



NEWS



Board News...

President: Roberta Highland
Vice Pres: Renee Eidem
Treasurer: Donna Richards
Secretary: Janet Fink
Members at large:
 Marian Beck
 Rhonda Bradshaw
 Sarah Robertson
 Shirley Schollenberg

Invite Sponsors or Members!

Member	Supporting	Riding
Individual:	\$ 30	\$ 60
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Sponsor:

Platinum:	\$1500 & above
Gold:	\$ 1,000 - \$1499
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Gambler:	\$ 50 - \$ 99
Cowpoke:	\$ 35 - \$ 49

We so appreciate your donations to make Cottonwood Horse Park a reality. Please send your sponsorship to:

KBEA
 PO Box 21
 Homer, AK 99603

Pick your poison:

Please make my contribution specifically for:

Land payment - \$	_____
Insurance - \$	_____
General Fund - \$	_____
Building Fund - \$	_____
Total \$	_____

Our sponsors will be listed in each newsletter.

Sponsors:

Thank you to the following Sponsors:

Gold:

Robert Archibald/Roberta Highland
 Coast Range Construction
 Cass Crandall
 Dibble Creek Rock
 Kachemak Bay Ferry
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 Renee Eidem
 Eileen Mullen
 Donna Richards
 Janice Todd

Gambler:

Janet Fink
 Shirley Schollenberg

Cowpoke:

Barb's Video
 Jerry Nybakken

ANNUAL MEETING:

We are going to be having our annual meeting for KBEA

on
Nov 10
 at
7 pm
 at
City Hall.



Newsletter Update

now that we have the arena up and running we are only going to put out a Newsletter twice a year. Once, around April/May and another one around Oct/Nov.

Kbay Equestrian Assoc. Email:
KbayEA@gmail.com

Website: KBEAHomer.org
 (under construction... We really need someone to pick it up and run with it!?!?!?)

MEMBERSHIP RENEWAL

Please mail in your membership forms and dues for 2009 by January 31st as this would really help our volunteer who makes up the membership packets that get mailed out. We will also be able to complete our Membership Directory before the riding season.

RIDING MEMBERS - use the attached **NEW** membership application to renew or to invite a friend to join..
SUPPORTING MEMBERS - complete the **RENEWAL** form to extend **YOUR** existing membership through 2009. Your continued support is appreciated!

ARENA NEWS:

A big **Thank You** to the Pony Club and 4-H Club for putting the arena to good use this year.



As Well As Donna Richards and Shirley Schollenberg for putting it to use doing the Barrel Clinics.



Also to all other members who used it or renewed memberships so that others could enjoy the arena.



In Appreciation

Thanks to all for donating so that we could make our land payment in June.

We now need to raise enough to make our payment in June 2009.

From The Horse's Mouth

By Roberta Highland



Howdy Everyone!!!

We had ourselves a very successful riding season! The parking lot and driveway were completed by Memorial weekend thanks to the Rasmuson Foundation Grant and Coast Range Construction. The electric and water line were installed at the same time and the restrooms are almost finished. Thank you HEA, Coast Range Construction, Shank Electric, Vandehey Well Drilling, and Kachemak Bay Ferry for donations.

The grand opening party was held June 15. This included a chili and cornbread feed, a raffle for a lovely horse quilt made by Bridgette Clark of Seams to Bee, and riding demonstrations emceed by Shirley Schollenberg. Katie Schollenberg gave barrel racing and pole bending demonstrations; Donna Richards gave a reining and cutting demo; Janice Todd gave a dressage demo; and Meredith Stevens gave a jumping demo. In addition there were games for riders and non-riders. Fun was had by all.

CHP also hosted the five-day each Horsemasters Pony Club and Kachemak Pony Club Camp with Pony Club instructor Samantha Speigel. Donna instructed the Ridge Riders 4-H Club one day a week; Donna and Shirley gave a western riding clinic one evening a week; and Meredith gave jumping lessons every Saturday. A horse show was held July 12, 2008, sponsored by the Kachemak Pony Club as a fundraiser to attend the Pony Club Rally in Anchorage. The show was judged by Sue Kolstad, a national dressage judge and rider, and included a full day of events for Western and English riders. It was amazing! CHP also hosted a Girls Scouts introduction to horses. In all, the 2008 riding season saw approximately 280 riding participants and approximately 330 spectators of all ages.

We continue to fundraise and still need \$1000 one hundred and forty five times to complete the purchase. We are hiring a professional grant writer to assist in this goal.

