down through the flooring material layers can suffer from odor retention. Non-porous floors depend on slope for drainage and/or adequate bedding to soak up urine.

Feed

Feed good quality hay and grain. Hay is the staple of the horse's diet providing fibre which is essential for healthy gut function but it is also the **single most common source of dust and mould for horses**. Even good quality hay will contain some dust; sprinkling hay with water can reduce the dust by half. Feeding from the ground and not throwing hay over the top of stall door will also reduce airborne dust. All hay will have some mould present as there are many types of fungi in field crops. Hay that has been baled damp is the largest concern as this provides an environment of moisture and heat for mould to thrive and multiply. Mould spores are very small and often undetectable to the human eye but can travel deep into the lungs of a horse. Avoid round bales which can become havens for dust and mould.

Footing

Fine smooth particles are more prone to suspension than heavier angular particles. Careful material selection and maintenance are required to reduce dust in arenas. When course materials break down over time partial or full replacement should be considered. Check moisture content of footing weekly and water as required increasing the weight of footing particles. Consider additives and environmentally friendly oils to held bind particles and slow evaporation.

A trip down through the respiratory system

A horse in a dusty environment is more prone to infection than a horse in a cleaner environment. A horse at rest taking 12 breaths per minute can inhale and exhale approximately 60 litres of air/minute. A top athlete can take over 150 breaths/minute moving over 2,250 litres of air through the lungs. Airborne dust, noxious gases and infectious agents can hinder or halt a horse's athletic career.

Air enters the nostrils where it is warmed and humidified before entering the trachea. Then air travels along an ever increasing number of initially larger airways (bronchi) to small airways (bronchioles). Airways lined by cilia, move mucus and particles up from the lungs. There is also mucus producing cells in the linings of airways. In a state of infection mucus can become tenacious. Finally, a gas exchange occurs at the end of the journey in the alveolar sacs. A final defense barrier exists in the alveoli. Tiny inhaled particles are cleaned up by cells called macrophages which engulf material ranging from tiny particles of dust to bacteria. However, a heavy burden of dust can decrease the ability of those cells to fight infectious agents such as bacteria.

The lung evolved to deal with air. To maintain a healthy lung, minimize the pollutants it is exposed to.

Learn more about maintaining a healthy environment for your horse with the next online offering of Equine Guelph's Management of the Equine Environment.

Learning to Speak Horse

Download this poster in landscape orientation

Our students are learning to speak horse and understand horse care needs every day when they take Equine Guelph's most popular courses in Equine Behaviour:
2 – Week courses in Horse Behaviour & Safety for Adults and for Youth (13 – 17)
2 week short course opens Olympic door for Behaviour Student (video testimonial)
12-week courses in Equine Behaviour & Advanced Equine Behaviour

WHEN TO CALL THE VET?

Pain Recognition & Grimace Scale

Hiding pain is one of the top survival skills of the horse. An important part of horse ownership is learning to recognize the signs a horse may be in discomfort rather than dismissing certain subtle cues as just bad behaviour.

There has been increased awareness of pain recognition and management in small animals and this science is also gaining more acknowledgement in the world of horses as well. The Facial Grimaces Score used originally to identify pain in rodents and rabbits has been incorporated into a **'grimace scale' for equines** as well. It uses ear position and tightening of the muscles around the eyes and mouth to come up with a score (0 – no pain, 1 – moderate, 2 – obvious). Everyone wants to be greeted by a bright-eyed, soft and relaxed face. The horse is telling you something hurts when they avoid looking at you, appear despondent, clench their jaw, flatten ears back and/or squint their eyes.

When variations in behavior occur, a step back may be required to figure out if it is you or the horse that has changed. Obvious pain requires a veterinary examination. Chronic pain will impact the horse's ability to heal and their quality of life.

doi: https://doi.org/10.1371/journal.pone.0092281.g002

Interested in this topic? Check out the Horse Welfare Certificate or Horse Care & Welfare short course and also the 12-week Equine Welfare course.

Wound Care

When a horse is injured, it can be a very scary time for owners and handlers, especially if there is blood involved. However, it is important to remain calm when dealing with wounds. Here are five things you should *not* do when your horse is injured:

1. **DO NOT apply any ointments, sprays or powders** to a wound that will be treated by a veterinarian. While it can be tempting to dress the injury immediately, it is important that the veterinarian examines an untreated wound. If you apply an ointment, powder or spray before your vet arrives, it will likely need to be removed for the examination. In some cases, ointments, sprays and powders may slow the healing process, so it is important to wait for your vet's directions. If the horse is bleeding profusely, you can press a clean towel against the wound to help stop the bleeding.

This horse has a laceration above the knee.

2. **DO NOT rush to give your horse pain medication**, such as "bute" (phenylbutazone). While the drugs will offer some pain relief, they may also mask a larger issue. For example, a horse with a cut and minor swelling might also have a hairline fracture – if the pain of the fracture is masked, it may go unnoticed and the horse may damage itself further.

3. **DO NOT remove any protruding objects from the wound**. Removing the object can cause more damage. *Wait for your veterinarian*! They will perform x-rays to determine how deep the object is and how to best remove it.

4. **DO NOT let the wound go unattended**. It is important to promptly treat the wound and then to carefully monitor the healing process. Wounds must be treated daily to ensure cleanliness, stop infection and to prevent the excessive growth of granulation tissue (commonly known as proud flesh). Even the smallest wound can result in a serious infection (such as tetanus), so examine all wounds, no matter how minor they may seem.

5. **DO NOT wait to call a veterinarian.** If you are unsure if the wound needs professional attention, do not hesitate to call your vet. It is better to be safe than sorry! Wounds should be addressed by a veterinarian within six hours. The longer you wait, the more difficult it may be for the vet to repair the wound. *If it is an eye injury, call your vet immediately.*

IMPORTANT: Make sure your horse has an annual tetanus booster. All horses are exquisitely sensitive to tetanus and this is compounded by their environment where the organism is common. Walking your paddock fence line on a regular basis is an important habit for spotting potential hazards before they cause injury but even the most vigilant horse owner will have to treat wounds as they are not uncommon among equids.

Equine Guelph would like to extend thanks to the Ontario Veterinary College veterinarians for input and content review of this fact sheet.

If you are interested in learning more about wound care, check out Equine First Aid at TheHorsePortal.ca & Equine Guelph's 12-week Equine Health & Disease Prevention course.

Routine care – vaccinations, dental exams, deworming

Always talk to your vet to create a vaccination plan and dental exam schedule that is individual to your horse.

Equine Guelph's Vaccination Equi-Planner tool can provide a starting point for these conversations.

Your schedule will depend on your location, if you plan to travel, exposure to other horses, the age of your horse (e.g. foal vaccinations will be very different than a mature horse) and if your horse is a broodmare.

