

### Foreword

This document is the result of many years of research and personal experience world-wide. I sincerely hope that it will be useful for your learning experience and contribute to your personal development. This manual is complemented. with a practical demonstration video to optimize the learning process. I wish you a lot of fun and lightbulb moments diving into these materials.

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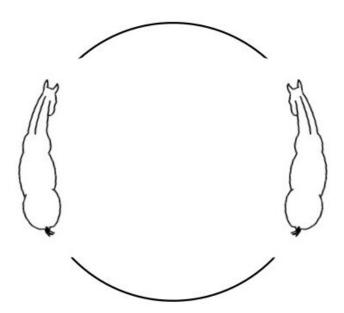
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# **INTRODUCTION**

The exercise of the circle is aimed to develop **lateral bending** in the horse.

Although it is listed a "basic exercise" because it is a fundamental building block towards straightness and suppleness, we must remember that the circle is one of the hardest exercises for the horse to perform as it is a completely alien concept to them. This was already argued in the 16<sup>th</sup> century by Antoine de Pluvinel who wrote:

"When we observe young horses moving, we can sometimes see them in the nicest of collected gaits and high school jumps in the air up to and including the capriole. We can even observe them performing a demi or quarter volte, but never a full volte."

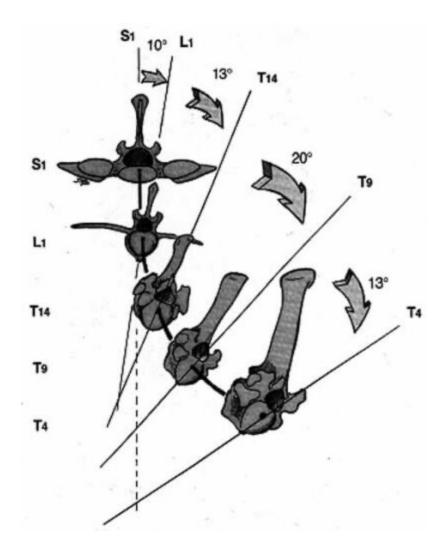


That being said, lateral bending is still an absolute basic for the trained horse as it allows the horse to turn corners and perform on angles without losing rhythm while promoting suppleness and straightness.

The term lateral bending refers to the illusion of equal bending from head to tail in the same direction of travel. Equal bending is an illusion as different regions of the spine allow for various degrees in range of motion. Hence, the spine cannot bend evenly throughout.

Lateral bending can best be considered as a bodily coordination where the horse can bend with the arc of a circle in both directions. By doing so, the inside shoulder and inside hip come closer together. This means that in a correct lateral bend the shape of the horse is slightly concave to the inside and convex to the outside.

Lateral bending is one of the three natural movements that occur in the horse's spine. It is critical to remember that in the cervical and thoracic spine lateral bending is always coupled with axial rotation and vice versa. This means that with a correct lateral bend, the spinous processes bend towards the concavity.



The opposite is called inverted rotation in which the spinous processes are pushed towards the outside – the convexity – of the bend. This position puts a lot of stress on vertebral structures and causes asymmetry in musculature.

Furthermore, it affects the rider's body in a negative way. Inverted rotation is often associated with the exercise of haunches-in and due to limitations within the spine a horse can only bend so far.





**Üdo Burger (1959)** was an accomplished horseman who spoke about the phenomenon of inverted rotation stating that:

"Some reputedly incorrigible horses, that one rider after another has vainly tried to manage will have learned to twist themselves in a perpetual 'S' shape which has enabled them to evade all controls that their riders could think of. Although they willingly turn their head and neck right when the rider pulls on the right rein, in doing so they turn their hindquarters the other way."

Inverted rotation is thus a root cause of many problems and should always be addressed and cured through proper coupling of axial rotation and lateral bending.

### **ESSENCE**

As mentioned, the essence of the circle is lateral bending. Lateral bending as a concept is not so much of a separate exercise, but more of a shape required to fluently perform turns, circles, and lateral movements within a training environment.

The Circle can be considered as a whole-body exercise. Its benefits include:

- Refining vertical balance
- Lateral Suppleness
- Improved Coordination
- Increased Straightness
- Building horizontal balance

Suppleness allows a horse to move with ease and increases the efficiency of the recoil systems. This in turn enhances lightness.

The circle also targets straightness. Most horses have a lateral asymmetry to some extent – i.e., they find turning to one side easier than to the other. This lateral asymmetry causes problems when moving on angles such as turns and circles to both sides.

