Understanding the Sitting Trot

Exploring the effect of the laws of nature
during a horse's trot

by

Roger Guevremont

Trot without bounce?

Can one learn the sitting trot without the bounce? Yes. We explain WHY the rider must not push his foot against the stirrup. We explain why his hips and waist must be flexible while his upper body remains firm. Understanding is the key to developing a sitting trot without the 'bounce' against the saddle.

Briefly

A horse's trot is composed of two phases: (a) the horse's diagonal hooves are on the ground and (b) the horse is airborne in 'suspension'. During (a) both the horse and rider feel additional weight because they are pulled downwards as if they were in the valley of a roller coaster. During (b) the horse and rider are both weightless in 'suspension'. While weightless the horse and rider can freely drift apart if any forces initiate their motion away from each other.

Roger Guevremont
3/1/2013

With special Thanks to:

Maria Guevremont, we appreciate your comments about the clarity and understandability of this document. Since Maria is not a horseback rider, she ensured that no 'horseback lingo' would make it difficult for a beginner to understand the information presented here. Thanks for help with editing everything from spelling to grammar.

Irina Yastrebova, english/dressage instructor in Edmonton. Irina has been riding and teaching for 25 years in both Russia and Canada. She has MSc in biology and has studied anatomy and biomechanics related to horse and rider. Please visit Irina's web page:
http://www.balancedrider.com/index.htm

Natalie Gaanderse , a rider since childhood and a long-time instructor. Thanks Natalie, for your understanding in reading our early drafts. Thanks for your help in enlightening Roger about the sitting trot.

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INTRODUCTION

Roger is trying to learn the sitting trot. Because he has interests and experience in the world of science and physics, he always asks himself what explanations lie behind the instruction being given. He always asks WHY, and again later, WHY?

With some effort at his desk and computer, he began to understand the details related to the sitting trot. Once he had reached a pretty good understanding he vowed to give it a try at the next riding lesson. It worked perfectly! His instructors said he was ready to hold the reins while trotting.

He decided that by writing down his thoughts, these ideas might help other students improve their performance too. Roger, with the help of Irina (a skilled instructor (http://www.balancedrider.com/index.htm), tries to make learning to do the sitting trot somewhat less challenging.

Who is this for?

We have written two versions of this document. This first version is somewhat simpler and targeted primarily for the beginner learning the sitting trot. From now on we'll refer to him as "BinT" as short for "beginner in learning the trot". In this document we hope to help the BinT understand WHY he has to do certain things in order to execute a successful sitting trot.

The second document is more complete and can be of assistance to those with a desire to learn more about the trot:
http://www.rogerguevremont.com/pdfFile/LearningTrotComplete.pdf
By understanding the motions of horse and rider and what we see and feel, we will strive for improvement in performance. Importantly, we will understand WHY we try to do the things leading to better performance.

We begin. This discussion covers several subjects. Some subjects are a little dry, but please be patient. We think you may be surprised at the levels of complexity and simplicity that coexist in the sitting trot.

Words and their definition

Please review carefully. In this discussion we use some terms in a specific way. To ensure our ideas can be clearly understood, we will define several of the key terms used here.

Beginner

Here we consider a beginner in the usual sense, someone completely new to riding, a novice. He lacks the knowledge and the capability to ride a horse.

Beginner in learning the sitting trot (BinT)

This is a very specific definition for the rider trying to learn how to do the sitting trot. He already does the walk comfortably and has developed his core strength. He bends forward and backward only slightly during the start and stopping motion of the horse. He may have tried to do the sitting trot several times, however, without success. He cannot do a sitting trot for more than a couple of strides of the horse. All he knows about trot is 'my seat hurts!' For brevity we will call him "BinT" beginner in trot.

Sitting Trot

During the sitting trot the rider remains on the saddle throughout the duration of the horse's trot motion. This is a particularly difficult approach to learn because the beginner rider feels that he is being launched into the air after each step of the horse.

Weight and Mass

Weight and Mass are almost always misunderstood. In common terms they are both thought to tell us how heavy an object is. Here we'll try to be far more specific in these definitions.

Mass

Mass - this word is not used in our discussion here but we'll define it anyway. Mass tells us how much matter there is in the object. The amount of matter contained in a rock is the same whether here or on the moon, but the rock weighs less on the moon, and is even weightless while sitting inside the shuttle circling in orbit around the earth.

