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From JUMPERS to HUNTERS

How to retrain a former jumper to become a competitive hunter.

BY HANNAH ISOP • PHOTOS BY AMY K. DRAGOO

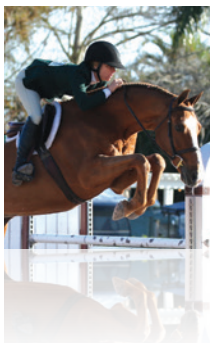
Just like people, horses don't always land their ideal jobs at the beginnings of their careers. Some muddle along in one or more disciplines, not quite reaching their full potential until they're switched to the discipline that suits them best. That's why, even though I'm primarily a hunter rider now, I pay close attention to horses in the jumper rings. I'm always on the lookout for potential hunter stars. Although it takes time and patience to convert a jumper to a hunter, if the horse has what it takes to succeed in his new career, it's worth it.

My aunt, Tracy Freels, and I have successfully converted several jumpers into hunters, including one of my current International Hunter Derby mounts, Red Ryder (pictured below). When we spotted him at a show, we were first attracted to his beautiful jumping style. He had a nice, round bascule (the shape the horse's body makes in the air) over the fences and good technique (folding his legs neatly and evenly), and he was consistent: Every jump looked the same.



▲ Heidi Tummel's 8-year-old European warmblood Sincerely ("Siri") competed in low-level jumpers before she was imported and re-trained to jump in this more relaxed hunter style, stretching her nose forward while staying straight and square with her front end.

Even though he was in the jumper ring where riders usually keep their mounts packaged together with shorter reins and more visible rein contact than riders do in the hunters, this horse was carrying his nose out more like a hunter, traveling on a loose rein with great self-balance and a lovely expres-



ABOUT HANNAH ISOP

Third-generation equestrian **Hannah Isop** teaches and trains at her family's Harkaway Farm, in North Salem, New York, with her aunt, Tracy Freels, and her mother, Susie Isop, who manages the barn. Her grandparents, Jeri and Bob Freels, were both horse trainers. Hannah has earned top placings in many hunter and jumper divisions, including several wins in national and international hunter derbies, second place in the 2011 Ox Ridge Charity Horse Show's Grand Prix, second in two consecutive years at the USHJA World Championship Hunter Rider Developing Pro Challenge, first and second at the 2018 Devoucoux Hunter Prix at HITS-on-the-Hudson II, and a top-10 finish in the 2018 Platinum Performance/USHJA International Hunter Derby Championship.



▲ **ADJUST TO A NEW FRAME**

1. I start with the collected canter—a slower pace, more compressed frame and stronger rein contact—that Siri was accustomed to in the jumpers.

2. Then I lower my hands slightly to encourage her to drop her head and relax her back, softening my rein contact a bit but still maintaining some connection so as not to surprise her with a drastic difference. After a few strides, I will shorten the contact and ask her for a collected canter again, returning to her familiar compressed frame before she has a chance to fall out of balance.

sion on his face. It turned out he'd been imported from Europe, where he'd competed in the 1.40-meter jumpers. He was for sale at the time, and a kid was trying him out in the Training Jumpers.

My aunt bought Red Ryder, and we transitioned him to the hunters using the process I'll describe in this article. Like many of our other conversion successes, he blossomed in his new job, earning many top ribbons, including several International Hunter Derby wins.

The qualities we saw in Red Ryder that first day are the same ones we look for in any potential hunter: obvious talent (fluid gaits, beautiful jumping style) that catches the judge's eye the moment the horse walks into the ring; smooth, well-put-together conformation; excellent body condition (shiny coat, healthy weight); and, most importantly, charisma. By that, I mean that the horse has a pleasant, confident expression—ears forward, neck nicely stretched out, nose poking out in front—and a good work ethic that enables him to compete in more than one class per day without losing his enthusiasm. He should be light on the forehand and able to travel in self-carriage without too much work on the rider's part to keep him in balance. We avoid horses who look extremely heavy in



the bridle (leaning their weight onto the rider's hands) or have a very “hot” (tense) temperament and/or overly quick movement. These habits and traits can be difficult to reverse.

Making the Transformation

It's rare to find a horse who can go straight from the jumpers to the hunters, even one as naturally suited to the latter as Red Ryder. Before you ask one to make the switch, you have to help him develop the different muscles and attitude required for the new discipline. Physically, the hunters require horses to travel between the jumps in a longer, lower shape, with a more outstretched neck and light rein contact while still powering their bodies forward with active hind ends. This is a very different balance from the compressed, more connected shape you see in the jumpers, and it takes time to develop the muscles to maintain it throughout an entire course.

