

DRESSAGE TODAY

VOL. 45

EXTRA

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Collection
Without
Resistance

HOW TO DEAL
WITH ARTHRITIS

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DEVELOPING COLLECTION WITHOUT RESISTANCE

In this lovely harmonious collected canter, Jaralyn Gibson Finn, owner of Finesse Dressage LLC, channels her 12-year-old Hanoverian gelding Sanford's energy between her lower legs, seat bones and hands. His inside hind leg is stepping well underneath his center of gravity, elevating his front end and producing a nicely cadenced suspension. Her centered position and erect upper body support his upright balance, while the soft, but well-bent angle in her elbows creates her hands' forward "attitude," which, in turn, results in his quiet mouth and peaceful facial expression.



A positive approach to tackling the top of the Training Pyramid

By **Karen Adams**
Photos by **Susan J. Stickle**

Most dressage riders encounter resistance from their horses at some point when learning to perform collected gaits. As a judge, what I most often notice while sitting at C is a misunderstanding of how to achieve a rounder, more collected gait and shape. When I see backward pulling or sawing on the reins or holding the horse's head down—or even the reverse, a horse dropping the contact and being behind the vertical—these indicate resistance. Horses often resist collection if they are forced into a fixed shape and held there beyond their comfort zones. They tighten, lean or brace the neck or jaw. More obvious signs range from pinned ears and swishing tails to delayed responses to the aids and rearing or kicking at the leg or spur.

As you begin riding Second Level movements, your equine partner may become irritable, reluctant to work and even downright disagreeable. Instead of thinking of this as a bad thing, view it instead as him communicating his discomfort in his own language—and as an opportunity for you to step back and take stock

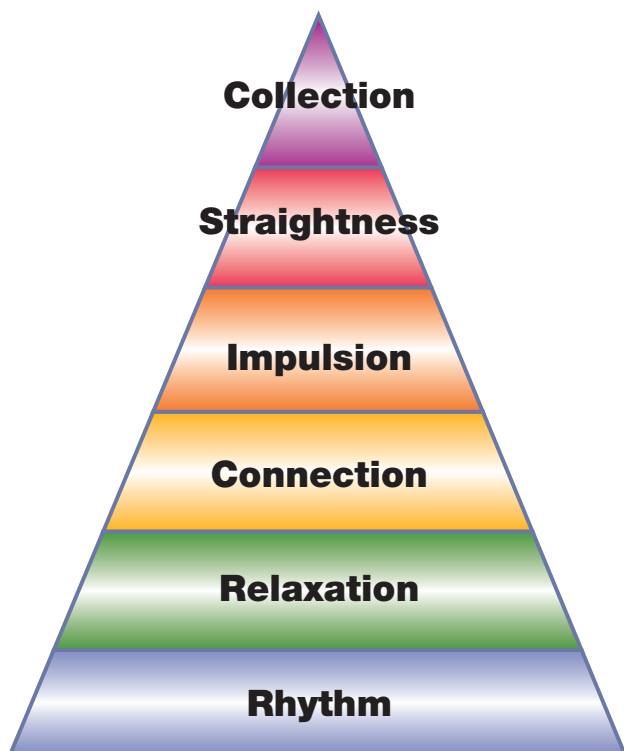
of your training program. This red flag is telling you to change your aid-giving methods or training program. Creating harmony with the horse is one of the most fundamental goals of dressage. And the only way you can achieve it is by producing circumstances in which your horse finds nothing from you to resist against. This sounds simple, but it isn't easy to do!

In this article, I'll explain how the Training Pyramid's building blocks—rhythm, relaxation, connection, impulsion, straightness and collection—can help you work toward resistance-free harmony. Collection comes at the very top of the Pyramid because its success depends upon your ability to attain all the other important components first. Rather than thinking of it as the next box to check off on your training list, think of it as a gradual, progressive process of gymnastic development. The collection in a solidly schooled Second Level horse is not as confirmed as that of an FEI (International Equestrian Federation) horse. You can see this in the horse's muscular development and the way he travels in a more uphill balance as he becomes increasingly capable of carrying more weight in the hind end during collection. For most of us, achieving collection at any level can be a pretty tall order. It requires time, patience and good tools for developing the Training Pyramid building blocks.