Within a domesticated environment, when a horse does not bend to one side it will develop asymmetrical muscle tone and become imbalanced through turns and angles. The horse will lose vertical balance in which case it is forced to either increase or slow its pace, interfering with the cadence and rhythm of the gait.





Possible ignorance and asymmetries of the riders body often worsens the imbalance.

Therefore, it is the trainer's task to improve **your** own posture first so that you can guide the horse to gain the ability for a proper lateral bend to both sides, which will ultimately contribute to general straightness and carrying power in the hind limbs, and thus balance and lightness.

The phenomenon of lateral asymmetry was already discovered centuries ago, and various classical masters stressed the importance of lateral bending for straightening the horse. **Steinbrecht** wrote:

"I consider a horse to be straight not if he carries his body entirely without bending, but if its forehand is adjusted in a forward direction to the lines travelled, so that the horse's forelegs precede the hind legs under all circumstances, even if its body is bent to the greatest extent possible, and in the movement on two tracks. The hind legs, in turn, follow the forelegs unconditionally in that they always step forward in the direction of movement and never to the side of that direction."

However, it must be said that despite its importance, the old masters also realized that no horse or no rider will ever be fully straight. In the words of Miguel de Lancastre é Tavora:

"Through improving the lateral suppleness of the horse we will be able to make him straight. But we will not be able to make his tendency of not being straight completely disappear. We may only be able to make it less strong and specifically, to control it."

Several masters also discussed whether more horses had difficulty going to the right versus going to the left. Steinbrecht stated:

"It is a generally known fact that green horses have more difficulties on one side than on the other and that most horses initially have these difficulties on the right rein."

To discover the actual reason for this phenomenon is more the task of a researcher in natural sciences than of the practical horse trainer. There is reason to discuss whether most horses are still left-bended as there are many modern-day findings who prove the contrary but that is not the point. Instead, Steinbrecht goes on to say:

"I want to mention this phenomenon only to warn against the mistake which often arises: the predominant working of one side while neglecting the other. It is indeed advisable to bend the stiff side more frequently by practicing the appropriate exercises a greater number of times."

The most important take away message is thus that you – as a trainer – should be aware of your horse's lateral asymmetry and always train the right intervals on each side to supple and straighten the horse.

Finally, the circle also lays the foundation for horizontal balance. A horse first needs lateral suppleness and straightness from which you can softly build towards longitudinal flexion (collection).

The circle can be asked both on the ground and ridden in all positions and gaits.

However, due to the natural rigidity of the trot, range of motion for lateral bending and axial rotation is most limited in this gait and should thus be carefully applied within the natural integrity of the spine.

### **HISTORY**

Within classical literature, the circles are often described with the technical term "voltes". A volte can be defined as the smallest circle a horse can accommodate with his lateral bend. The use of voltes has been employed since the early ages of horsemanship.

It is not exactly known who invented the exercise, but the Portuguese author Carlos Manuel de Andrade (1790) credits the Italian master **Giambattista Pignatella** (+/- 1525-1600) for discovering the gymnastic value of riding circles on a single track. Unfortunately, Pignatelli didn't write a book. However, luckily his talented student **Antoine de Pluvinel** (1555-1620) did. De Pluvinel described the volte as:

"The most important movement a good horse can do, because therein lies more science than in any of the others."



Der Britilgererite Ernb an der Corde auf der Volte recite.
Le trot ou Manege a la corde sur la Volte a la droite.

From a historical perspective there were two types of circles – or voltes:

- 1. Those in use for the exercise of war
- 2. Those practiced for art in academies

From a military perspective, the voltes were first invented to make horses more expert in combats with the sword or pistol. The horse was required to be obedient and swift on the circle, ready to turn upon their croup briskly. This way, the soldier might gain the croup of his enemy, or prevent his enemy from gaining his own croup by always facing him.

The circle was thus performed on one circular track, only half haunch-in so that the horse may be firmer behind. As the arms were traditionally held in the right hand, a war horse had to be very supple to the right with lesser attention of voltes to the left. This would create asymmetries in the horse's body.

Later, the volte became an exercise performed in schools or academies, in which the haunches were more closely confined. The exercise was performed not on one, but upon two tracks – either on a square or round volte. Most masters also used the pillars to some extent and experimented with various lateral executions.