Core vaccines are typically:

Rabies

Tetanus

West Nile Virus

Eastern Equine Encephalitis

Optional vaccines may include:

Equine Influenza

Equine Herpesvirus

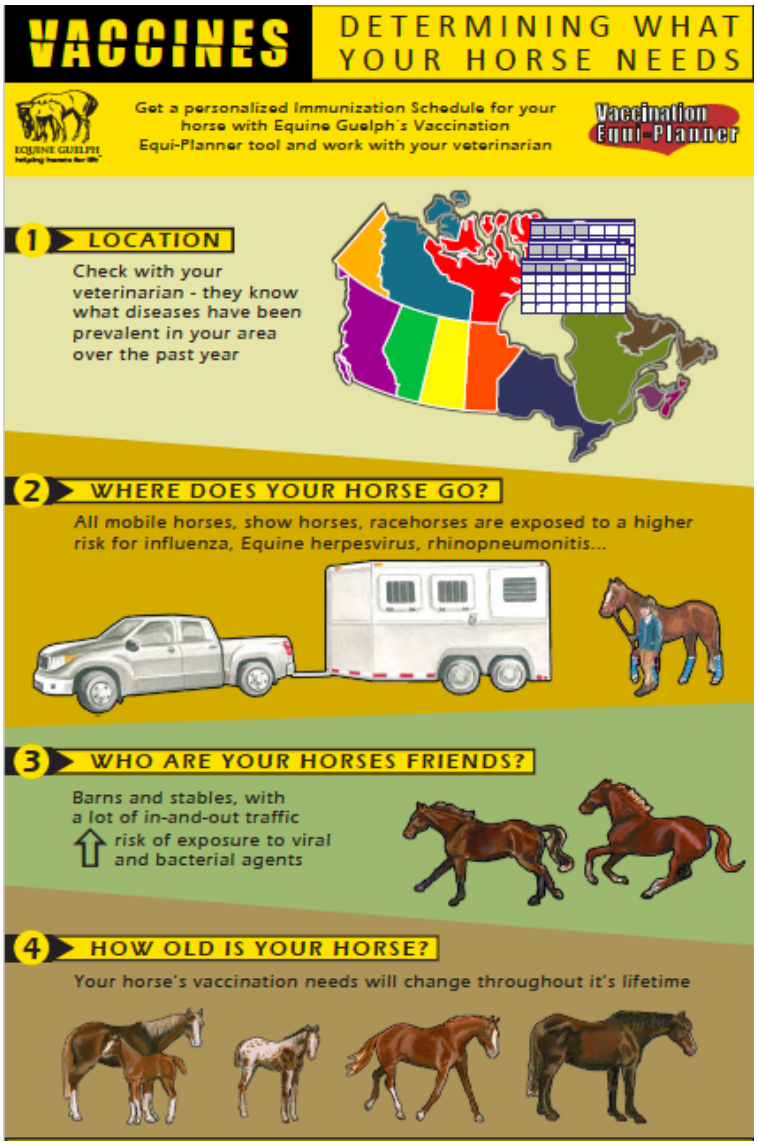
Strangles

Potomac Horse Fever (PHF)

Botulism

Equine Viral Arteritis (EVA)

Have a look at all the resources on Equine Guelph's Vaccination Equi-Planner tool and then talk to your vet for a plan that works for you and your horse.



Interested in this topic? Equine Guelph's 12-week Equine Health & Disease Prevention online course is for you.

Dental Exams

The average horse chews about 60,000 bites per day! Not surprisingly, the mouth plays a very important role in a horse's overall health. Lack of dental care can lead to number of problems, including colic, weight loss and issues under saddle. While horses don't need to brush their teeth daily, **your veterinarian should examine your horse's teeth every six months to a year.** Horses that are young, elderly or have a history of dental problems may need their teeth checked more frequently.

If you have ever had a tooth ache, you know the excruciating pain that comes along with dental problems! However, unlike humans, horses can't tell us it hurts.

Some common signs of dental issues:

- decreased appetite
- becoming head shy
- undigested feed in the feces
- foul breath
- reddened or inflamed gums
- reacting negatively to a bit

A horse's teeth can help determine its age. The skull above is from an older horse — the teeth are worn down from many years of chewing

More signs of dental issues that often go undiagnosed include:

1. **Lameness –** when a horse goes lame, owners and trainers tend to look at legs first. Pain in the mouth does not always make the check list of possible causes for gait abnormalities.
2. **Head tossing during riding –** A horse that suddenly does not want to accept the bridle is another big tip off that something may be going amiss in the mouth. Painful, dental-related lesions may also cause bit/bitting problems, including abnormal head carriage, resistance to the bit and headshaking during work. Your vet will check for sharp points, wolf teeth and other potential problems.
3. **Rearing –** Is the horse unhappy with the contact or is there an abscess forming in the mouth or some other cause of pain? Don't wait until a rider is ditched to explore all the possible physical ailments including teeth. At the first sign of any bad behaviour, a complete physical exam is warranted.
4. **Losing weight –** Your horse may have 24/7 access to forage but if they can't chew properly, they may not be consuming enough nutrients. Weight loss can occur in very serious cases of dental disorders.
5. **Tilting –** a horse that tilts its head while eating or while being ridden may be trying to take pressure off one side of their mouth.
6. **Digestive Emergency –** horses that are having difficulty grinding up their food are at risk of feed becoming lodged in the esophagus (choke) or even impaction colic. Another reason to have your veterinarian perform regular dental work and oral exams.

If you suspect your horse is having a problem, contact your veterinarian for help. Many horses suffer from undiagnosed, painful dental disorders. A thorough clinical examination using a full mouth speculum is a pre-requisite to performing any equine dental procedure.

The horse has both temporary and permanent teeth. Like humans, horses lose their "baby teeth" when their permanent teeth develop. The permanent teeth continue to grow throughout the life of the horse. However, horses grind down their teeth by chewing. A horse that cribs can show accelerated uneven wear. Horses can develop a number of dental ailments, including the following:

Sharp Enamel Points

Horses will develop sharp points as a result of chewing and can cause lacerations in the mouth. Quidding (balling up grass in the cheek to create a barrier from the sharp edges) can be an indicator sharp points have developed. You may also notice clumps of wadded up hay dropping from the horse's mouth. Your veterinarian should perform a yearly dental float.

Wolf Teeth

Some horses also develop one to four wolf teeth (more common in the upper jaw) which erupt just in front of the premolars and can present problems interfering with the bit. They are frequently removed especially if they are too large, impacted or infected.

Retention of Temporary Teeth

Horses commonly retain their temporary teeth after their permanent teeth have erupted. This can cause the horse pain during chewing. Young horses should be checked for retained caps prior to the start of training. A veterinarian should remove the retained teeth.

Tooth-Root Abscess

Tooth-root abscesses can occur in the horse's molars and usually cause substantial pain. The horse will often stop eating and become depressed. Symptoms include swelling of the jaw, foul breath, and nasal discharge.

