The Miniature Horse – Not Just a Small Horse!

Nicole Jones, DVM Student (Class of 2007)

The American Miniature Horse is a curious, intelligent, and delightful breed that has been selectively bred down in size from larger breeds while maintaining as near-perfect conformation as possible. Despite their small size, these horses are not dwarves or runts but well-proportioned mini horses. Care of the Miniature Horse is nearly the same as that of the larger breeds but on a much smaller scale with regard to feed, deworming doses, medication, etc. Although these tiny equines appear as smaller replicas of the larger breeds and share many similarities, minis seem to be more susceptible to certain health problems than their full-sized cousins. This article is intended to point out the most commonly noted conditions that affect the Miniature Horse preferentially as compared to larger breeds of equines.

Obesity

Many new Miniature Horse owners join the “mini world” with lots of experience in a larger breed of equidae. Although most are aware of the smaller portions of feed that a smaller horse would require, some owners find it very difficult to feed such a small amount of grain and hay or limit the amount of grazing on pasture to their lovable companions. Miniature Horses are very easy to overfeed due to their small size and metabolism, and as a result, many minis tend to be obese. Obesity in horses, whether large or small, can predispose to laminitis (founder), poor performance, and decreased reproductive efficiency. Strict feeding recommendations based on your Miniature Horse lifestyle should be accurately assessed, planned, and followed to avoid excess body condition; this can be accomplished by contacting your veterinarian or a representative from one of the feed manufacturers.

Hyperlipidemia

Hyperlipidemia is a condition that Miniature Horses are well-known for although it also affects ponies and donkeys. In short, hyperlipidemia (or hyperlipemia) is a disorder of lipid metabolism that may lead to fatty infiltration of the liver, clinical signs of liver disease, loss of appetite and ultimately, death. The disease often occurs in obese individuals that are stressed, anorectic (off-feed), pregnant, or lactating. It frequently develops following a primary illness of several days duration such as diarrhea, endotoxemia, parasitism, pituitary tumor, or neonatal septicemia but can occur any time a horse is unable to satisfy its own metabolic energy needs (late gestation, early lactation, hormonal imbalance, etc). (continued on page 2)
Diseases of athletic horses

Research / Scholarly Interests

Lexington, KY, 2005-2006

Internship, Rood & Riddle Equine Hospital, Clarksburg, NJ, 2004-2005

Education / Training

DVM, Szent Istvan University, 2003

Resident, Large Animal Surgery, 2006-2009

Dr. Benjamin Uberti
Residency, Large Animal Medicine, 2006-2009

Education / Training

DVM, Buenos Aires University, Argentina, 2005

Private Practice Practice, Argentina, 2005-2006

Internship, Ohio State University, 2006

Research / Scholarly Interests

Equine Neonatology

Gastroenterology

News & Notes

New Residents

Miniature Horse (continued from cover)

Affect ed horses usually will begin with anorexia and lethargy, progressing to incoordination, abdominal pain, head pressing, circling, diarrhea, convulsions, and death. It is important for owners and veterinarians alike to always suspect hyperlipidemia in any obese mini with severe depression, anorexia, neurological signs, and icterus (jaundice). Owners may prevent this condition by providing appropriate nutrition while avoiding obesity, stress, and engaging in good routine health care.

Colic

Miniature horses seem to be more susceptible to colic than full-sized horses, which is possibly the result of incorrect grinding of feed due to poor teeth, consumption of poor-quality coarse hay, or inadequate water consumption (an average adult mini should consume 1-2 gallons of water per day depending on their size and the ambient temperature). The small colon is the most common site of disease in Miniature Horses and impaction is the most common cause of colic either due to fecolith (hardened fecal ball), enterolith (mineralized intestinal content) or undigested feed. Another problem is that colic in these small equines can be a major diagnostic challenge. One reason for this is that rectal palpation is limited to the most caudal portion of the abdomen due to the small size of the pelvis in comparison to full-sized horses. Another challenge is that the clinical signs seen in Miniature Horses are frequently not the classic colic symptoms seen in full-sized horses in that some may only show depression and anorexia. Nevertheless, most of the medical treatment protocols for colic are the same in Miniature Horses (flunixin meglumine, mineral oil, and feed withdrawal); however, it is important to remember that they are particularly susceptible to hyperlipidemia and should therefore not be held off feed any longer than is necessary.

