



Young Horse Development 18-24 Months



ANNE M. EBERHARDT

By age 2, young horses are being prepped for future careers; maximize their potential by preventing/correcting health problems early

The second year of a horse's life brings significant changes not only in his development, but also in his use. Lanky yearlings, though perhaps still hip-or-wither-high, broaden and become more proportional. Fillies and stud colts show increasing sexual maturity. And, depending upon the intended discipline, an owner's thoughts turn toward training. The changes during the 18-24-month period bring rewards, but they also carry health risks.

CHRISTY CORP-MINAMIJI, DVM

Ideally, a horse owner will monitor a foal's development from birth—closely observing growth, conformation, nutrition, housing, socialization, and preventive care as discussed in the first two segments of this series (see the February and June issues). But, what about the foal purchased at a yearling sale, or one that is brought in from the yearling band to prepare for training? What should owners look for in the near 2-year-old?

Musculoskeletal Development

By 18 months, “most (orthopedic) lesions are already developed but may not yet be clinical,” meaning the horse doesn't show detectable signs of the disorder, says Elizabeth M. Santschi, DVM, Dipl. ACVS, associate professor of veterinary clinical sciences at The Ohio State University.

Developmental abnormalities that might become apparent at this age include osteochondritis dissecans (OCD) lesions in the cartilage and bone of developing joints; acquired flexural deformities such as contracture of the fetlock (in which the joint can't be fully extended); and wobbler syndrome, a malformation of the cervical vertebrae (in the neck) causing compression of the spinal cord.

According to Santschi, the OCD lesions most likely to be seen at this age are subchondral bone cysts of the femur (under the cartilage at the stifle joint) and cartilage flaps in the shoulder joint. Hock OCD generally shows earlier in life, but it might still appear. Clinical signs of OCD lesions usually include lameness and/or increased fluid in the affected joint. Veterinarians can diagnose OCD lesions through radiographic (X ray) and lameness examinations. Some of these lesions might respond

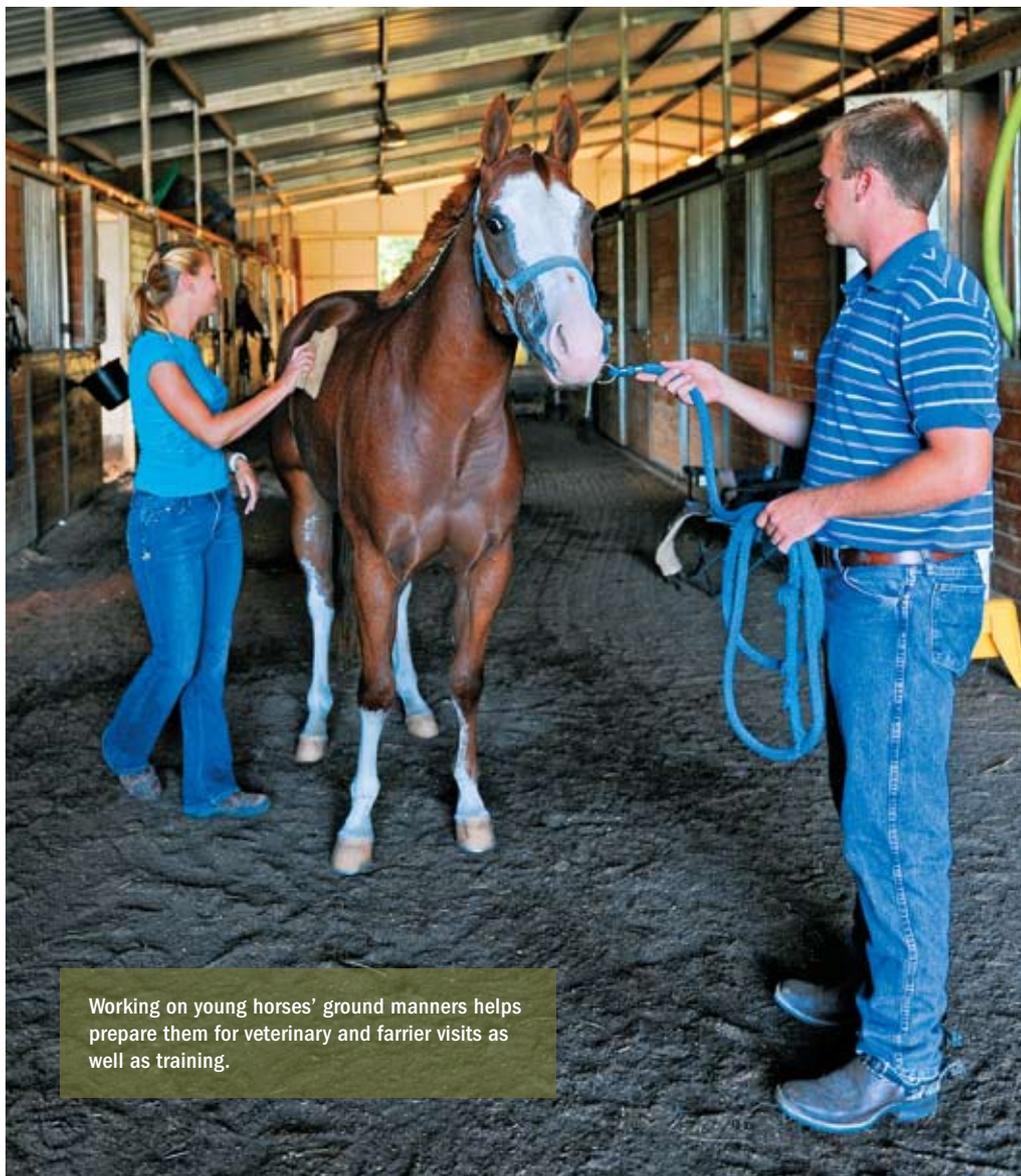
to conservative management such as joint injections, while others might require arthroscopic surgery to remove bone fragments or “clean up” cartilage.

