

Training for Success

with Lisa Wilcox

A special-edition booklet featuring four of Lisa's tried-and-true training features, plus Herm. Sprenger's guide to the basics of correct biting.



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Lisa Wilcox currently lives and trains in Wellington, Florida. She has brought numerous horses to success at the Grand Prix level and continues to compete in the elite ranks of the sport.

This special-edition booklet includes a collection of Lisa's most popular articles published in *Dressage Today*, in addition to a biting guide, provided by Herm. Sprenger.

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THROUGHNESS

This Olympian gives keys for achieving the most essential quality in dressage training.

By Lisa Wilcox with Beth Baumert • Photos by Susan J. Stickle

Throughness—or lack of throughness—is a common theme in every clinic I teach. What is throughness, exactly? How do you develop it, and how does it feel? That isn't easy to answer, because there are so many factors.

However, in general, when your horse is “through,” he is supple both laterally and longitudinally. Energy moves through his entire body with no blocks, so the entire topline swings without tension.

Throughness keeps horses sound, because there is no torque to break the body down over a period of time. When horses stay balanced, through and carrying weight on the hind end, it prevents wear and tear on the front end that causes splints, quarter cracks, abscesses and tears.

Some movements, such as half pass or rein-back, easily prove to the judge that a horse is through or not. For example, horses with throughness do phenomenal half passes. When the half pass is not so good, the horse might look lame, but it's probably simply that he's not through. The rein-back is another key movement. Horses that pick up their feet and rein-back with even diagonal pairs, without changing the frame, are through. The horse that drags his feet through the ground in the front, comes against the hand or goes behind or above the vertical is not through. I think it's good that the rein-back is in the Grand Prix test again. There are certain movements that we should show, even if they are boring.

Achieving throughness is the most important aspect of my training. As I walk you through my methods, you'll notice that I take my time. When horses burst

forward and get pulled up fast, it can be devastating to their bodies. I warm up properly—slightly under tempo. My aids are like a nice invitation, and I don't expect a result on the spot. Loss of rhythm and balance creates blocks, so I do transitions slowly over several strides, to ensure that my horses maintain their rhythm and balance.

My focus on taking time has a lot to do with my horse's mind. In the warm-up, I don't want to force him to do something he's not yet elastic enough to do. I've learned that the more time I take, the better my result. My horse opens to me when I don't expect a result on the spot. However, that on-the-spot reaction is my goal in the end.

How to Achieve Throughness

To develop throughness, we want to make the horse longitudinally and laterally supple. **Lateral suppleness** is my first goal. I work on this with the exercise of spiraling in and out.

- I start on a 20-meter circle with my

LATERAL SUPPLENESS: On a 20-meter circle, I spiral in (left) a few meters at a time—18 meters, then 15, then 10—to maintain the balance and rhythm while increasing the horse's flexion and bend. I spiral out gradually, too (right).



rein contact even (fifty-fifty). My horse's body conforms to the size of the circle with just enough flexion so I see his inside eye.

- When I spiral in, I do it carefully, a few meters at a time. It's easy to make the mistake of falling in to a 10-meter volte without control, which would not only cause a loss of balance, but also a loss of bend and alignment, making engagement impossible. Then the exercise completely loses its gymnastic value. If I take my time spiraling in, the horse's shoulders won't fall in or out.
- From 20 meters, I do 18 meters, then 15 meters and so on. As the circle gets smaller and I increase the flexion and bend, I maintain the balance and the rhythm.
- I do this in both directions to achieve bend in the spine around my inside leg so my horse is shaped like a banana. Because of the suppling effect of this exercise, I get closer to my ideal contact. *My rule of thumb: two-thirds in the outside rein, one-third in the inside rein.*

As soon as I feel this ideal contact, I'll work on **longitudinal suppleness** by doing transitions within the spiraling exercise. I think of my horse as an accordion.

- First, I half halt to ask the horse in working trot to come back to "collected" trot for a few steps. I don't mean truly collected, but rather I change the length of the stride while maintaining the activity of the haunches, which even a Training Level horse can do. I do these transitions slowly. If they were abrupt, I would get a blockage and loss of throughness. So, it's OK if it takes three or four steps before I get a reaction to my half halt aids. I take my time.
- Next, I ask the horse to go back to the working gait. I don't chase him out. Again, I take my time. I don't want



ABOVE: Lisa Wilcox on Queba HM, an 11-year-old Lusitano stallion owned by Ingrid Lin of White Fences Equestrian Center

OPPOSITE PAGE: Wilcox's student Jessica Kozel rides Welt, a 5-year-old Hanoverian gelding owned by Joan and Kenny Sims of Highlife Farms.



LONGITUDINAL SUPPLENESS:

I ask the horse to come back to shorter, quicker steps (left) within the spiraling exercise. I don't ask for anything abruptly. Then, I allow him to go back to working trot (below).



him shooting forward. He needs to go back to the longer strides while keeping the rhythm and balance.

Your transitions need to be made with perfect flexion and bend, appropriate to the size of the circle you're riding. If your horse pops his shoulder left or right, the bend is lost along with the ability to engage. When the horse steps under his body straight, or engages, his spine lifts up, like a bow, in each transition or half halt. If the horse isn't straight in the bend, the exercise is no longer gymnastically effective.

Over time, your horse will start to understand these transitions. When he is longitudinally through, your leg aids stimulate his energy without obstruction into your hand, and also your horse will yield and come back easily from your half halt aids. It's not easy to do this smoothly without a change in the

rhythm. Imagine you're driving a car on ice. You would handle it carefully, with thought and feeling.

The more time you take with your horse, the less he will be thrown off balance and look for your hand to lean on. Be very systematic and patient, and don't do anything abruptly. Then, your horse will lighten off your hand, because he has no fear of falling. Soon, you will get that accordion-like longitudinal suppleness.

If you learned to drive a stick shift, you went from having a surging, halting, surging, halting car to a nice flowing car. When your horse is through, he will have the same smoothness in transitions as your car. He will be prompt to your leg aids and on your seat aids. Getting the horse sensitive to the leg has nothing to do with speed. Rather, the horse is more active on the spot as the energy goes from the leg to the hand.

The Keys to Throughness

My life is about throughness exercises, and my advice to riders is to do the same every day. I don't do any movements until my horse is through. If you only ride movements, the horse becomes rigid. I often see people drilling their tests. At the beginning of the season, the horse is OK but, by the end of the

season, he's stiff and crooked. Once the horse is through, the movements are easy. Be honest with yourself, and work on throughness before you work on movements. Here are a few keys:

Shoulder-fore. My horses and I live in shoulder-fore, and all transitions are done in shoulder-fore. A horse is as harmonious as the relationship between the leg and hand of the rider, and shoulder-fore develops this relationship. Shoulder-fore is my preparation for any movement, and it enhances my horse's gaits every day. Here's how my aids work to create it:

1. Ideally, in classical dressage, the aids are invisible. You cannot see weight. When I step with two-thirds of my weight into the inside stirrup, it is invisible, and I want my horse to move away from that leg.

2. But, at first he won't, so I press gently with that inside leg to send him to the outside rein. I want two-thirds of the rein connection in the outside rein.

3. Then, I drive with my outside leg to secure him in that outside rein. My outside rein then becomes the "director

Shoulder-fore

The horse in shoulder-fore steps with his inside hind leg between the tracks of the forelegs, while his outside hind leg follows in the track of the outside foreleg (see *Technically Speaking*, p. 60).

rein." It directs the horse in whatever movement I want. Whereas we'd like thoroughness to be the same all the time, in reality it changes step-by-step, so my inside rein is a "compensation rein," which comes and goes as needed. It guides and gives, guides and gives. The outside rein holds the violin, and the inside rein makes the music.

This shoulder-fore enables my horse to accept my inside leg and outside hand in bend. When I do transitions within this position, my horse is straight, which makes him laterally and longitudinally supple, balanced and swinging through his back. As a result of this supple balance, we are prepared for everything. It gives both horse and rider a wonderful, delightful, phenomenal feeling.

- **On the inside:** My horse is loose and free so the energy from his inside hind leg can flow with no blockage. The inside shoulder has maximum freedom. From this balance, I am able to do fantastic half passes—like Isabell Werth—directed by my outside rein.
- **On the outside:** My horse steps through his body with two-thirds of the contact in the outside rein. He maintains flexion to the inside, because he's balanced two-thirds on the right.

(An exception to the two-thirds/one-third rule: When I go across the diagonal in an extension or in flying changes, my reins are even. However, in the flying changes, I half halt left and give right in the change to the right, then I half halt right and give left in the change to the left, so I never block my horse on the inside.)

Keep the impulse flowing. When you drive the equine version of a stick shift, the key to smoothness is to never use more hand than leg. *My rule of thumb: Every time I use my hand, it must be supported by two times more leg.*

In preparation for any transition, I say, "OK, motor, let's get going!" I give a driving, steady impulse from the leg

that causes my horse to move up into my hand. The energy comes up under my seat, up over the entire back and to the poll. I don't want to break or block that with my seat, so I keep a loose thigh and that impulse keeps flowing over the back. Then, when I ask for an upward transition, I apply my leg again so I have the energy to half halt or do a downward transition.