Smooth Mouth

In elderly horses the teeth may lose their rough edges and become entirely smooth, which results in an inability to grind food. In some horses, the teeth may be lost entirely. There is no treatment, and horses with smooth mouth should be fed highly digestible feeds that are easy to eat, such as soaked hay cubes or beet pulp – your veterinarian will be able to recommend the best course of management.

Broken or Missing Teeth:

A horse with broken or missing teeth may have difficultly chewing properly, which can result in weight loss. If you suspect or notice a broken or missing tooth, discuss management strategies with your veterinarian.

Veterinarian versus Equine Dentist

Dental care is not limited to the horse's teeth. During a dental check, the veterinarian will also check the horse's head, oral cavity, sinuses, general health and nutrition. Dental care of the horse includes special tools, equipment and sedation, to make the experience less stressful on the horse. Veterinarians who practice horse care are also trained in equine dentistry. If you employ a specialist in equine dentistry, it is highly recommended to choose a professional that has also graduated as a veterinarian. In certain provinces it is illegal to perform dentistry without the supervision of a veterinarian.

Equine Guelph would like to extend thanks to the Ontario Veterinary College veterinarians for input and content review of this fact sheet. One resource used to compile this info sheet is the Book of Horses by UCDAVIS School of Veterinary Medicine which is also used as a reference text book in Equine Guelph's Health and Disease Prevention Online Course.

References for this information sheet.

If you are interested in learning more about equine teeth, please view Equine Guelph's Tale of the Teeth YouTube video to look at horse's teeth as they age.

Parasites - Fecal Collection & Deworming

With growing concern over resistance of parasites to anthelmintic drugs, the concept of deworming every horse at every interval is becoming a thing of the past. It is estimated that 80% of the eggs shed in to the environment come from 20% of the herd. Parasitologists suggest the threshold for recommending treatment is typically a strongyle egg count above 200 eggs per gram of feces. Veterinarians and researchers are advocating a more targeted approach to treating the horses with such burdens. The follow up fecal test, two weeks later, is just as important to be sure the drug administered was successful. If it was not effective; your veterinarian will be able to suggest a different anthelmintic to use.

Performing regular fecal egg count testing is an important step in equine parasite management. Collecting a manure sample is easy, but it must be done properly to ensure accurate test results. Be sure to request feces are examined for a strongyle egg count in horses aged 2 years and up. Here's how:

1. Turn a new zip-lock bag inside out over your hand
2. With your hand inside the bag, pick up a fresh fecal mass
3. Use your other hand to pull the zip-lock bag over your hand, turning the bag right side out. The feces are now in the bag.
4. Zip up the bag. Place the bag into another zip-lock bag.
5. Write the date and horse's name on the bag.
6. Store in a cool place, such as a fridge.
7. Deliver your fecal sample to the vet within **48 hours**!

WARNING! Do not place the sample in the freezer or leave it in your car. Extreme cold or heat can kill parasites, defeating the purpose of collecting a sample.

Discuss what parasite control program is right for your individual horse with your veterinarian. They can advise on: Rotation of deworming products (not just switching brands but switching drug classes), environmental factors and ways to reduce the parasite burdens.
You should take into consideration:

- foals are predisposed to roundworms
- horses spending long periods indoors are more at risk for roundworms and pinworms
- horses on pasture are more at risk to pick up strongyles while grazing.
- Bot eggs should be removed from grazing horse's legs with a bot knife in late summer/fall.

Parasite risk increases in paddocks that are overstocked with horses. A minimum of two acres/horse is recommended and management of the environment can vastly decrease the chances of parasitic disease:

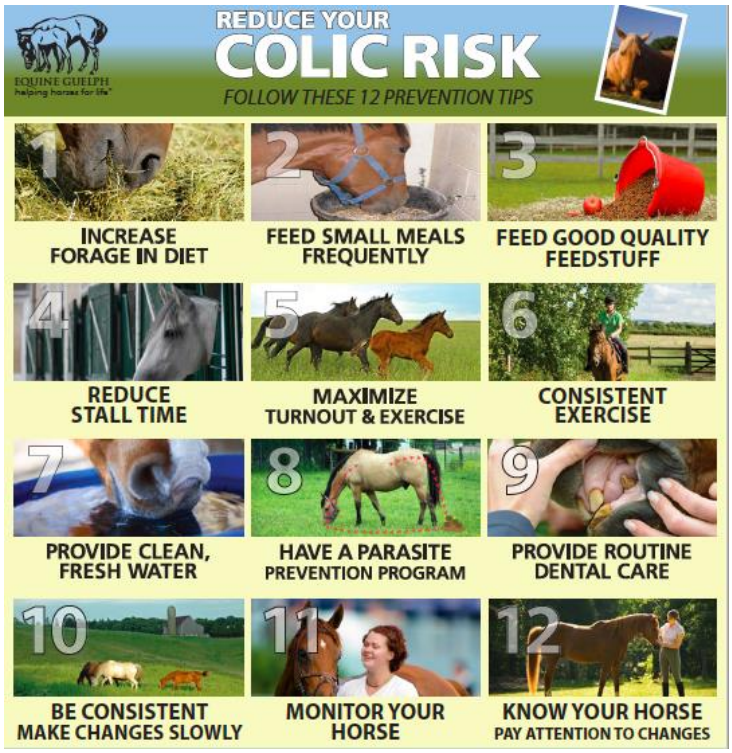
1. Picking up manure twice a week (more in wet conditions) can significantly decrease parasite populations.
2. Rotating pastures can be beneficial during grazing season when implemented for 2 – 3 months at a time.
3. Graze other species on the pasture (i.e. Cows for one month).
4. Clean stalls daily and if occupants change: steam clean stall walls and flooring.

Resources for this information sheet and more about parasite control
https://aaep.org/guidelines/parasite-control-guidelines

Colic Prevention Tips

Colic is the #1 horse killer other than old age and 80% of the time it is related to stable management. Equine Guelph's Colic Risk Rater is an interactive tool to help you assess your horse's risk and learn how to reduce it.

You will get your score in ten minutes by completing a questionnaire of ten sections: Turnout, Activity Level, Caregivers, Feeding, Water, Dental History, Parasite Management, Colic History, Other/Horse-Specific Factors and Change Assessment.



The assessment outlines 12 colic prevention tips including: increasing forage, feeding small frequent meals, quality feed, reducing stall time, maximizing turnout, providing consistent exercise, clean water, parasite control, dental care, making changes slowly, monitoring and understanding your horse.

The Colic Risk Rater has links to many more resources:

Video on how to reduce the risk of spring colic by gradually introducing horses to pasture.

An anatomy diagram showing the 85 feet of a horse's digestive system.

Video of research delving into the bacterial population of the gut

An illustrated glossary of colic terms.

Top Colic Risk Factors include:

- High grain, low forage diets
- Sudden changes in diet/routine
- Limited turnout/stall confinement

Education is the best defense! One of the best ways to increase knowledge of risk factors and preventative management strategies is to take the next offering of Gut Health & Colic Prevention at TheHorsePortal.ca

"This course provides valuable insight for anyone that has an interest in improving the management of horse health. The take away is that good management saves horse lives and reduces expensive vet calls."

