

# Ready to Run?

*Keeping a racehorse fit and ready to run at his best requires a team effort and lots of proactive preventive care*

**O**n the surface it might seem that what it takes for a Thoroughbred to run is the correct age and careful training preparation, along with an inborn talent for speed or stamina. Yet, many elements affect a horse's health and soundness, with even the smallest details having a significant impact on how well a Thoroughbred can reach its genetic performance potential.

Some of the most basic management strategies have everything to do with a horse's health and soundness, how well his body metabolizes the offered nutrition, and how well his cardiovascular system and musculoskeletal structures respond to exercise and training. Let's take a look at some details that contribute to preparing a horse to be ready to run.

## **SOUNDNESS IS PREMIUM**

Dr. Foster Northrop, vice chair of the American Association of Equine Practitioners (AAEP) Racing Task Force, concentrates his Louisville, Ky.-based practice on the racing Thoroughbred. "Soundness and attitude are absolute indicators," he said. "If these are good, a horse should be able to run to his ability."

Another veterinarian familiar with racetrack medicine, Dr. Gary Norwood of McKinney, Texas, is a member of the AAEP Racing Task Force and serves as a spokesman for the AAEP On Call program during televised races. He recommends several parameters to determine if a horse is ready to run: "A horse's appetite, attitude, and alertness are important, in addition to how well he maintains weight. Fitness and soundness should be assessed based on performance at workouts."

Also focusing his practice interests on Thoroughbred is Dr. Scott Hay of Teigland Franklin & Brokken, in Fort Lauderdale, Fla., who is the AAEP board representative for the Racing Task Force and also a spokesman for the AAEP On Call program. "Probably our main concern, from a veterinarian's viewpoint for ensuring that a horse is ready to run, is soundness," he said. "The trainer is primarily responsible for cardiovascular 'fitness,' and we rarely have much input on that part of the horse.

But, veterinarians have a lot of influence on identifying whether or not a particular horse has a soundness issue and whether or not the horse will be able to perform. Veterinarians work very closely with trainers on this."

## **LAMENESS AND FOOT CARE**

Soundness has a lot to do with hoof care, and Hay said maintaining hoof balance and basic general hygiene of the foot are the best ways to avoid problems such as thrush, cracks, and white line disease.



A horse's fitness and soundness can be assessed based on performance at workouts



“All of these can be very problematic if not caught early, so it is important to have a good working relationship with your blacksmith to keep a close eye on developing problems,” he noted.

Norwood urges owners and trainers to house the horse in a stall with clean, dry bedding, and give daily attention to foot care. “Farrier work need not be fancy; just provide the horse with good, balanced shoeing,” Norwood said.

Hay added, “We encourage trainers to allow us, the veterinarians, to look at their horses for lameness issues before they run or after a below-par performance. Many lameness conditions can be picked up when the horse is jogged on a hard surface in hand, yet may not be obvious on the racetrack. The opposite can be true as well; therefore, if we don’t discover any significant lameness on a horse that is not training or racing well, we commonly watch the horse train on the track to see if we can observe any abnormalities there.”

Northrop acknowledges the availability of specialized equipment, such as a high-speed treadmill, at referral centers is useful for tracking down gait abnormalities. However, “I still use my eyes and ears, as sometimes you can hear a gait abnormality before you see it. A thorough clinical exam repeated at frequent intervals is critical to identifying a problem. Then the best approach is through diligent investigation for potential problems.”

A veterinarian performing a thorough lameness work-up couples a clinical exam



**A vet should perform an endoscopic exam before a horse begins racing**

with diagnostic nerve blocks to isolate the area of concern as accurately as possible. Then he or she might use diagnostic imaging procedures, such as ultrasonography, radiography, MRI, and/or nuclear scintigraphy to detect the problem. Once a diagnosis is reached, the veterinarian can advise on how to best manage and treat the horse’s lameness.

**AIRWAY HEALTH**

A clean, well-ventilated barn can help prevent allergies and respiratory diseases in its residents. “We see a lot of inflammatory airway disease in our stables,” Hay remarked. “Most of our barns are open

training barns, but the prevalence of shavings that are quite often dusty can lead to recurring airway disease. This airway inflammation definitely has an effect on performance.”

Monitor respiratory problems closely, whether it is a mechanical issue of the upper respiratory tract or a lower respiratory tract issue, such as exercise-induced pulmonary hemorrhage (EIPH) or inflammatory airway disease.

Veterinarians stress that not only is mucous production in the airways counterproductive to optimal breathing and the ability to run, inflammation can contribute to EIPH.

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Hay recommends a veterinarian perform an endoscopic exam on every horse at some point before it begins racing. "Some respiratory issues can be present without noise or obvious exercise intolerance," he said. "Having a handle on these issues before racing a horse can make major differences in performance."