Get to the Root of The Problem

Before focusing on your training strategy, be sure your mount is healthy, sound and comfortable in his tack. Your first thought should always be for his welfare. Whenever he displays signs of resistance, run through this simple checklist:

1. Have an expert saddle fitter check that your saddle fits your horse well. Remember that his shape may change as his musculature develops, so he may need periodic refittings.
2. Ask your veterinarian to do a thorough examination to rule out any physical pain or discomfort.
3. Schedule a checkup with an equine dentist to identify wolf teeth, high points, an abscess or jaw pain/temporomandibular joint disorder. Also ask the dentist to evaluate your horse's bit fit. Some horses with a low soft palate (roof of the mouth) do much better with a French-link snaffle because it drapes nicely over the tongue. A regular snaffle, on the other hand, creates a nutcracker action on the tongue and a pointed arch that can dig into the soft palate when pressure is applied to it. (I prefer a KK French link for most horses for these reasons.) The thickness of the mouthpiece should suit the size of your horse's mouth. The thickest (21 mm) bits have the gentlest action, but if your horse has an unusually small mouth, he may be happier in an 18-mm bit.
4. Ask a recommended chiropractor or massage therapist to check your horse for joint or soft-tissue sensitivity or soreness in the back, shoulders, neck, etc.
5. Ask your farrier to make sure that your horse's feet are healthy, that the footing is reasonable (or well tolerated if he is



barefoot) and that he doesn't have a corn under the shoe or an abscess forming.

Barring any of these issues, the next logical step is to honestly assess your own aid-giving tendencies and try to figure out what your horse is objecting to. Here's where dressage theory can be really informative. Let me explain:

Your job as your horse's trainer and steward is to learn how to correctly channel and manage his energy flow from his active hind leg to the front without resistance. This allows you to put his body into whatever shape you want, i.e., long and low, shorter and rounder (collected), flexed and bent for lateral movements or to facilitate straightness and so forth.

Imagine you're going to ride him through a narrow tunnel or corridor and need to form both sides of his body to fit through safely. Think of sending his energy through the corridor with your legs, weight, seat bones and hands on either side. In essence, you are making the shape (with your own body aids) that you want him to adopt and then you are allowing his energy to flow into that shape.

If there is a hole, or weakness, in your corridor of aids, then your horse's energy can leak out through that hole. This can happen, for instance, if you overbend his neck, which causes his energy to drift out over the outside shoulder. You need to plug up your "aiding holes" to allow his energy and impulsion to move through the entire length of his body

Meet Karen Adams

Karen Adams is a U.S. Equestrian Federation "R" dressage judge, instructor and coach who lives in Keedysville, Maryland. She grew up in Alaska, where there were no dressage teachers, so she hired Karl Mikolka to come teach weeklong clinics in the early 1970s. She found him very inspiring and subsequently headed east to attend Meredith Manor School of Horsemanship in 1975–1976.

After graduating, Karen landed a teaching job at Linda Zang's busy public lesson program at Idlewilde Farm in Davidsonville, Maryland. She considered this a perfect apprenticeship: At the time this farm was the teaching base for Col. Bengt Ljungquist, coach of the U.S. dressage team. Karen quickly became Idlewilde's head instructor and farm manager. She competed through the Prix St. Georges level and her horse Aleutian was USEF (then AHSA) Fourth Level horse of the year for Zone III in 1980.

without getting blocked anywhere. Resistance is a sign of a block or leak in that flow.