Dystocia

Many Miniature Horse owners are involved in breeding since there is less of a focus on using them for riding or performance purposes. Unfortunately, the incidence of dystocia (difficult births) in the Miniature breed is much higher (15-20%) than full-sized breeds (2-4%). This may be due to metopic disparity (the small size of the mare’s pelvis and a disproportionately large fetus) or fetal malpresentations (abnormal presentation, posture, or position of the fetus) caused by the small amount of space within the uterus for the fetus to move during parturition. Regardless of the cause of the dystocia, once difficulties arise, it is even more difficult to correct the problem due to the difficulty with manual manipulations of the fetus because of the small size. Dystocia is a serious and potentially life-threatening condition.

Dental Issues

Miniature Horses often have more problems with their teeth than do larger breeds of horses. Most likely, this is due to the small size of their heads along with the presence of the same number of teeth as found in a full-sized horse which leads to overcrowding of the teeth. As a result, tooth wear may be uneven and predispose Miniature Horses to colic. Additionally, retained deciduous teeth (retained caps) and chronic sinus infections are commonly associated with dental overcrowding. Thus, routine dental examinations and care one to twice a year are strongly recommended.

Other Conditions

Among other medical issues that preferentially affect the Miniature breed are dwarfism, upward fixation of the patella (“locked stifle”), increased or decreased sensitivity to drugs and vaginal adhesions.
**Nutrition for Improved Hoof Quality and Growth**

Derek Stansberry, DVM Student (Class of 2007)

Good hoof nutrition begins with feeding a ration that is well balanced and adequate in energy. To maximize hoof growth a horse should be kept in a positive energy balance. A horse’s body condition score is a good assessment of the energy content within their diet. Horses should also be fed a ration with a calcium to phosphorous ratio of approximately 2:1. Most commercial feeds are designed to achieve this calcium to phosphorous ratio when combined with hay or pasture. Feeds high in phosphorous, such as timothy hay, corn, or oats, should be balanced by adding to the diet feeds that are higher in calcium, such as alfalfa hay or a balanced, commercially available ration. A complete mineral supplement is also important to ensure adequate amounts of minerals such as zinc and copper. This is best accomplished by using a commercial mineral supplement or by feeding a concentrate that is balanced for minerals.

Horses with pre-existing hoof problems such as laminitis or chronic poor hoof quality may benefit from an extra source of chelated zinc. Generally around 500mg of chelated zinc per day is an accepted amount. This is often included in commercial hoof supplements. Adequate protein is also important for hoof growth and quality. Hoof is composed primarily of protein and in particular the protein keratin. Keratin contains several sulfur containing amino acids such as methionine, cysteine, and cystine. These amino acids help keratin acquire its strength. These amino acids are important, but having an adequate amount of a quality protein source that includes all the amino acids is essential to unlock your horse’s full hoof growing potential. Supplemental methionine is often recommended to be added to the horse’s diet and often is included in commercial hoof supplements.

Nine grams of methionine per day is the current accepted recommendation. Many studies have looked at the effects of adding a supplemental biotin source to a horse’s diet and its effects on hoof growth. It is generally accepted that adding a dietary biotin supplement is helpful in achieving your horse’s maximum hoof growth potential. Supplementing your horse’s diet with at least 20-50mg per day is the general recommendation at this time. No added benefit has been found when using larger amounts of biotin supplement per day. Before searching for the right commercial hoof supplement to improve your horse’s hoof health, make sure all the basics such as adequate energy and protein are covered in the base diet. Hoof grows at the rate of about 1 cm per month and an entire new hoof is grown about every 10-14 months. Therefore, it is not uncommon for dietary changes to take 6-8 months before improvement is seen. So remember to be patient with any change in nutrition and hoof growth. The overall message is that feeding the hoof not only includes giving your horse the latest commercial hoof supplement with biotin, chelated zinc, and methionine. It is essential that the diet includes an adequate amount of energy, quality protein, vitamins, and minerals.