Another sometimes difficult adjustment is learning to accomplish the “hunter gap”—taking off several inches farther away from the base of the fences than jumpers normally do. This extra space in front of the fence encourages horses to slow down their jumping efforts so that they have more time to rotate their shoulders forward, fold their legs neatly and produce a nice bascule in the air. Because the fences are bigger in the jumpers, the emphasis there is more on creating power to clear the jump—which is easier to do from a deeper (closer) takeoff spot—than on the horse’s shape in the air.

Horses also need to be prepared mentally to switch disciplines. They need to become familiar with the different

types, colors and materials of hunter fences—flower boxes, rolltops, etc. They need to adapt to new aids: Because hunters are expected to perform with a much lighter rein contact than jumpers, their riders must rely even more on their body weight and position to influence their mounts. Whereas jumpers aren’t judged on their lead changes, hunters are penalized for making expressive ones (jumping high in the air, changing the rhythm, pinning their ears, etc.). And, even though the atmosphere of a big hunter class may be similar to that of a big jumper class, how we expect horses to respond to that atmosphere is very different. It can take time for a former jumper to learn how to keep his cool and continue in his

◀ *GRADUALLY INCREASE THE PACE*

1. This is the ideal hunter frame we’re aiming for: a relaxed, balanced canter in self-carriage with a pleasant expression and very light contact. Once I know Siri can maintain this frame at a slow canter pace ...

2. ... I ask her for a few strides with more pace down the long side of the arena. Note how she has maintained the same long, relaxed frame without leaning on my hands for balance. In the next corner, I will shorten the reins again and prepare to slow her pace gradually.



► SMOOTH OUT LEAD CHANGES

1. I start on the right lead and turn across the diagonal. Before Siri has a chance to anticipate the lead change, I turn right again (about three-quarters of the way across the diagonal) and return to the rail, maintaining the same steady rhythm.

2. After repeating that a few times, I canter the same diagonal, again to about three-quarters of the way across, where I make a transition to trot.

3. When she feels balanced and calm, I quietly ask for a left lead canter. After repeating that several times ...

4. ... I ask for a flying change. She's late changing behind here, but by staying centered and straight in my body, I am helping her learn to find her own balance while producing a smooth change.



steady, rhythmic, relaxed balance despite distractions outside the ring, like a cheering audience.

I think of these physical and mental transformations as peeling away the layers of a horse's former training and starting from scratch. How long this takes varies from horse to horse, but I usually allow about a year from the start of the transition to when I hope to have the horse showing consistently in his new job. It's very important to do this slowly and methodically. Take baby steps!

Flatwork

The first goal is to accustom your horse to carrying himself in a good balance with lighter rein contact. Start by switching him to a gentle bit, such as a rubber D-ring or Happy Mouth, or even consider riding him in a hackamore for a while. Because most jumpers are ridden in relatively stronger bits, this change might make your horse harder to stop and turn initially. So keep your early rides simple. Do lots of trail riding and easy flatwork. Also start riding him in a loose standing martingale to help encourage him to lower his head if he's used to carrying it a little high.

In your flatwork, use plenty of figures—turns, diagonals and circles of different sizes—to encourage him to rebalance

himself frequently and thus keep his pace in check while he gets used to the lighter bit and rein aids. Focus on maintaining a consistent rhythm at each gait. Stick to a steady medium pace at the trot. At the canter, start with more collected work, which jumpers are used to. Ask for a slower pace and a more compressed frame, connecting your horse between your legs and hands, holding just enough contact to keep the pace in check. Lower your hands slightly more than normal (but no lower than his withers) to encourage him to drop his head and relax his back.

Gradually loosen the feel on the reins for a few strides at a time while using your body weight and balance to help him maintain *his* balance. Use a soft, centered seat, lightly staying in contact with the saddle, but never with a “driving” motion. Keep your hips, core and shoulders centered over the middle of the saddle. One of the biggest mistakes we see in the hunter ring is riders getting too forward with their upper bodies. This encourages horses to tip their balance on their forehands and lean on the bridle—exactly the opposite of the self-carriage we want.

Another common mistake is to take your legs off your horse's sides. This is especially tempting in the beginning of the transformation process when it may still be difficult to control



the pace without relying on the reins. But maintaining a light but still supportive, constant leg pressure actually works as a sort of security blanket for horses. Knowing that it will always be there tends to help horses find their own balance.