Identify and Fill in Your 'Aiding Holes'

We all have aiding holes. No human body is perfectly symmetrical; most of us are left- or right-handed, which means we have a dominant (stronger) side and a weaker (but often more flexible and supple) side. If your arena has mirrors, pay close attention to your position as you ride by. Most people sit with more emphasis on one seat bone or with one tighter thigh, which is less able to lengthen and lie flat, or with one hip or side of the rib cage collapsed. Sometimes we aren't entirely conscious of things we do that affect the horse.

For instance, if you often sense that your horse is stiff or plank-like in one or both directions, you might start pulling on or "milking" the inside rein to soften or create flexion. But until you recognize this as an inside-leg issue instead of a rein issue, it will never be fully resolved. Instead of fixing the lateral stiffness at the root of the problem, you'll end up habitually pulling or nagging on the inside rein without being entirely aware of it. One of my past teachers referred to this as having a case of "inside-reinitis."

If you don't have mirrors, ask a friend to take notes while watching what your body does as you ride at walk, trot and canter in both directions. She might see things you are unaware of doing. Or ask her to video you in a lesson or clinic. Watch the video several times to evaluate your position, your horse's behavior, how the instructor led you during the lesson and whether you can see any solution or improvement.

To address both your and your horse's weak spots, I recommend using gymnastic exercises that work opposites against each other (often called rubber-band exercises). These take you out of your comfort zone a little at a time, over and over, until your comfort zone becomes expansive. I'll share two examples later.

As you practice these exercises, learn to problem-solve on your own, developing a "tool box" full of different ways to address issues. Keep a journal at the barn and, as soon as you dismount and get your horse squared away, sit down and write what you worked on that day, why you did what you did, how it felt, what improved and what you think needs further improvement.

Only do these exercises after your warm-up has confirmed the bottom and middle building blocks of the Training Pyramid—



Your job as your horse's trainer and steward is to learn how to correctly channel and manage his energy flow from his active hind leg to the front without resistance.

Exercise 1: Test the Lateral Suppleness



Jaralyn begins the exercise by establishing a rhythmic, connected, relaxed yet energetic trot on a large circle. She sits quietly in the saddle, maintaining a straight line from her shoulder to the back of her elbow to her hip bone and the back of her heel while allowing her upper arm to fall naturally from her shoulder so she can create a straight line from her elbow to her horse's mouth. She has established what's known as "position right"—the correct degree of inside bend to the right for this size circle—by dropping a little more weight down through her right hip, seat bone, thigh and lower leg, which are positioned slightly ahead of her left leg.

rhythm, relaxation, connection and the desire to go forward. You have established a rhythmic and relaxed trot and a soft, steady contact on both reins. Your horse is accepting your inner-bending leg and rein and your outside-forming leg and rein—the corridor through which you will channel his energy. He is going nicely forward with energy and a willing attitude.

Test and Improve Lateral Suppleness

The following exercise, shown in the photos above, will help to loosen your horse from side to side (laterally) by changing back and forth between an inside and outside bend. It is also a good test of his suppleness.

TIP

Most people sit with more emphasis on one seat bone or with one tighter thigh, which is less able to lengthen and lie flat, or with one hip or side of the rib cage collapsed.

STEP 1. Trot on a large circle to the right (clockwise) with your inside right hip, seat bone, thigh and lower leg positioned slightly more forward, or ahead of, your left, putting a little more weight down and through that inside leg. Imagine your legs as a partly open pair of scissors. Called "position right," this is used for bending or traveling right.



To ask Sanford to follow her hand and increase his bend to the inside, she uses an open leading inside rein, bending and moving her inside elbow back while moving her hand away from his neck. At the same time, she supports him with her inside leg so he doesn't fall in on the circle, and positions her legs, hands and seat bones on either side of his body to create a corridor for his energy to flow through. To be ideal, her inside hand could be a little lower and his poll a bit higher.