**Equine Sarcoid**

Diagnosis of equine sarcoids requires confirmation by histopathology of biopsy specimens.

Treatment modalities for the management of equine sarcoids include surgical excision, cryotherapy, radio-frequency hyperthermia, immunotherapy and local chemotherapy. Surgical debulking with either a scalpel or CO2 laser along with cryotherapy has been shown to have a lower recurrence rate than surgical removal alone. Sarcoids around the eyes can be treated with intra-lesional injection of Bacille Calmette-Guérin (BCG) vaccine or mycobacterial cell wall products. It is believed that host lymphocytes are stimulated with BCG injections leading to a host immune response against the sarcoid cells. Repeated BCG treatments are usually needed and care should be taken to prevent adverse reaction by pre-treating the horse with flunixin meglumine and prednisolone prior to each BCG injection. The successful treatment of sarcoids has also been described using cisplatin and 5-fluorouracil injections in the tumor and with application of 5-fluorouracil cream on the tumor. A topical product called Xxterra contains a caustic agent and an extract from the bloodroot plant which results in the sloughing of sarcoids. The caustic agent is thought to change the antigenicity of the sarcoid tissue so that the body identifies it as foreign and destroys it.

Ask your veterinarian to examine and treat horses with suspected sarcoids or other lumps and bumps. Sarcoids vary in size, number, location on the body, rate of growth, and type. Early detection will allow for timely implementation of a treatment plan and potentially, the use of several minimally invasive treatment methods. Tumors left untreated may grow to an unmanageable size or become locally invasive making treatment less likely to succeed.


It is most common over the back, rump, fetlock, and cannon bone. The organism is contagious and may be spread by tack, equipment, or insects. Keeping horses clean and dry is effective for both prevention and treatment. It is also important to disinfect all tack and equipment to prevent spread. Antibacterial shampoos and rinses containing agents like chlorhexidine are effective for both equipment and animals. It is not advised to use ointments as they tend to hold moisture in while the goal of treatment is to keep these lesions dry.

Summer conditions can make for an excellent time to enjoy your horse, but they can be harmful in extreme cases. Please remember this and remember that avoidance of the extreme summer elements is the key to preventing skin problems.

**Summertime Skin Diseases**

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Using permethrin based fly control products 1-3 times a week may also make a difference. In addition to these management changes, medications prescribed by your veterinarian such as glucocorticoid anti-inflammatories can be quite effective. Some studies have also shown promising results from immunotherapy or allergy shots specific to the insect causing the problem.

**Dermatophilosis or Rain Scald**

Horses exposed to hot, humid, or rainy conditions are at risk for development of rain scald. Rain scald (rain rot, dermatophilosis, or streptothricosis) is a summertime skin disease caused by the organism Dermatophilus congolensis. It is an organism with properties of both fungi and bacteria that infects the hair follicles. Because there is damage to the hair follicle and the hair shaft the hair will pull out easily in small clumps leaving pink skin. The lesions also may become scabbed over or contain pus. It is most common over the back, rump, fetlock, and cannon bone. The organism is contagious and may be spread by tack, equipment, or insects. Keeping horses clean and dry is effective for both prevention and treatment. It is also important to disinfect all tack and equipment to prevent spread. Antibacterial shampoos and rinses containing agents like chlorhexidine are effective for both equipment and animals. It is not advised to use ointments as they tend to hold moisture in while the goal of treatment is to keep these lesions dry.

Winter conditions can make for an excellent time to enjoy your horse, but they can be harmful in extreme cases. Please remember this and remember that avoidance of the extreme summer elements is the key to preventing skin problems.
GBED should be suspected in a foal if it is:
- of a Quarter Horse or Paint Horse breeding,
- suffers from generalized weakness or fails to suckle properly,
- is prone to seizures, and
- has flexural deformities of multiple limbs at birth.

The veterinarian may also note the following with routine physical exam and bloodwork; a heart murmur, persistent weakness, seizures, and/or cardiac arrest.

Erin Mapes, DVM Student (Class of 2007)

Emilie Blough, DVM Student (Class of 2007)

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The veterinarian may also note the following with routine physical exam and bloodwork; a heart murmur, persistent muscle tremors, and seizures.