For example, to supple the horse effectively, **Pluvinel** started the education of a horse by the means of the single pillar. The single pillar marked the center of the turn on the forehand in movement and the passade. For these exercises to be effective, the horse had to execute two round circles with the shoulders and its haunches, while its spine had to remain parallel to the radius of the circles. The turn on the forehand can be seen as the gymnastic precursor of the shoulder-in on the circle as it requires the shoulders to travel on a smaller circle than the haunches that must step over and across.

The opposite is the passade, which can be described as a turn on the haunches in movement. In the passade, the haunches are closer to the center of the circle than the shoulder. As a result, this exercise predominantly supples the shoulders and shows close kinship to the haunches-in, renvers, half pass and pirouette.

Pluvinel was not the only successful student of Pignatelli but shared this legacy with **Salomon de La Broue** (1530-1610). He developed the horse's training by breaking up the figures in simple elements and using the square volte imagined by Pignatelli which would later inspire **Francois Robinchon de La Guérinière** who went on to develop the square volte through using lateral exercise which require even more flexibility and suppleness of the horse.

He distinguished between two types of voltes:

- Reversed volte
- Ordinary volte

Guérinière preferred the more difficult reversed volte – in fact he often taught this one first stating:

"as soon as the horse obeys, and goes readily in the lesson of volt reversed, he may be put to the ordinary volt".

The reversed volt is derived from the exercise renvers [croup to the wall] in which the forehand moves on the sides of the square, the hindquarters travelling on an outside track parallel to the sides of the square and in the corners, the forelegs move in place while the croup describes a quarter of a circle on the outside.

Guérinière explained the difficulty of the reversed as following:

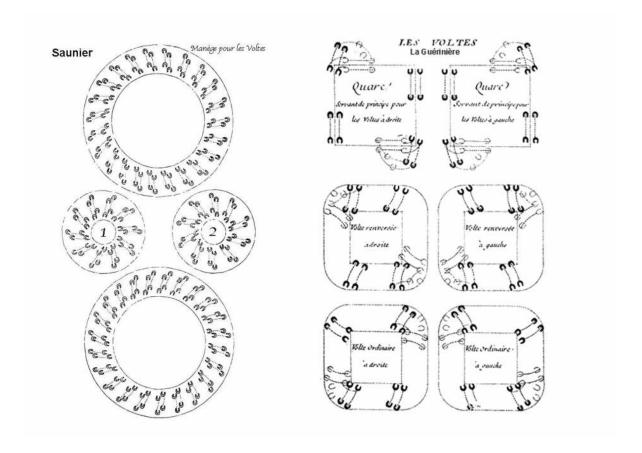
"in volts reversed, the outer legs ought to pass and step over the inners, as in croup to the wall, and this is much more difficult to perform, because he is more collected and upon his haunches than in an ordinary volte."

After the reversed volte Guérinière went on to the ordinary volt in which the horse is kept "with his croup to the center, and his head and shoulders opposite the wall, at about three feet distance from it" so the horse moved with the hindquarters on the sides of the squares so that the forehand moved on parallel tracks outside of the square. In the corners, the hind legs moved in place so that the shoulders described a quarter of a circle. Guérinière described this as 'embracing the volte'.

The reverse voltes are hardly practiced in modern day dressage as they are quite difficult. However, they can be of great value for those aspiring high-level dressage.

Other masters that furthered the volte as an exercise include **William Cavendish** (1592-1676) and **Gaspard de Saunier** (1633-1746). The Duke of Newcastle furthered the concept of shoulder-in on the circle and the Saunier left us with beautiful images of his work on what he called 'Manége pour les voltes' which can be seen below.

From this it becomes clear that the masters experimented a lot with sideways (two track) movement on the circle as opposed to the "classic" one track version.



However, although they claimed the two-track voltes had proven to be very useful, some limitations were also recognized. Despite being his favorite exercise, The Duke of Newcastle acknowledges the inconvenience of the circle – when he says that in the circle with "the head to the center and the croup out, the foreparts are more confined and constrained than the hind parts, and that it puts the horse upon his shoulders."

It is this discovery that led French classical master **Francois Robinchon de La Guérinière** (1688-1751) to the invention of shoulder-in on the straight line as the ultimate exercise to induce correct lateral bending. He wrote:

"This acknowledgement – \*referring to the Duke of Newcastle's own statement\*

– which is confirmed by experience, proves clearly that the circle is not the true

means to supple the shoulders perfectly, because any part that is constrained

and loaded by its own weight cannot become light; and besides it is very true as

this illustrious author – \*referring to the Duke of Newcastle again\* – admits, that

the shoulder cannot be made supple unless the inner hind leg be kept near to,

and advanced before, the outer hind leg, in the action of the walk. It was this

judicious remark that let me upon inventing this lesson of the shoulder-in".