STEP 2. Exaggerate the bend slightly to the inside (right) by applying an open leading rein—bend and take back your inside elbow while moving your inside hand slightly toward the center of the circle. Use as much pressure as needed to get your horse's head to come around until you can see his right eye while he stays soft in his neck and yields in the area near the crease behind his throatlatch and poll. At the same time, press or hold your inside leg at or near the girth. Together, these aids will ask him to hollow the inner side of his body into an arc shape.

To contain that shape, bend your outside knee a bit more than usual so your lower leg is farther back and in contact with your horse's barrel. This will also lighten your seat bone on that side. For a very sensitive horse, outer knee/thigh pressure serves the same purpose. Meanwhile, your outside left hand stays on its own side of the neck and remains steady but elastic to allow for the inside bend while maintaining a mostly straight line from his mouth, along his neck and into your hand.

As in most aid-giving situations, the rule of thumb is to use as little aid as possible, but as much as necessary, to get the horse's response. When he responds, remove or reduce the aid immediately and praise him.

While you're bending him, ask yourself, "Can I keep him upright—not leaning in or coming in on the circle—and bent around my inside leg as needed?" If the answer is no, ask again until you



Next, Jaralyn asks for a counter bend to the outside, which is difficult to achieve on a circle without creating some resistance. To do it successfully, she maintains a soft, steady contact and gives clear aids: weighting her left seat bone and opening her left hand away from his neck. Note also that her right arm, elbow and hand come forward to allow the bend. Now her corridor is channeling the energy in the direction of the new bend.

can achieve this with a certain ease.

STEP 3. Next, still riding on the same clockwise circle, ask for a bend and flexion to the left. Reverse your body aids so that your left (outside) hip, seat bone, thigh and lower leg are now ahead of your right and slightly more weight is down and through that left sitting bone. Close your left leg at the girth and open your left rein to ask him to turn his head to the outside of the circle while using your passive right rein and leg aids (which are now acting more like outside aids) to control his shape. He should stay on the same large circle but with a slight hollowing on the left side of his body and a filling up against your right leg and rein. This is called “position left,” where your left aids have become your inside aids and your right aids are now your outside aids.

This can be more challenging with some horses; you may have to slightly exaggerate your aids to get the job done. Repeat this change of bend back and forth until your horse becomes loose and buttery soft in both directions. By removing any neck, poll or jaw stiffness, you should now have a soft, fluid corridor from withers to poll. If he can stay on the bit—or on the aids—to this point without resistance or tension, you’re ready to proceed to the next exercise.

Test and Improve Longitudinal Suppleness

Visualize an accordion or Slinky toy while doing this exercise, shown in the photos on pages 8–9 and pages 10–11. When



After straightening his neck, she then continues changing the bend tactfully until Sanford does it easily and equally in both directions and is buttery soft in the contact. Then she returns to a regular bend on the circle, always ready to repeat the exercise if he begins to lose this lateral suppleness.

ridden well, it can quickly take a horse who is blocking or stiffening in the back, neck, jaw or poll to a softer, more supple place. Going back and forth between these opposites supple him longitudinally—lengthwise from tail to poll—which will make it easier to introduce collected steps. It also promotes an honest “reaching for the bit” attitude, which is essential for maintaining a connection both alive and relaxed in the moment. By playing your horse back and forth this way, you can never force him into a false frame, so he never learns to lock up or resist your aids when you shorten your reins.

Some people might worry that asking the horse to reach forward and down into the bridle regularly would encourage him to travel on his forehead. This is true to some extent. But don’t worry, it is only a temporary state, one that is absolutely essential for eliminating tension and resistance. Once that is achieved, you can ask your horse to shift his balance back onto his hind legs and begin to develop collection.

For this exercise, I recommend using smooth reins without stops, which might cause friction against your fingers.

STEP 1. While trotting to the right and maintaining an inside



As in most aiding situations, the rule of thumb is to use as little aid as possible, but as much as necessary, to get the horse’s response.