For the first few weeks or even months, keep the canter pace slow. Soften the rein contact for just two strides at a time, then pick it back up again. When that's going well, try it for four strides, then gradually build on that. Remember to use your figures—circles, turns, etc.—to help him balance during these short spells on lighter contact. Always try to pick up the contact again before your horse has a chance to fall apart, which can happen very easily in this early stage. If you completely throw away the contact, an 8-year-old ex-jumper will suddenly ride like a 3-year-old, losing his balance completely.

Eventually, your horse will learn how to carry himself in a longer frame with less rein contact. At this point, you can begin to open up his stride. Again, do it in baby steps. Try it down just one side of the ring, collecting him again in the corner. Gradually build up to cantering around the whole ring with more pace, still focusing on maintaining a steady rhythm. Be ready, though, to throw in a circle or transition back to collected canter whenever he starts to lose his balance.

With each transition and change in pace, instead of asking your horse for an instant—and potentially abrupt—response, give him a little extra time so he can make it as smoothly and subtly as possible. In the hunter ring, it should look like it happens almost magically.

Lead Changes

During these early days of flatwork, teach your horse a new approach to lead changes. Jumpers often anticipate the changes, making them before their riders ask for them. Your goal is not only to teach your horse to wait for your cue, but also to make a smoother, less expressive change.

To do this, practice cantering across the diagonal, but then turn in the direction he doesn't expect. So, for example, if you're on the right lead and make a right turn across the diagonal, instead of cantering to the end of the diagonal and turning left, make another right turn back to the track. Do this at about three-quarters of the way across the diagonal, so you can initiate the turn smoothly without disrupting the rhythm or forcing your horse to make an extremely tight turn. This will teach him to hold his lead until you ask for the change.

Repeat this exercise until you don't sense any anticipation



▲ **INTRODUCE JUMPS**

Incorporate a simple, single jump into your flatwork—a vertical or oxer resembling the types of fences your horse was familiar with in the jumper ring. Roll out a ground line about a foot from the base of the jump.

1. When Siri feels quiet and balanced on the flat, I canter her to a vertical, focusing on maintaining a steady rhythm all the way to the jump. Here she's demonstrating the relaxed frame and expression we're aiming for.

2. On takeoff, I keep my hands low, maintaining a light, gentle feel of her mouth, so her head and neck remain outstretched, while centering my shoulders over my hips, so I don't tip her off balance. After, I'll return to flatwork, correcting her balance and rhythm as needed, and incorporate a few more single fences throughout the session. Over time and still over familiar fences, I'll build up to riding simple lines and small courses and experiment with opening up her stride.

for the change building up in your horse. Then move on to making simple changes through the trot toward the end of the diagonal. So, for example, if you're on the right lead and make a right turn across the diagonal, when you arrive about three-quarters of the way across the diagonal, calmly ask your horse to make a transition to trot. Continue trotting until he feels straight, rhythmic, relaxed and soft in the bridle and in his back. Then quietly ask for a left lead canter. Don't rush



these transitions! This is how your horse is going to learn to stay calm and relaxed throughout his changes. Depending on the horse, this may take as many as 10 trot steps initially.

Over time, as his balance and understanding improve, gradually shorten the number of trot steps you take in the simple changes. Eventually, with patience and repetition, he'll be ready to progress to making smooth flying changes.

Introducing Jumps

Hold off on jumping your horse until he's consistently carrying himself in the new, relaxed frame on a soft contact. When he feels ready to maintain that balance in the approach to a jump, begin incorporating single fences into



▲ *INTRODUCE HUNTER-STYLE FENCES*

When your horse is confidently jumping single fences, lines and courses over familiar jumps and remaining manageable on the landing sides, introduce him to a single hunter-style fence (see opening photo, page 3) and, if that goes well, a line.

1. Jumping into the line, Siri has a wonderful expression—relaxed yet focused on the out jump. She is well centered over the fence and stretching her nose forward on a soft contact.
2. This is exactly how you want your hunter to look in the middle of a line: staying balanced on an open stride, stretching her relaxed topline toward the jump with a confident, alert expression on her face.
3. The result is an excellent jump out of the line. Note Siri's round topline, soft expression and square, straight body. The loop in my reins proves that she stayed in balance all the way to the jump. However, I've allowed my upper body to get a little too close to her neck.

his flatwork. Keep them simple and recognizable—verticals and oxers resembling the types of fences he was familiar with in the jumper ring. High crossrails are also fine for reminding him to jump the middle of his fences. Roll a groundline out about a foot from the base of each jump. This will help him to get used to the “hunter gap.”