By the time you read this we will have had a work party to complete an important drainage ditch and button up the arena for the winter.

We have a lot to be proud of and we want to thank everyone for their wonderful support.

Happy Trails!!!

Roberta Highland
President



Committees:

Finance / Fundraising:

Renee Eidem, Chair 235-8567
Arndt, Sandy Crandall, Cass
Eisenberg, Jackie Fabich, Jeanie
Fabich, Len Pierce, Therese
Quinn, Tim Rourke, Shishana

Culinary: Kathy Simpson, Chair 235-5528
Beck, Marian Eisenberg, Jackie
O'Neill, Melissa

Building: Tim Quinn, Chair 299-2780
Archibald, Robert Barnett, Tamara
Eidem, Renee Ervice, Elizabeth
Stuiver, Yolande Willis, Skip

Historian / Marketing / News Letter / Web Site:

>>>We are desperately seeking Chairperson!!!!



Arndt, Sandy Cabana, Amber
Fabich, Jeanie Fabich, Len
Kilcher, Mossy Lea, Sabrina
Reed, Carrie Rourke, Shishana

Transportation / Facility Rental / Travel:

Renee Eidem, Chair 235-8567
Arndt, Sandy Cabana, Amber
Rourke, Shishana Schollenberg, Shirley

Regulatory / Safety / Risk Reduction:

Carrie Reed, Chair 399-0140
Crandall, Cass

*Check out the options available and call or email your area of
"committee interest"
before we get the '09 Directory done...*

you too could be on a committee. ☺

*It's not too late to volunteer - call 235-8567
email: KbayEA@gmail.com*

Upcoming Fundraisers: MEMBERSHIP DRIVE

Be sure to renew your membership in a timely manner, and get your friends and family to join, too!

You can enjoy their company on the trail rides, clinics, play days, pony club, 4H events, etc next spring & summer and you can help raise money for next June's land payment!

We ended the 2008 riding season with 97 KBEA Members. Thank you to all of you for your continued support. Don't forget to talk to your friends and get them to join in 2009.

Craft Projects for future Bazaars and/or Faires

We need ideas and/or someone to train us on how to make projects to sell (along with membership applications) at future fundraising endeavors.

Here are some interesting facts about a horse's body...

Horse's hooves grow at a rate of about 1cm per month.

The forelock on a horse's head helps to keep flies out of the eyes.

Horse's legs are built so that they can sleep standing up, but to get a good rest they need to lie down.

Each leg has a small spot that looks like a scar called a 'chestnut'.

Horse's kneecaps are not done fusing until they are about 3 1/2 years old. That's why many young racehorses are injured.

CLASSIFIED ADS

~ Place an Ad ~

Members can place a classified ad for free here! Selling a horse or a saddle? Are you boarding horses or maybe looking for something special? We would love to include your ad in the newsletter!!!

~ Free Business Ad ~

We are looking to expand our newsletter! We need your business card size ad (or the info that you would put on a business card) I can design one for you if you don't have one! Most of you out there have a business, or a hobby you could advertise for FREE in our newsletter!:

~ Ad in KBEA Directory ~

Directory 2009: You may put an ad in the directory for your business for as little as \$25 !

Contact me with info: *Sandy Arndt* arndtfarm@gmail.com or kbayea@gmail.com

~ Saddle for Sale ~

Just in time for spring riding!
like new, light weight,
black english Wyntec saddle
for a medium sized rider,
used twice, includes stirrups
\$275.

Mossy 235-7540
Seaside Farm

~ Check This Out ~

GIVE AWAY an older mare
free to a good home
rescued & got back to health,
she is gentle, easy, good with kids,
a real pet- nice looking too.

Vandeheys 235 8821

www.thesaltry.com



Puppies/kittens for sale ?
car or truck for sale ?
personal land for sale ?
looking to buy something ?

Member's ads in the KBEA
Newsletter are FREE !!!!



The Haven

Horse Boarding
Short term or Long Term
\$8 day - \$125 month

235-8567 ask for Renee

summer pasture ~ individual corrals ~ covered stables

Trail access to Cottonwood Horse Park!!