Owners of King descendants who intend to breed these horses made testing for GBED available to owners and veterinarians. Currently, it is estimated that approximately 8% of King’s descendents are carriers of the GBED allele, with an estimated 300 GBED foals being produced per year! Unfortunately, none of these foals survive longer than 15 weeks and it is estimated 300 GBED foals being produced per year! Unfortunately, none of these foals survive longer than 15 weeks and in the future, this deadly disease is completely preventable and may be able to be eliminated altogether.

Weakening of the body is common in neonatal foals is commonly seen in equine veterinary practice and can be caused by a variety of ailments. Recently, a genetic disease has been identified in both Quarter and Paint horses that causes a fatal defect in energy metabolism of newborn foals. This disease has been named Glycogen Branching Enzyme Deficiency, or GBED.

Glycogen is the storage form of the sugar glucose, a molecule needed by the cells of the body for energy metabolism. Glycogen normally exists as a tree-like structure with thousands of branch points that allow for the rapid storage and mobilization of glucose. The Glycogen Branching Enzyme, GBE, is responsible for the creation of these branch points in the glycogen tree. The lack of GBE, therefore, results in a long, non-branching molecule, and subsequently a decreased number of available terminal glucose molecules necessary for energy storage and metabolism. This produces somewhat of a glucose deficiency that is especially harmful to skeletal muscle, heart muscle, and the brain. The foal eventually dies from persistent weakness, seizures, and/or cardiac arrest.

Summertime Skin Diseases
Justin Sellon, DVM Student (Class of 2007)

Summertime in Indiana has a tendency to bring sunshine, heat, humidity, and insects to your horse barn. These three things can be hard on your horse’s skin and may lead to the development of several common diseases.

Sunburn
Increased day length and a hotter sun can spell trouble for horses lacking pigment on their face, nose, and ears. Intense sunlight can cause redness, swelling, and increased sensitivity. It can be unsightly and is no doubt painful for the horse. Certain plants, such as poison ivy, St. John’s Wort, and buckwheat contain chemicals which cause horses to be unusually sensitive to the sun. Medications, like tetracycline, can also make horses more photosensitive. If your horse is showing signs of sunburn, the first and most logical step is to limit exposure to the most intense hours of sunlight by stabling during these times. Sunscreen or zinc oxide is effective for horses and may be used in the affected areas of the nose and face. Many grooming products and fly-sprays may have sunscreen already added. Eliminating photosensitizing plants from the horse’s pasture or hay, and being aware of possible side-effects of your horse’s medications may also solve the problem.

Equine Sarcoi
Emilie Blough, DVM Student (Class of 2007)

Have you noticed any new lumps or bumps on your horse(s) recently? If so, there is a good chance that sarcoi are the culprit. Sarcoi are locally invasive fibroblastic neoplasms and are the most common skin tumor of horses. A definitive cause has not yet been determined for equine sarcoi, but an association exists between bovine papillomavirus types 1 and 2 and sarcoi lesions. The papovavirus is also thought to play a role in sarcoi development. Seventy percent of equine sarcoi develop in horses less than 4 years of age; however, all ages can be affected and no sex or breed predisposition has been identified. Some horses have been proven to have a genetic link and familial tendency for developing sarcoi. Sarcoi can arise throughout the body and in multiple locations simultaneously, with lesions commonly reported on the eyes, ears, and limbs. Sarcoi tumors have not been shown to metastasize, but recurrence following incomplete removal is possible.

Six classes of sarcoi lesions exist (described below) and are characterized by both lesion location and appearance. Occult sarcoi are generally flat, circular, hyperkertotic areas 2-5 mm in diameter, that appear in relatively hairless areas including the skin around the mouth and eyes, neck, medial forearm and thigh.

Verrucous (wart-like) sarcoi can be broad-based (sessile) or pedunculated and generally occur on the face, body, and groin/sheath areas.

Nodular sarcoi tend to develop on the eyelids and in the groins/sheath areas and are generally well circumscribed subcutaneous nodules, 5-20 mm in diameter, but can be larger and numerous with deep dermal attachments.