The hind legs go up, down, up, down—stepping under, pushing up and articulating in perfect rhythm. When you bring your horse back to a shorter stride (and cover less ground), those hind legs shouldn't get lethargic and slow down. However, they are inclined to slow down in a downward transition, so I think about maintaining the activity of the hindquarters. My driving aids keep the hind legs working in rhythm when I bring him back. In that way, the horse learns to be active in the downward transition, instead of following his natural inclination to get slower and stall out. Because I focus on keeping the hind end, my horse even

stays forward with his hind leg when he yields to my hand in a half halt. I drive with my leg just enough so the hand



KEY TO THOROUGHNESS: My horses and I live in shoulder-fore, where all transitions are done.

can half halt, and the hand half halts just enough so the leg can maintain the forward energy.

A successful half halt. My half halt does not go to the horse's mouth but rather to his balanced poll—a poll that is at the highest point, carrying his

nose in front of the vertical. This posture gives him a naturally arched neck, an open throatlatch and a soft lower neck. I give my half halt at the moment when the poll is at the highest point. This is the time when the outside hind pushes and makes the impulsion, allowing the inside hind to reach. The half halt should last a split second. If it lasts too

long or if it is unsupported by the rider's driving aids, the half



THOROUGHNESS: This half pass demonstrates the horse's thoroughness and shows his ability to be free on the inside.

halt goes to the mouth instead of the poll. Then, the poll collapses, the horse



HALF HALT: If my horse is strong on my inside rein, I'll find some weight in the outside rein by opening it (above). In pirouette, I half halt when the poll is at the highest point and the inside hind is directly under my saddle (right).

comes behind the vertical and you end up holding as the energy goes backward. Your goal is to drive your horse up into the hand so your half halts work in a forward way and avoid creating a blockage.

The elasticity of my half halt depends on the degree of my horse's throughness. As it develops, his body ideally yields to

my half halt. He stays soft in the jaw and nice in my hand while maintaining that ideal soft poll position.

If your horse is very strong, and you have a 500-pound half halt, break it up with many releases and half halts. Don't let the 500 pounds be an invitation to a tug of war. You'd be surprised at the

horse's reaction when you release and half halt again and again. He'll breathe a sigh of relief and be much softer.



The Summarizing Four-Step Equation

Set yourself up with my four-step equation for throughness:

1. Establish bend in your horse's rib cage and send two-thirds of the contact to your outside rein.



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2. Check the flexion. The flexion will depend on how your horse's shoulders are behaving. He might have one of three slight variations.

- If he is correctly on the outside rein, he should be ideally flexed, just enough to see the inside eye.
- If he has a tendency to pop his shoulder out, he should be positioned straight, or
- If his shoulder is definitely out and he is too strong on the outside rein, you should counterflex him.

3. In this position, drive with your outside leg to activate the hind end to step up into the connection on the outside rein. The impulse from your leg creates an impulse from your horse's hindquarters. The hocks articulate, step up underneath, carry weight and then thrust. The energy flows under your seat

and up to the poll. This gives you the energy necessary to half halt.

4. Squeeze your outside hand in a fist to half halt, sending that energy back under your seat to the hind leg. As your horse responds, relax your fist. Then your leg presses to send the energy right back again. Think of it as an electric current that goes back and forth from your leg to your hand, making effective gymnastic transitions in throughness.

Your horse will feel like he looks—harmonious, beautiful, flowing, swinging, elastic and expressive. His ears will be forward, and he will have a friendly look in his eye, because he is enjoying that feeling of throughness. 🐾

See a training video of Lisa Wilcox at DressageToday.com.



Lisa Wilcox was a member of the U.S. bronze medal team at the 2004 Olympics in Athens, Greece, and the U.S. silver medal team at the 2002 World Equestrian Games in Jerez, Spain. She also earned an individual silver at the 2003 Open European Championships in Hickstead. After 12 years overseas, she returned to teach and train in the United States. Based in Wellington, Florida, she trains out of Tuny Page's Stillpoint Farms. She is competing Ingrid Lin's two Lusitano stallions at Grand Prix, Highlife Farms' Der Euro at Intermediaire II and Diamond Stud and Der Dollar in the 6-year-old classes.



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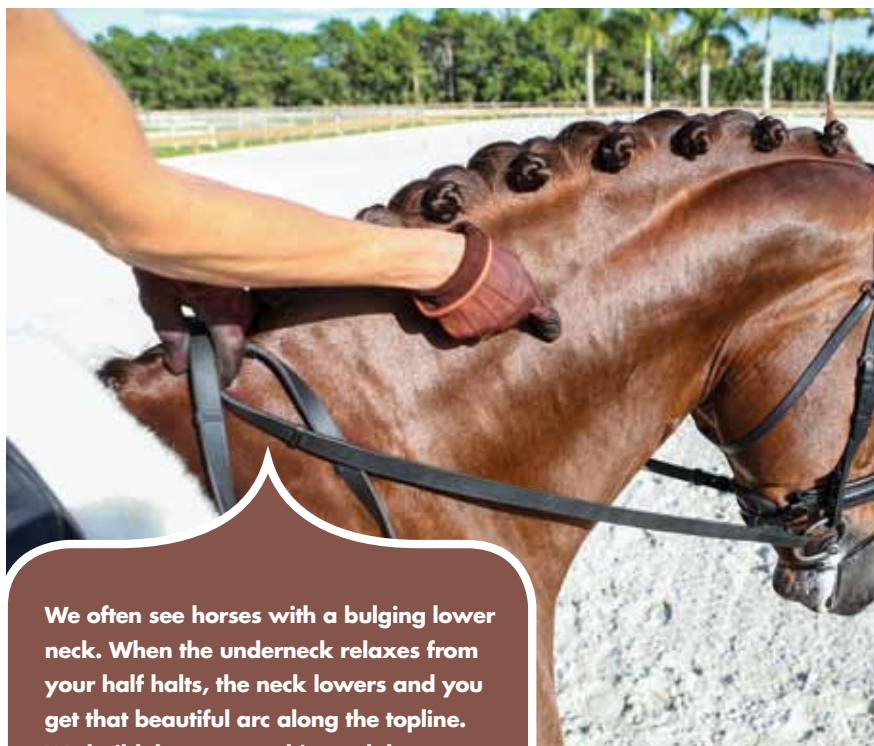
An American Olympian describes her system for developing her horses mentally and physically from their start as young horses to the Grand Prix.

By Lisa Wilcox with Beth Baumert • Photos by Susan J. Stickle

With the horses I've recently trained to Grand Prix—Galant, Pikko del Cerro, Denzello—I think of their mental and physical development in terms of layers. Sometimes the horse's body may develop when the mind is still immature and then the mind catches up to the body or vice versa. Paying attention to that is

an important aspect of my training. For example, Galant was physically ready for the 6-year-old championships, but I didn't take him. He was mentally too immature, so it wouldn't have been an educational experience for him. As you go up the levels, be aware of where your horse is mentally as well as physically. This will help you understand that patience may be needed if your horse is more immature mentally than he is physically.

Throughness has a lot to do with mental development. An immature mind



We often see horses with a bulging lower neck. When the underneck relaxes from your half halts, the neck lowers and you get that beautiful arc along the topline. We build the crest on this, and the top muscle becomes very defined while the lower muscle atrophies.

LEFT PAGE: Paying attention to a horse's mental and physical development is an important part of Lisa Wilcox's training. Here she rides Gallant Reflection HU.

might react to a flag that snaps when it's windy and cold. When a horse is more mature, he's more likely to listen to the rider and be attentive to the rider's aids. I like to expose my young horses to interesting venues as non-compete horses when they are young to help them learn to enjoy new places without stress. Galant gained confidence by experiencing these venues often. With mentally sensitive horses, consistency brings confidence. Consistency when focusing on balance, straightness and throughness is a huge plus as the degree of difficulty increases. When you finally make it into the Grand-Prix arena, if you have a little deficit

ing through from back to front. Tension or holding of the underneck serves as a kind of dam—a wall—that stops the energy. When the underneck relaxes, the crest of the neck lowers, and that's when you see that beautiful arc in the middle of the neck. When this muscle is visible, the horse is carrying his neck. This muscle enables the development of the topline. With training, that muscle becomes very well defined. Unfortunately, too often horses are developing very strong undernecks. The overdeveloped underneck can be related to the horse's conformation (low set-on neck) or sometimes it's because the rider is holding on

there, it affects harmony.

Throughness and The Underneck

In addition to the horse's mental development, we must also be aware of how the horse's underneck can prevent throughness. The underneck is often the place that prevents the horse's energy from flow-

to the rein to keep her balance in the saddle, which causes the horse to hold with the underneck to support the rider.

In this article, I'll explain how your half halts can relax your horse's underneck so his energy can go through his entire body. But first, let's look at the rider's position, the aids and the use of shoulder-fore to balance your horse.

Seat and Position

The rider will not be able to achieve throughness if she is not properly balanced in the tack and independent of the saddle and the horse in every way. The rider must carry her hands, allowing the horse to carry his head. The horse's mouth should not be used to keep the rider balanced in the saddle. The reins are not meant to be tow ropes for riders to water ski with. Keep the hands low, quiet and in front of the saddle at wither-height so the horse can work within the length of his entire neck. Carrying the hands at wither-height will also give you the desired straight line from the bit through the hand to the elbow. This was the hardest thing for me to learn because this takes core strength to coordinate. If your hands come back into your lap, the length of neck is negatively infringed upon, thus creating balance issues for the horse.