Dog Boarding \$8 day (includes feed)

Fresh Chicken eggs \$5 per 12 or \$7.50 per 18

PO Box 21 ~ Homer, Alaska 99603

PENINSULA VETERINARY SERVICES

Jery Nybakken, DVM

~~~~~  
*Specializing in large animal medicine  
& "Exotic" animal medicine*



**Ranch calls available**



48213 Funny River Road  
P.O. Box 1763  
Soldotna, Alaska 99669

(907) 260-5850

(907) 252-7806 cell

[jerny@gci.net](mailto:jerny@gci.net)

(907) 262-1441 fax

### ~ Newsletter Input ~

We want to make this YOUR newsletter,  
with information/ideas  
**you** are interested in.

Send info by **email**:

KBEA: [kbayea@gmail.com](mailto:kbayea@gmail.com)

Sandy: [arndtfarm@gmail.com](mailto:arndtfarm@gmail.com)

or to any Newsletter Committee member

KBEA: PO Box 21, Homer

Renee: 235-8567

**or drop it off:** Renee @ HEA

*The Kbay Ferry & Saltry Restaurant still Rock!*

**Kachemak Bay Ferry**

**PO Box 6410 ~ Halibut Cove, AK 99603**

**(907) 235-7847**

Saltry Restaurant ~ [www.thesaltry.com](http://www.thesaltry.com)

Lunch 1-3 pm. Dinner 6-9 pm. Dinners \$14 to \$25

Reservations are required 296-2223

## NBHA AKOI AWARDS BANQUET

**SAT. NOV. 8, 2008**

Eagles Club Spur Hwy between Kenai & Soldotna

Dinner Catered by one of our Sponsors:

*Grand Burrito*

\$10 per plate,

except for age 8 and under—free will offering.

Open Bar

RSVP to Karen 262-7070 or

[DSUnurse@att.net](mailto:DSUnurse@att.net)

ORDER OF EVENTS:

- Doors Open at 6:00 pm
- Live Music from 6—6:30 pm
- Dinner Served at 6:30 pm
- Guest Speaker at 6:45 pm
- Awards Ceremony to Follow

## **THE TRAIL BLAZERS 4-H CLUB**

based on the lower Kenai Peninsula, has deep roots in the local horse community. Through exploring horsemanship, veterinary medicine, equine behavior and community service, the Trail Blazers have been turning out young leaders with strong equine backgrounds for over twenty years.

Since Alaska is noted for its dark and dreary winters, the club general focuses on classroom-type activities during the snowy months. These include learning basic colors, breeds and riding styles, learning to judge horses for confirmation and riders for horsemanship and practicing leadership skills and teaching techniques in an informal setting. Practice has paid off, with the Aurora Lambert, Ryann Dahl, & Katie Schollenberg Trail Blazers horse judging and quiz-bowl teams repeatedly placing in the top five at the yearly State 4-H Horse Bowl and Judging Contest.



The summer months are a whirl-wind of activity for the club. June kicks off with the sponsoring and facilitating of Trail Blazers Horse Camp, an annual three-day camp where young riders and their horses participate in horsemanship lessons, trail rides, cook-outs and veterinary studies. Camp is concluded with a horse show, giving the students and their mounts a chance to show off their newly-mastered skills in front of their friends and families. Weekly lessons throughout the summer are often held at the Ninilchik Fairgrounds, the home of leader Shirley Schollenberg, as well as at Cottonwood Horse Park. Several members participate in weekly gymkana clubs or ride in rodeos throughout the summer season. The Trail Blazers are involved in the annual Trail Ride Extraordinaire and commonly take overnight trail rides to remote locations.

Don't be fooled – the Trail Blazers is not just a horse club. Many members do not own horses and instead, choose to participate in other club projects such as sewing, cooking, crafts, shooting sports, leadership and the Junior Market Livestock program. No matter what project members choose, they are encouraged to attend leadership events, enter public speaking contests and volunteer within their communities.

If you are interested in joining 4-H, contact the Cooperative Extension Office at 907-262-5824 or via email: [kenaipeninsula4h@acsalaska.net](mailto:kenaipeninsula4h@acsalaska.net). For club news and updates, check out the new website under construction at [www.kenai4-h.com](http://www.kenai4-h.com).

**PS:** some of the members plan to attend the annual meeting and give a brief run-down of our recent horseback adventure on Kodiak Island. It was fabulous!

## **BETTER OFF BAREFOOT - The Natural Hoof Care Advantage**

by Dr. Tomas G. Teskey D.V.M.

Arizona, U.S.A.

Ask your veterinarian, farrier or trainer about hoof care and the majority will freely admit that all equines are most healthy if they can be kept without steel shoes. Some believe, however, that shoeing is a necessary evil, evidently important for today's working horses, mules and donkeys.

Veterinary medicine has its roots in blacksmithing, branching directly from the iron-working profession. The two developed into their own specialties, but the hooves continued to be the "territory" of the iron men. With the ever-increasing knowledge of the hoof, farriery and veterinary medicine struggle for understanding and reason after a thousand years of tradition. As time marches on, a new paradigm for hoof care that does no harm is replacing methods that misunderstand the hoof.

Given the latest exciting hoof research, the finest in hoof care today is focusing on maintaining normal hoof form and function to achieve optimum health:

- ensuring the hoof can flex in all directions to handle the terrain
- promoting fluid movement and circulation