Fibroblastic sarcoi develop commonly on eyelids, lower limbs, at the coronet, and groin, can be sessile or pedunculated, and are frequently ulcerated with serum exudation (“proud flesh”). Fibroblastic sarcoi resemble exuberant granulation tissue, which must be considered as a differential diagnosis. Traumatized sarcoi categorized as either occult, verrucous, or the nodular form can progress into fibroblastic sarcoi.

Mixed sarcoi lesions have multiple tissue types including occult/verrucous type tissue with nodular/fibroblastic type tissue; predilection sites include eyelids, face, groin, and medial thigh. Malevolent sarcoi develop commonly in the jaw, face, elbow, and medial thigh and are generally comprised of nodular or fibroblastic type tissues. This type of sarcoi is locally invasive and can infiltrate lymphatics; however, sarcoi tumor cells have not been isolated from adjacent enlarged lymph nodes.

Insect Allergies
Besides being responsible for the transmission of many infectious diseases, insect bites can result in serious skin disease in some horses. Many horses develop allergies to the saliva of biting gnats and flies. These often present as itchy, raised lesions along the back or belly of the horse. It may also involve the mane and tail with hair loss resulting from the intense itching. In more serious cases bacterial skin infections can result because the horse is scratching and causing trauma to the skin. The most commonly documented culprit is the biting midge (Culicoides sp). Others include blackflies, horn flies, and mosquitos. Allergies to these insects can be a frustrating occurrence, but there are several counteractive measures that may be taken. The most effective therapy is avoiding or minimizing your horse’s contact with the insects. Stabling horses from dusk until after dawn is important since dusk and dawn are prime feeding times for biting insects. Fans may need to be installed while your horse is in the stall to reduce the number of flying insects in the building.

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Ask your veterinarian to examine and treat horses with suspected sarcoids or other lumps and bumps. Sarcoids vary in size, number, location on the body, rate of growth, and type. Early detection will allow for timely implementation of a treatment plan and potentially, the use of adjuvant therapies. Repeated BCG treatments are usually needed and care should be taken to prevent adverse reaction by pre-treating the horse with flunixin meglumine and prednisolone prior to each BCG injection. The successful treatment of sarcoids has also been accomplished by using a commercial mineral supplement or feeding a concentrate feed that is balanced for minerals. Horses with pre-existing hoof problems such as laminitis or chronic poor hoof quality may benefit from an extra source of chelated zinc. Generally around 50mg of chelated zinc per day is an accepted amount. This is often included in commercial hoof supplements. Adequate protein is also important for hoof growth and quality. Hoof is composed primarily of protein and in particular the protein keratin. Keratin contains several sulfur containing amino acids such as methionine, cysteine, and cystine. These amino acids help keratin acquire its strength. These amino acids are important, but having an adequate amount of a quality protein source that includes all the amino acids is essential to unlock your horse’s full hoof growing potential. Supplemental methionine is often recommended to be added to the horse’s diet and often is included in commercial hoof supplements. Nine grams of methionine per day is the current accepted recommendation. Many studies have looked at the effects of adding a supplemental biotin source to a horse’s diet and its effects on hoof growth. It is generally accepted that adding a dietary biotin supplement is helpful in achieving your horse’s maximum hoof growth potential. Supplementing your horse’s diet with at least 20-50mg per day is the general recommendation at this time. No added benefit has been found when using larger amounts of biotin supplement per day. Before searching for the right commercial hoof supplement to improve your horse’s hoof health, make sure all the basics such as adequate energy and protein are covered in the base diet. Hoof grows at the rate of about 1 cm per month and an entire new hoof is grown about every 10-14 months. Therefore, it is not uncommon for dietary changes to take 6-8 months before improvement is seen. So remember to be patient with any change in nutrition and hoof growth. The overall message is that feeding the hoof not only includes giving your horse the latest commercial hoof supplement with biotin, chelated zinc, and methionine. It is essential that the diet includes a adequate amount of energy, quality protein, vitamins, and minerals.
Miniature Horse (continued from cover)

Affected horses usually will begin with anorexia and lethargy, progressing to incoordination, abdominal pain, head pressing, circling, diarrhea, convulsions, and death. It is important for owners and veterinarians alike to always suspect hyperlipidemia in any obese mini with severe depression, anorexia, neurological signs, and icterus (jaundice). Owners may prevent this condition by providing appropriate nutrition while avoiding obesity, stress, and engaging in good routine health care.