To keep yourself properly balanced:

- Stay centered in the saddle, stepping deeply into both stirrups. With the rider's weight in the stirrups, the thighs and knees should lay loosely along the horse's barrel. Once the rider is balanced in the saddle with stirrups weighted, the rider must then use her core to stretch tall and erect in the saddle. If you lift your chest up to sit erect, your upper body weight will be driven deep into your seat bones, thus becoming your driving seat. This has the potential to be 85 to 90 percent of



USDF Definition Of Throughness

The state in which the rider's aids/influences go freely through to all parts of the horse, from back to front and front to back (e.g., the rein aids go through to reach and influence the hind legs). Prerequisites for this state are good connection and positive mental/emotional state. Note: "Throughness" is a shortening of "throughlettingness," the literal translation of the German term *Durchlässigkeit*.

Throughness cannot be achieved if the rider isn't properly balanced in the tack and independent of the saddle and the horse in every way.

the rider's driving aid. The calf and the artificial aids are then supplements that, when used appropriately, should not create tension.

- Keep a vertical pelvis, with your shoulders directly over your hips, which are in line with your heels.

When I'm a balanced rider in every way, I can produce a balanced horse who is supple and has sufficient lateral bend. This then enables me to develop correct throughness.

Weight—The Invisible Aid

From your balanced position, always

start with small aids. Less is more; never use more than you need. It's better to start small and get no reaction and then add accordingly. Over-aiding imbalances the horse and creates tension. Aim for invisible aids.

We don't hear much about invisible aids anymore, but they are the weight aids, and it's surprising what you can do with your weight. If you watch Ernst Hoyos—a rider from the Spanish Riding School in Vienna for 29 years—you don't see any aids. It's remarkable because he's so effective but very relaxed. Here's how I achieve invisible aids on a circle:

As I develop bend in the body of my horse from the poll to the dock of the tail on a circle, I think mathematically. In the contact, I want one-third of the weight in my inside rein and two-thirds

in my outside rein. I achieve this by using my weight accompanied by a leg impulse. I step into my inside stirrup with two-thirds of my weight to create bend. This bend then creates the two-thirds in my outside rein that I want, leaving one-third in my inside rein. More weight in my inside stirrup, accompanied by a brief leg impulse, gives me the bend needed to put more weight on my outside rein.

I always use my weight aid first by stepping deeply into my inside stirrup and then I apply a brief pressure with my leg. Horses are clever. If the rider remains consistent in her approach, the horse will understand the aids quickly. Eventually, when you step into the inside stirrup, your horse will correlate that with the brief inside leg impulse and he will respond to only the weight aid. Basically this is the "inside leg to outside rein" refined. Ideally, you won't have to touch the horse much with your leg. Why is that ideal? Prolonged pressure creates tension, and you don't want that. You want relaxation and harmony.

Shoulder-fore

Keep your horse in shoulder-fore at all



The weight is an invisible aid. On a circle, step into the inside stirrup.

the underneck responds by relaxing. Remember that the underneck is like a wall, and you can't get energy to flow through from back to front if it is tense or closed. When your horse yields in his underneck, the crest of the neck lowers and the withers and back raise, allowing the hindquarters to come through.

The driving aspect of the half halt is important. You always need the appropriate ratio of leg to hand—always more leg than hand because the activity of the horse's hind leg must be enhanced by the influence of the rein

aid, not stopped by or stalled by it.

Whatever I have weight-wise in my hand—say 20 pounds—then I need a 40-pound leg aid. As a result of my half halt, I want to feel the underneck relax when I relax my fist directly following the half halt. If my 20-pound half halt doesn't work, I use a 25-pound half halt with a 50-pound leg. If the muscle re-

times throughout exercises and movements. It is important for the development of balance in your horse. If your car isn't properly aligned, you'll have a tire issue, and if your horse isn't straight or aligned, he'll have comparable issues. Here's how to achieve shoulder-fore:

1. Flex your horse slightly to the inside—just enough to see his inside eye.
2. Keep your weight in your inside stirrup (two-thirds creating bend to get two-thirds in the outside rein). The properly weighted outside rein will enable you to position the horse's outside shoulder inward. The inside one-third rein is positioned close to the withers, making sure the shoulder does not fall in when the outside rein guides the shoulder in.
3. The horse's outside hind leg should stay aligned with his outside foreleg. The outside hind shouldn't be allowed to drift away or in. The rider's guarding/driving leg prevents the outside hind leg from drifting out while requiring it to track up into the outside rein.

Now that you have a straight, balanced horse in shoulder-fore, let's look at how the half halt can relax his underneck.

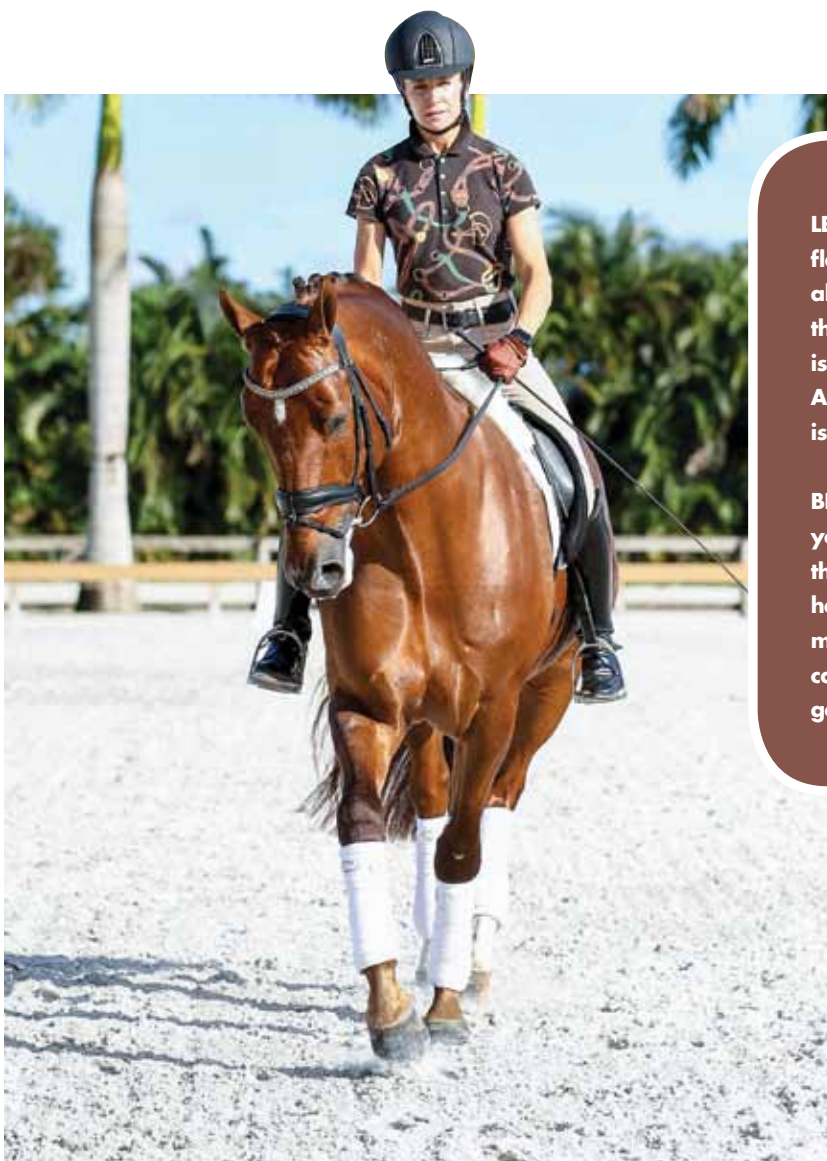
A Half Halt for Thoroughness

The half halt (a brief closing of both fists at the same time, supported by a securely positioned elbow and my driving leg aids) compresses both sides of the horse's neck from wither to poll. When the fists relax,

Common Problems

Tilting. It's common to see the horse's head tilt so the ears are out and the nose is in. In this case, you have too much inside rein; perhaps you have two-thirds inside and one-third outside. You want to correct that by subtly straightening your horse from the wither to the poll to reconnect with the outside rein or by straightening with a slight or subtle counter-flexion. Then redevelop the inside flexion and ride from inside leg to outside rein. If the head is straight this time, you know you've developed the proper outside rein connection.

Wagging the head. Riders often make the mistake of flexing left and right fast and furiously, pulling the horse from one rein to the other and throwing him off balance. Horses in this situation are forced to brace the underneck muscles to help balance themselves. As a result, they are working out of alignment and therefore the risk of injuries are far greater. Keep your horse healthy over his lifetime by using subtle aids that develop his topline. Horses find comfort and confidence in the patient, quiet rider. The longer you take, the faster it goes!



LEFT: In shoulder-fore the horse is slightly flexed to the inside. The outside legs are aligned and the inside hind steps between the two front feet. In this position, the horse is straight, which is necessary for balance. Always keep your horse in shoulder-fore; it is the foundation for everything.

BELOW: Flex your horse to the inside with your inside hand by the wither. Because of the flexion and bend to the inside, the outside hand needs to give the neck more length, so move it slightly toward your horse's ear and carry it up on the shoulder. This outside rein goes toward the mane as in a neck rein.



laxed from this half halt, then I have an idea of what I need to be effective. By asking the hind end to track up in every half halt, I get the flow of energy from back to front.

In the half halt, the inside leg is responsible for bend via the weight aid. My outside leg asks my horse's outside hind to track up, staying in shoulder-fore and in front of the seat and leg. When my horse yields to the outside rein and the muscle relaxes into the contact, the inside rein softens, I end up with the desired ratio of two-thirds outside rein and one-third inside rein, making my horse supple laterally and longitudinally. Transitions and half halts within the gait in correct alignment create the longitudinal suppleness.