Exercise 2: Test the Longitudinal Suppleness



Once Sanford is laterally supple, Jaralyn uses a “rubber-band” exercise to test that he can stretch over his back and reach for the contact, thus improving the elasticity of his entire body: side to side and back to front. Trotting on a large circle in position right, she brings both elbows backward to take a little more hold of the contact. Her hands remain hip-width apart to allow the energy to continue flowing through his withers into a good connection with the bit. (You can do this at sitting or rising trot.)

bend on a large circle, ask your horse to stretch forward and downward, draping his neck as you gradually lengthen the reins. If he’s not familiar with these aids, begin by feeling both reins more firmly to get his attention. Bend both elbows at a near right angle so the joints act like pulleys, allowing your arms and hands to go forward or backward as needed. To keep the inside bend on the circle, your inside rein may need to be a bit shorter than the outside rein.

While maintaining a supportive “position right” with both legs and reins to produce the corridor, give on the outside (left) rein by moving that hand an inch or two forward. Then allow the fingers of both hands to be open and inviting, rather than in firm fists, to encourage your horse to reach. As he starts to drop his head and neck, keep a light feel while gradually letting him take the reins longer. Timing this is challenging, but always try to stay “connected”—never throwing the reins away. Praise him with a pat on the neck and a soft quality to the hand so he *wants* to find the connection with you and stay there. It is very important to praise even the start or beginning of stretching into the bit. Some horses really come around if you make a big deal out of them.

Think of this stage as being “on the bit with a longer neck.” The length of time you stay in it depends on your success. If all goes well and he stays in rhythm and tempo, keeps the inside bend and honestly stretches forward and downward, praise him and continue for one or up to three circles. Try to keep him connected and reaching into both reins. Think of them as telephone lines where the messages can be sent and received only if the



Next, she moves her outside hand slightly forward, opening her fingers on the rein to encourage him to drop his head and neck while supporting his upright balance with her inside leg and maintaining the bend and connection with her inside hand. I’d like to see her hands slightly farther apart so they don’t risk blocking his energy at the withers.

circuit is not broken or loopy.

With practice, your horse will learn to lengthen his neck and reach toward the connection with the bit the moment you give the hand forward and close your legs. Most horses love this stretching part. Learn to use it as a reward, not just in a resting phase or end of a session, but at other times in your work also.

STEP 2. Now it’s time to bring your horse up into a rounder connection and shape. Gradually shorten your reins by taking both elbows back and sliding your fingers gradually up the reins to the length of neck you want. Or, if you can do this without losing the connection, take both reins in one hand at your desired length and then return to one rein in each hand. Either way requires practice. When you reach the rein length you want his neck to be, give with the fingers a little to encourage him to stretch again into the hand toward this rounder, more upright neck shape.

Meanwhile, keep your inner and outer “corridor walls” true and in line with the big circle shape you are riding and channel his active energy straight between both lower legs, seat bones and hips into your receiving hands. Keep your elbows bent, but with a forward “attitude” in your hands, which stay as passive and quiet as possible. If you do this tactfully and with good timing, your horse will simply adapt his shape to the rounder bascule you have made with your body aids. Praise him, soften your fingers and do not overstay your welcome. Keep this rounder shape for no more than one circle in the beginning.

STEP 3. As soon as your horse shows that he can stay soft



As Sanford reaches into the bridle, Jaralyn follows with a sympathetic upper body and her hands maintain light, equal contact on both reins while still creating the corridor on both sides of his spine. This is a beautiful stretch, showing an ideal neck “drape,” and excellent forward activity. He is bending nicely to the inside. (The bend is the first thing to fall apart when a stretch is performed unsuccessfully.) She’ll continue this for two or three circles or as long as he maintains his self-carriage, tempo and stretch.



Next, she brings him smoothly up into a rounder, more uphill connection by gradually shortening the reins while using her legs to ask for a continued lively trot. She’s still gathering the reins here, but Sanford’s relaxed, willing expression shows that she hasn’t lost the great connection in the process.