- protecting sensitive structures inside the feet and legs
- wearing evenly through movement and growing in evenly and strong
- helping engage and sense the environment



These are all achievable with natural hoof care and impossible using steel shoes or improper trimming. In fact, placing shoes on hooves fixes them in two dimensions, forcing the joints above to twist and torque—arthritic changes such as ringbone result. Normally shaped, healthy hooves are made of a specialized skin that can be conditioned to handle any terrain, flexing the proper amount to prevent damage to all joints in the body.

Shoes disrupt normal energy and circulation patterns body-wide, forcing the heart to work harder, stagnating energy flow and causing abnormal hoof growth. Healthy hooves pump large amounts of blood to keep themselves strong and all body systems vital and energized.

Instead of protecting the hooves, shoes cause concussive damage, promote weak growth and allow infection, heat and cold to invade the hooves, causing health problems for the entire body. Normal hooves are perfectly protective, insulate against temperature extremes and prevent injury from rough terrain.

Hooves can't wear themselves when shod—without a little bit of normal wear, they become deformed and infected with fungus and bacteria. Exfoliation keeps hooves healthy and free from infection and stimulates strong, new growth.

Shoes prevent the horse from sensing the earth and their own hooves — stumbling, loss of traction and increased injuries result when shod. The loss of a shoe and the lameness that follows demonstrates the underlying unsoundness of the shod horse. If shod horses suffer no ill effects from their shoes, as many professionals contend, why are they so lame within minutes when walking a short distance without them? Soundness in horses has come to mean moving with animation and impulsion on unfettered feet. These horses appreciate normal sensation and feel comfortable around us, place their feet accurately, with superior

soundness and traction, keeping themselves and their riders safer. When in need of protection on rough terrain or during rehabilitation, flexible, removable boots that complement hoof form and function are most appropriate, providing superior protection and doing no harm to the horse.

Just as it was a change in horsemanship practices that allowed horses' health to deteriorate, so a change in horsemanship is required for them to regain their vitality...achieving peak performance takes more than just trimming hooves a certain way. Proper nutrition and lifestyle are critical for success.

Natural horsemanship practices today go hand in hand with natural hoof care—together they are unbeatable! These horses and their astute caregivers are leading the way in all parts of the equine industry, demonstrating the efficiency of the natural hoof care paradigm which raises horses with superior hooves and prevents all common hoof diseases. These are the priceless advantages that are bringing horses and their owners greater enjoyment all over the world.

## **Bridling Made Easy**

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by Kelin

I have seen many riders, especially "weekend warriors" trying in vain to coax or force a bit into their horse's mouth. Usually the result is an extremely frustrated rider, and a horse with banged teeth.

On a day when you are not going to be actually riding, go catch your horse. Groom her, spend time with her and love her. Take her bridle and her (on a lead rope) to a safe area such as a corral, round pen or empty arena. With the lead laying loose over your arm – **not wrapped** – face your horse and talk to her. Rub her face with your hand. Gently press your fingertip on her forehead as if you are pushing a button. Keep adding pressure until she twitches her head down, even if it's only a millimeter. The instant she does, **release the pressure and rub her face again.**

Repeat the procedure until she willingly drops her head anytime you 'push the button'. Then stand beside her and lay your hand between her ears like you would to bridle her.

Repeat the procedure until she is comfortable with it. By now you should be able to put your arm over her head, and between her ears, and she will drop her head.

When you feel she is confident enough with this, pick up your bridle, and with the hand that will be guiding the bit, hold a cookie or a treat under the bit. Ask her for her head, and offer her the bit, but don't let her snatch the cookie without the bit. It's awkward, but with practice, your horse will come to associate the bridle with a yummy taste, and will reach for the bit.

**And a horse that reaches for the bit, is a thrill to bridle.**

Be very careful removing the bridle, as you don't want to bump the teeth, but again, with the hand that will be guiding the bit out, simply hold a tid-bit. She must open her mouth to get the goody, and the bit will fall in your hand without bumping her teeth. Promptly remove the bit from your hand while her head is down, and give her the treat. Then she can have her head back.

Practice this as a game before feeding, grooming, hand walks, lunging, or anything else you can think of. It works equally well for old spoiled horses, green colts, and stubborn saddle horses. Even if you just want to get "Ol' Paint" a bit softer to bridle, it comes in handy.