As for the timing, the half halt in the trot comes in the sitting phase because that's the moment your driving seat has impact. In the canter, you half halt at the moment the poll is at the highest point. When the fist closes it must be followed by a release or relax of the ring finger. You must give after every squeeze—even if you feel that the half halt didn't work.

You want to get the desired reaction to your half halt early in your ride as time is of the essence. You have between 45 minutes and an hour before the horse's mental and physical batteries wear down. As soon as your horse's underneck relaxes, the energy from behind can flow through.

The degree of throughness ideally develops through the years. A well-known example is the British star Charlotte Dujardin's Valegro. His degree of throughness currently is much greater than it was when we first knew him. My favorite exercise for developing greater degrees of throughness is the following spiraling exercise.

Spiraling for Throughness

Spiraling in and out on circles while transitioning within the gait supple your horse both laterally and longitudinally and develops his throughness. Begin with your horse on a 20-meter circle, tracking right. Check your rein aids on this circle: Your hands do not sit side by side as they would, more or less, if you were going straight. With flexion and bend to the right, your aids look like this:

- The outside (left) hand needs to give the neck a bit more length in order for the horse to flex to the inside, so move it slightly toward the ear and carry it by the shoulder.
- Flex your horse to the inside (right) with your inside hand by the withers.
- Use your weight aid. Step into your inside (right) stirrup, knowing that should put more weight up in your outside rein by creating bend.
- Always think shoulder-fore.

Imagine a bird's-eye view of your circle, and keep your horse's shoulders turning by riding the circle like a hexagon. Your frequent guiding of the outside shoulder in will be invisible, so you end up with a smooth circle that supple your horse in proper posture and alignment.

Now spiral in. From your 20-meter circle, reduce the size to 19 meters. Do a complete 19-meter circle before going on

Ride your 20-meter circle like a hexagon, continually asking the shoulders to stay on the circle while you maintain the flexion to the inside. Your hexagon will appear to be a smooth circle with no corners.



Building Throughness

As you spiral to smaller circles, you're increasing the degree of bend and throughness. Your horse's ability to canter on a volte is a prerequisite to his ability to do a pirouette, which requires great strength and balance to stay nearly on the spot. In the first photo below, you see that my horse does a haunches-in on an 8-meter volte as a working pirouette to teach the hindquarters to be quick in preparation for pirouette. The hardest part of the pirouette is maintaining the activity of the hind leg with this highest degree of collection. When your horse carries himself easily with bend and flexion on a volte in canter, he can build the strength to pirouette gracefully with his inside hind going up and down like a piston (the second photo below). Ride this as if you are on a skateboard. Your inside foot is on the skateboard and your outside leg propels your horse so his inside hind can carry, stepping up and down like a piston.



The higher the degree of bend, the higher degree of throughness is required. Throughness in the volte is a prerequisite to throughness in a pirouette. My horse does haunches-in on an 8-meter volte as a working pirouette (top) to teach the hindquarters to be quick in preparation for pirouette (bottom).

to your 18-meter circle and then do a complete 18-meter circle. Continue with this spiral until you get to a 10-meter volte. When spiraling in, we often see the shoulders fall in, but try to maintain your desired circle size. The positioning of your hands continuously asks the shoulders to stay upright on your circle while you maintain the flexion and bend to the inside. Here's how:

- Your left (outside) fist squeezes as it goes toward the mane in a neck rein that guides the shoulders in. At the same time, the inside rein gently squeezes to prevent the shoulder from falling in. Close both fists at the same time because you want your horse to stay upright. If you close only the inside fist, the shoulder would fall out, and if you use only the outside one, it would fall in.
- Next, your fists relax and allow the neck muscle to relax. You must give after every squeeze—even if you feel that the half halt didn't work. You close the fists, position the shoulder, maintain the flexion and then relax both fists, which are always supported by the driving leg.
- During these half halts, the muscle will contract and then relax. Soon it will soften instantly from your half halt, rather than it taking four or five half halts. You can think of these as longitudinal-compression half halts while in bend. The muscle is compressed and then it relaxes again and again. As the upper muscle grows, the lower neck muscle atrophies and disappears.

Maintain correct alignment as you spiral in and then spiral out one meter at a time, being conscientious about the balance and shoulder-fore. Switch directions regularly so you change the bend and the outside rein to develop bilateral balance in your horse.

Testing Your Throughness

In trot rising, leave your spiraling circle and go straight on the quarterline in



ABOVE: Test your throughness by leaving the circle and going onto a quarterline in shoulder-in. Are you able to maintain the bend and direct the shoulders in off the track of the quarterline? Can you maintain it for the length of the arena? Here, I keep the rising trot.

RIGHT: After your shoulder-in, keep testing your throughness by going to half pass rising. How well does your horse carry himself while retaining the flexion, bend and throughness?



terline without losing the bend and balance? If not, you were inadvertently maintaining the bend on the circle with the inside rein. If you're successful in going straight, can you maintain the bend, balance and activity down the entire long side? If you're successful again, transition from shoulder-in to half pass rising. Were you successful? If so, try to do transitions within the half pass. Go to shorter strides and then back out again.

Incorporation of these exercises clarifies how well my outside rein is developing. I

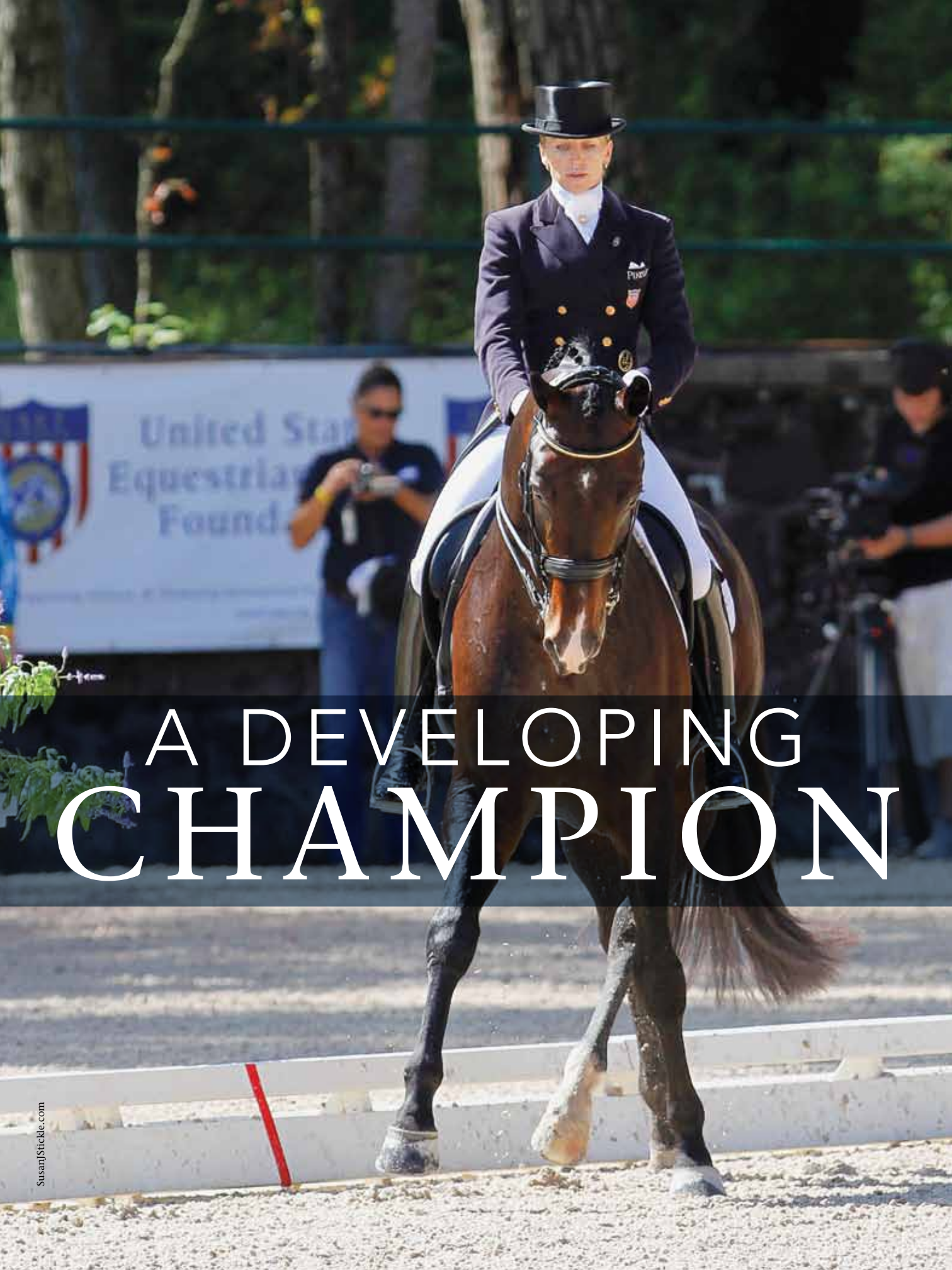
might find that I didn't have the

shoulder as controlled as I thought. I get readings from the neck as to how supple my horse is. I use all that information for my next phase of work. I might want to go back to the spiraling circle. Horses who don't master the bend on a circle lose the gymnastic aspect of the sport.