Check out the testimonials posted in the Gut Health & Colic Prevention course for more comments from new horse owners and those who have generations of knowledge and still came away with new ideas.

NUTRITION

Nutrition Right from the Start

It is no surprise that nutrition plays an enormous role in the health of a foal. Meeting a foal's nutritional requirements is necessary to ensure proper growth and bone development.

In Utero

The health of the foal begins with the mare. Ensuring your broodmare's nutritional needs are met is critical. Calories, protein, vitamins and minerals are all passed on to the foal while in utero, and later through the mare's milk.

- Broodmares should maintain a body score of 5.5 to 6.5 throughout their pregnancy.
- Pregnant mares will need more calories to maintain a good weight – they are eating for two!
- Insufficient mineral intake could negatively impact the mare's bone and liver stores.
- A lack of protein will cause the mare to lose muscle mass, noticeable first in the topline.

The First 24 Hours

It is vital that foals receive colostrum within the first 24 hours of life. Colostrum, or First Milk, provides the foal with protein and with the antibodies that will enable the foal to fight off infections.

- A foal should receive 250 ml of colostrum per 100 pounds of body weight, every hour for the first six hours of life.
- Colostrum is necessary to "kick start" the foal's immune system.
- Breeders should have access to a supply of frozen colostrum, in the event the foal is not able to suckle from its mother during this crucial time period.

The First 30 Days to Three Months

During this period foals will drink seven to ten times per hour. This is unchanged whether the foal is drinking from its mother or from a bucket (such as in the case of an orphan foal).

- Drinking frequently helps to prevent digestive upsets like diarrhea and colic.
- Foals should never go more than 2 hours without drinking.
- Eating forage (hay and straw) or concentrated feed should be discouraged at this time.
- Monitor the mare, ensure she is maintaining weight & producing enough milk to sustain the foal.

Learn more:
Resource article & Nutrition, Advanced Nutrition and Growth and Development online courses

Three to Four Months

At this stage, foals can begin eating forage and concentrated feed. Test your hay and carefully select a concentrated feed in order to ensure all nutritional requirements are filled. Feed the softest hay possible

Select a concentrate specifically for weanlings

Nutrition for Performance Horses

Gut Function – Forage is the most important part of a horse's diet!

"Horses are designed to be continuous grazers," explains nutrition expert Don Kapper. An 1100 pound horse will eat up to 18 hours a day consuming 2.0% - 2.5 % of their body weight per day in dry forage.

- Forage should make up 50% to 90% of a mature horse's total diet. Knowing the nutrients of your forage is important before deciding what the horse may need in the way of concentrates and/or supplements.
- Horses only produce saliva when they chew and saliva acts as a natural buffer for the digestive system reducing chances of acid gut syndrome, ulcers and impaction colic
- The hind gut of the horse makes up 62% of their digestive system, which functions with a microbial population breaking down the fibre in forages by fermentation.
- Soft hay is more desirable for the performance horse because its nutrients will be higher and is easier to digest. Over mature hay is cut later, will have grown taller and have larger, courser stems. This hay will be higher in lignin, which makes it less palatable and lower in digestibility, i.e. quality.

Body Condition Score

Checking the horses Body Condition Score on a monthly basis provides a good visual indicator for achieving optimal calorie intake with the ideal being between five and six on a scale of one to nine. Performance loss will occur before you see visual changes that may indicate an unbalanced diet. Visual changes to watch out for include:

- Loss of muscle over topline
- Decline in hoof and hair quality.
- Loss of appetite and unthrifty condition

Amino Acids

During the process of conditioning horses, muscles are torn down during exercise and need additional branch-chain amino acids.

- A horse can benefit greatly from having 4 – 10 ounces of branch-chain amino acids replaced within 45 minutes of a workout.
- Research has shown a lack of amino acids in the diet can affect the utilization of minerals in the diet, potentially causing skeletal and soft tissue problems.

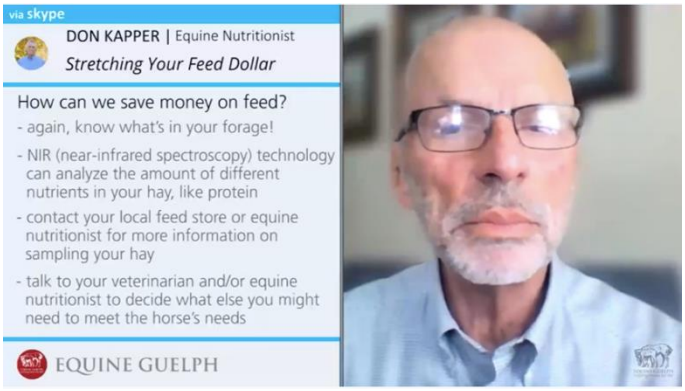
- All 10 essential amino acids need to be provided to horses on a daily basis: arginine, histidine, isoleucine, leucine, lysine (involved in growth and development), methionine (for hoof and hair quality), phenylalanine, threonine (involved in tissue repair), tryptophan, and valine.
- If one amino acid runs out, it 'limits' protein synthesis for the rest of the amino acids.
- For grass hay, your first limiting amino acid is going to be Lysine. For alfalfa, it could be threonine or tryptophan. Knowing what 'type of forage' you are feeding is key to knowing what supplements you need to choose to complement your horse's diet.

Feed According to Directions

Always choose a feed that is tailored to the individual needs of the horse (size, breed, age, workload…) and feed according to the instructions. Kapper cautions, "Feeding less than recommended amounts/day, means you have chosen the wrong feed and it could result in nutritional deficiencies".

If you would like to learn more from nutrition expert, Don Kapper, including choosing calorie sources to fuel muscle function and the role of electrolytes and assessing topline, please read Equine Guelph's article 'Nutrition Replacement for Optimum Performance'.

More great tips in this video on feeding to meet your horse's nutritional needs while not breaking the bank and a video on the importance of non-dusty hay for respiratory health (including a caution against round bales):



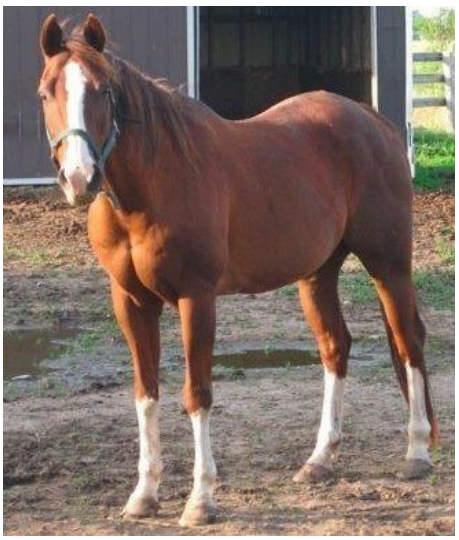
Always contact a trusted equine professional or veterinarian if you are concerned about your horse's diet or health.