## Diseases of Dietary Origin

by: Nancy S. Loving, DVM

March 01 2004, Article # 1001 (The following was found on Horse.com)

The axiom, "You are what you eat" does have relevance to horses with regard to health and well-being. Although horses have evolved to eat plant material, not all plants are safe to eat. Some food substances directly exert toxic effects, while others grow fungi that do so. Availability and type of food are important issues to intestinal health and nutritional balance. In addition, imbalances of nutritional compounds such as microminerals, energy, carbohydrates, and protein can have adverse effects on equine health. Let's review some of the more common dietary problems that affect various organ systems.

### Musculoskeletal Problems

Developmental orthopedic disease (DOD) results from a variety of multi-factorial issues, but nutritional imbalances are known to predispose a young, growing horse to this malady. DOD is linked to an imbalance of calcium and phosphorus, and/or a deficiency in microminerals such as copper, zinc, and manganese. Physisitis (formerly called epiphysitis) is one manifestation of DOD. Other problems that develop due to nutritional inconsistencies during growth include osteochondrosis and wobbler syndrome. DOD can have significant consequences for future performance.

**Physisitis** is a term that describes defects in the ossification (process of cartilage hardening into bone) of the growth plate (physis) at the end of a long bone. The syndrome should be more correctly called physeal dysplasia since it is both the growth plate and metaphysis (a section of bone between the epiphysis and the long part of the bone) that are affected. (The growth plate is responsible for lengthening of the long bones.) A young horse four to six months of age typically exhibits problems in the fetlocks, while a yearling up to two years of age is susceptible to physisitis around the knees. Affected knees or ankles exhibit an hourglass-shaped, firm swelling just above the joints. The joints appear "knobby" and enlarged. Only one limb might be affected, but usually there will be signs of change in similar joints on two or more limbs. A horse with physisitis might be lame, but not always.

Dietary imbalances of copper, zinc, calcium, and/or phosphorus are linked to physisitis. Overfeeding is just as likely a cause as imbalanced nutrition in stimulating this disease. Rapid growth due to excess energy intake is implicated in causing physisitis, which also can occur from "crushing" of the physeal plate by trauma due to excessive loading of the limb (too much exercise) or by a growing horse being too heavy for his young bones. Additionally, abnormal conformation can overload one side of a growth plate to create this condition, and trauma from a kick or fall can cause damage. Although seemingly innocuous, physisitis is often the tip of the iceberg for DOD.

**Osteochondrosis** is another component of the DOD syndrome. A defect in the endochondral ossification process at the joint surface causes displacement of an area of abnormal cartilage as a fragment or flap (this condition is termed osteochondritis dissecans), or as a cyst that remains just beneath the surface of the joint. Eventually, osteochondrosis in any of these forms can cause lameness and arthritis. More than 60% of horses diagnosed with osteochondrosis show clinical signs prior to their first birthday. Signs include varying degrees of lameness, distention (swelling) of the affected joint, and reluctance to flex the limb, especially when osteochondrosis develops in the hocks and/or stifles. Some horses might have difficulty getting up or



ANNE EBERHARDT

down. In more than half of the cases, osteochondrosis is present in bilateral (both front or hind) joints, although obvious signs might only show up in one.

Osteochondrosis is considered a multifactorial problem, although diet is highly implicated. Excess energy intake (120% of National Research Council--NRC--requirements) has been correlated with osteochondrosis. Too many calories enables a growing horse to become fat, with subsequent overload of developing joints. Hormonal changes associated with a rich diet also can affect joint metabolism.

Mineral imbalances have deleterious effects on joint cartilage development. It is known that high phosphorus (and relatively low calcium) levels will cause cartilage defects. A diet that is low in copper also increases the development of osteochondrosis. High zinc levels can suppress copper absorption and result in a diet that is relatively deficient in copper. Thus, microminerals in the feed should be analyzed to determine if the diet is properly balanced.

Adverse effects of an imbalanced diet are amplified by other high-risk factors. The potential for rapid musculoskeletal development is dependent on genetics as well as on nutrition. Rapid growth adds stress to a growing skeletal system, bones, and joints when they can least withstand the added body mass. Osteochondrosis as a developmental problem occurs by virtue of joints being more susceptible to damage during specific times in their development. The stifles and hocks are most at risk in horses six to eight months of age. Risk increases if the youngster overly stresses the limbs with excessive exercise, causing damage to bone and to the blood supply within the joints.