Inspired by De La Guérinière, Steinbrecht (1808-1885). observed that the only way for the horse to move the shoulders toward the inside while maintain the haunches perfectly straight, was to bend the thoracic spine laterally. He presented this idea in a concept he named the 'shoulder-fore' which basically precedes the shoulder-in.

The growing emphasis on lateral work, especially the shoulder-in showed a geniality all these classical masters had in common: they discovered the fact that axial rotation – placing the horse's shoulders towards the inside – induces lateral bending. None of these classical authors ever mentioned the combined existence of axial rotation and lateral bending simply because scientific knowledge was not available at that time. However, they all started to realize that circles were a useful, but not the only tool to supple the horse and induce correct lateral bending and counteract inverted rotation.

At later times, Portuguese Master Nuno di Olivera (1925-1989) confirmed this line of thinking by stating that "The shoulder-in is the aspirin of horse riding that cures everything". He was known to start regular training with a few minutes of trot after which he immediately started with the shoulder-in.

As such, although the circles can be of great gymnastic value for the horse, their level of difficulty, limitations and disadvantages should also be recognized.

Historical literature shows us that the old masters themselves constantly kept innovating and experimenting as to what exercises were best suited to develop suppleness in the horse.

In modern times, we can follow that line of tradition by implementing science to make an informed as to what exercises serve functional biomechanics within the horse the best way at a given time.

# THE ANATOMICAL EXPLANATION OF INSIDE LEG / OUTSIDE REIN

"Inside leg to outside rein" is probably one of the most used phrases in traditional riding lessons. Arguably, it is one of the most famous diagonal combination aids – specifically for riding turns and circles. The concept is of biblical proportions in the dressage world.

This famous application of diagonal aids stems from Steinbrecht's idea of costal flexion:

"The lateral flexion of the spine produced by lateral bending work is called, in the rider's language, rib cage flexion. This term is misleading since there is no bending of the ribcage, which is a fixed bone structure. Rather what we understand to be "rib cage flexion" is a lateral bending of the spine which somewhat pushes the ribs together on the bent side (...) Flexion in the ribcage is therefore part of the soul of equestrian art."

Although Steinbrecht chose his words carefully, the practical application of his work became a justification for always turning and bending the horse to the inside by means of the famous 'inside leg to outside rein':

"During turns and collection, the outside rein is supported by the riders outside leg which must prevent the croup from falling out. For guiding however, the outside rein is supported by the riders inside leg which must drive the hindquarters sideways in harmony with the forehand which is guided by the outside rein."

#### AND

"For guiding, the outside rein is supported by the riders inside leg which must drive the hindquarters sideways in harmony with the forehand which is guided by the outside rein. It is therefore the main task of the outside rein and inside leg to maintain forward movement and the correct lateral position, with the other aids acting in opposition, correspondingly, and simultaneously."

Interestingly, even Steinbrecht's greatest adversaries picked up the technique.

Although everyone focusses on the differences between Baucher and

Steinbrecht, both emphasized the need for straightness.

In Baucher's Second Manner, we can read the voltes and turns were first demanded by the neck rein [counter bend]. However, to set the haunches, Baucher added these aids the use of the inside leg, and even outside rein.

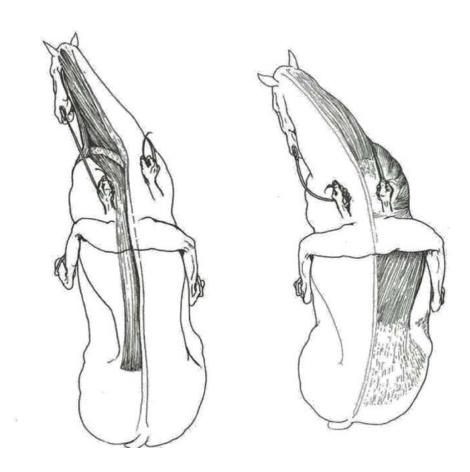
In fact, on the voltes (circles) and the work on two tracks, he made the inside leg predominate.

In modern times, the concept of inside leg to outside rein is often interpreted as the holy grail of dressage. A few quotes:

"the result of inside leg to outside rein is uphill and forward energy. The inside hind leg of a horse is the driving (energy) source. The outside rein is the stabilizer (organizer if you will) of that energy. This technique is what properly compresses the body length, which in turn, controls the balance of a horse appropriate to the level of the horse's ability."