Horses with wobbler syndrome might initially appear lame, but neurologic signs can surface and worsen. Thus, have your veterinarian carefully evaluate flexural and other limb deformities. Santschi recommends owners keep an eye out for changes in limb angulation as viewed from the front and side. She says this is also when young horses begin to show signs of defects such as carpal offset (“bench knees”) or carpal varus (the lower leg deviates inward from the knee, as viewed from the front), which can affect future performance.

In terms of correcting musculoskeletal abnormalities, Santschi says “the sooner (they) are dealt with, as always, the better.” With flexural deformities, all club feet short of 90 degrees (the front of the hoof wall is not yet straight up and down) are potentially correctable with surgery, and some less severe cases might be managed conservatively with appropriate trimming and shoeing. Flexural deformities at the fetlock can be more challenging to manage. “Once the horse is bucking forward (over at the fetlock) or is straight (through the fetlock joint), it will require surgery,” Santschi explains. She believes fetlock contracture is the least desirable of the deformities, since even with surgery it might not improve.

Other Medical Issues

Wendy E. Vaala, VMD, Dipl. ACVIM, senior equine technical services specialist at Merck Animal Health, says owners need to remember when acquiring a young horse that “you inherit whatever they received—or not—on the farm.” Thus, Vaala advises owners to house youngsters (particularly those newly acquired) together and monitor them carefully for signs of infectious disease and parasitism. Know your horse's normal temperature and behaviors, and the minute you suspect illness, take his tem-



Working on young horses' ground manners helps prepare them for veterinary and farrier visits as well as training.

ANNE M. EBERHARDT

perature. “A fever means the horse doesn’t leave his stall until the vet looks at him,” says Vaala. Horses of this age, especially those entering new barns, are at high risk for respiratory disease. “They are like kids going to school for the first time, in terms of exposure.”

Respiratory Disease In a study of 2-year-old Thoroughbred racehorses, respiratory disease was the No. 1 cause of missed training days. Viral causes of respiratory disease include equine herpesvirus (EHV, rhinopneumonitis), most commonly type 4 but also type 1; and equine influenza virus (flu). Common signs of early respiratory disease are lethargy and loss of appetite, as well as nasal discharge (which typically appears clear with EHV). Signs of flu in horses usually include a high fever and a dry, hacking cough. Other, as yet unidentified, viral pathogens of horses might also exist. As in humans viral infections in horses are typically self-limiting, clearing with time off from work for rest and recovery, states Vaala. However, the stresses of viral infection occasionally can lead to

secondary respiratory infections with bacterial agents such as *Streptococcus zooepidemicus*, which can cause pneumonia.

A common and highly contagious primary bacterial agent affecting this age group is *Streptococcus equi*, which causes strangles. Clinical signs of strangles include high fever, muscle soreness, thick nasal discharge, and enlarged and abscessing lymph nodes of the head, generally under the jaw.

Internal Parasites Another continual young horse challenge—this one to the immune system—is internal parasites. Both Vaala and Ray Kaplan, DVM, PhD, Dipl. EVPC, professor of parasitology at the University of Georgia’s College of Veterinary Medicine, stress the risks of parasitic disease in the young horse. Regardless of fecal egg monitoring, an owner should consider an 18-24-month-old horse to be a “high shedder” simply by virtue of age. “While parasitic disease in adult horses is relatively uncommon, young horses are much more susceptible,” says Kaplan. He also stresses the importance of fecal egg count reduction testing (FECRT) in young

horses—which entails sampling manure and providing a quantitative assessment of parasite egg numbers at the time of deworming with a particular drug and then again 14 days later. Veterinarians and owners can use this test to assess each deworming drug’s efficacy against each parasite on a particular farm. Since a drug might be more effective in killing one type of parasite than another, Kaplan says, “If you are just rotating without testing, you can get into trouble (i.e., fuel parasite resistance to dewormers) by using ineffective drugs.”