*"Some respiratory issues can be present without noise or obvious exercise intolerance; having a handle on these issues before racing a horse can make major differences in performance."*

DR. SCOTT HAY

Norwood concurred, "An endoscopic exam is usually performed after a workout, and should be done on horses 10-14 days before racing to give a chance to treat if necessary."

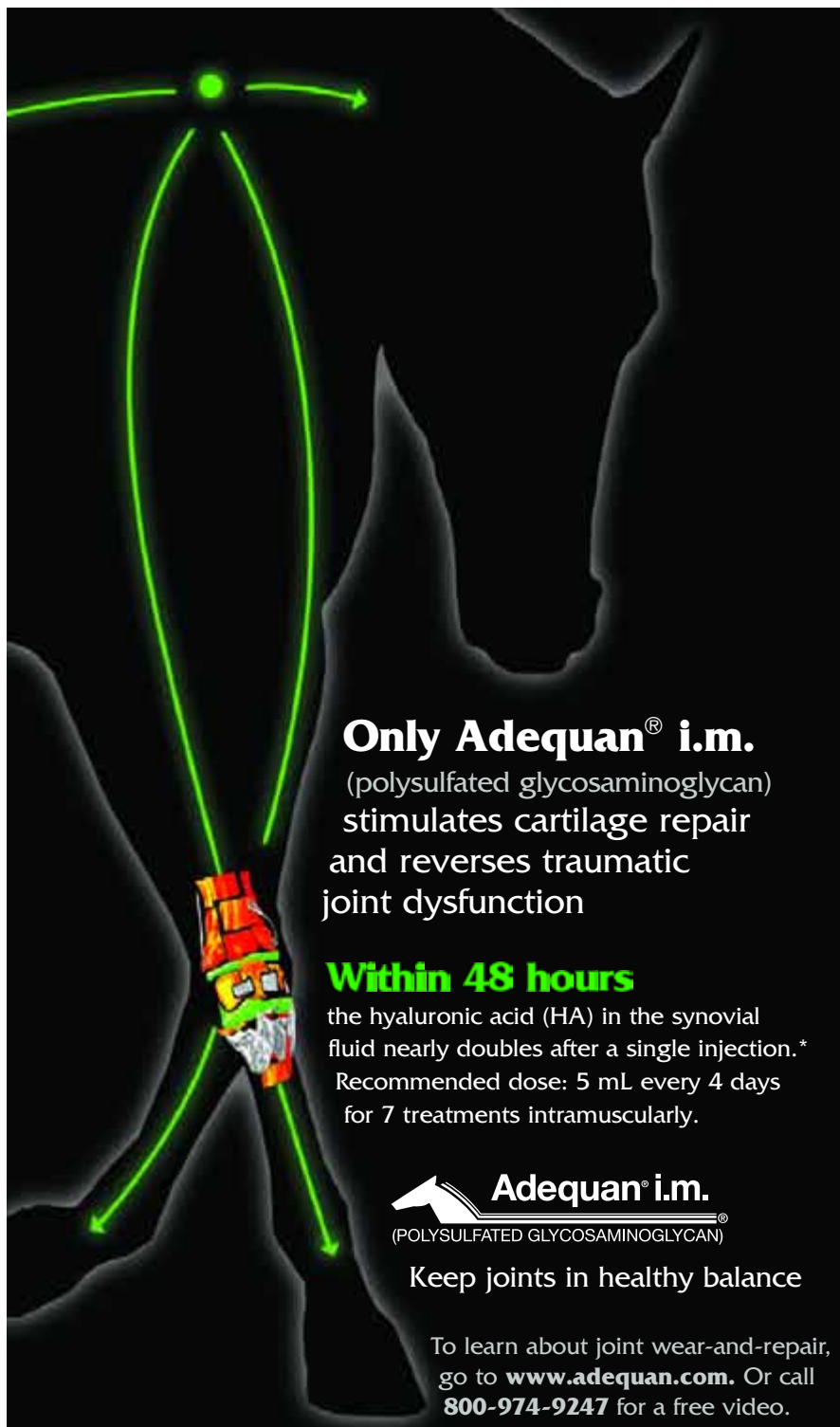
#### **PREVENTING DISEASE**

Outbreaks of equine herpesvirus and strangles in recent years underscore the inherent disease risk posed by horses from many different farms and tracks of origin congregating at a venue.

Because close confinement increases health risks, maintaining good hygiene is important in these scenarios, along with regular monitoring of rectal temperature and establishment of quarantine, if indicated by veterinary authorities.