Conformation also has a role to play in osteochondrosis development. Crooked limbs and less-than-perfect conformation traits can overload susceptible joints, potentially leading to cartilage damage. One controversial, yet significant, stressor to joint development is confinement. Youngsters limited in their daily exercise might not have sufficient development of the subchondral (beneath the cartilage) bone to support their body weight. Then, when the youngster is turned out, he might abruptly overload under-challenged joint cartilage.

***Cervical vertebral malformation (CVM)*** is another manifestation of DOD. This occurs when the joint surfaces of spinal vertebrae develop osteochondrosis lesions. Instability in affected cervical vertebrae can compress the spinal cord, eliciting subsequent neurologic disease that is known as wobbler syndrome (more on this later).

### **Nutritional Secondary Hyperparathyroidism**

Also called "big head disease" or "bran disease," this syndrome results from a diet that is too high in phosphorus, or too low in calcium (calcium intake should always exceed that of phosphorus). Feeding excess amounts of bran (rice or wheat) or grain provides abundant phosphorus in the diet. With a relative deficiency of dietary calcium, parathyroid hormone stimulates mobilization of calcium from the bones as well as increasing reabsorption of calcium from the kidneys and excreting excess phosphorus from the kidneys. The overall result is skeletal depletion of calcium.

Signs of this problem include shifting leg lameness, a stilted gait, distortion of facial bones, broadening of the face across the bridge of the nose, and loosening teeth. Supplementing with legume hays (which tend to be high in calcium) along with removing grain and bran from the diet can resolve this disease if it's caught early before permanent skeletal damage occurs.

## White Muscle Disease

A diet deficient in selenium can create muscle problems. The NRC lists the required amount at 0.1 mg/kg of the diet. Foals might exhibit stiff and painful muscle disease and cardiac problems, while older horses have recurrent episodes of tying-up. Selenium deficiency occurs in certain geographic areas such as the Northwest and the northeastern United States. However, caution must be taken not to supplement with too much selenium as toxicity can occur. The maximum tolerable level is 2 mg per kg of the diet, according to the NRC. Supplementing selenium to toxic levels could trigger several adverse effects, including colic, diarrhea, hair loss, and separation of the hooves from the coronary band.

## Neurologic Problems

**Moldy corn poisoning**, also known as encephalomalacia or blind staggers, is associated with consumption of corn that has been contaminated with the fungus *Fusarium moniliforme*. This fungus thrives on corn plants that have been stressed by drought, disease, or insects prior to harvest. High humidity and moisture encourage proliferation of the mold. Exposure to high doses of this fungus over a short period of time results in liver toxicity, while low doses ingested over a longer time result in brain damage or moldy corn poisoning. Clinical signs include decreased appetite; behavioral changes such as depression, anxiety, or hyper-excitability; and neurologic signs such as circling, blindness, difficulty chewing or swallowing, muscle tremors, ataxia, recumbency, and eventually coma. Depending on the amount of toxin ingested, moldy corn poisoning takes seven to 75 days before the horse demonstrates clinical signs; once signs are seen, death can occur within two to three days.

**Botulism** in a dietary form occurs in horses which have ingested feed contaminated with this toxin (produced by the bacterium *Clostridium botulinum*). The toxin forms when a decomposing animal or bird is accidentally baled with the hay or is processed with pelleted or cubed feed. Haylage or silage that is improperly prepared without sufficient heating allows for continued decay of organic material and production of the toxin. Moist or rotten hay, especially legume hay, can also spawn growth of anaerobic bacteria responsible for generating the toxin. Botulinum toxin is extremely potent and lethal, resulting in flaccid paralysis and dysphagia (difficulty swallowing) preceding death.

Botulism affects young foals as shaker foal syndrome. The causative organism, *Clostridium botulinum*, is eaten, and once in the gastrointestinal tract can proliferate in an ulcerated area and secrete a toxin that affects nerve and muscle tissues. Mares on breeding farms of known incidence should be vaccinated before foaling to develop antibodies to pass to the foal in the colostrum.