Don't hesitate to go back to the circle, change directions and go back to shoulder-in and half pass, which will continue to develop your horse's throughness. Pay attention to your arena and your lines of travel. Be aware that the steeper your half pass, the higher the degree of bend and throughness required. Preparation for each movement will build your horse's confidence mentally along with strengthening him physically. 📖

Lisa Wilcox lives and trains in Wellington, Florida. Her many accomplishments include a team silver medal on Relevant at the 2002 WEG and a team bronze on Relevant at the 2004 Olympic Games. In 2015 she won the National Championships for 6-year-olds with Galant Reflection HU. She is currently vying for a position on the 2016 U.S. Olympic team with Pikko Del Cerro and Galant.

shoulder-in. The shoulder-in tests your contact in the outside rein and how well you're able to control the position of the outside shoulder with it. The outside rein is the director rein. It directs where the shoulders go. Are you able to direct the shoulder-in off the track of the quar-




A DEVELOPING CHAMPION



Shoulder Control and More: Training a U.S.-bred Hanoverian stallion to Grand Prix success

By Lisa Wilcox with Hilary Moore Hebert



Lisa Wilcox and Pikko del Cerro HU, a 10-year-old Hanoverian stallion, show off an effective shoulder-in on their way to becoming 2012 Developing Horse Grand Prix Champions.

From his birth in New Mexico to his arrival at the national championship for young horses, Pikko del Cerro HU (aka Cerro) has journeyed far in his life. Foaled in 2003 at Horses Unlimited (HU), in Albuquerque, New Mexico, he was named the 2012 U.S. Equestrian Federation (USEF) Developing Horse Grand Prix Champion with his trainer and rider, U.S. Olympian Lisa Wilcox. His name means “top of the hill,” and he is, indeed, reaching the summit of dressage as he is now scoring in the 70th percentile and has won the World Dressage Master’s CDI3 Qualifier. Former U.S. Technical Advisor and Coach Anne Gribbons named Cerro one of three young superstars in U.S. dressage.*

Courtesy, Horses Unlimited



Anne Sparks bred Cerro at her Horses Unlimited in New Mexico.

I have always trained Pikko del Cerro HU and every other horse that comes into my barn with a particular focus on straightness. When we talk about the Training Scale and straightness in terms of developing dressage horses, it is important to re-

member that they would prefer to travel crooked with their shoulder falling in either direction. That is why one of the most important things I do in my training is ride a lot of shoulder-in. My horses practically live in it and it is my preferred positioning. Commonly, you hear people talking about riding a slight shoulder-fore to confirm straightness so that the horse’s outside front foot is in line with the outside hind foot and the two are traveling on the same track. However, I like to take it a step further and add the option of the shoulder-in since it allows me to add more bend. For example, I might warm up in shoulder-fore and then add shoulder-in to prepare for movements like the half pass, volte or pirouette—some of the movements that benefit from this work.

A U.S.-BRED GRAND PRIX HORSE'S STORY

By Charlene Strickland

Pikko del Cerro (aka Cerro) is by Pik L and out of Rohweena, both Hanoverians imported to the United States from Germany. Pik L (Pik Bube II/Abajo xx) is a 16.2-hand stallion foaled in 1993. Pik L stood at stud at Löhden Sportpferde in Heeslingen, Germany, where owner Anne Sparks and trainer Mary Howard found him in 1999. He had competed at Germany's prestigious *Bundeschampionat* as a 4-, 5- and 6-year-old before going on to place fourth at the 2003 Pan American Games with Cesar Parra riding. He was later shown at Grand Prix by Danish trainer Mikala Gundersen. Today he's back at Sparks' Horses Unlim-

ited (HU) and ridden by his owner. he suggested that the farm haul some of its best to show at Dressage at Devon in Pennsylvania. He helped Sparks choose the horses, which included Cerro.

That September, Cerro was hauled the 1,900 miles to Devon, where he scored 90 in his first class. "I was in the warm-up ring and saw the scoreboard," remembers Sparks. "Cerro was my first horse ever shown in-hand. At that Devon show, he went in the ring first out of all my horses. To get a 90—it was lovely." He went on to earn the Born in the USA award and was Reserve Champion Colt/Gelding.

Cerro had another year of growing in the farm's pastures. In 2006, he was one of the youngsters that assistant farm manager Alfonso Estrada broke to saddle during the summer. "Cerro was not started like a dressage horse. He was started like a Western horse," says Sparks.

After a second show at Devon, Cerro stayed in the East, moving to Wellington, Florida, in January 2007 with trainers Mikala and Henrik Gundersen. "Mikala recognized his talent as a 4-year-old," says Sparks.

"When I got him, he was barely broken," says Mikala. "I could just steer him around the arena. [In his training] he was very straightforward with everything. I rode him in normal soft bits—the Sprenger double-jointed snaffles."

Cerro's first U.S. Equestrian Federation (USEF) show under saddle was that year, and he won the Materiale 4- and 5-year-old stallion or gelding class at Raleigh, North Carolina, with 81.3 percent. He qualified and won the 4-year-old championship at the USEF/Markel National Young Horse Dressage Championships and at Dressage at Devon. "It's fun to have a horse that you know can get a 9 for the walk," says Gundersen. "A lot of the Pik Ls have



LEFT: Pikko del Cerro HU's (aka Cerro) sire, Pik L, is a 1993 Hanoverian stallion.

ABOVE: Cerro's dam, Rohweena, is a 1998 Hanoverian mare.

Photos courtesy, Horses Unlimited

ited (HU) and ridden by his owner.

Cerro's dam, Rohweena (Rohdiamant/Grundstein II), is a 16.2-hand mare foaled in 1998. In 2000, Sparks saw her on a video. "I had a VHS tape from Lora Schorlemer, who was my mentor," she says. "I showed that tape to everyone, saying, 'Look what a great walk this mare has.'" Sparks chose Rohweena to breed to her new stallion, and Cerro was her first foal.

Cerro lived outside that spring and summer in a pasture with other mares and foals, and he was halter-broke before he was inspected and branded by the American Hanoverian Society (AHS) as a 7-month-old. Rohweena was also presented at the 2003 AHS inspection. In the Mare Performance Test, the inspectors, Gerd Zuther and George Walker, gave her good scores in free jumping, 8 on both style and ability. Since then, she has produced foals also of excellent quality—a full brother and two sisters to Cerro.

Soon Cerro was weaned and moved to a pasture with six colts. "We weaned them in October," says farm manager Mario Sandoval. For the next two years, Cerro lived outside and earned the nickname "Burro" or "Donkey" because he liked to hang back on the lead rope, like a donkey. Robert Meseroll, a friend of Sparks, visited the farm in summer 2005. Seeing the quality of the HU horses,

that great walk.” She recalls how she enjoyed having Cerro in her barn and describes him as “a playful horse, like a big puppy. We had a lot of fun with him. We hacked everywhere and galloped along the canals. He loved to go out and stretch into a big, slow-motion canter.”

Gundersen showed him under saddle at Dressage at Devon from 2007 through 2009. “All three years he won at Devon. He was really good—great in front of the big audience. He could be unfocused in the warm-up, but when we came down centerline, he was ready to work.”

In 2009, as a 6-year-old, Cerro won the national championship again and also showed to Fourth Level. At these shows, Gundersen would jog him. “He was a bit of a handful, but nothing I didn’t have with my other stallions,” she says, adding that he liked to show off in awards ceremonies. “He would only buck then—the awards would get him going. The more people watching him, the more active he is. Anne always knew he would be a good horse. You don’t know till the horse is there—you have to wait and see.”

“He’s had his highs and lows,” says Sparks. “His riders will tell you that I had faith in his ability.”

Cerro did have to overcome a few medical issues. After the 2008 Devon show, he enjoyed time off in New Mexico. On his return to Florida, he had an abscess under his jaw, near the throatlatch. A veterinarian lanced it and it healed, but Cerro now has a scar on his throatlatch.

Another time during turnout, Cerro kicked a front leg and ended up with a swollen tendon, even while wearing wraps. He wasn’t lame, but for a few weeks he exercised on the treadmill

Shoulder Control on Bending Lines



1. As I turn Cerro in the volte, I pay special attention to his outside front and hind legs, making sure that they are in line. This is one of the hardest and most important parts of riding the tighter turns of the volte. If I feel a slight loss of control in my outside aids, I must correct it quickly.



2. Here Cerro is more correct because he is lifting his shoulder and making a perfect line with his outside limbs as we return to the track.

One important aspect of how I ride the shoulder-fore and shoulder-in is that I guide the forehand around the horse’s hind end. When I have correct control of the shoulder through the outside rein, the horse becomes genuinely straight. Without riding with control of the outside shoulder, the horse can easily disconnect from your outside aids and start to lean on the wall.

With this idea of shoulder control in mind, let us think about trying to turn that same horse onto a circle. A horse that is turned with the support of the outside rein and a fully weighted inside stirrup iron positioned at the girth as well as the outside leg placed behind the girth (guarding that the haunches don’t swing off the circle) will stay “straight” on the circle. His whole body will stay on the same track as he follows the line of travel. If that same horse is

not straight on the track and is leaning on the wall for support, we will find it a little difficult to turn because his shoulder has fallen out and, therefore, he will fall on his forehand.

Now the majority of weight is balanced on the inside rein, blocking the horse from correctly stepping through with his inside hind leg. The torque necessary on the outside rein to bring the now heavily weighted forehand/outside shoulder back to its correct shoulder-fore position is immense, creating rhythm and balance issues throughout the circle. These will obviously lead to incorrect shapes and sizes of circles. To avoid this issue, it is important to maintain the proper shoulder-fore position prior to beginning the circle.