Weight

Weight - the reading on a scale that we put under the object. The scale must touch the object but must not change the object's speed. Usually when we weigh something, the object and the scale are both stationary. This is the case when we weigh our carrots in the grocery store.

Weightless

Weightless - if a scale is put under the object and touches it without changing its speed and the scale reads zero this object is weightless, i.e. it feels weightless, as it would in a satellite orbiting above the earth. A ball that is allowed to fall is weightless while it falls. This means that if we put a scale so that it just touches the bottom of the falling ball without changing the speed of the ball, our scale will also be moving (falling) at exactly the same speed as the ball and the scale will read zero.

Energy

Energy can neither be created nor destroyed. Energy is the means by which work is done (http://en.wikipedia.org/wiki/Energy). Exactly "what" energy is cannot be stated, but what it can do is clear. It does work. Energy exists in forms including kinetic (motion), heat, chemical, elastic, biological and many more. Energy can be converted from one form to another, often from one form to several others at the same time.

Force

Force – an influence that causes an object to change speed or direction. Force is usually caused or created by something else e.g. your hand is applying a force on a ball, to start or stop the motion of the ball. A stronger force pushes the object harder, making it change speed faster.

Suspension

Suspension - not connected to the ground or to anything else. While you are in the air, for example after jumping off of a diving board, we say you are in "suspension".

Acceleration

Acceleration - rate of change of speed, e.g. a car the goes from 0 to 100 mph in 10 sec is said to have accelerated by 10 mph per second. Similarly, after putting on the brakes it is decelerating (usually a word meaning acceleration in the negative direction, slowing down).

Gravity

Gravity - the attractive force that the earth puts on objects thus pulling the objects towards itself.

Acceleration due to Gravity

Acceleration due to gravity - if a ball is held at rest, then dropped, the ball falls with a speed that increases with time. All objects that are not influenced by air drag accelerate towards the earth at the same rate. This fixed rate of increase of speed (acceleration) is called the "acceleration due to gravity"

Flexibility and Elasticity

In a living creature, a flexible joint means that he can move the appendages which are attached to the flexible joint. We will avoid using “flexible” as a property of an object that can be bent. Here, an object that can be bent is elastic.

An elastic object can be deformed and will return to its shape after the force causing the distortion is released. This physics definition of elasticity will be used throughout this document.
(http://en.wikipedia.org/wiki/Elasticity_(physics))

The Gaits of the horse

Walk

In a walk the horse always has two or three feet on ground at any time.
The four feet (hooves) are placed down in a fixed pattern.
The walk pattern is: (i) Left Hind then (ii) Left Fore then (iii) Right Hind then (iv) Right Fore, ... and then the pattern repeats.

Trot

The trot is a repeating pattern in which the diagonal legs are placed down together.
The gait pattern is: (i) Left Hind and Right Fore, suspension, (ii) Right Hind and Left Fore, suspension, ... and the pattern repeats

It might be helpful to number the legs.

1 Left Hind

2 Left Fore

3 Right Hind

4 Right Fore

The walk can now be simplified to the stepping sequence of legs: 1-2-3-4

The trot is simplified to: (1 and 4)-suspension-(2 and 3)-suspension.

The Horse's Leg Motion during the Trot

A careful description of the horse's leg motion and its effect on the horse during the trot follows:

(a) Assume a STARTing point where the horse's diagonal legs (1,4) just touch the ground after suspension.

(b) Horse is descending and these diagonal legs begin to stop the horse's downward motion.

(c) All downward motion is stopped and the legs are at maximum bend, ready to push upwards.

(d) These diagonal legs (1,4) push upwards together and the horse rises. This upward motion starts slowly and accelerates going upward.

(e) After their push these diagonal legs (1,4) become nearly extended, push is no long available and the horse is airborne in “suspension” .

(f) The horse continues to rise upward as result of the strong push. However gravity is slowing the upward motion.

(g) The horse’s upward motion is stopped by gravity. It is neither moving upwards or downwards.

(h) Now the horse is descending downward but all of its feet remain off the ground – it is still airborne or in “suspension”.

(i) The other diagonal legs (2,3) reach out to get contact with the ground.

(j) The diagonal legs (2,3) make contact touching the ground. This step is the same as step (a) above, but now legs (2,3) replace (1,4).

I will refer back to these steps (a) – (j) in what follows.