After a half circle or so, she asks him to stretch forward and downward again both to reward him for staying soft in the shorter frame and to reinforce the importance of following her hand forward into the contact. She opens the fingers on her outside hand to invite the stretch without throwing away the contact. This light, direct contact in concert with her outside leg keeps the outside of the corridor closed so energy continues to flow forward.

and give to this shorter contact (or even start to, if this is new to him), praise him and send him forward and downward again into a longer neck and rein. Let him find a comfortable, soft connection there. If he loses the stretch or gets hollow, take your elbows back with a light driving leg aid until he chooses the rein



Jaralyn repeats this exercise until she feels that buttery-soft connection again. Only then does she ask for a few steps of slightly more collected trot. She shortens her reins and uses her legs to animate his hind end, riding him into a more uphill frame with his croup lower than his withers and his poll the highest point of his body. His more cadenced, collected steps lift his body higher off the ground while his soft expression reveals a total lack of resistance.

tension that encourages him to soften himself and yield forward and downward. Then reward him right away.

Sometimes a horse will go down, hit the contact, then come up above the bit and need to be sent back down again. This just means you were a tad slow in softening your reins. The more

Exercise 3: Test the Longitudinal Suppleness at the Canter



Everything that's challenging about these suppling exercises is even more so at the canter. Jaralyn begins with an active canter on a large circle, asking for a nice supple bend to the inside. (She's so confident in this connection that she can glance at the photographer without fear of losing it.)

you do it, the better your feel and timing will become.

Repeat this exercise with the aim of getting your horse buttery soft going back and forth between a shorter and longer frame, spending half to up to three circles in each mode. Always ride him energetically forward and give him nothing about your aids to resist against—no pulling the head in or sawing on the reins or riding him into a set hand. The beauty in this exercise is that the horse becomes softer, more malleable and more willing to follow your requests because he is *not* being forced into a hard or backward hand or pulled into a slower gait.

All the while, maintain the same rhythm and tempo, riding in such a way that your attitude *and* your aid-giving show *no bias* between the longer work and the shorter work. *It is all equal.* One is not harder than the other; one is not work and the other rest. It is all on-the-aids work ridden from the hind legs up into the contact.

If you can achieve all the important ingredients of the Training Pyramid in both directions, practice the exercise both ways. If not, one direction will suffice for that day.

Introduce Collection Gradually

As your skills in this exercise improve, you can begin to develop more collection. Think of this as shortening your horse's steps



She then brings her elbows back in order to feel more contact in both reins.

and outline without sacrificing the energy, activity or impulsion. When you shorten the reins to the length of neck and frame you want him to adopt, ride him forward into them, encouraging an active hind leg and a reaching neck and topline.

Over time, his collected trot will become more energetic with forward purpose and a rounder, more uphill balance. His withers will begin to rise and the muscles along his back, shoulders and hindquarters will strengthen. His self-carrying ability will also improve as he becomes more athletic and balanced. You can then ask that he carry more weight in his hind legs, an important quality of correct collection. Think of these exercises as progressive and gymnastic in nature, developing his entire body, instead of what we humans tend to do, which is focus on and pull back on the parts we can see from his back: his head and neck.

Before attempting more collected steps in this exercise—or in any other movement—review the warm-up goals I described earlier. Without being able to tick off these boxes, I would not ask for collected steps.

Also try the stretchy circle at the canter, bringing your horse from long and low to a rounder, more collected canter and then back down again. To take this exercise to the next level, ride between lengthened or medium trot and a more collected trot—or between lengthened or medium canter and a more collected canter—again riding the opposites back and forth to develop the quality of both the longer steps and the shorter steps. (For more detail on this exercise, read Laura Graves' article, "Tuned In: Self-Going Horse," on PracticalHorsemanMag.com).

Keep the work lively and vary your training program so you

TIP

It is very important to praise even the start or beginning of stretching into the bit. Some horses really come around if you make a big deal out of them.