Equine Guelph offers 12-week online courses in Equine Nutrition and Advanced Equine Health through Nutrition.

Nutrition and your senior horse

Remember, each horse is an individual and will have their own specific nutritional needs. With that in mind, there are several categories into which seniors can be divided based on their nutritional needs.

The senior that is healthy and an ideal weight



- Healthy senior at an ideal weight who is still used for performance and/or reproduction.
- Continue what you're doing, as long as it's balanced and meeting your senior's needs.
- 1.5-2.5% of body weight (on a dry matter basis) of a good quality forage should be enough to keep your senior in good condition. Provide free access to water, salt and a forage balancer.
- Concentrate feed is only required for those that are not maintaining weight on forage, or for those with dental problems that interfere with feeding.
- Monitor body condition score and body weight with a weight tape every week to quickly catch any changes.

The overweight/obese senior

- Senior horse that is overweight or obese, but otherwise healthy.
- Overweightness and obesity are associated with the development of unfavourable metabolic changes and increased disease risk. It is important to restore an ideal body condition in these horses.
- Schedule a veterinary visit to rule out any underlying problem contributing to weight gain
- Work with your veterinarian and/or an equine nutritionist to develop a weight loss plan, which usually involves restricting feed intake (especially through pasture) and/or eliminating any concentrate feed the horse is receiving.
- Providing free access to water and salt. A good quality forage balancer is essential when restricting feed intake.
- Increase the horse's physical activity. Choose a method that works best for your senior (in-hand, loose, ridden) and be consistent. Consider splitting the exercise into several short sessions each day and introduce exercise gradually to avoid overwork.
- Consider management techniques to increase physical activity and/or prevent boredom between feedings:
    - Hay nets and slow feeders can increase the time the horse spends foraging
    - Provide frequent small meals
    - Separate forage in different piles to encourage movement
    - Provide a play ball or toy with a small handful of high-fibre pellets between feedings. *This feed should be included as part of the horse's calculated feed allowance according to the weight loss plan.*

The senior that is losing condition

- Senior horse that is difficult to keep weight on with a normal diet, but otherwise healthy.
- Schedule a veterinary visit to rule out underlying problems (e.g. parasite or dental problems) and for nutritional advice.
- Monitor your herd. Your senior may have lost dominance in the herd and may have less access to feed. If so, provide alternative feeding arrangements.
- Gradually increase the calories and nutrients in your horse's diet. The horse should receive around 2.5% of body weight (on a dry matter basis) of good quality forage (hay analysis is recommended). Highly palatable hay may increase the horse's appetite. Hay based cubes/pellets may also be beneficial to include in the diet.
- A concentrate feed may be necessary. These should include good quality protein e.g. (10-14%, preferably from soybean meal or legumes) and added vegetable oil/fat (7-10%).
- Provide free access to water, salt and a forage balancer. The type/amount of balancer required depends on the vitamin and mineral content of the concentrate feed.
- Including sweet smelling/tasting feed toppings may increase feed intake. Including odours that the horse already knows may increase the acceptance of new foods.

Senior with health problems (the geriatric horse)

- Different conditions will require different nutritional management strategies, and this is further complicated by the current status of the horse (e.g. obese, dental problems, etc.).
- A consult with your veterinarian is essential to treat and address any conditions that your senior may have.
- Your veterinarian may suggest a nutrition plan based on your senior's individual needs. It will be easier for your veterinarian to assess your senior's needs if you have kept detailed records of health checks, behaviour, body condition scores, body weight and feeding programs.
- Your veterinarian will address any discomfort issues, such as pain in horses with arthritis, which may be causing decreased appetite
- Management techniques, such as elevated feed stations and separation during feeding, may be helpful for horses with difficulty eating due to pain
- Generally, diets high in cereal or water soluble carbohydrates should be avoided

For All Senior Horses

Provide loose salt vs. a salt lick as many senior horses have a drier mouth and loose salt is easier for them. Perform body condition scoring regularly and watch for changes in muscle development (loosing muscle).

Fact sheet References.

Test your knowledge with Equine Guelph's Senior Horse Challenge Healthcare tool .

Nutrition- What are Macronutrients?

Macronutrients are the nutrients that are required in larger amounts in your horse's diet. They include protein, fat and carbohydrates (non-structural carbohydrates and fibre).

The sections below provide examples of dietary sources of each macronutrient but remember that **these sources still contain other macronutrients**. For example, cereal grains can be a source of carbohydrates, but also contain protein and fat.

Protein

Protein, important for the growth and function of your horse's tissues and organs, is made up of amino acids. Each type of protein is made up of different types of amino acids. Certain amino acids are "essential" for your horse to get through his or her diet, because they cannot be made by the horse's body. Other amino acids are considered "non-essential", because they can be made by your horse's body. It is important to consider the amino acid composition of the proteins in your horse's diet to ensure your horse is getting enough essential amino acids.

Sources high in protein include:

- Commercial ration balancers
- Seed meals, like soybean
- Legume hays e.g. alfalfa, clover and birdsfoot trefoil
- Growing pasture, e.g. smooth bromegrass
- Dried yeast
- Amino acid supplements

Fat

Fat is used by your horse as an energy source and to help with the absorption of fat-soluble vitamins, like vitamin A. Fat contains fatty acids. Like protein, different fats have different fatty acids, and some of these fatty acids are essential, while others are non-essential. Again, it's important to consider the differences in fatty acid profiles when looking at your horse's diet.

Sources high in fat include:

- Oils, like vegetable or fish oil
- Grains
- Pasture

Carbohydrates

Carbohydrates include many very different types of compounds. Animal scientists have developed many ways to divide this category of nutrients over the years, but two important categories for horses are non-structural carbohydrates and fibre.

Non-structural Carbohydrates (NSC)

Non-structural carbohydrates (NSC) provide a source of energy for your horse that is more rapidly digested and absorbed than structural carbohydrates (fibre). NSC include mono- and disaccharides, oligosaccharides (including fructans) and starch. High dietary intake of NSC may increase the risk of obesity and laminitis and can be harmful for horses with diseases like Cushing's and Equine Metabolic Syndrome.

Sources high in NSC include:

- Spring pasture
- Molasses
- Grains
- Concentrates

Structural Carbohydrates (Fibre)

Fibre is one of the most important nutrients for your horse's digestive health! Fibre is needed to ensure food keeps moving through your horse's digestive tract and is an important source of energy when broken down and used by microbes in your horse's hindgut. Examples of fibre important to your horse's health include cellulose and hemicellulose.

Sources high in structural carbohydrates include:

- Hay
- Pasture
- Beet pulp

An equine nutritionist or veterinarian can help design your horse's feeding plan.

Learn more: Equine Guelph Online Equine Nutrition and Advanced Equine Health through Nutrition courses.

Laminitis and Nutrition

and Paying Attention to pH

"The pain can be compared to tearing your fingernail away at a 45 degree angle but then the horse is asked to walk on that painful foot," explains Equine Nutritionist Don Kapper.