Some photos of several of the steps are below. From:
http://www.youtube.com/watch?v=QD1TfJyTAxI

(a) diagonal legs (1,4) just touch the ground after suspension

(b) diagonal legs (1,4) begin to stop the horses downward motion

(c) the horse's downward motion is stopped

(d) diagonal legs (1,4) push upwards and the horse rises

(e) the diagonal legs (1,4) become nearly extended, push is no long available and the horse is airborne in “suspension

(g) The horse is airborne, it is neither moving upwards or downwards

(h) the other diagonal legs (2,3) reach out to contact the ground

(j) diagonal legs (2,3) just touch the ground after suspension

The Bag of Oats

Rather than a rider, we will begin by placing a full bag of oats over the saddle so that its ends hang off the sides of the saddle. For clarity the oats have no elasticity. What are the consequences on the bag of oats sitting on the saddle during the horse's leg motion described above for steps (a)-(j)? Can this bag of oats do a sitting trot?

In (a) bag is very close to the saddle (i.e. at the saddle).

In (b) the bag increases in weight because it is being slowed down by the saddle. It is now in tight contact with the saddle.

In (c) the bag has maximum weight because although its motion is totally stopped, it's like we are at the bottom of a valley on the roller-coaster and we feel the heaviest.

In (d) the horse and the bag are being pushed upwards by the horse's strong legs.

In (e) the bag's weight decreases to zero and it gets into suspension. The horse is also weightless and in suspension.

In (f),(g),(h),(i) the bag is weightless, suspended in the air but remaining in contact with the saddle. It is not pushing against the saddle, since both are weightless floating along through the air together.

In (j) the diagonal legs of the horse reach for the ground, and steps (a)-(j) are repeated.

Was that a sitting trot? YES! The bag of oats remained in contact with the saddle throughout steps (a)-(j). The bag of oats and the saddle (horse) moved in total synchronization.

Just to expand on these ideas let's consider what other objects might behave in exactly this manner. Does the discussion above apply if the bag of oats is only half full, and the oats easily flow and redistribute inside its

container bag? What happens if the ends of the bag which are hanging off the sides of the saddle are free to flop up and down during the trot?

These also behave exactly the same way. Other objects including a plaster model of a human, behave exactly the same way. All such objects share a feature that always leads to a successful sitting trot. They cannot absorb any energy. On the other hand the rubber ball, considered next, can absorb energy.

The Rubber Ball

Let's consider the effect on a rubber ball sitting on the saddle during the horse's leg motions in steps (a)-(j) of a trot. The rubber ball is elastic and can store energy. If one drops the ball down onto a hard surface the ball bounces back upwards. This upward motion requires energy to combat gravity. That energy was stored inside the ball as elastic energy when it was compressed upon hitting the ground after its fall. Let's look at the details.

At (a) the ball is very close to the saddle.

In (b) the ball is pressed against the saddle by both gravity and the deceleration of the slowing saddle.

At (c) the ball has no up/down velocity and has reached its maximum weight. Since the ball is elastic it begins to flatten against the saddle.

At (d) the saddle is pushed upward and the ball has reached its maximum flattening against the saddle.

By (e) and (f) the ball has expanded back towards its regular shape. Since the ball was sitting on the saddle all of its size expansion has had an upward direction. This causes the ball to spring away from the saddle. The

ball is now airborne, weightless and moving upwards. The horse and saddle are both airborne and moving upwards but the ball is no longer touching the saddle. Now the ball and saddle are moving independently.

By (g) the horse's upward motion has been stopped by gravity but, because of its spring from the saddle the ball continues in an upward direction.

At (h) the horse is descending and its downward speed is increasing (acceleration due to gravity). The ball has stopped its upward motion and gravity now pulls the ball downwards. At any point in time the downward speed of the horse will be greater than the downward speed of the ball since the horse has been accelerating for a longer time. The ball continues moving farther away from the saddle i.e. the separation between the ball and the saddle increases.

During (i) the ball continues to move farther away from the saddle.

During (j) the saddle begins to slow down, but the ball is above it, airborne and cannot slow down. Rather, gravity is making it go faster.

When the horse begins its second cycle of steps (a)-(j) the ball is still moving independently of the horse.

At (a) the ball approaches the slowing saddle.

At (b) or (c) the ball collides with the saddle as it slows, or worse, if collision occurs at (d) the ball travelling downward hits the saddle going upwards and the ball bounces away completely.

Why does the Rubber Ball Fail?