The hardest part of the circle can be keeping the outside limbs in line, especially when you shrink down to

Photos by Susan Strickie.com

while on a break from training. “Now to protect him, he goes out with wraps, bell boots, and open front boots over the wraps, which are harder in the back,” says Sparks.

In 2010, Lisa Wilcox took over Cerro’s training. Since Sparks was aiming at the new Developing Horse Championship, he needed an American rider. “Mikala and I go back a long way, 20 years,” says Wilcox. “We help each other. Mikala handed him right over to me, and she wouldn’t take him back. I told her, ‘I’ll train him for a short time, and you can have him back.’ But she said, ‘You keep him.’ It was so professional. Now if she wants him back, she will have to arm-wrestle me!”

Of his training at Grand Prix, Wilcox says, “Cerro tells me that he understands what he’s doing and he’s enjoying it. I can feel that. And he’s happy. He’s so proud.” Cerro is a “morning person.” At the 2012 championships, Wilcox says after their winning morning ride, “He felt relaxed and calm. This is his time of the day. This is when I ride him at home, so it is more what he’s accustomed to.” Wilcox describes a typical morning at home: “He has 30 minutes walking free on the [European hot walker] to warm up, and then we school.” Cerro is unsaddled and put in his stall for a bathroom break, and then he’s wrapped for turnout. “He usually stands in his ‘thinking corner’ under a tree, for 60 to 90 minutes,” says Wilcox. “Then he eats lunch, has his wraps off and is given a bath.” After, he wears his magnetic blanket and ice boots, later replaced by wraps.

Wilcox calls Cerro “Monkey,” and she appreciates his personality. “He’s not a deadhead. He’s funny.” Like Gundersen, Wilcox recognizes Cerro’s enthusiasm for showing off in jogs and awards ceremonies. “He’s got this on-and-off click. You never know when it’s going to go on.”

Ernst Hoyos, who’s trained Wilcox for many years, regularly comes from Germany to Florida to coach her and to ride Cerro. “We have to thank Ernst for taking the time, polishing us and staying with us and developing us to what we are today,” says Wilcox.

Wilcox started showing Cerro at Prix St. Georges in December 2010. The following year they won the first Developing Horse Championship at the finals at Lamplight in Wayne, Illinois. Cerro moved to the new Developing Horse Grand Prix class in 2012 and is the only horse to win both inaugural Developing Horse Championships. In 2011, he was presented to the American Hanoverian Society as a stallion candidate and earned the title East Coast Champion. Cerro’s duties now include breeding, but he has no problems being collected and his attitude as a high-performance competitor hasn’t changed.

Judge Jayne Ayers called Wilcox and Cerro “a dynamic duo.” Last November, the pair was selected as the recipient of the Anne L. Barlow Ramsay Grant from The Dressage Foundation. The \$25,000 grant allows them to train in Europe with Hoyos this summer and to show the 10-year-old at prestigious European events, including Aachen, Lingen and Rotterdam.

“It takes a village to make a Grand Prix horse,” says Gundersen. “It takes a big team.” Wilcox has set her sights on qualifying Cerro for the next U.S. team at the World Championships, and if his record of success says anything, there is no doubt they will get there.

Shoulder Control in the Pirouette



The key to the canter pirouette is to come into it in slight shoulder-fore. You will then already have control of the shoulder when you need to bring it around for proper execution of the movement.

the smaller voltes.

For balance, riders tend to hold on to the rein on the side they are the weakest. In most cases, this is the left rein. This will create a hard, bracing connection because it never gives. Riders must work at becoming bilateral themselves first before they can truly make their horses bilateral. This takes a lot of training, but the better balance you have, the more coordinated and effective you can be on both sides.

As you and your horse develop straightness, you should easily be able to ride movements like the change of direction from B to E. At B, ride a shoulder-fore to get onto the line between B and E, then change to shoulder-fore on the opposite rein as you cross X and turn onto the new direction at E. You know you are straight because you have been in control every step.

Shoulder Control Through the Highest Levels



Photos by Susan Stickle.com



Because I have control of Cerro's shoulders, I have the ability to achieve and maintain straightness in all aspects of our dressage work. This is just as important and sometimes more difficult to do as we execute the upper-level movements.

- 1. For example, I remember to prevent the common mistake of a horse throwing his shoulder out in the flying changes.**
- 2. And I maintain the same line of travel in the piaffe and passage work.**

Similarly, riding shoulder-fore or shoulder-in a few strides before the advanced movements will prepare you for success. For example, in half pass you often see the haunches leading or the shoulder falling out. To prevent this crookedness, I like to think of the half pass as a shoulder-in on the diagonal.

These problems can also come up in the flying changes, and it is not uncommon to see a horse's shoulder fall out in the single or tempi changes. Riding a simple shoulder-fore feeling from change to change will correct that.

We can take the concept of outside control a step further with the canter pirouettes. The key to the pirouette is to come into it in a slight shoulder-fore as we did with the previous movements. This will set you up for success when you need to move the shoulders around to execute the movement. It's the feeling of your outside leg making the horse's outside hind twice as active.

Imagine you are getting impulsion from your horse's outside hind leg in the same way a person pushes through a turn on a skateboard. If you do not have that outside control and outside power, you are not set up for the inside hind leg to take the weight it needs for a proper pirouette. Instead, you will get incorrect

rotation with your horse throwing himself through the turn.

As you can see, whether you are trotting or cantering on the track or riding piaffe or flying changes off the rail, controlling the shoulder allows your horse to travel in a way that is straight and, therefore, correct. 🐾

Lisa Wilcox won a team bronze medal for the United States at the 2004 Olympic Games in Athens, Greece, and a team silver medal at the 2002 World Equestrian Games in Jerez, Spain. She earned individual silver at the 2000 Open European Championships. After 12 years in Europe, she is now based in Wellington, Florida (lisa-wilcox.com).



Cealy Tetley

MY TOUGHEST TRAINING CHALLENGE

This Olympian had to get creative and find a new way to teach a horse the flying change.

By Lisa Wilcox
with Mary Daniels

In this occasional series, top trainers tell how they were temporarily stumped at some point in their careers. These tales are fascinating because most of us see only the finished product at a show or on a video and assume the training must have gone smoothly. Certainly, the best riders make it look that way. The manner in which the toughest training challenge is resolved is a lesson to all of us in persistence, patience and good horsemanship.



Courtesy, Hallie Ahrensbrak

Lisa Wilcox and Ernst Hoyos stand next to Hallie Ahrensbrak riding Emmitt Sport, a Friesian gelding owned by John Bartlett. Ahrensbrak says, “This photo was taken quite some time ago. Now I always wear a helmet.”

came across my toughest training challenge with a Friesian gelding named Emmitt Sport. All horses come with a cross to bear, but I usually don’t have to go as far out of the box as I did to figure out how to get this horse to react.

Emmitt came to me when he was 5, right after I moved my training base from Europe to Florida. He was gorgeous, a big guy. If you ever saw “Ladyhawke,” he looks just like the Friesian in that movie. He was a man magnet, that horse. Guys would just flock around his stall. A typical Friesian, he had a big tail, feathers on his legs and a mane that was so thick and long it had to be

braided when I rode so it didn’t get tangled up in the reins.

Today’s Friesians are starting to look more lean and narrow with longer legs and finer bones, but Emmitt was as wide as he was tall. Friesians were built to pull rather than to carry themselves on their hind ends as a dressage horse must do.

Creating a dressage horse out of him was a challenge because I was taking him out of the discipline for which he was bred.

The first thing I did was to build his condition so he could do general work. Because Friesians are not bred for endurance, their energy is short-term, and it would take an amazing amount of energy just to make it one time around the arena in a canter. On the positive side, Emmitt had quite a good canter. He could do a beautiful counter canter, and I could do lovely pirouettes with him. I also had to worry about his sweating as he dealt with all the humidity in Florida.

After five months, I sent him back to Maryland, where his owner lived, and we maintained his training at the clinics I did there every two months. This was a process that took place over a year and a half. When it came down to his 6th year coming 7, it was time for him to learn flying changes. This requires skill from the rider. The rule of thumb for starting them: The horse has to have enough balance to perform a quality counter canter. The change comes from the half halt and leg coming together. It is such a question of timing and balance of horse and rider that it is not so easy to do. For that reason, I prefer having a professional teach the horse the change and then the amateur can get on and do it. Even if the rider may make a mistake, the horse is in the right frame of mind despite small balance issues from the rider.

Emmitt had a good canter and was ready for it, but he just didn't seem to understand. When we put a leg on him for the change, there was no reaction. Finally, the owner asked me to take him back again, which I did, but although he now had a foundation, after three months, I still hadn't been able to confirm the changes. There was *no* reaction, not even a flinch or cross canter. I'd never had a horse that didn't

react to some degree.

As a trainer, I know you can't always put a time frame on these things. You have to be flexible; it is important not to force a horse when teaching him. Thank goodness the owner allowed Emmitt to stay another month because that's when I started to think outside the box. I thought about how a trainer needs to study how horses think to know what makes them react and from there create a new understanding.

Here was a horse with a heavy body type—so wide that it was difficult for him to keep his balance. He didn't want to fall down. With this in mind, I realized that every time I applied my legs for a change, he wasn't reacting in an effort to maintain his balance on all four feet. I would sit on him, and he could counter canter all day long, but he would not allow me to change his balance with my leg. So I had to do something—create something—that would give him a balance issue, something that would spark him into reacting. Otherwise, the mosquito on his back (me) wasn't going to get him to move.