Hay noted the recent outbreaks have reminded the racing industry to keep its guard up and have led to implementation of requirements to control future outbreaks or prevent them altogether. Veterinarians are observing vaccination strategies more closely, particularly for respiratory diseases such as equine herpesvirus (rhinopneumonitis) and influenza.

His strategy for immunizing horses incorporates vaccinations for diseases that are common to the area in which he practices. Hay said, "We normally recommend influenza and rhinopneumonitis vaccinations at least every four months. The encephalitis vaccines (Eastern and Western encephalitis—EEE and WEE—and West Nile virus) are recommended to be given at least once a year. In areas with year-round mosquito populations, as in Florida and the southeastern United States, it is wise to boost these vaccines every six months. Rabies boosters are



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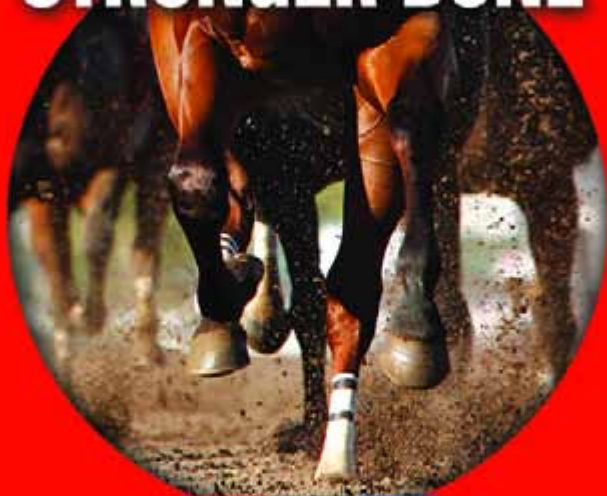
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given yearly, as are tetanus toxoid boosters."

He noted that some owners and trainers are resistant to maintain vaccinations for the encephalitic diseases, which are not communicable horse

to horse but are transmitted to susceptible horses by infected mosquitoes.

"Even with our primary practice being in South Florida...there has been reluctance," he said. "We have been lucky in that we haven't had cases at our tracks, as far as I know. Unfortunately, that leads to complacency in trainers' awareness of the risk of not vaccinating," he said.

Northrop educates his clients by citing examples of cases in which horses have died subsequent to neurologic encephalitic disease. He said, "I tell them about the last outbreak or death, and they seem to get it."

## DEWORMING

Deworming is a common health care strategy that has greatly reduced the risk of colic, ill health, and performance issues in equine athletes of any discipline. Hay said, "At the track we still tend to deworm regularly, although the frequency varies with the individual approach of each veterinarian. Common recommendations range from deworming every three months to only deworming at six-month intervals. We usually alternate between an ivermectin and a moxidectin product and at least once a year include medication for tapeworms."

Norwood recommends a double-dose of fenbendazole (Panacur Powerpac) be given for five consecutive days once or twice a year, during the time when a horse is given a short rest. However, Hay, Northrop, and Norwood all recommend that having a laboratory run a fecal egg count on your horses' manure is the most effective way to monitor parasite loads in horses and develop treatment protocols.

## CONDITIONING THE HORSE

The ability of a horse to perform well, especially at speed, relies on his ability to dissipate heat from the muscles during exercise. An important series of physiologic responses relieves such heat buildup in the horse. Fitness and conditioning develop a horse's cardiovascular system to maximize movement of heat from deep in the working muscles to the skin where the heat then evaporates from the sweat glands.

"Evaporative cooling" uses sweat as a means to convey heat from the horse's skin to the ambient air and accounts for about 65% of a horse's cooling process, while the lungs might blow off as much as 25%

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of internal heat. Release of the heat load through the respiratory tract is evident as a hot horse stands blowing with widened nostrils after exertion.

Conditioning develops a horse's ability to perform as easily and as efficiently as possible. Yet, climate can factor in to the potential to develop heat stress. In hot and humid climates a horse's sweat glands might become exhausted, leading to overheating problems during training and exercise. This situation is referred to as anhidrosis or the inability to sweat. The incidence of anhidrosis in Thoroughbreds in a study in Central Florida was figured at around 6%.

Maintaining a horse's hydration is essential. Salt and water should be offered free choice. Potassium chloride (KCl) is purported as useful, although horses with anhidrosis usually have normal electrolyte plasma concentrations. Adding "light" salt to the feed ensures sufficient potassium intake, and provides a stimulus for increased water intake.

### **FUEL FOR THE FIT HORSE**

Nutrition is also an important component of a healthy racehorse's regimen.

Northrop stresses the use of common sense in feeding, and noted, "I like an 'Atkins' approach (restricted carbohydrates and sugars), especially for a horse with chronic muscle soreness." He remarked that good hay and ample forage are vital for intestinal health, recommending owners take caution in offering certain feedstuffs: "Avoid corn, high-sugar supplements, and oversupplementation—many supplements are worthless and unwarranted."