## Intestinal Problems

**Gastric ulcers** can affect adults and foals. Even when horses are not eating, the stomach continues to secrete digestive acid. Two different tissue types in the stomach--the glandular and non-glandular squamous cell epithelium--depend on different protective devices against stomach acid. In adult horses, most (80%) of the problems seen with equine gastric ulcer syndrome (EGUS) develop in the upper area of the non-glandular squamous mucosa as a result of excess acid secretion.

Intermittent feed deprivation is known to cause EGUS. It has been demonstrated that horses on a diet of free-choice grass hay or pasture have less gastric acidity than horses fed at fixed intervals, as occurs with set multiple daily feedings. Food in the stomach retains acid within the lower areas where the glandular

epithelium is more resistant to stomach acid. It is also known that roughage has a buffering (acid-neutralizing) effect. Small amounts of alfalfa hay seem to buffer stomach acid for up to five hours.

Grain supplementation elicits greater acid secretions in the stomach and thereby compounds problems related to a diet with low roughage intake. Horses on unrestricted access to fiber are less commonly afflicted with gastric ulcers. Thus, owners should provide free choice access to grass hay or pasture when possible and limit concentrate intake as much as possible.

***Enteroliths***--In certain geographic areas, especially in California, horses fed high amounts of calcium- and magnesium-rich hay such as alfalfa might develop an intestinal "stone" known as an enterolith. Layers of salts develop around a small object, such as a tiny pebble. Enteroliths can grow to obstructive sizes within the large colon, causing recurrent colic pain. Abdominal radiographs can identify these for surgical removal.

### **Obesity-Related Problems**

Malnutrition is not just about dietary imbalances. It also relates to caloric intake and body condition. Obesity is a nutritional disease with great impact on performance and quality of life.

***Lipomas***--An intestinal lipoma is a fatty tumor that develops in the mesenteric fat cloaking the small intestines. The stalk of such a tumor can wrap around the intestines, resulting in strangulation of a loop of bowel. The horse presents with severe and unrelenting colic pain that requires surgery. Lipomas occur most commonly in Arabian horses, particularly those which are overweight.

***Laminitis*** is inflammation within the sensitive laminae of the feet. It can occur for many reasons, but as a nutritional problem it is commonly linked to grain-rich diets, ingestion of too much rich pasture, and obesity. Grain overload or a diet rich in high-carbohydrate feed (grain or lush pasture) initiates a series of metabolic and endocrine (hormone) disturbances in the body. A diet abundant in carbohydrates upsets normal intestinal bacteria, allowing more endotoxins from harmful bacteria to be absorbed into the bloodstream than can be neutralized by the liver. Additionally, the endocrine system might run amuck because of excess body fat stores and persistent feeding of carbohydrate-rich food. Blood flow in the feet is particularly sensitive to toxins in the bloodstream, and to hormonal disturbances associated with too many groceries.

***Peripheral Cushingoid syndrome*** is also known as equine metabolic syndrome or peripheral Cushing's disease. An horse with recurrent laminitis might have Cushing's disease, but instead of being a primary problem within the pituitary gland as is seen with Cushing's, the excessively high levels of circulating corticosteroids originate from enzyme activity in intestinal sources. These sources include the liver or fat cells of the mesentery (membrane) that covers the bowel. Fat cells are responsive to endocrine signals; the more fat cells present (as occurs with obesity), the greater the risk of hormonal irregularities. Many affected horses are erroneously diagnosed as hypothyroid (having a deficiency in thyroid hormone); although there might be some degree of diminished thyroid hormone levels, the problem is not within the thyroid gland but rather is due to irregular hormonal feedback in the entire body as a result of high circulating levels of corticosteroids.

Despite dietary restriction, it is difficult to reduce the weight on horses afflicted with equine metabolic syndrome. Fat deposits are distributed in the crest of the neck, in the rump areas, and within the prepuce of male horses. Affected horses often have fertility issues. At the current time, there is no approved medical treatment of this condition other than strict dietary management. A dietary strategy relies on feeding only grass hay at amounts less than two percent of body weight per day. It is important to entirely eliminate grain

products and other high-carbohydrate feeds that exacerbate the problem of insulin resistance. For more on this, see "Cutting Down on Carbs for Your Horse" on page 116.

## Skin Problems

**Photosensitivity** can be caused by plant ingestion. Certain plants contain photo-reactive pigments that are absorbed into the blood when a horse eats the plant. In the presence of ultraviolet light from the sun, these then react in areas of non-pigmented skin, and the horse's skin sunburns. Two main plants are culprits in this situation: St. John's wort (*Hypericum perforatum*) and buckwheat (*Fagopyrum esculentum*). Other plants create a photosensitivity response secondary to damage in the liver caused by alkaloids in the plants. Examples of these include Tansy ragwort or groundsels (*Senecio spp.*), hound's tongue (*Cynoglossum spp.*), horsebrush (*Tetradymia spp.*), and alsike clover (*Trifolium hybridum*). Legume hays have also been implicated in setting up these conditions for skin problems.

Generally, a horse has to consume these plants for a few months before the liver effects are severe enough to allow accumulation of a by-product of plant chlorophyll breakdown in the blood. This compound is called phyloerythrin, and its accumulation in areas of non-pigmented skin causes photosensitivity. Affected areas on the lower limbs are often referred to as scratches, but the process is more correctly known as photoactivated vasculitis.