This illustrates that a rubber ball cannot do the sitting trot. WHY NOT? The most brief physics explanation is that the rubber ball stores ENERGY while it is compressed. It stores elastic energy. When it expands the stored elastic energy is converted to kinetic energy (motion). The ball now has kinetic energy and moves away from the saddle.

The Human Rider

We consider the human rider in detail. The human has a brain, muscles and bones and can act in several different ways. Usually the muscles and their control develop as riding skills improve. We will consider the rider on the basis of his level of skill. The BinT beginner has tried to do a sitting trot several times, always unsuccessfully.

BEGINNER, do not try the sitting trot

The beginner should not attempt to do the sitting trot. Why not? The new rider usually lacks the core body strength to accomplish many of the more challenging activities on a horse, including the sitting trot. Even a person with good core strength developed in other exercise or work activities will ride poorly. He lacks the knowledge and muscle control that develop with riding experience.

Will a beginner rider doing a trot be elastic or stiff or maybe both?

Lacking the necessary muscles and control, the beginner will be petrified during the trot due to fear of falling off the horse.

When the rider's muscles lack strength, i.e. are soft, and an external force is applied, such as the horse starting to walk, the rider will be unable to maintain his proper position. Lacking the appropriate core muscle strength

the mid parts of the rider are almost the exact opposite of stiff. He is too elastic, i.e. his posture easily yields to external motions. He leans forward and backward as the horse starts and stops.

Is the beginner rider more like the bag of oats or the rubber ball? Since he has parts too stiff and parts too elastic, the net effect is that he has a degree of bounce that makes him behave like a rubber ball. Maybe he is a rubber ball with wooden rods through parts of the ball. The ball is neither hard nor soft, but nevertheless it still leaves the saddle and bounces in some clumsy manner.

The beginner cannot do much about it. Even reading this document will help only slightly. He must spend some hours on the saddle just walking around. Muscle control and awareness of the feel of the horse will improve. Trials with trot only begin once the rider has sufficient core strength and balance on the horse to avoid sudden and unexpected dismounts.

The above is too vague. Let's try to learn more.

What problems arise from improper brain and muscle activity in the beginner trying to do a sitting trot? Most are not conscious errors, they just spontaneously happen as a result of natural reactions. These are "reflex" actions, and happen automatically (http://en.wikipedia.org/wiki/Reflex). Here we will call them subconscious muscle activation.

(i) Subconscious muscle activation ---- When a person is pushed upwards (like in an elevator) he feels heavier than when he was stationary. His natural (subconscious) reaction is to firm up the legs to push (resist) against this extra weight.

(ii) Subconscious muscle activation ---- When a person becomes weightless he does not understand nor like the feeling. The muscles will activate in unpredictable ways as the body tries to correct the situation. Most obviously he stretches his legs to try to touch the ground or to absorb an expected collision with the ground.

(iii) Subconscious muscle motion ---When the rider becomes airborne above the saddle he automatically expects to feel a crushing blow to his seat when he returns to the saddle and he firms up his seat and abdomen in response to the expected pain from the blow.

(iv) Conscious muscle motion ----The rider may feel some loss of balance and try to correct. The rider may try to 'absorb' the up/down motion of the horse in parts of his body including his legs, hips, back, neck and shoulders. These are the wrong things to do.

Our BinT TRIES to do a TROT

Once the beginning rider has gained sufficient core strength that he no long flops forward and backwards when the horse starts and stops walking, and he has sufficient balance that he is comfortable on the walking horse, he may have reached the BinT stage. What is the next step? We look at his potential difficulties in more detail to try to understand more.

We will consider what is happening to the BinT rider during the horse's leg motion as we have done previously for the bag of oats and for the rubber ball.

At (a) the human starts very close to the saddle (i.e. at the saddle).

In (b) the human is pressed against the saddle by the deceleration of the slowing saddle. He subconsciously reacts by increasing the pressure of his foot against the stirrup to try to support himself He may slouch in the neck, shoulders and back.

At (c) the human has no up/down acceleration and feels his increased weight pushing him towards the saddle. Since he has been pushing his feet downwards against the stirrups, he now succeeds in partly supporting himself on his feet. Because he has weak core strength, his posture is also compressed through bending in abdomen, back and neck.

At (d) the saddle begins to accelerate upward and the human continues to feel additional weight. As in the previous step above, he uses his legs for support against this additional weight.

By (e) the weight of the human has rapidly decreased to zero, but since he has been pushing with his legs as he was travelling upwards, he now has a little more upward speed than the saddle and he separates away from the saddle. Any curvature in his back and neck is now reversed which adds further upward motion propelling him away from the saddle.