Start each ride with the same flatwork you've been doing. When your horse feels quiet and balanced, canter him to a single fence at a fairly slow pace. Focus on maintaining your rhythm all the way to the jump. On takeoff:

- Keep your hands low, maintaining a light, gentle feel of his mouth, so his head and neck remain outstretched.



- Support his impulsion with plenty of lower leg pressure. This will help him learn to trust his own balance—without relying on strong rein contact telling him to compress his body and power off the ground—and use the space in front of the jump to show off his best technique.
- Meanwhile, keep your shoulders centered over your hips, being careful not to push your upper body too far forward, which would tip him off balance at the most important moment.

After the jump, go right back to your flatwork, correcting his balance and rhythm as needed. Add in a few more single fences throughout the session, depending on how well he maintains his balance before, during and after them. Over time, slowly build up to riding simple lines and, eventually, small courses. Also begin experimenting with opening up his stride, always insisting that he do so while maintaining a long, relaxed frame and steady rhythm.

When this is going well, gradually introduce the types of fences he'll see in the hunter ring: rolltops, flower boxes, etc.

If he's a careful horse, he may overjump these fences the first time. To help him overcome this problem, keep the jumps small and approach them at a slower pace than usual. Also add a stride in every line so he doesn't feel too strung out in front of the "out" jump. For example, if you're riding a five-stride line, do it in six strides. This will help him stay confident and relaxed.

If he feels a little lost in front of his fences—drifts sideways or hesitates—support him with a solid upper body position. If he's a brave horse who tends to get too fast, continue jumping these new fences out of a slower-than-normal pace and circle or collect him after each one to correct his balance and pace.

Don't expect your former jumper to canter around a hunter course in perfect style instantly. Always be ready to compromise. Whenever it feels necessary, go back to things he'll find familiar, like collected work and simpler-looking jumps.


Preparing for Shows

When your newly converted hunter is jumping courses confidently at home, plan to make his competition debut in a low-key division at a show with a quiet atmosphere. In the weeks leading up to it, desensitize him at home to some of the potential distractions he'll encounter. For example, braid his mane before a schooling session, so he experiences that different feeling on the crest of his neck while jumping. (This is also a good way to train his mane to lie on the correct side.) Apply a tail wrap, too, to simulate the pressure he'll feel from a braided tail. Some horses clamp their tails down or bounce their butts up in mini-bucks when they first encounter this sensation. Better to experience these surprises at home than in the show ring!

To accustom him to staying calm despite the sounds of crowds outside the ring, find videos on YouTube to play while you're schooling at home. Or ask friends to stand outside the ring and clap and cheer while you're riding a course.

When you finally begin showing, always start the competition with a warm-up class over a smaller height than your regular show height. Ride this at a steady rhythm and slower-than-usual pace, adding a stride in each line. This way, he'll be less likely to tense up when you come back into the ring and ask him to open up his stride.

Most importantly, keep your expectations reasonable. Instead of aiming for a ribbon, which might place too much pressure on your horse, make your top priority riding the entire course in a consistent, smooth, rhythmic manner. In between fences, use a soothing voice and rub his neck with your pinky finger to encourage him to stretch his neck down, relax and take a deep breath.

Remember, every horse learns at his own pace. If you take your time and break the process down into small, easy-to-achieve steps, your horse will embrace his new job with confidence and enthusiasm. 



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BALANCE HIS DIET

Determining whether your horse is getting the right nutrients doesn't need to be complicated.

By Elaine Pascoe with Sarah Ralston, VMD, PhD, DACVN

Your horse doesn't seem as sharp as he did a few months ago, and his coat is losing its glow. Does he need a supplement? Should you change his feed?

Before you can answer those questions, you need to answer two others: First, does he have a health problem? Second, is his diet balanced? The first one is easy—just call your veterinarian and schedule a visit for a complete checkup. But determining if your horse's current rations provide the right amounts of the nutrients he needs may seem daunting. You'll find reams of nutritional information in books and online, much of it highly detailed. The numerical data and technical jargon can deep-fry your mind.

The process doesn't need to be complicated, says Sarah Ralston, VMD, associate director of the Rutgers Equine Science Center and a specialist in equine nutrition. You won't even need higher math skills. In this article, you'll find out how to balance your horse's diet using some simple tools. Want instant gratification? See "Cut to the Chase" on page 14 for shortcuts.