The major parasitic culprit in young horses is the cyathostomin, or small strongyle. Small strongyle larvae can bury themselves or “encyst” in the intestine wall lining, hiding from both fecal testing and from many antiparasitic drugs. A few anthelmintic drugs are labeled specifically for efficacy against this encysted larval stage. Horses younger than 3 years old will usually benefit from a once-per-year treatment of one of these drugs given at the end of the grazing season. On rare occasions encysted larvae numbers can reach extremely high levels, leading to severe disease. This condition, called larval



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cyathostominosis, is characterized by substantial weight loss and diarrhea.

Gastrointestinal Issues Vaala recommends owners also look for signs of gastric ulcer syndrome and colic in young horses. Changes in social environment, feeding, housing, and exercise can stress horses in training and render them susceptible to gastric ulcers. Affected horses might not eat grain, and they might play in their water and show mild colic and general un-

could set a young horse up for impaction colic.

Management (i.e., “Now What?”)

So now you know what health concerns to watch for in your almost 2-year-old. How can you prevent or correct some of these problems? How do you know if he is ready for training? And how can you maximize his healthy growth?

When approaching nutrition and housing, providing too much food and not enough exercise are the biggest mistakes

Santschi sees owners make. “People waste money and potentially make more errors by overfiddling with the ration,” she says. Instead, she suggests finding a good-quality forage and concentrate and feeding in consultation with your veterinarian or nutritionist.

To prepare a horse for training, Santschi suggests plenty of turnout “to develop the cardiovascular and musculoskeletal systems.” She also advocates working on young horses’ ground manners so that, for instance, the farrier’s job is made easier when he comes to trim the horse’s feet.

When assessing a horse’s readiness for training, Santschi stresses the importance of “treating each horse as an individual,” as each horse grows at his own rate. A small, poorly muscled horse or a “great, big Baby Huey horse” might require more time to develop than an average-sized horse before beginning formal exercise.

To prevent infectious disease, Vaala advocates a careful vaccination program tailored not only to the area of the country in which the horse currently resides, but also to regions in which the horse might travel. For example, horses in California are not routinely vaccinated against Potomac horse fever (PHF). However, a California-raised colt headed for a competition on the East Coast would need adequate vaccination against PHF.

Vaala recommends owners that are

vaccinating against multiple diseases to “break it up a little,” spacing individual vaccines two to three weeks apart. She suggests this interval between vaccines because “there is a two-week cycle for the immune response to peak and subside. If you revaccinate mid-cycle, you get a ‘blunted’ response.” Also, since a horse experiencing a vaccine reaction might be reacting to the adjuvant (a binding agent designed to enhance immune stimulation) rather than the active portion of the vaccine, Vaala suggests avoiding administration of multiple companies’ adjuvants in one day.

However, she does not advocate relying on vaccination alone to prevent infectious disease outbreaks. She suggests quarantining any new horse for 14-21 days, because “when you get a new horse, you get whatever is in his nose and in his manure.” Owners also should practice smart hygiene and biosecurity practices such as hand-washing or clothing/shoe disinfection between handling horses, along with not sharing equipment. Disease agents—*S. equi* for instance—can even be spread by moving a hose from contact with one water bucket to another. Owners should not share paste medications between horses, as communal tubes can also spread disease agents.

Welcome to Age 2

In this series we have learned that young horses thrive best when their growth is managed simply with free exercise, good-quality forage, and attention to disease and parasite management. All these factors contribute to preventing many disorders. By consulting a veterinarian and using careful observation and quick response, an owner can avoid or minimize many other problems in a young horse. 🐾

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ABOUT THE AUTHOR

Christy Corp-Minamiji, DVM, is a former equine practitioner and a freelance writer living in Northern California, with particular interests in equine wound management and geriatric care. She and her husband have three children, and she writes fiction and creative nonfiction and blogs in her spare time.

ONE
YEAR



ALEXANDRA BECKSTETT

TWO
YEARS



CHRISTINE HANSEN

From yearling to 2-year-old, horses experience drastic physical changes, as shown in this Warmblood filly. Assess young horses individually when deciding if they are ready for training.

thriftness. Vaala suggests owners have a veterinarian evaluate any horse that is not eating, even if he does not have a fever.

“Anytime you have a change in the lifestyle, you can see bacterial changes in the gut,” says Vaala. These changes in the normal gut flora can make a young horse susceptible to bacterial causes of colic, such as *Salmonella* or *Clostridium*. Additionally, changes in water intake or consumption of foreign matter, such as sand,