"The key is, inside leg to the outside rein. Not outside rein to the inside leg. The order you do it in is key. You must push the horse into the outer rein. This pushes your horse onto the track and balances the horse on the outer legs through the turn. It allows them to hold the desired track well. It allows them to free up the inside leg to raise up and change the lead."

"The action of "inside leg to outside rein" is meant to create and then maintain bend, without running forward or drifting out. In theory, the horse should respond to your active inside leg by moving away from your leg (in the rib cage area), thereby stepping out toward your outside rein. Your outside rein can then become an active actor in the movement by either limiting how far the horse can step outwards (as in stopping a leg yield from happening) or half-halting (to keep the horse from speeding up or falling to the forehand).



Unfortunately, the concept of inside leg and outside rein today is poorly applied as a means of a shortcut. Where Steinbrecht invented the technique to guide the horse in a lateral exercise, today the most common way to apply the technique is in the leg yield or to 'straighten' the horse between the aids. As such, it is used as a shortcut that might manage the visual of straightness but doesn't align the horse's spine correctly.

Most explanations sound quite complex and are reasoned from a training perspective, but the concept is hardly ever considered from an anatomical point of view.

To understand the effect of an inside leg we must consider the structures that lie beneath the skin. The first layer under the inside leg is the Cutaneous Trunci Muscle. Below lie the *Serratus Ventralis* and *External Oblique*.

The cervical portion of the serratus originates from the transverse processes of C3-C7 and inserts at the scapula. The thoracic portion originates from the lateral surfaces of the first 8-9 sternal ribs and inserts on the costal (medial) surface of the scapula.

At its insertion on the ribs, the *Serratus Ventralis Thoracis* starts to blend in with the *External Oblique* that originates from the lateral surface from the 4<sup>th</sup> rib and the thoracolumbar fascia and then inserts at the linea alba, prepubic tendon, pubis of the hip, tuber coxae, ilium, and the medial femoral fascia.



Interestingly, the area where the *Serratus Ventralis Thoracis* and *External Oblique* meet is exactly the area where an inside leg would be. Therefore, an aid with the inside leg can unilaterally activate both muscles which will flex the trunk to the same side laterally, bringing the horses inside hip and inside shoulder closer together in a slight concave curve.

To create this effect in the horse's body, a few things are of vital importance:

- Softness in the aids
- Letting go of the aids

A soft inside leg can trigger activation of the *Serratus & External Oblique*, but a hard or nagging inside leg or spur can cause the muscles to tighten up instead against the pressure. Furthermore, since both muscles are involved with inspiration and expiration, it can negatively impact your horse's breathing. Upon dissection, scars or longitudinally split muscle fibers from excessive leg or spur use have been found.

Secondly, it is important that aid is followed by a release to provide the horse with a chance to react to the stimuli. If the leg doesn't stop acting, it creates tension instead resulting in hypertonicity of the muscles affected.

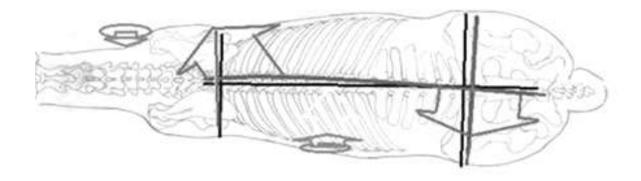
It is crucial to understand that the inside leg can thus stimulate lateral bending, but that it does not necessarily cause proper axial rotation. On the contrary, excessive, or improperly used inside leg is one of the most common flaws that causes the ribcage to rotate invertedly to the lateral bending.

A handy rider will then try to apply an outside rein aid to catch the horse's shoulder. Visually, the horse might look straight on the limbs, but the spine isn't. A distinction needs to be made between managing the defect and addressing the root cause. Squeezing a crooked spine between the aids to create an illusion of straightness is how we create horses that become leg movers instead of "back movers".

To understand the dynamics further, let's consider the effect of the outside rein. The outside rein guides the outside shoulder. The horse's shoulders are always leading and when going on a circle, the rule of physics dictates that the outer limbs will always travel on a larger angle than the inner limbs. Since the horse has four limbs, the inside front limb will travel on the smallest angle, whereas the outside front limb travel on the largest angle. Therefore, the angle of the bend is dictated by the outside front limb. The outside front limb must "step in" to the circle thereby determining the size of the circle. The more the outside front limb steps in, the smaller the circle and vice versa. Since the outside rein guides the outside shoulder, it also determines the angle of the bend. A limiting outside rein will hinder the horse's capacity to step into the circle and result in a contracted neck instead with a loss of proper forward – i.e., the outside hind limb will start to trail sideways. The outside rein is thus a guiding forward rein, and one should be wary to not use it as a limiting rein to hold the horse together and apply it as a means of a shortcut to mimic straightness.