What Does He Need?

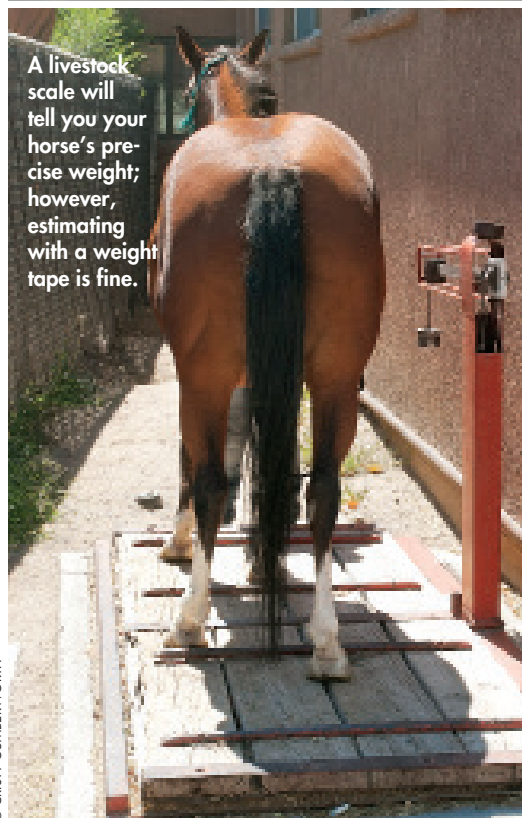
All horses need the same essential nutrients—energy to fuel body functions, protein to build and repair body tissues and produce enzymes and hormones, and certain vitamins and minerals—but the amounts required by individual horses vary. To figure out if your horse is getting what he should from his diet, start with basic information about him:

Weight: Feed recommendations are generally based on amounts per pound or per kilogram of mature body weight, so this is essential information. A livestock scale will tell you your horse's precise current weight, but a careful estimate with a weight tape (easily obtained from feed stores) will be fine.

If your horse is underweight or overweight, base his feeding program on optimum



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A livestock scale will tell you your horse's precise weight; however, estimating with a weight tape is fine.

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Young horses need extra energy, protein and the right amounts of minerals for proper development.

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What's He Eating?

You'll also need accurate information about what and how much your horse eats every day, by weight (not volume). Get the big picture—not just his grain, but his hay, pasture and supplements as well. If you board him, you may have only a vague idea, so ask the barn manager about the kinds and amounts of hay and grain he gets. If you're in charge of feeding, you know what you're giving him, but weigh everything (including typical flakes of the hay you feed) to be sure of the amounts. If he leaves grain or hay uneaten, weigh and subtract the wasted amounts, if possible, to calculate how much he actually consumes.

An adult horse in moderate work typically consumes about 2 to 2.5 percent of his body weight in dry feeds, such as hay and processed grain, a day. For a 1,000-pound horse, that means about 20 to 25 pounds. Individual needs vary, though. An easy keeper or a horse who's not in work may do with 1.5 percent total intake, while intense training may increase the intake to as much as 3 percent of body weight.

The information you collect will let you see how much of his diet each component makes up. Forage—pasture grass, hay (grass or legume) or hay substitutes—should make up the lion's share, if not the total amount, with free access to salt and water. The horse's digestive system is designed to process it, and the fiber in forage isn't just bulk. Beneficial bacteria in your horse's gut ferment it, producing fatty acids that he can use for energy. As a general rule, the more he meets his nutritional needs with forage, as opposed to grain, the better off he'll be. If hay makes up less than half of his daily ration or less than 1.5 percent of his body weight, you're inviting impaction colic and other serious problems.

Pasture can provide excellent nutrition. It's especially nutritious in spring and fall when grasses are either growing rapidly or storing energy for the long winter months. Grass is also high in water so it helps maintain gut function and hydration, and grazing is good for your horse—he moves around and thoroughly enjoys munching.

But you need acreage to maintain horses on pasture grasses alone, even in summer. In most of the East, one-and-a-half to two acres per horse will get you by from spring through fall if the horses are not working hard. "Subdividing pastures into sections and rotating their use will keep the nutrient quality up and allow optimal use of minimal acreage," says Dr. Ralston. "But in the arid Southwest, where grass is sparse, even rotational grazing won't maintain a horse on less than five to ten acres."