One day, I saw some cavalletti stacked outside the barn. I thought, *wait a minute*. I could create a situation, so that once he got all four feet off the ground, I could teach him the change in the air,

just like the jumpers do. I pulled a cavalletti out and set it up so he had to jump it. We cantered over it, he jumped and I asked for the change while he was in the air. My theory worked and a few cavalletti later, he figured it out. Eventually, I didn't need to use the cavalletti.

The next challenge came when the owner rode him during his final month with me. Would she get the change through her aid as I had done? She did! It was successful. Corking champagne bottles could be heard all over the farm. Since then, Emmitt's owner has had him out showing. He has won at Third Level and is now doing tempi changes.

I have yet to find a perfect horse. My objective is to work with their mental capabilities and gain their trust. That is how I come to understand them, which enables me to work with their physical deficiencies, if any. This takes time and patience. For example, most people don't know what it has taken for Isabell Werth to bring a horse like Satchmo to the Grand Prix level (see p. 50). Professional trainers know how many hours they must spend working on and improving the horse's weaknesses and mental capabilities. Think long-term, and you will not only have a horse that understands you but also one that enjoys what he is doing. This is the key to harmony. 🐾

Lisa Wilcox won a team bronze medal at the 2004 Olympic Games and a team silver medal at the 2002 World Equestrian Games. Again representing the United States, she also earned individual silver at the 2000 Open European Championships. After 12 years in Europe, she is now based in Wellington, Florida, where she competes horses owned by Joan and Kenny Sims at Highlife Farms (highlifesporthorsebreeding.com).



Terri Miller

2017



HERM. SPRENGER GMBH, GERMANY

Finding the right bit in 4 easy steps

Harmony between horse and rider begins with a well-fitting bit.

The bit is one of the most important communication channels between rider and horse. The use of a well-fitted, high quality bit means horsemanship and animal welfare are put into practice. The basic requirement for the correct bit choice is a healthy and properly trained horse.

As the mouth is one of the most sensitive parts of the horse's body, it is important to treat it very carefully. A bit should be sized and fitted to the individual anatomic shape of the mouth as well as to its characteristic needs. Choosing the right bit allows effective communication through the reins – a basic requirement for correct riding.

SPRENGER gains its outstanding scientific knowledge of the horse's mouth anatomy through intensive research in collaboration with the University of Veterinary Medicine Hannover. The SPRENGER Development Center continuously works on innovative products with optimized design and effectiveness, based on current research data. Top international professional riders, trainers, and coaches test and use SPRENGER products, hereby confirming their outstanding quality and effectiveness.



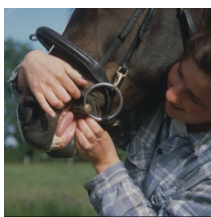
Step 1: Measuring the correct bit size

There are two things to consider for choosing the correct bit size:

- Thickness
- Size (length)

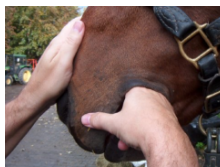
Thickness

The thickness of a bit should be adapted to the anatomic needs of your horse. A study conducted with SPRENGER and the Veterinary University of Hannover found that the oral cavity of horses is fairly small and the available space for a bit can be very limited.



Find the right thickness for your horse's bit by asking your horse dentist for advice and/or by bridling your horse and really checking the fit of your current bit.

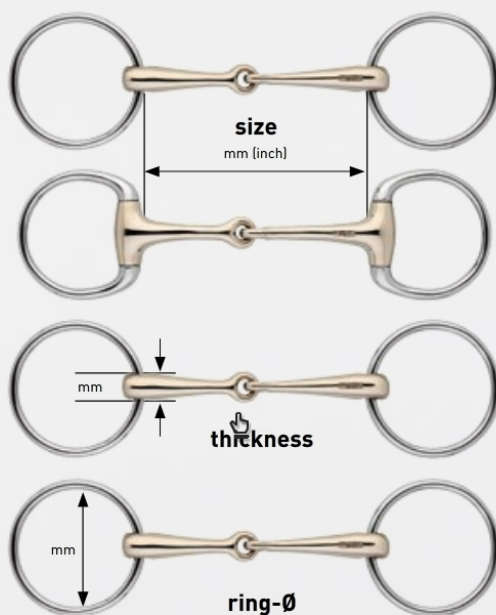
If there is pressure (or even bruising) on your horse's gums, your horse requires a thinner mouthpiece (14-16 mm).



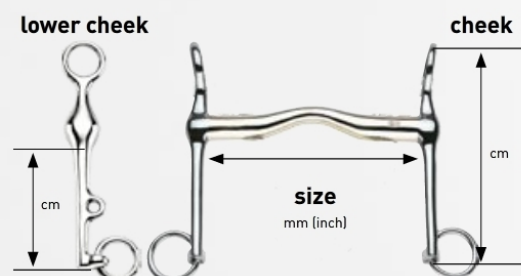
A snug fit, with little or no pressure on the bit, is ideal. However, a too large gap allows for a thicker mouthpiece (16-18 mm).

A thicker bit is not always more kind! Using a too thick bit can exert pressure on the sensitive palate and gums. This causes bruises and injuries. The horse might react with head tossing, gaping its mouth or jerking on the reins.

HOW TO MEASURE A BIT

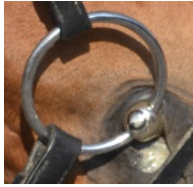


LENGTH OF THE CHEEKS OF WEYMOUTH BITS AND PELHAMS



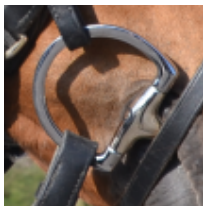
Size

Loose Ring snaffles



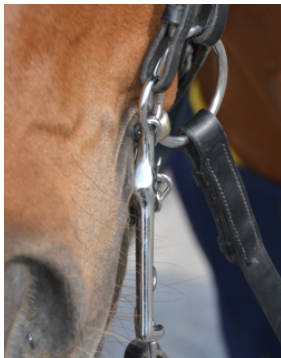
Loose Ring snaffles should not leave more than 5 mm space between the corners of the mouth and the bit ring on each side. It should also not be chosen too tight, since it must not pinch the corners of the mouth. The ring should always be able to move freely.

Bits with fixed cheeks



Bits with fixed cheeks such as Eggbutt, D-Ring, Full Cheek, Pelham or Weymouth bits should fit closely to both mouth corners and must therefore be chosen smaller than loose ring snaffles. Due to the contact of the side part to the corner of the mouth the rider achieves additional support from the rein aids.

Double bridle



The double bridle consists of a Weymouth and a bradoon.

The bradoon should equal the standard snaffle in size and shape because it lies at the same position in the horse's mouth.

The Weymouth is positioned a little bit lower where the horse's head gets more narrow. We recommend to choose the Weymouth 1/2 to 1 cm (or one bit size) smaller than the bradoon in order to achieve the best possible effect and to make the horse feel comfortable.



Ask your local retailer for a bit measurer to determine the correct bit size.

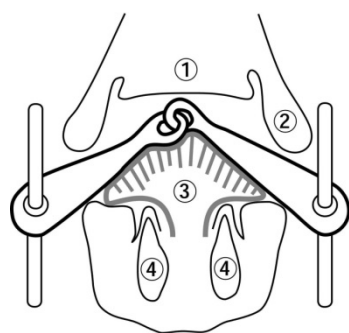
(Available in stainless steel or paperboard)



Step 2: Finding the right mouthpiece

You should carefully choose between the characteristics and effects of different types of mouthpieces in order to meet the individual needs of your horse.

Single jointed bits



Single Jointed bits forward the riders rein aids to the tongue-edges and the lower jaw bones. When giving rein aids the bit forms a V-shape and exerts pressure to the tongue edges. This can be described as “nutcracker” action.

- ① palate
- ② flews
- ③ tongue
- ④ lower jaw-bones

The V-shape may cause problems for horses with a flat palate and small oral cavity or if you choose a too large bit size. In these cases, the eye of the joint might press into the sensitive palate and cause bruises or injuries.

Standard single jointed bits have a production related characteristic: one part of the mouthpiece is longer than the other which results in stronger influence



on one tongue edge. To prevent exerting uneven pressure in the long term you should turn the bit around periodically.



To avoid the problem of exerting uneven pressure with a regular single jointed bit, we recommend the use of TURNADO or single jointed Dynamic RS bits.



The joint of these bits has been angled forward 45° in order to guarantee an even distribution of pressure on both tongue sides and to stay out of the sensitive palate.

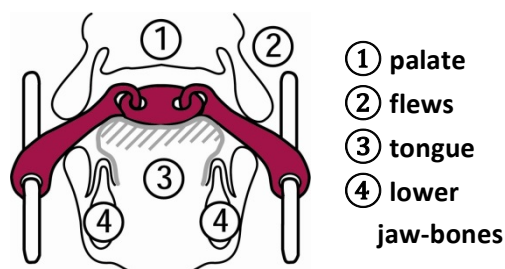


We recommend single jointed novocontact bits for horses that do not take the contact confidently. They also provide added benefit for horses with a sensitive mouth, since the rider is able to give soft aids.



More than 25 years of experience with the KK bit have shown that it is really helpful for horses that are very strong at times in the contact to the bit and are unresponsive to the signals of double jointed bits.

Double jointed bits



been shortened and

comfortable for the horse and to achieve the best possible effect.

Double jointed bits distribute the pressure from rein aids more evenly and over a wider surface onto the tongue, without exerting pressure to the sensitive palate.