In the next moment, she moves her outside hand an inch or two forward to encourage Sanford to stretch. Meanwhile, she uses her abdominal muscles to maintain a good upper body balance so she doesn't tip him off balance while following his head and neck with her hands.



As he reaches into the contact, creating another lovely draping neck, she uses her balanced seat bones and both of her legs and hands, hip-width apart, to continue channeling the energy forward from his well-engaged hind legs over his topline to his mouth.



Now she brings him smoothly up into a rounder, more uphill connection by gradually shortening the reins—keeping her hands steady and soft—and using her legs to animate his hind legs. Meanwhile, she sits quietly in the saddle, allowing him to take his time raising his front end.



Jaralyn repeats this exercise until Sanford feels buttery soft in the contact. Then she asks for a few more collected steps. His lowered croup and engaged hind legs enable him to shorten his topline and lift his neck up from his withers to a high poll. His nose is on the vertical, proving she didn't pull him backward on the reins. His eye, foamy mouth and inside ear cocked backward to listen complete this harmonious picture. The only sign of mild resistance is his open lips. This particularly mouthy horse will probably do this less as his strength and understanding of collection progress.

don't get too routine-oriented. Be sure to work your horse in both directions regularly to develop his balance and musculature in a purposeful and optimal way. Remember, this training is progressive and you are building an attitude and trust in your horse that the contact and connection are where he finds comfort. By

keeping this broader perspective in mind and incorporating these exercises into your program in a playful way, you can make collected work fun for your horse. In turn, he'll reward you with a better attitude and a willingness to tackle new stages of his training with enthusiasm. 🐾

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Cosequin[®] ASU Pellets contain quality ingredients to support joint health and leave out the fillers molasses and alfalfa — all while delivering the taste horses love. The colors of our ingredients shine through for a difference you can see.

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Source: Survey conducted among equine veterinarians who recommended oral joint health supplements.
Pellets not actual size. Color may vary.

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How to Deal with Arthritis

A range of medications and management options can help to keep an active sporthorse comfortable and competing.

Q My 14-year-old horse experiences mild lameness before he's warmed up, and our veterinarian has diagnosed minor arthritis in the left foreleg. He prescribed phenylbutazone (bute) and says that's all my horse needs to manage his pain for now. What else can I do to keep him in good condition so he's able to compete?

A Unfortunately, there is no cure for arthritis. Inflammation from injury or use has triggered a destructive cascade of events, breaking down the lubricating synovial fluid, degrading the cartilage and remodeling the bone in and around a joint. But medication and management can slow the progression of the degenerative condition and help maintain your horse's comfort so he's able to perform.

The treatments for arthritis are many and varied. A number are proven; others have yet to be validated through sufficient clinical study. As a result, you'll want to discuss what's right for your horse with your veterinarian. The most widely recognized options include:

Signs of Arthritis

Horses in the earliest stages of arthritis often show no signs. As the condition progresses, the most common signs include:

1. lameness or limping
2. stiffness or decreased joint movement
3. joint swelling, heat and pain
4. tenderness in the affected limb
5. movement that varies depending on whether the horse is being ridden or longed
6. uneven gait
7. shortened stride
8. reluctance to move freely forward
9. loss of appetite

- **NSAIDs.** Phenylbutazone—a nonsteroidal anti-inflammatory drug—has long been used to ease arthritis pain, but over time it can damage the lining of a horse's gastrointestinal tract. A newer type of oral NSAID—firocoxib—is



AMY K. DRAGOO

In arthritis, inflammation from use or injury triggers a destructive cascade of events, breaking down the lubricating synovial fluid, degrading the cartilage and remodeling the bone in and around a joint.

similarly effective against inflammation and pain but is less likely to irritate the gut. A third choice is the topical NSAID diclofenac sodium, which is applied to the skin over an affected joint for pain relief.