## Respiratory Problems

**Chronic obstructive pulmonary disease (COPD)** can be caused by various allergens. Like an asthmatic person, a horse can be afflicted by respiratory allergies that are often attributable to mold and mold spores in hay. Poor-quality roughage or hay that has a high moisture content is prone to mold growth. When a susceptible horse is exposed to these molds, a cascade of inflammatory events begins in the lungs. The end result is an emphysematous-like condition known as COPD or inflammatory airway disease (IAD), historically called heaves.

Inflammation in the lower airways triggers spasms and constriction of the bronchioles (tiny airways of the lungs) and bronchi (larger airways of the lungs). As the diameter of these air tubes closes down, resistance to airflow increases. Irritated lung tissue becomes coated in mucus and fibrin (an insoluble protein that forms blood clots) in response to the inflammation. Eventually, adhesions and scar tissue "glue" together localized areas of the tiny sacculles of alveoli (small cells containing air in the lungs) so they no longer expand to fill with air, nor are they able to completely empty of residual air. Bronchospasms (muscle spasms of the smooth muscle of the bronchi) and inflammatory debris limit the extent of air capacity in the lungs. These conditions stimulate nerve receptors in the lungs, eliciting a cough reflex.

What might start as an intermittent and infrequent cough can become more persistent as more lung tissue is affected and the lower airway becomes more sensitive to the effects of environmental allergens. It is not just the presence of dust or mold that elicits the COPD syndrome; respiratory viruses or chronic respiratory infections also create similar damage.

Any situation that results in damage to the lower airways and alveoli reduces the amount of lung tissue available for transferring of oxygen to the blood. The result is that the horse's tolerance for exercise diminishes and performance suffers.

## Reproductive Problems

*Fescue toxicosis* occurs when tall fescue, a common pasture and hay forage for horses throughout the United States and Canada, is infected with a fungal endophyte (a plant parasite living within another organism). This fungus produces ergot alkaloids that exert detrimental effects on the pregnant mare and fetus. Common signs of fescue endophyte toxicity include prolonged gestation, lack of udder development, absence of milk production, abortion, thickened placentas, retained placentas, stillbirths, and foal mortality. In fescue areas known to be infected with endophyte, pregnant mares should be removed from the fescue in the latter months of pregnancy, at least by Day 300 of gestation. Daily doses of domperidone can be given orally to mares in late gestation to counteract adverse responses to the fungus.

Knowing the risks that these and other feeds pose to your horse's health is the first step to avoiding problems. You should discuss local plant/hay/feed risks with your veterinarian so that you can formulate a plan of action to remove any dietary obstacles from your horse's diet.

### Hey Members – What do you think about this?

"How to bombproof your horse" by Rick Pelicano.

A mounted police officer in the Washington D.C. area who trains PD horses and has for the last 20 years.

Paraphrased response from the author of "How to bombproof your horse" when asked if he was willing to do a clinic for us here in Alaska.

WOW Alaska? I never thought I would get a request way up there!

I'm not sure how to explain about what we call "travel clinics". They are not easy to do because of logistical issues. I still work full time at the police dept and the rest of my staff have full time jobs. So first is the taking off work issue, and then I have to make sure they are compensated for missing work. At the very least we are looking at 3 days (travel to, clinic day, travel back) so it gets pricey. Travel clinics start at \$5000 then I have to look at all associated costs. I like to bring 3 staff with me.

I can do 2 three-hour sessions with up to 25 horses per session. So that is potentially 50 horses per day. Since I will be flying, you will have to provide all of the equipment.

That is it in nutshell. So let me know if it is even close to feasible and we can look at it further.

Thanks  
Rick

*So gang, do you think we could get 50 horses for a clinic like this? If he charged us \$7000.00 at 50 horses it would cost us each \$140.00.*

*Let me know what you think.*

Thanks  
*Lyn Patton*

A thought: maybe people or Homer businesses could donate mileage or companion discount coupons to get them here?  
Sandy