So, although both aids (inside leg and outside rein) have their place, the way it is commonly applied today to create the illusion of straightness only masks the problems but doesn't target the root cause. It creates or maintains dysfunction in the horse by not addressing the necessity of proper axial rotation coupled to the lateral bending.

Let's consider the leg yield as an example. When trying for a leg yield to the right, a rider often pushes with the inside (left) leg. If the spine is not aligned, the ribcage will rotate invertedly and the horse displaces most weight to the outside (right) front limb and travel crookedly. In this moment, the rider desperately tries to mimic the feeling the of straightness by applying an outside rein aid to catch the horses outside shoulder and avoid it from collapsing. Visually, the horse might look straight on the limbs, while in fact creating spinal compression. In this case, the application of inside leg to outside rein functions to mask the symptoms of a problem created by its own use.





When inside leg to outside rein is used incorrectly you will often see the following:

- The hind limbs start trailing sideways on angles. The horse often loses the
  forward. The challenge of a good circle is usually not to get the inner limbs
  load bearing, but to make sure the outer limbs especially the outside hind
  limb also carry some weight to maintain rhythm and alignment.
- When the rider releases the aids, the horse falls apart (i.e., the rider needs to hold the horse into frame as a means of providing sidewheels as the aids or not effectively straightening the horse, bit simply masking the symptoms. As soon as the sidewheels are taken off, the horse collapses again. There is lack of self-carriage.

Does this mean "inside leg to outside rein" is all bad? No, in certain situations it can guide the horse the way Steinbrecht meant it. It is mostly the improper explanation behind the technique that results in poor execution and makes riders dependent on it and believe they are straightening the horse as such. It should never be a primary aid and can only be applied correctly to enhance a bend – but to do so the bend and rotation must first be correct in its essence.

Put simply, inside leg to outside rein could only be successful to fine tune an already correct forward stepping lateral coordination. On the opposite, if there is inverted rotation or crookedness, inside leg to outside rein will only make it worse. Other aids are needed to restore alignment first to set up the horse for success.

Diagonal aids are thus not "holy" and can potentially cause restrictions in the horse when applied incorrectly. Sometimes the horse is better off with lateral aids, sometimes the horse is better off with a single aid, sometimes the horse needs less aids all together.

Ultimately, what matters is that a trainer understands what is happening inside the horse biomechanically and physiologically so that you can act to straighten the horse accordingly. In the words of Nuno Oliveira:

"Both diagonal or lateral effects have the danger of making the horse crooked instead of straight. Hence, ultimately, the rider should not have to worry about which exact combination of aids to use, but rather that the horse is correctly straightened."



In summary, it can thus be said that the term "inside leg to outside rein" is somewhat of a misnomer. It is not driving the horse with the inside leg to the outside rein. Aids are not meant as sidewheels, shortcuts or to hold horse in a certain frame.

If anything, a dynamic interaction of aids – whether diagonal or lateral - can allow the horse to move with the proper arc of bend. As such, diagonal aids can be a useful means when executed correctly to enhance an existing quality, but detrimental when they are used to hold a crooked horse between the leg and reins. It is the task of the trainer to never mask the symptoms, but always address the root cause instead.

### **PREPARATION**

To set up the horse for success, the circle is preceded by:

- Vertical balance (quarter lines)
- Lateral flexion (of the mandible)
- \*\*Shoulder-In\*\*

The horse should be familiar with the aids for vertical balance to adjust the shoulders if necessary. The straighter the horse is on straight lines, the better he will adjust to the curve of the circles that a trainer would make him describe.

Lateral flexion is essential as the horse can have lateral flexion without bending, but not the other way around.





Furthermore, lateral bend is naturally induced through a Shoulder-in position.

As such, for some horses, it is easiest to first teach them the concept of the shoulder-fore / shoulder-in to acquire the proper lateral bend and rotation and then progress to the circle. For other horses, the reverse order might be more suitable.

Finally, to execute a good circle, it is key that you have a clear inner picture and can master your own posture appropriately to allow the horse to succeed.