Consult your veterinarian on advice for building your horse's diet and for input on supplement use.

Protein is a primary culprit for generating metabolic heat in the horse due to its high heat increment. Horses urinate more when fed legume feed (which is high in protein) than when fed grass hay. A combined increase in sweat and urine losses makes horses on high-protein (greater than 16%) feeds "at risk" for dehydration in hot weather, whether the protein source is alfalfa hay or soybean meal. Fats have the lowest heat increment.

The best way to provide "cool fuel" is to feed grass hay (8-12% protein) and 5-10% fat in amounts necessary to maintain body weight. Concentrates should be constrained to no more than 0.5% of body



**Proper foot care has a lot to do with soundness**

weight at each meal, i.e., a 1,000-pound horse should not receive more than 5 pounds of grain at a meal. Restricted grain meals not only improve the state of metabolic heat generation, but also reduces the risk of gastric ulcers.

For a horse to digest his feed properly, dental health is important. Hay has noticed most horses in his racetrack practice only need routine care. He explained, "Most of our patients are relatively young horses with few dental issues. Of course, taking care of wolf teeth and retained caps is important. There are occasional broken teeth or sinus infections that result from an abscessed tooth root, but these are not common."

Northrop considers it important to check a horse's teeth at least two or three times a year to look for broken or injured teeth and for retained (deciduous teeth that are not shed) caps that can cause discomfort.

### **PERFORMANCE PROBLEMS**

Preparing a horse to run relies on tying all the little details into one big package. At times certain systems will falter, although the rest of the horse seems fit and ready to perform. For airway problems, Northrop recommended, "All horses with a suspect condition, such as airway noise or poor performance, should be examined with an endoscope. For the best evaluation of function, use of a treadmill or a dynamic scope

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gives insightful information.” The dynamic endoscope is helpful to identify and prognosticate about physical changes in the airway openings at the larynx—a malleable optical tube is affixed in

the horse’s upper airway to record visually dynamic respiratory obstructions that occur during exercise. The horse is exercised normally with the device in place as video information is transmitted to a computer screen.

Hay concurred that an endoscopic ex-

amination following exercise is important for a horse experiencing performance problems. He said a thorough physical examination and a lameness examination are key to pinpointing obvious or subtle lamenesses that might inhibit performance. “Comprehensive blood count and chemistry panels also help to identify sub-clinical disease processes,” he said.

Northrop promotes a similar approach, touting a solid diagnostic workup that includes a lameness exam, respiratory evaluation, laboratory blood work, and other necessary diagnostic procedures in order to identify subtle problems.

In addition to evaluating soundness, the respiratory tract, and blood work, Norwood suggests veterinarians and trainers check for equine gastric ulcer syndrome, along with assessing the horse’s body condition to address any concerns of weight loss.

Hay urges owners and trainers to have a full gastric ulcer workup done by a veterinarian, complete with gastric endoscopy to identify ulcers rather than just starting a horse on anti-ulcer medication. Northrop stresses that to manage a horse effectively it is key for owners or trainers to work with capable vets and for there to be direct client communication and clarification regarding managing a horse.

### SOUND RECOMMENDATIONS

In a recent white paper, the AAEP made several recommendations to ensure equine welfare and to provide a platform from which a horse can perform to potential. One piece of sage advice from the white paper can help an owner know if his horse is ready to run to his optimum: “There should be a period of rest for all horses to provide an opportunity to refresh and diminish the volume of persistent cyclic loading that occurs in the absence of rest.”

In addition, it is suggested that owners, trainers, jockeys, farriers, grooms, stewards, starters, security personnel, and veterinarians take advantage of a variety of educational opportunities and accreditation programs that can help participants better understand the Thoroughbred.

Other important messages conveyed in the AAEP white paper are worthy of consideration in attending to all the details of racehorse health care:

■ Trainers should include horse owners in all aspects of health care decisions.

■ Owners should have a thorough understanding of the medication and training philosophy of their trainer, with particular emphasis upon the level of medical care provided to their horses.

■ Veterinarians should provide unfettered access to owners and trainers for consultation and discussion of medical treatments.

### TAKE-HOME MESSAGE

To optimize your horse’s readiness to run, Norwood recommended, “Evaluate a horse’s level of ability early on to identify and address the weak components, and find a trainer you are compatible with.”

Ideally, horse care should be a collaborative team effort. Find a trainer and a veterinarian that you, as an owner, can openly communicate with. Northrop stressed, “Open communication between the vet and owner goes a long way in preventing owners from getting discouraged and allows everyone to do the best by the horse.”

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