When laminitis occurs, an incident has affected the quality of the laminae in the foot. It has been torn and the coffin bone may rotate. This can range in severity. One cause is overfeeding starch found in cereal grains (oats, corn, barley, wheat, rice) or fresh, immature pasture.

In the spring and fall, when there is frost present at night, the sugar is stored in the grass. When horses go out in the morning and consume large amounts of this pasture (now rich in non-structured carbohydrates) they are at greater risk for laminitis.

Photo: Barbara Sheridan Photography

"Nutritionally, it is critical to ensure the pH of the digestive system is at optimal," says Kapper. Normal pH of the cecum is 6.7 – 6.8. When the pH drops to 6.5, this is referred to as acid gut syndrome and it is accompanied by a loosening of the stools. An acid smell will also be present in the feces. If pH reaches 6.0, laminitis will occur in 80 percent of horses. If a horse is laminitic, eliminating high starch and sugar content cereal grains will help maintain a normal pH in the cecum.

Using a ration balancer, which will be low in non-structured carbohydrates, is an ideal way to feed proteins, minerals and vitamins to horses prone to laminitis. Depending on the weight of the horse, the balancer can be fed at one to two pounds a day and meet all of their needs to complement their grass or mixed forage intake without having a negative effect on the cecum.

Forages also play a role in pH. Analysis can be done for non-structured carbohydrates for starches and sugars. New technology also allows testing of structured carbohydrates for water soluble carbohydrates (WSC) and ethanol soluble carbohydrates (ESC). In a laminitic horse, it is the WSC plus starch that requires monitoring because that measures starch plus fructans (present in cool season grasses). Fructans are not found in legumes, warm season grasses or grains. Fructose is a large molecule sugar that cannot be broken down and absorbed in the small intestine. It has to go all the way to the fermentation vat (cecum) to be released and this is where it will affect the pH of the cecum.

Feeding forage ad-lib will result in the production of saliva – one of the best buffers for the horses' digestive system and the most effective way to control PH. "Horses are designed to be continuous feeders," explains Kapper. An 1100 pound horse will eat up to 18 hours a day consuming about 2 – 2.5 % of their body weight per day in dry forage. This will produce between 25 to 30 gallons of saliva, significantly reducing the chances of acid gut syndrome and improving nutrient absorption and overall health.

Feeding the best choice of ad-lib forage, minimizing starch intake and analyzing the structured and non-structured carbohydrates can help laminitic horse owners maintain a balanced pH for happy cecum's and healthy horses.

Information sheet references.

Learn more about Equine Guelph online courses for horse caregivers.

Dehydration

Dr. Bri Henderson, assistant team vet for Canada's endurance team at 2010 WEG says, "Hydration is everything. The correct balance of water and body salts controls everything from the brain to the gut. As dehydration develops, we risk our horse's health and welfare by stressing their hearts, kidneys and gut function. From the polished show horse to the racehorse to the beloved pasture horse, **we must ensure access to clean drinking water and CORRECT replacement of electrolytes lost through sweating**."

Two simple ways you can check your horse for proper hydration are the capillary refill test and the skin pinch test.

Mucous Membranes/Capillary Refill

Lift the upper lip of the horse 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 cause for concern. 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).

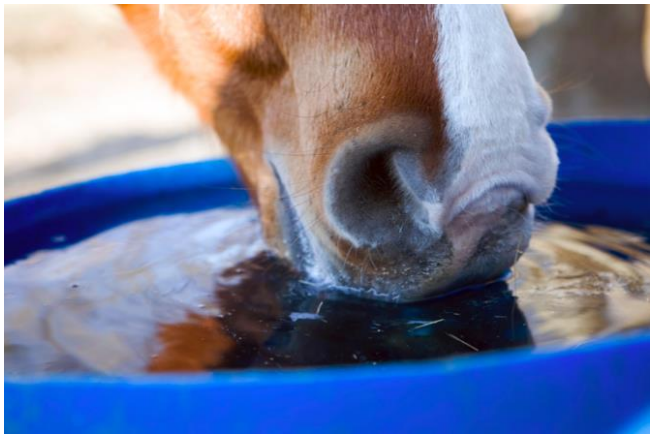
Skin Pinch

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.

Video to check for dehydration on Equine Guelph's YouTube channel
Also see The Importance of Hydration (complete with Heat Stress Chart)
Infographic on heat stress and equine thermoregulation.

Water, Salt and Electrolytes

It is of utmost importance to have **fresh, clean water available to your horse at all times during EVERY season of the year**. A horse's body is 2/3rd's water. It is crucial for almost every function in the body including: aiding in blood circulation, muscle function, digestion, cleansing the body of toxins and waste, skin elasticity and cooling the body.



Inadequate water supply can result in colic, heat stress and death.

Always Monitor Water Consumption

Horses may reduce intake or refuse to drink for a number of reasons: palatability including change in water source (e.g. when travelling), temperature too hot or cold (4 – 18 degrees Celsius is optimal), stray voltage from the water source (e.g. electric fence ground rods and defective heaters) contamination (including algae) and other herd members guarding resources. It is recommended to test water quality annually, if it is not from a tested water supply deemed safe for human consumption. If automatic watering systems are used, water consumption meters can be used to help monitor intake. A reduction of urine discovered when cleaning the stall should signal a red flag!

How Much Water?

The amount of water a horse needs can vary depending on the type of horse, activity level, diet and season to name just a few factors. A mature horse in light work, in moderate temperatures will drink approximately 5 L/100 kg of body weight. That's around 25 litres for a 500kg horse. Other horses (strenuous activity/sweating, lactating, in foal, etc.) will require more. This could be 12 to 15 L per 100 kg of body weight, or 60 to 75 L per day for a 500 kg horse!

Snow as Water Source?

No, just no! 10 inches of snow = 1 inch of water. If 2 inches of snow falls, a horse would need to consume over 4 football field's worth of snow to get enough water. **Snow is not an adequate source of water!**

Requirements from the National Code of Practice for the Care and Handling of Equines:

Horses must have access to safe, palatable and clean water in quantities to maintain health and vigour. In extreme weather conditions (cold or hot), special attention must be paid to ensure water availability, access and intake. Water troughs, containers and any automatic watering devices must be cleaned regularly and maintained in working order with no sharp or abrasive edges.

More code recommendations on feed and water: http://www.nfacc.ca/codes-ofpractice/equine-code#section3

It is important to maintain heated water systems, ensuring they are in good repair to prevent water from freezing in the winter and to be sure they will not become a hazard.
More recommended reading: preparing water systems for winter.

Salt

Salt is important for fluid balance and hydration. Providing salt is a requirement of the National Code of Practice for the Care and Handling of Equines: Horses must have access to salt either provided in the ration or free access (a block or loose salt).