It's hard to estimate how much a horse eats at pasture (you can't count and measure every bite of grass), but Equi-Analytical's website outlines a way: Calculate his total daily dry-matter need (more on this in the next section), subtract the amount he's getting from hay and grain and assume—provided he's maintaining good weight—that he's getting the



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ABOVE: Get an accurate picture of what your horse is eating every day by weighing his feed.

LEFT: Your horse should always have access to free-choice water and salt.

weight rather than current weight, Dr. Ralston says. A body-condition scoring system (such as the Henneke scale, online at www.equisearch.com and other websites) can help you decide if you should go with his current weight. Check the table of typical weight and height ranges for various breeds at www.equi-analytical.com (the website of Equi-Analytical Laboratories, which does hay and feed analyses) for an idea of normal weight for horses of his breed and body type.

Age: Horses have different needs at different stages in life. Young horses need extra energy, protein and the right amounts of minerals, such as calcium and phosphorus for bone and tissue development. Broodmares' nutritional requirements jump during late pregnancy and lactation. Senior horses may develop metabolic problems that call for changes in diet.

Work level: Work increases energy needs. The increase isn't very great for horses in light to moderate work (five hours a week or less), but a horse in very heavy work (upper-level eventing, racing, endurance) may need twice as many calories as a horse who just loafs in the pasture. Sweat losses associated with hard work dramatically increase the need for water and salt, too.

rest from pasture. Given the opportunity, horses will consistently eat at least 2 to 2.5 percent of their body weight a day, without regard to nutrient content. “That’s why so many horses will get fat with free-choice access to lush pasture or high-quality hay,” Dr. Ralston says.

What about grain and other processed concentrates? They can provide extra energy, protein, minerals and vitamins, but they’re not necessary in every situation. “Horses have survived for centuries on forages, plain salt blocks and water, with grain added for extra energy only if needed,” Dr. Ralston points out.

Check the Guidelines

With information on your horse and his current diet, you can figure out if he’s getting the basic nutrients he needs. The National Research Council’s *Nutrient Requirements of Horses*, last revised in 2007, is the standard. It has tables for horses at various weights, ages and work levels, setting out the average needs for

■ **dry-matter intake (DMI)**—the amount of feed your horse needs minus the moisture content. The nutrients are all in the dry matter. Hay and grain are typically 10 percent moisture, so a horse who consumes 22 pounds of those feeds has a dry-matter intake of 20 pounds. Pasture grass is typically around 75 percent moisture, so he needs to eat more of it—about 80 pounds of grass to get the same dry matter he’d get from 22 pounds of hay and grain.

■ **digestible energy (DE)**—the energy he needs from feed, with amounts in megacalories. (One megacalorie equals 1,000 nutritional calories.) Energy needs are highest for horses in intense work and for lactating mares.

■ **crude protein**—the total protein required, in grams. Lactating mares have the highest needs.

■ **lysine**—an essential amino acid needed for growth and muscle repair. (Proteins are made up of chains of amino acids; essential amino acids must be provided in the diet.) “This is of high importance only in young, rapidly growing horses,” Dr. Ralston says.

■ **calcium and phosphorus**—important

Cut to the Chase



Reading commercial feed labels is the easiest way to make sure your horse is getting all the nutrients he needs.

Calculating how much of each nutrient your horse’s total diet provides is a time-consuming, mind-numbing chore, you say? You’re right—and it’s a chore you may not need to do. Here are some shortcuts to the bottom line.

Use software. The National Research Council developed a free computer program that does the work for you; it’s online at <http://nrc88.nas.edu/nrh/>. Enter information about your horse, and it shows

you the average nutritional needs for horses of his age, weight and work level. Enter information on the feeds he gets, and it spits back an analysis that shows how closely his diet meets the guidelines.

Want more information? There are several other programs horse owners can use, says Peggy Miller, associate professor and Extension horse specialist at the University of Iowa. They’re based on the 2007 guidelines, but some have larger feed “libraries” and can perform additional functions, such as formulating rations on a least-cost basis. However, these programs aren’t free, and they may be most useful for breeding farms and other large operations. They include REINS (Relevant Equine Intensive Nutrition Software) from the Iowa State Extension store, Equi-Balance software from Performance Horse Nutrition and Horse Ration Formulation 2007 from Creative Formulation Concepts.

Read feed labels. NRC’s program works like a charm for the forages and concentrates it lists, but you won’t find commercial mixed-grain feeds on the menu. If you use those feeds, you can still use the program. Just leave out information about the concentrate and turn to the commercial feed label to see if it fills deficits (or provides an excess) of any nutrients.