### STEP-BY-STEP EXECUTION

### The basic aids include:

- Inner intention
- Body posture
- Breathing
- Secondary Rein
- Secondary Whip

# **GROUNDWORK – ONE REIN (CAVESSON)**

- 1. Start on a straight line the square or rectangle is usually easiest.
- 2. Check the lateral flexion of the horse.
- 3. Start "rounding" off the turn so it becomes a circle:
- Have a strong inner picture in which you imagine being a pillar and ask the horse to softly move around you without bumping its shoulders.
- Keep the circle big in the beginning. Imagine a big truck going on the roundabout.

Make sure you can keep your own line of travelling so you can lead the
horse on the proper figure. If you lose your own direction, this will cause
the horse to fall in or out over the shoulders. If you struggle with this, place
some cones on the desired line of travel as a reference frame.



- 4. Check or ask for lateral bending:
- The outside front limb should initiate and lead the bend by turning into the circle. This will also rotate the rib cage the right way (up and inwards)

- Imagine the coordination and curve of a shoulder-in where the shoulders are leading, but instead of the limbs moving laterally the horse should keep the hind and front limbs on the same track.
- You can encourage concavity through a whip aid at the spot where normally your inside leg would be - activating the Serratus Ventralis and External Oblique. This should bring the inside hip and inside shoulder closer together. Apply this aid very gently as when you do it too much, it can cause the horse to fall over the outside shoulder causing inverted rotation and losing the vertical balance.
- If the circle is correct, the horse will be slightly concave to the inside and convex to the outside while the nose and all the four feet keep travelling in the same direction. The base of the tail will also go slightly to the inside.





5. In the beginning, never do more than 2-4 circles in a row as the exercise is very tiring for a horse. Give the horse plenty of breaks, vary with straight lines and praise the horse for all its efforts.

### **WORK IN HAND & LONG-REIGNING – TWO REINS**

- 1. Prepare the same way as described under the "groundwork section"
- 2. If you use a whip, keep it in the outside rein hand.
- 3. Be aware of the separate function of your reins:
- The inside rein is for lateral flexion. As soon as the horse has the right coordination, give this rein forward.
- The outside rein guides the outside shoulder and determines the angle of the circle. Make sure you can follow the rhythm of the shoulder properly and that the rein doesn't limit or slides too far forward on the horse's neck. Keep an organic feel to it.

- Make sure that the independent quality of one rein aid doesn't cause to
  lose quality of the other. Quality once established must remain. For
  example, once the lateral flexion has been established using the inside, it
  should not be lost when you apply an outside rein aid.
- If you find it difficult to coordinate your hands and reins separately, keep them in one hand instead and imaging turning as if you are only having a neck-rope.
- 2. Assist with a whip aid on the girth area if needed. Make sure to not pull on the reins while doing so.
- 3. Enjoy the process and do not tire the horse. Give the horse plenty of breaks.

vary with straight lines and praise the horse for all its efforts.

### **RIDING – TWO REINS & SEAT**

Naturally, when performed ridden, the aids of the seat are added.

1. The essence of anything performed ridden is to remain in a soft neutral seat in which you stay vertical over your seat bones and don't disturb the horse's movement. Remember that any shifts in your weight will prefer one side of the back muscles over the other, causing either the thoracic or lumbar spine to stiffen:

- Follow first and produce later. Start to feel and follow your horses left-right swing and reduce – not stiffen - your range of motion to match that of your horse.
- 2. If your horse is vertically imbalanced, it is impossible to sit 'straight' and remain vertical over the seat bones as the horse simply pushes you off. If this happens, rebalance the horse first vertically before asking any lateral bend.
- 3. If your horse is horizontally imbalanced, try to produce a bit more of a light

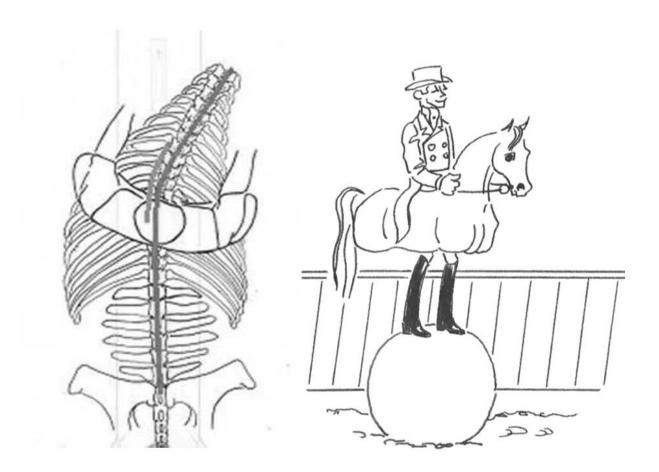
seat in which you follow the horse's center of gravity. You can use your leg aids in the rhythm of the hind limbs to encourage the horse to step under further.