Colic

Miniature horses seem to be more susceptible to colic than full-sized horses, which is possibly the result of incorrect grinding of feed due to poor teeth, consumption of poor-quality coarse hay, or inadequate water consumption (an average adult mini should consume 1-2 gallons of water per day depending on their size and the ambient temperature). The small colon is the most common site of disease in Miniature Horses and impaction is the most common cause of colic either due to fecalith (hardened fecal ball), enterolith (mineralized intestinal content) or undigested feed. Another problem is that colic in these small equines can be a major diagnostic challenge. One reason for this is that rectal palpation is limited to the most caudal portion of the abdomen due to the small size of the pelvis in comparison to full-sized horses. Another challenge is that the clinical signs seen in Miniature Horses are frequently not the classic colic symptoms seen in full-sized horses in that some may only show depression and anorexia. Nevertheless, most of the medical treatment protocols for colic are the same in Miniature Horses (flunixin meglumine, mineral oil, and feed withdrawal); however, it is important to remember that they are particularly susceptible to hyperlipidemia and should therefore not be held off feed any longer than is necessary.

Dystocia

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Dystocia is a serious and potentially life-threatening condition.

Dental Issues

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Other Conditions

Among other medical issues that preferentially affect the Miniature breed are dwarfism, upward fixation of the patella (“locked stifle”), increased or decreased sensitivity to drugs and vaginal adhesions.

As the summer approaches, owners need to consider management practices needed to help their horses get through the hot weather. It is important to understand the normal physiology of the horse when exercised in hot or humid weather. During exercise the body generates heat faster than at rest. A large percentage of the stored energy used by the body during physical activity is converted to heat rather than motion. The more strenuous the activity the more body heat is generated. Additional heat generated during exercise results in an elevation of core body temperature from resting values (range, 99-100°F) to an excess of 102-106°F. The horse’s body attempts to cool itself by dissipating excess heat via sweating. In response to exercise sweat glands are triggered to produce sweat. The subsequent evaporation of sweat carries heat from the body and helps to lower body temperature to a safe range. An important point to remember is that high humidity decreases the heat evaporation rate, therefore slowing the cooling process. This is especially important in the heat and humidity of the summer. High temperatures and humidity decrease the horse’s ability to cool. If the rate of body temperature cooling is not satisfactory to match the ambient conditions heat stress can develop.

Horse owner’s can help their horses cool by employing four management practices. These include good ventilation, encouraging water intake, carefully planned exercise, and actively observing for signs of heat stress. One way to help horses get through hot weather is to ensure that barns are adequately ventilated. This can be done by opening doors and windows. Fans can also be used to increase air flow. A fan over each stall will move air directly over the horse. Fans with mist attachments can also be used, but may not provide any additional benefit to a regular fan in humid areas. Assuring adequate water intake is critical. On average a 1,000 lb horse needs 8-10 gallons of fresh water per day. As the air temperature increases, even non-exercising horses sweat and consume more water. When exercising at temperatures above 70°F, adult horses may consume 20-25 gallons of water per day. An owner can encourage the horse to drink water by providing salt blocks or loose salt in the feed. Horses should be offered fresh water frequently and have access to water at all times. It is also advisable to offer an additional bucket containing commercially available horse electrolyte solutions mixed with water. This can be beneficial, especially if the horse is losing electrolytes through sweating. However, some horses will not willingly drink electrolyte solutions mixed with water so an alternative water source should be made available. An additional management practice to decrease heat stress is avoiding exercise during the hottest time of the day, typically from 11 am to 3 pm. Turn horses out to pasture at night, especially if the pasture is lacking shade.