The guaranteed analysis shows the levels of crude protein and, often, lysine, crude fat, crude fiber and minerals, including calcium, phosphorus and vitamin A. The ingredients list may give more information—you may see that the feed contains vitamins and minerals not listed in the analysis, for example—although quantities aren’t shown. You won’t find a number for digestible energy, but you can deduce whether it’s high or low. Feeds with high levels of fat (say, 8 percent) and grains in the ingredients list likely provide more energy than those with low fat levels (say, 2 percent) and lots of forage-based ingredients.

Choose a brand-name balanced feed. Many brand-name commercial feeds are already balanced for horses at different life stages and work levels, and they’re designed to complement grass or legume hays. You’ll find this information on the label, too. If your horse is getting one of these feeds in the amounts recommended in the label’s feeding directions, along with good-quality forage, put down your pencil and stop worrying. “Resist the urge to buy supplements just because they are there,” says Dr. Ralston.



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Calculate the amounts of important nutrients in your horse's diet before adding supplements; you don't want to accidentally feed him toxic levels of vitamins or minerals.

macrominerals. The total ration must provide them not only in adequate amounts but also in the right ratio: between 1.2 and 1.8 parts calcium to 1 part phosphorus.

■ sodium, chloride (together, those are table salt), potassium, magnesium and sulfur and other macrominerals essential for body processes.

■ trace minerals—cobalt, copper, iodine, iron, manganese, zinc, selenium—needed in very small amounts. Some of these (such as copper and zinc) are especially important for growing horses and pregnant mares.

■ vitamins A, D, E, thiamin and riboflavin.

"The NRC guidelines represent our best estimates, but realize that they aren't law and that there is wiggle room," Dr. Ralston says. The full guidelines (available through the National Academy Press) provide much more information than most horse owners need, she adds. "It is not necessary to balance rations to the nearest one percent for all known nutrients. If you make sure needs for energy, protein and some macrominerals [calcium, phosphorus, sodium, chloride] are met, the rest will usually be OK," she says.

What about vitamins and minerals not listed in the guidelines? "If the nutrients are not listed, it is because the requirements are not known and signs of deficiency have not been documented in horses," Dr.

Ralston says. This means that if there are physiologic requirements, they are met by standard rations. "Indeed, for some of the nutrients listed, such as sulfur and magnesium, true deficits have never been documented in horses on normal rations," she adds, "so it is not necessary to worry about balancing them with supplements."

Other tables show the typical nutrient contents of different forages and feed grains, such as oats and corn. (The amounts and percentages are all figured on a dry-matter basis.) You can look up grass hay, for example, and find that on average it provides up to 0.9 megacalories per pound, contains 9 percent protein and a good balance of calcium and phosphorus, and meets your horse's needs for other macrominerals with the exception of sodium.

Are the averages good enough to go by? Grains don't vary much in nutrient content from batch to batch, so averages are fine. Hay's nutritional content can vary more widely, and a lab analysis is the only way to know for certain what's in it. Still, as long as you are feeding good-quality hay, you can use averages in most circumstances, Dr. Ralston says. "Have it analyzed if you are concerned about quality, for example, when a drought affects the availability of good hay" or if you are feeding horses with special needs (pregnancy and growth, metabolic problems and so on).

Extension offices can help you get this done, and it usually costs less than \$50. If you buy hay in small lots and analysis isn't practical, ask your suppliers if they have had it

analyzed. Or check with your Extension office for information on the nutrient content of hays grown in your region.

Correct the Balance

Once you add up the amounts of important nutrients in your horse's diet, you can compare the totals to his needs to see if his diet is balanced. The process may end up saving you money, especially if he's getting supplements, because you may be giving him more of certain vitamins and minerals than he needs. This isn't just a waste of your money—it can be harmful. "Suppose your horse is getting quality hay, a commercial feed mix, a coat supplement and a multivitamin supplement. All these may have vitamin A, and when you add them together he may be getting toxic levels," Dr. Ralston says.

Here are a few other situations that may call for adjustments:

His work level increases. More work means he needs more energy, but don't worry if his rations provide a bit less energy than the average in a table, Dr. Ralston says. "Let his condition tell you. If his coat shines and he has energy for the work you ask him to do, he's getting what he needs." If he's sluggish or losing weight or condition, get a health check and, if he checks out OK, add calories—if possible in the form of better-quality forage.