• **Injectables.** Corticosteroids injected directly into the synovial fluid have long been used to halt inflammation and reduce pain. Injecting hyaluronic acid (HA)—a component of synovial fluid—into a joint or intravenously can also ease inflammation and may stimulate HA production. A newer treatment, synthetic polyacrylamide gel is injected into the joint to relieve inflammation and increase the viscosity of synovial fluid. An additional option

cartilage breakdown. It is a new regenerative therapy.

- *mesenchymal stem cells*, which are derived from fat or bone marrow to repair skeletal tissue such as cartilage and bone.

• **Additional treatments.** Two other procedures are recognized for treating arthritis. The first is extracorporeal shockwave therapy. A noninvasive technique, it is a method of applying energy waves to a particular area of the body to reduce pain and promote healing. The second procedure is surgery. In cases where arthritis is advanced and there is no other way to alleviate a horse's pain, fusing a joint using chemical, laser or physical means perma-

cartilage cells.

An additional benefit of exercise is that it burns calories so your horse can maintain a healthy weight. Extra pounds put extra stress on an already compromised joint. With this in mind, also consider what you are feeding. He will benefit from an increase in fiber (hay and grass). Also check that he is getting adequate amounts of vitamins and minerals.

The most important consideration in managing a horse showing signs of arthritis is tailoring his exercise program to promote his longevity. This means working him hard enough to gain the benefits of movement but not so much that the inflammation in his joints increases and makes the situation worse. Give him ample time to stretch during warm-up and cool-down. Determine whether he could benefit from ice or cold therapy after work. It may help to ride him on footing that provides some cushioning—but is not too soft—or in a well-maintained arena.

The intensity and nature of their work puts sporthorses at a greater risk of developing arthritis. Even so, your horse should be able to stay sound for some time and compete without pain as long as your expectations are reasonable and you work together with your veterinarian and farrier to determine the appropriate course of care. 🐾

The most important consideration ... is tailoring his exercise program to promote his longevity.

is polysulfated glycosaminoglycan. A component of synovial fluid and cartilage, it is injected into muscle to reduce inflammation, stimulate synovial-fluid production and facilitate cartilage repair.

• **Regenerative therapies.** These treatments utilize certain substances in a horse's own blood to deal with arthritis. In each case, processing a blood sample yields a concentration of components that are extracted and then injected into a joint to prevent further cartilage damage and possibly reverse it. These therapies include:

- *autologous conditioned serum*, which contains the anti-inflammatory protein interleukin-1 receptor antagonist protein and growth factors to trigger cell reproduction and stimulate healing.
- *platelet-rich plasma*, which delivers concentrated growth factors for repair.
- *alpha 2 macroglobulin*, which uses an enzyme in the blood to inhibit

nently eliminates the source of friction and discomfort.

• **Nutritional support.** A number of commercial supplements are formulated to support equine joint health. Many of these oral nutraceuticals contain glucosamine, chondroitin sulfate and/or hyaluronan, substances found naturally in joints. Other common ingredients include polysulfated glycosaminoglycan, methylsulfonylmethane (MSM), soybean and avocado unsaponifiables, vitamin C and omega-3 fatty acids.

• **Management.** To help your horse maintain flexibility and condition, keep him active while minimizing the risks of overuse. Ride and compete as often as is reasonable; let his response to each outing be your guide. Provide plenty of turnout. Don't confine him to a stall. Moderate exercise stimulates circulation to promote healing, builds muscle strength to stabilize joints and supports the production of synovial fluid. In addition, gentle concussion encourages the generation of bone and

Practical Horseman thanks A. Kent Allen, DVM, for his technical assistance in the preparation of this article. Dr. Allen owns and operates Virginia Equine Imaging, located in The Plains, Virginia. Opened in 1996, it was the first privately owned and operated equine diagnostic imaging specialty clinic in the world. Today Dr. Allen and his staff offer comprehensive services focused on lameness, performance concerns and more for a clientele that ranges from pleasure horses to FEI competitors.