4. Turn into the circle by moving your shoulders and pelvis in the direction of travel without tilting in your waist:

- What you feel in your hands is information about the horse's body and mind. Have a receiving hand first, before producing. Use the reins the same way as described in the work in hand position.
- Remember that lateral bending happens mostly between the 9<sup>th</sup> -14<sup>th</sup> thoracic vertebrae which is exactly the area covered by your seat. You can align your seat by turning your body inwards to the direction of bend wanted. By doing so, your outside thigh should contact your horse ribcage. You can slightly use small pressure to make your intentions clear to your horse. Your inside thigh should be able to receive as the spinous process have to turns inwards and need room to do so.
- You can use your inside lower leg if needed to replace the whip aid given
  on the ground in the girth area. Use your leg only in the rhythm of the
  horse's limb: the inside swing in the rhythm of left-right swing in your seat.
- Each aid you give with the inside leg must be received in the outside leg. If this isn't done the horse will fall over the outside shoulder and start traveling sideways.

The outside leg can be put slightly behind the girth, making sure that the outside hind leg is tracking the front leg and thus, not stepping outside of the horse's mass.



5. Enjoy the process and do not tire the horse. Give the horse plenty of breaks,

vary with straight lines and praise the horse for all its efforts.

### **CHALLENGES & TROUBLESHOOTING**

# 1. Inverted rotation & overbending of the neck

This is by far the main challenge. Inverted rotation will always cause the horse to lose vertical balance and make it impossible to achieve horizontal balance. It can be caused by:

- Preferential or asymmetric rotation of the horse itself
- Overbending of the head/neck
- Disturbance of the trainer's seat- and/or rein aids





In case of preferential or asymmetric rotation of the horse you can restore correct bending through imagining the concept of shoulder-in as this coordination will automatically induce the ribcage the right way (when done correctly).

So, you want to have a shoulder-in feel in the top line, with the only difference that the front and hindlimb should stay on one track (no sideways stepping).

There are two scenarios' possible that require corrective aids:

• When weight is diverted towards the outside shoulder, bring it back into the right coordination so that it steps into the circle and not away from it.

On the ground, use a directional outside rein aid which you can possibly assist with a whip aid over the outside shoulder. Make sure the rein aid is directional in nature and not limiting. Imagine that you want to draw the shoulders inwards to the circle again. As soon as alignment is restored, release and reward.

When ridden, you can use a soft aid with your outside thigh while opening your inside thigh to invite the ribcage towards the right direction.

When too much weight is diverted to the inside shoulder, increase the angle
of the circle, and rebalance weight vertically. Vary a lot between circles and
straight lines.

If the inverted rotation is induced by overbending of the head and neck, gently direct the nose back in front of the sternum. Range of motion for lateral bending is greatest in the cervical spine and therefore horses overbend their necks so easily. A couple of things to be aware of:

- Increase the angle. The smaller the circle, the more risk of overbending
- Do less with the inside rein. Lateral flexion is usually less than you think
- Ask the horse a couple of steps towards counter bend to straighten

If the inverted rotation is caused by disturbance of incorrect seat- and rein aids you will have to work on those that hinder the horse most. The more you can master your own body, the better you will be able to guide the horse.

Finally, the following applied for all positions and possible causes of inverted rotation:

- The Shoulder-Fore and Shoulder-In on the straight line are the best remedies
- Stay dynamic in your angles: a bit of circular work, a bit of straight work





### 2. Traveling sideways

On a regular circle, the horse will always have to able to track up and step forward. The nose and all four feet should point forwards to the direction of travel.

When the horse loses alignment or finds lateral bending difficult, the circle might start to travel sideways and swing out with the hindquarters – rather than really bend through its body. If this happens, you can try the following:

- Think more forwards and make the circle bigger
- Return to other basic exercises such as the square and quarter lines
- Use lateral exercises to restore straightness:

When the horse trails out with the outside hind leg, you can ask a
haunches-in just enough to straighten the horse and place the hind limbs
back under its mass.

When the hindquarters steps too much to the inside (haunches-in tendency), you can restore straightness by a shoulder-in aid just enough until the horse tracks up again.





## 3. Fatigue

Remember, circles are the hardest exercise for the horse as it is completely alien to their natural way of turning. Therefore, don't overdo it and give plenty of breaks and variation in between.