The delivery method of sodium chloride (NaCl) varies among horse owners. Salt blocks are convenient but were originally designed for cows. Horses have a smooth tongue, dry mouth and have an easier time consuming free-choice loose salt. If they become irritated licking a block, they may not achieve their required intake. Blocks can also go untouched in the winter when they become cold. A block with teeth rakings or bite marks signals a desperate attempt to consume more! Also, if your horse starts licking dirt or even you, they may deficient.

Low sodium (NaCl) levels may result in a horse drinking less and increase the risk of impaction colic. Unlimited access to water is essential.

Electrolytes

When a horse sweats, they are losing more than fluids. They also lose electrolytes including: sodium, potassium, chloride, magnesium and calcium. Electrolytes moderate many body functions including firing of nerves and contracting of muscles. Prolonged and strenuous exercise results in an even greater loss of electrolytes and depleted glycogen levels which contributes to muscle soreness and poor performance.

According to research studies, giving electrolytes before situations likely to cause dehydration will be beneficial to overall performance and help guard against the serious effects of dehydration. And giving electrolytes again after exercise helps restore the essential nutrients lost during sweating.

Horses are less adept at coping with heat than humans. They get hotter faster and are more susceptible to the negative effects of heat stress. Tips for protecting horses from the harmful effects of summer heat begin with teaching your horse to drink an electrolyte solution to replace sweat losses. It is recommended to start with a small amount in the water, allowing the horse to get used to the taste, and gradually increase it over days and weeks until up to the recommended dosage. Always have another water source available that is free from electrolytes.

Not all electrolytes are created equal.

When correctly formulated, electrolytes will replace the ions lost in sweat. For performance purposes – the electrolyte should specify it is a 'performance' electrolyte on the label. The ingredient dextrose should be present because it is essential to improve the absorption rate of all the ions. The amounts of sodium, potassium and chloride levels are usually provided in the labels ingredient list. Adding the amount of sodium and potassium together should come close to equaling the amount of chloride in the formula. When you compare the amount of these three ions, you will see that not all electrolytes on the market today are created equal! The higher quality electrolytes are palatable, while lower quality ones are bitter and discourage consumption when top-dressed on feed or mixed in water.

Before electrolytes can be absorbed, they need to be broken down with water. Delivery of a powdered electrolyte in feed or water is acceptable as long as they can continue to drink water. If water is not available or the horse does not drink after administering dry electrolytes, the horse will take water from its body and put it into their digestive system to break the powder down. Mixing electrolytes in water will reduce the absorption time in the small intestine. All electrolytes are hydroscopic, which means if fed in powdered form and the horse does not drink water, they will dehydrate the horse. **Paste electrolytes are to be avoided due to their 'short term affects'. They will lay in the gut and actually pull water from the horse's body, increasing dehydration, at the most critical time after exercise!**

HELPFUL FORMS

Boarding Barn Checklist

Looking back at the 5 freedoms of animal welfare in chapter one, it is easy to come up with a basic list of the top questions to ask your boarding barn candidates.

1. Freedom from Hunger and Thirst - Horses are trickle feeders designed to graze 18 hours a day. Is there access to good quality free-choice forage to promote good health and minimizes digestive issues like colic and ulcers? Is there clean fresh water available 24/7? Do they have heated water systems for the winter? Do horses have access to salt? **Is the hay tested** and what is included as far as balancing the horse ration (grain, ration balancer)? Most barns will feed supplements provided by the owner but **without knowing what is in the hay, one cannot make accurate decisions on what may be needed**.

2. Freedom from Discomfort - Do the horses on the property seem bright, in a good body condition score, with healthy feet and coats? Would they get a green light on the horse health check in chapter one?

3. Freedom from Pain, Injury, or Disease – Does the boarding contract include a protocol for addressing emergency issues and include an agreement detailing what happens if the owner cannot be reached? What vaccinations and paper-work are required before arrival and is there a quarantine protocol for new arrivals? Does the barn have a herd health program including parasite control, fecal testing, dental exams, vaccinations or is scheduling routine veterinary visits the responsibility of the horse owner?

4. Freedom to Express Normal Behaviour- Can the horses see and interact with one another? Is there ample turnout time, room to move around, exercise and forage?

5. Freedom from Fear and Distress - What is the stocking density? Can all the horses access resources and what safety measures are taken when introducing new horses and in ensuring compatible groups?

Of course, choosing a boarding barn is dependent on what you intend to do with your horse and what your priorities are. There are plenty of multi-discipline facilities out there however, a three-day eventer, jumper, dressage rider, reiner or trail rider will all be looking for different amenities and different footing. It can be pretty difficult to find a barn that checks all the boxes but print out the following **checklist to help with your search**.

Boarding Barn checklist

Address & contact information:

_____

Indoor or outdoor board cost

$_____

Non-negotiable – 5 freedoms of animal welfare and National Code of Practice:

- ☐ 24/7 water –and outdoor waters heated in winter.
- ☐ Quality hay.
- ☐ Salt is provided.
- ☐ Good footing for turn out and riding so as not to cause injury.
- ☐ Adequate shelter/shade/windbreak, areas that are free of mud.
- ☐ Turn out has sufficient space to canter and move away from others in herd. Compatible groups.
- ☐ Parasite control program and routine veterinary care program in place?
- ☐ Vaccinations required for new arrivals? Coggins test? Quarantine period?
- ☐ Policy for immediate treatment of injuries (& protocol if owner cannot be reached)?

Next questions/observations (Some of the following only pertain if the horse will be occupying a stall):

- ☐ Good Ventilation? Non-slip flooring. Adequate ceiling height for horses (converted cow barns are not always suitable for equids larger than ponies).
- ☐ Barn is clean, free of clutter, no foul or dangerous odors (especially ammonia).
- ☐ Bedding is not dusty and adequate depth; stall is adequate size and safe? Rubber mats?
- ☐ Paddock size adequate for cantering? Group Turn 0ut? Not over-stocked?
- ☐ If not on 24/7 turn out, how much turn out time?
- ☐ Are shelters and paddocks an adequate size for the stocking density?
- ☐ Fencing? Safe & in good repair?
- ☐ Are paddocks maintained: Weeds? Rocks? Manure? Seeding? Rotating to allow regrowth?
- ☐ Barn has an emergency action plan. Safe wiring and other fire safety considerations. Fire safety checklist.

Questions/observations tailored to your needs and preferences:

Owner or manager lives on property? Y/N How long have they leased/owned? _____

Are there spare stalls available if an outdoor board horse(s) needs to come in for an emergency or injury? Y/N

Pasture in summer? Y/N Dirt paddock if needed for a metabolic horse? Y/N

Hay quality? _____ tested? Y/N. Round bales or small squares?