All double jointed bits from SPRENGER made of SENSOGAN and AURIGAN are anatomically adapted to the horse's mouth. The middle link has

angled forward in order to make it more

Common double jointed bits have a wider middle link. The eyes of the link are not angled and lie



upright between tongue and palate and can therefore cause problems by pressing into the tongue or the sensitive palate, especially when the bit is too thick for the shape of the mouth.



The patented KK ULTRA bits have been developed based on scientific research. They reach their unique and precise effect due to the shortening and 45° angulation of the middle link. This specific adaption to the horse's oral anatomy makes a noticeable effect in comparison to using common double jointed bits. The bit is gentle to the horse's mouth and allows the rider to give precise but soft aids.

The ergonomically formed Dynamic RS mouthpiece lies perfectly between tongue and palate, resulting in soft and even pressure on the entire tongue area, encouraging the horse to chew. The



gentle joint in the middle, which is angled forward by 45°, makes it a very friendly bit as it lies smoothly on the tongue and does not press into the sensitive palate.



This unique WH ULTRA roller provides a gentle stimulation to the tongue, which encourages the horse to chew, prompting salivation, allowing the acceptance of the bit and relaxation of the jaw. Through this gentle stimulation, the horse learns more quickly to accept the

bit, not to lean, and to soften its entire top-line which leads to more relaxation, throughness and ultimately, more harmony.



The double jointed novocontact bits are ideal to use on horses that occasionally tend to pull against the hand, but are too sensitive to be ridden with stronger bits.

Mullen Mouth bits

It is important to choose the correct size as a bit that is too large can tilt and become uncomfortable when taking up the reins single-sided. Mullen Mouth bits are recommended to be used by skilled and experienced riders only, being able to ride their horse with weight and leg aids.

Straight and rigid



Straight and rigid Mullen Mouth bits exert steady and even pressure on the complete tongue. In comparison to jointed bits, a straight bar exerts less pressure on the tongue edges. The stronger the rein aid the more pressure is directed onto the tongue and lower jaw bone.

Recommended for horses that evade the rein aids and tend to get strong. In contrast to bridles with additional lever action on the poll (e.g. Pelham or Kimblewick), Mullen Mouth bits can be used for horses that dodge downwards and lean on the bit.

Straight and flexible



(e.g. Flex Control or Duo bit) Compared to rigid Mullen Mouth bits the effect of single-sided rein aids is slightly better with flexible bits. Pressure is also distributed over the complete tongue when pulling the reins, but gets stronger towards the tongue edges.



Recommended for horses that sometimes get strong or show unresponsiveness during the schooling of certain lessons or when approaching an obstacle. Flexible Mullen Mouth bits are often well accepted by horses that do not get along with jointed bits.

With port



Compared to straight Mullen Mouth bits no steady pressure is exerted onto the tongue with bits that have a port (e.g. CM Mullen Mouth). The middle of the tongue is more relieved with this bit shape and will only be squeezed with stronger rein aids.

Suitable for horses that resist the rider's hand or have particularly fleshy tongues, as well as to correct tongue vices of horses that perceive pressure on the tongue as uncomfortable and evade this pressure by pulling up or sticking out the tongue.

Step 3: Determining the right type of side parts/rings

Loose ring snaffles



Loose Ring snaffles transmit the pressure of the rein aids directly onto the tongue and the lower jaw without leverage action on the neck.

The moveable rings may help to slightly compensate and balance an unsteady and inexperienced rider's hand. Also, the horse may slightly lift the bit in its mouth by stretching the tongue in order to evade too strong pressure from rein aids in the short term.

Loose ring snaffles are suitable for all horses of all disciplines and educational levels, including starting a horse and familiarizing young horses to bit and bridle.

Eggbutt, D-Ring and Full Cheek snaffles

Eggbutt, D-Ring and Full Cheek snaffles transmit the pressure from the rein aids directly onto the tongue and the lower jaw without leverage action on the neck. Due to the fixed cheeks, the rein aids reach the tongue in a more direct way.



The fixed cheeks keep the bit steady and calm in the horse's mouth. The smooth transitions to the side parts make these bits suitable for horses with sensitive mouth corners.

Due to the wider contact surface on the corners of the mouth, these bits support guarding and sideways acting rein aids. The larger the contact surface the higher the lateral influence, which means that the above described effect is even higher with D-Ring and Full Cheek bits.

Recommended for horses with sensitive mouth corners, horses that tend to play with the bit and therefore give the rider an unsteady contact and for horses that tend to fall out while riding turns or approaching an obstacle.

Bits with additional lever action on the poll



When pulling the reins on a Multi Ring or 3-Ring bit, pressure is distributed from the tongue onto the lower jaw and the poll. This allows the rider to get more control over strong horses that evade upwards as the horse normally reacts by lowering the head trying to dodge this pressure.

The Baucher bit is suitable for preparing dressage horses for being ridden with a Weymouth. It is an extremely stable bit in the horse's mouth and the side pieces effectively stop the bit from being pulled through the mouth. (These type of bits cannot be recommended for horses that tend to evade downwards or push down against the rider's hand.)

Bits with additional lever action on the poll and lower jaw (e.g. Pelham, Weymouth or Kimberwick)



These bits act on three different parts of the horse's head: over the tongue onto the bars, by lever action of the lower cheeks on the poll, and through the curb chain on the chin groove. The rein aid is therefore distributed to several pressure points on the horse's head. This enables the rider to give clearer instructions and to ride with greater finesse and influence.

A correct basic education and rideability is necessary for using these bits. As the chin is very sensitive and only covered with a thin layer of skin we recommend using a curb chain guard.

Properly fitted bradoon and Weymouth bits:



Example of a properly fitted double bridle engaged and activated by rider's reins:





Step 4: Choosing the Bit material

Metal:

The greatest advantage of metal alloys is a high breaking strength and a long-lasting durability. However, there are significant functional differences between the existing metal bit materials being used in a horse's mouth.

Copper alloys for example are very popular as bit materials. Copper qualifies as a bit material because of its natural oxidation process which can be used to increase the chewing activity of a horse. Because copper itself is fairly soft it needs to be hardened by other metals. This is where it gets interesting, because the metal that is used to harden copper has a big influence on the function of the bit.

Stainless steel:

Stainless steel is an alloy of iron, chrome and nickel and has a high breaking strength. It is neutral in taste, has no saliva activating properties and therefore does not increase the chewing activity of a horse. Nickel has also been proven to be an allergen and exposure to this chemical element can lead to uncomfortable allergy symptoms. Because of the low production costs, the majority of stainless steel bits are made in the Far East and – depending on the manufacturer - may provide significant differences in quality. All SPRENGER stainless steel products fulfill highest quality standards.

Aluminum bronze / common copper alloys:

(all golden colored copper alloys except AURIGAN and SENSOGAN)

Alloy of copper and aluminum with high breaking strength. Aluminum is a useful alloying addition to harden the copper but it largely eliminates the natural oxidation process of copper – the reason why copper qualifies as the preferred bit material. Therefore, common copper alloys do not increase the salivation and chewing activity of the horse.

AURIGAN/SENSOGAN: (Made in Germany)

AURIGAN and SENSOGAN are patented bit materials developed by SPRENGER, based on scientific research, toxicologically tested by the Veterinary University of Hannover and tested by professionals.

AURIGAN® **AURIGAN:** Alloy of copper, zinc and silicon. Silicon hardens the copper without influencing the natural oxidation process of copper.

SENSOGAN® **SENSOGAN:** Alloy of copper, manganese and zinc. Manganese hardens the copper without influencing the natural oxidation process of copper.

Both materials increase the salivation and chewing activity which positively influences the horse's comfort, concentration and willingness to perform. SENSOGAN achieves even better salivation results as AURIGAN with less content of copper - this makes it also easier to maintain and keep the shining appearance.

Synthetic/plastic or rubber bits:

Compared to metal bits, plastic and rubber bits are softer and should not get in contact with the teeth of your horse. SPRENGER Duo bits are food-safe, solvent free and do not contain plasticisers. All SPRENGER Duo and rubber bits have a steel cable interior to provide more security and to prevent the bit from breaking.

Rubber generally has an "eraser-effect". We recommend the use of rubber bits only for horses that are salivating and chewing well in order to prevent it from being uncomfortable for the horse.

HS[®] SPRENGER

HS[®] SPRENGER



Based on scientific research - Made in Germany



KK ULTRA bits (double jointed) reach their unique and precise effect due to the shortened middle link that is rotated by 45° to the front. This specific adaption to the horse's oral anatomy has a noticeable positive effect in comparison to using common double jointed bits.



Dynamic RS bits – a further development of the KK-Ultra bits - are ergonomically shaped in order to appropriately fit between tongue and palate. This results in a better acceptance of the bit even by sensitive horses and allows the rider to give soft but effective aids.



WH ULTRA bits combine the KK ULTRA mouthpiece with a unique roller in the center section. The roller improves the chewing activity, concentration and attention of the horse.



TURNADO bits are incomparable to common single jointed bits. Due to the 45° angulation of the middle joint TURNADO bits enable even distribution of pressure on both sides of the tongue, whereas common single jointed bits always distribute more pressure on one tongue edge.



novocontact bits have a unique oval shape which widens the contact area of the mouthpiece on the horse's tongue. The wide contact surface allows soft rein aids without putting pressure on the palate.



For all SPRENGER bits that are stamped with an arrow on the side of the mouthpiece:
The arrow must be pointing in the direction of travel on the left hand side.

Visit www.SPRENGER.de for further information

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