■ If good grass is available, increase his grazing time. It'll be good for his brain, too.

■ Grains are packed with carbohydrates, which provide fuel for bursts of intense activity. There are limits to how much grain a horse can handle, though. Heavy loads of carbs in the digestive tract can trigger laminitis, colic and other health threats. Divide your horse's grain into as many small feedings as you can—at least two and preferably three. "Do not offer more than half of one percent of his body weight in grain-based feed in a single meal. For a one-thousand-pound horse that would be five pounds maximum," Dr. Ralston says. "If he needs more than ten pounds of grain-based feed a day [which would be highly unusual], three feedings are a must."

■ Fat provides twice as much energy



ABOVE: For seniors and other horses who have trouble chewing, add a substitute such as chopped hay to the diet.

LEFT: If your horse is overweight, avoid drastically reducing his feed intake, which could cause digestive problems. Instead, try a grazing muzzle during turnout.

ounce for ounce as carbohydrates; research suggests it's an especially valuable fuel for sports that call for stamina, like endurance. (It's also a good energy substitute for the minority of horses who can't tolerate carbohydrates.) Rice bran, vegetable oil and commercial high-fat feeds are good sources.

Exercise doesn't change the need for protein or most other nutrients in the ration. "He needs more energy, so he consumes more food, which increases his intake of all nutrients as well as calories," Dr. Ralston says. One exception to this rule is salt: If he sweats heavily, he needs more plain salt (preferably free choice) and water. But the percent of protein in the diet doesn't need to change, says Dr. Ralston. Excess protein is broken down by the body and stored as fat, and the byproducts are excreted. A horse who consumes more protein than he needs may drink more water and urinate more to get rid of the byproducts, producing ammonia fumes and a mess.

He's a top competitor. Elite athletes—horses training and competing at top levels in any sport and regularly shipped to competitions—are under stress. Besides increased energy, they may need addi-

tional antioxidants (vitamins E and C) and electrolyte replacement, Dr. Ralston says. Electrolytes are minerals (mainly sodium, chloride, potassium, calcium and magnesium) dissolved in your horse's body fluids, and they're essential for body function and muscle activity. They're lost in large quantities when he sweats. Most horses get enough of these minerals in their diets and don't need a supplement other than free access to a salt block, even in warm weather. Elite athletes are the exception.

He's too fat. You may have read that obesity is linked to laminitis, but not every obese horse will founder. "Don't panic if your horse is overweight," Dr. Ralston says. "There are genetic and metabolic factors in laminitis." Don't starve the weight off, she adds. A drastic reduction in feed intake can lead to digestive problems.

To help him shape up:

- cut out grain. If you are worried that he'll be short on vitamins and minerals, give him a single vitamin-mineral supplement balanced to complement his hay.
- give him enough hay to supply about 75 percent of the energy required for his ideal weight. Divide it into three or four meals spaced throughout the day to keep

his digestive system running smoothly, satisfy his need to chew and relieve boredom. If you give him all his hay in the morning, he'll finish it quickly and likely start chewing the barn.

- try a grazing muzzle to reduce intake while on pasture. Research suggests that limiting grazing time works less well—horses just eat faster while they can.
- increase his exercise.

He's a senior. Horses' nutritional needs may change as they age. The changes may be different for different horses, but they often mean that forage alone won't be enough, even for a retiree.

■ Your horse may develop dental problems that make it hard for him to chew his hay. Look to substitutes like chopped hay, hay-replacer pellets and complete feeds that include forage.

■ He may digest food less well so he doesn't absorb all the nutrients it contains. You'll see him begin to drop weight. Try him on a commercial senior feed that's complete or balanced to complement his hay. These feeds are processed in ways that make them easy to digest.

■ He may develop metabolic problems that cause him to put on weight and put him at risk for laminitis and other health problems. You may need to limit his grazing and keep him on a low-carb diet with special feed and steamed or soaked hay. Your veterinarian can help you identify and manage these problems.

If your evaluation suggests you need to make changes in the kind or amount of feed your horse gets, do so gradually. That gives the microbes in his gut a chance to adjust to the change and reduces the chance of digestive trouble. A hay switch isn't as big a change as a new concentrate. As a general yardstick, change hay over three to four days, change or increase grain over five days to a week, and take up to two weeks to add large amounts of new fat sources such as vegetable oil and rice bran. 🐾



Do you know what all that tiny print on your horse's feed label means? Learn to decode it at www.PracticalHorsemanMag.com.



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