Types of Concentrated Feed offered? _____ How many feedings/day? _____

Any supplements provided, or owner provides at cost? _____

Discipline specific questions: Jumps? Y/N Area to gallop? Y/N Trails? Y/N Hills? Y/N

Indoor Arena: Y/N Size? _____ Good footing, not dusty _____

Outdoor arena Size? _____ Good footing, not dusty, well maintained? _____

Wash stall? Y/N Tack Lockers? Y/N Washroom Y/N Viewing lounge? Y/N

Hours? _____ Riding School? Y/N Busy barn? Y/N

Lessons $_____ Coaches on premises? _____Outside Coaches allowed? Y/N

Vet & Farrier- designated or your choice? _____ Holding for vet/farrier? Y/N $_____

Blankets and boots on off service? Y/N $_____ Any other extra service fees? _____

Trailer Parking or trailering available? Y/N _____

Other notes:

_____

_____

_____

_____

It is highly recommended to read the National Code of Practice for the Care and Handling of Equines before starting your search to become aware of minimum required standards of care.

Good luck with your hunt!

Annual Horse Expense Sheet

It is often said that if you ask a question to ten horse owners, you will get ten different answers. However, one thing we can all agree upon is that horses are expensive! Affording the initial purchase cost is the least of expenses. Calculating the maintenance over the horses' lifetime is a more realistic look at a long-term budgeting plan. How much does horse ownership really cost? The short answer is that it depends. There are many variables that come into play when calculating the cost of horse ownership.

The first choice is between indoor or outdoor board, if you are not keeping horses on your own property. Whether you choose board or horse keeping at home, some common costs apply to both situations:

- Vaccinations
- Farrier
- Dental exams
- Deworming and fecal tests
- Supplements if needed, including electrolytes
- Emergencies
- Insurance
- Blankets if needed
- Tack (Saddle, bridle, halter, leads, boots…)
- First aid kit
- Grooming supplies (including shampoo, sprays)
- Fly spray
- Rider clothing and equipment
- Lessons
- Horse Transportation costs

Always have a bank account reserved for unexpected expenses, such as emergency veterinary bills. If you keep your horse at home, you will also need to factor in feed, bedding, water, waste removal and general equipment (hoses, shovels, pitchforks, brooms, wheel barrows, tractor…)

Download the customizable Annual Expense sheet (Excel)

It is best to know all these cost before looking for your equine partner. Enjoy lessons or part-boarding if horse ownership is going to be too big a stress on your cash flow. If everything looks good in your budget for owning a horse; here are four tips for horse shopping:

1. Seek professional help – Enlisting a coach or pro that understands your skill level can be invaluable helping you partner up and they can help you avoid emotional mistakes. Also, seek the help of someone who knows legal contracts (which should always accompany a sale, lease or part-board agreement).
2. Know your goals – can the horse perform the tasks you would like to achieve?
3. Don't skip the veterinary pre-purchase exam! (if you are to become the new owner, even if you are getting the horse for free)
4. Educate yourself– even if you plan to board your horse, you will be the main advocate for your partner, and it is your responsibility to be knowledgeable in equine care, management and welfare. Sign up for online courses at EquineGuelph.ca.

EQUINE GUELPH
helping horses for life™

Stall Card

HORSE: _____

OWNER:

Veterinarian:

Farrier:

Feed:

Emergency Contact:
(if owner cannot be reached)

Insurance Provider:

Special Instructions:

Health record sheet

HORSE: _____

Farrier Visits (4-6 weeks)**:**

Last Dental Check (at least once or twice a year):

Vaccinations (list all vaccinations & dates administered)**:**

Deworming (include fecal test results)**:**

Last Saddle Fitter visit (recommended at least once or twice a year):

Body Condition Score (it is a good idea to record your horse's BCS at least once a month)**:**

Regular Vitals (Temperature, Pulse, Respiration & Other Notes):

More FAQ's

Visit Equine Guelph's Free Online Interactive Healthcare Tools to answer all sorts of FAQ's:

Does my horse need a blanket?
Horse Blanketing Tool

What vaccinations will my horse need this year?
Vaccination Equi-Planner

What do I need to know when planning to breed my mare?
Mare & Foal Care Tool

How well do I know the National Code of Practice for the Care and Handling of Equines?
Welfare Code Decoder

How do I reduce the chances of sickness in my horse?
Biosecurity Risk Calculator

Is that a front or hind limb lameness?
Lameness Lab

What causes equine arthritis and how do I manage inflammation in a joint?
Journey through the Joints

How do I recognize what is normal and not in an aging horse?
Senior Horse Challenge

Am I following the top 12 colic prevention practices?
Colic Risk Rater

Does my barn comply with the 7 Principles of Barn Construction to ensure fire safety?
Barn Fire Prevention Tool

How do I take care of my horse's hooves?
No Hoof, No Horse is just one of the many helpful PDF's for download on Equine Guelph's Healthcare tools page.
Hoof care myths & common issues is just one of the news stories that can be found archived on the news pages at TheHorsePortal.ca and at Equine Guelph.ca

Quick Links for personalized downloads in this e-book:

Helpful Checklists

- Boarding Barn Checklist
- Annual Horse Expense Sheet (Excel)
- Stall Card
- Health record blank sheet

Continuing Education Opportunities

Equine Guelph has offered award-winning online learning since 2002, from short hot topics on TheHorsePortal.ca to the 20 incredible 12-week courses, which can be taken toward the Business, Science or Welfare certificate and Diploma Program.
Join our global online learning community for those who strive to give the best possible care for their horses.
FAQ's that students enjoy discussing in Equine Guelph's 20 twelve week courses:

Business Management/Science Courses

- Management of the Equine Environment How do I create a safe and healthy environment for my horse and how do I need to adjust my management strategies throughout the seasons?
- Equine Health and Disease Prevention – What are the best prevention practices to minimize the chances of disease and how do I guard against new and emerging diseases?
- Equine Functional Anatomy How do I approach feeding, training and management differently depending on the anatomy of my horse?
- Equine Nutrition How do I properly balance my horses diet and learn to cut through clever marketing to find products with science-based research backing them?
- Equine Behaviour – How do horses learn and how can I create the best possible relationship with my horse to have a calm and willing partner?
- Equine Exercise Physiology – What tools can I use to train my horse to reach its potential while minimizing the chances of injury?
- Equine Genetics How do I select for specific traits in my breeding program?
- Management of Broodmare, Stallion and Foal – What should I do every step of the way to successfully breed my mare and nurture a health foal?
- Equine Business Management How do I write a business plan?
- Equine Business Finance and Risk Management How do I structure my business so it will succeed among all the local competitors in the equine industry?
- Equine Event Management What are all the considerations for hosting a successful event and how long before the event should I start planning?
- Equine Journalism What are the most effective tools for writing articles to gain publication?
- Marketing and Communication in the Equine Industry What are the top tools to drive traffic to my equine business and how do I relay what sets my services apart from everyone else?
- The Equine Industry How is the equine industry evolving and where do I fit in?
- Stewardship of the Equine Environment How can I make my barn as environmentally friendly as possible?

Advanced Courses/Welfare Courses – an even deeper dive into the topics that interest you

- Equine Welfare
- Global Perspectives in Equine Welfare
- Advanced Equine Behaviour
- Advanced Equine Functional Anatomy
- Advanced Equine Health through Nutrition