In addition to following these management recommendations owners should be aware of the signs of heat stress suffered by horses in the summer. It is important to understand and recognize the signs of heat exhaustion and to know what to do when these signs have been observed. Horses with heat exhaustion may continue to sweat excessively or in severe instances may stop sweating altogether. Signs of heat stress include weakness, stumbling, increased respiratory rate (> 32 breaths per minute), and an increased rectal temperature (> 106° F) after removal from exercise. Notify your veterinarian immediately if any of these signs are observed. Before your veterinarian arrives owners should provide frequent small amounts of cool water for the horse to drink. To aid in heat dissipation the horse can be bathed in cool water starting at the feet and slowly working up the legs. Alcohol baths (isopropyl) can also be helpful to lower elevated body temperatures. If possible stand the horse in the shade and/or in front of a fan. Once you have initiated first aid continue to take and record the horse’s rectal temperature every 15 minutes until the veterinarian arrives. In severe cases it may be necessary for your veterinarian to administer intravenous fluids to combat dehydration and electrolyte imbalances associated with heat exhaustion. Your veterinarian will also consider the use of nonsteroidal anti-inflammatory drugs such as flunixin or phenylbutazone to aid in patient well being and to aid in the reduction of elevated body temperature. In summary owners should understand what they can do to avoid heat stress in their horses and to recognize the signs of heat stress so that prompt veterinary care can be provided when necessary.

New Residents

Dr. Benjamin Uberti
Resident, Large Animal Medicine, 2006-2009

Education / Training

DVM, Barquisimeto University, Venezuela 2005
Private Practice Practice, Argentina, 2005-2006
Internship, Ohio State University, 2006

Research / Scholarly Interests

Equine Surgery
Gastroenterology

Dr. Rita Delfe
Resident, Large Animal Surgery, 2006-2009

Education / Training

DVM, Saint Louis University, St. Louis, MO 1996-2005
Internship, New Jersey Equine Clinic, Clifton, NJ, 2004-2005
Internship, Reid & Riddle Equine Hospital, Lexington, KY 2005-2006

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Equine dermatology and upper urinary tract diseases of stallion horses
The Miniature Horse – Not Just a Small Horse!
Nicole Jones, DVM Student (Class of 2007)

The American Miniature Horse is a curious, intelligent, and delightful breed that has been selectively bred down in size from larger breeds while maintaining as near-perfect conformation as possible. Despite their small size, these horses are not dwarves or runts but well-proportioned mini horses. Care of the Miniature Horse is nearly the same as that of the larger breeds but on a much smaller scale with regard to feed, deworming doses, medication, etc. Although these tiny equines appear as smaller replicas of the larger breeds and share many similarities, minis seem to be more susceptible to certain health problems than their full-sized cousins. This article is intended to point out the most commonly noted conditions that afflict the Miniature Horse preferentially as compared to larger breeds of equines.

Obesity
Many new Miniature Horse owners join the “mini world” with lots of experience in a larger breed of equidae. Although most are aware of the smaller portions of feed that a smaller horse would require, some owners find it very difficult to feed such a small amount of grain and hay or limit the amount of grazing on pasture to their lovable companions. Miniature Horses are very easy to overfeed due to their small size and metabolism, and as a result, many minis tend to be obese. Obesity in horses, whether large or small, can predispose to laminitis (founder), poor performance, and decreased reproductive efficiency. Strict feeding recommendations based on your Miniature Horse lifestyle should be accurately assessed, planned, and followed to avoid excess body condition; this can be accomplished by contacting your veterinarian or a representative from one of the feed manufacturers.

Hyperlipidemia
Hyperlipidemia is a condition that Miniature Horses are well-known for although it also affects ponies and donkeys. In short, hyperlipidemia (or hyperlipemia) is a disorder of lipid metabolism that may lead to fatty infiltration of the liver, clinical signs of liver disease, loss of appetite and ultimately, death. The disease often occurs in obese individuals that are stressed, anorectic (off-feed), pregnant, or lactating. It frequently develops following a primary illness of several days duration such as diarrhea, endotoxemia, parasitism, pituitary tumor, or neonatal septicemia but can occur any time a horse is unable to satisfy its own metabolic energy needs (late gestation, early lactation, hormonal imbalance, etc). (continued on page 2)