During (f) and (g) the human and the saddle both rise upwards, then stop due to gravity, and then begin to descend because of gravity. During this entire time the human is moving away from the saddle. Just as in the example of the rubber ball, the human has no way to get closer to the saddle. While his legs were helpful to push against the rising saddle, they are of no use to pull the saddle closer to himself again.

During (h)(i),(j) the horse and human are descending at a speed that is increasing (acceleration due to gravity) . Both are weightless. However the human continues to move farther from the saddle. He cannot get closer to the saddle because he is airborne.

During (j) the saddle begins to slow down, but the human is above it, airborne and still descending. Gravity continues to make him descend even faster.

The horse now begins his second cycle of steps (a)-(j).

At (a) the human begins to approach the slowing saddle

At (b) or (c) the human the collides with the saddle as it slows, or worse, if collision is at (d) the human travelling downward hits the saddle which is going upwards.

OUCH!!!!

We review what went wrong……

During steps (b), (c) and especially during (d) the human (subconsciously) pushes against the stirrups to moderate the new weight pushing him against the saddle. During (e) the rider's weight decreases rapidly and his push now causes him to rise up above the saddle and a space appears. The rider's separation from the saddle gets bigger throughout times (f), (g), (h), (i), (j). Eventually gravity stops his and the horse's/saddle's upward motion. Both descend but a space remains between the rider and the saddle. The horse begins a second cycle of its leg motion but, unlike the first cycle, the rider is not close to the saddle. During (a) and (b) of this second cycle the descent of the saddle is being slowed by the horse's legs but being away from the saddle (or any other support) the rider continues to descend (fall) because of gravity. Eventually in (c) or worse in (d), the rider collides with the saddle. That hurts!

Unfortunately the BinT rider suffers from not only subconscious muscle activations of type (i), but also types (ii) through (iv). None of them are beneficial to his ride. we will let the reader continue to visualize the results of (ii) to (iv) ……

The BinT must understand the causes of his difficulties described above. He must understand WHY he experienced problems.

The Elasticity Factor

Before trying to help the BinT rider achieve a sitting trot, we will digress briefly to look at the human rider from a little different point of view.

The average human with no riding experience has properties ranging between the extremes of rigid and elastic (yielding). He is neither a bag of oats nor a rubber ball. Now we consider his elasticity.

(1) He can be completely rigid with no elasticity. Can this plaster model of a human ride a successful sitting trot? What happens?

(2) He can be completely elastic or yielding in every direction with no muscles activated anywhere at any time. What is the result of this rubbery elasticity?

(3) He can be someplace between rigid and rubbery.

Can our plaster model of a human at elasticity level (1) do a sitting trot? It turns out that we can avoid a detailed step by step analysis here for this plaster model of a human. He is identical to the bag of oats. If the bag of oats can do a successful sitting trot, so can our plaster model of a human. Do we need more? YES, a person will find it difficult (maybe unpleasant, maybe dangerous) to become like a plaster model on his horse. It's not likely the horse will fare any better.

Maybe it would be better to achieve complete elasticity like (2)? Unfortunately this elastic entity now begins to resemble the soft rubber ball. As we saw above, the rubber ball failed the sitting trot rather miserably. No need to continue in this direction.

In reality the human is nether totally elastic, nor entirely rigid. The average human beginner rider without experience is most similar to elasticity (3). This average person cannot do the sitting trot. This is because he retains too much of elasticity type (2).

Have we arrived at the final question? Only the rigid (plaster model of a human) rider with elasticity like (1) was close to a successful sitting trot. Must we learn to approach, or strive towards the rigidity similar to the plaster model of a human to do the sitting trot? Answer: YES…. but HOW?

The Riding Instructor and the Sitting Trot

These discussions suggest that a firm, stiff plaster model can do a sitting trot. Is this in contradiction to instructions usually provided to a beginning rider? Absolutely NOT! These notes written here emphasize WHY we are given certain instructions. We are always told to leave our hips and legs flexible and supple on the saddle. We are told this in order to help us avoid pushing down on the stirrups at any point during the trot, i.e. to feel as part of the horse and saddle following their motion as if we were a bag of oats. This not in contradiction to the plaster model because that plaster model cannot apply any force on the stirrups. It follows that the human rider's legs can be either supple or firm as long as they don't push on the stirrups. The instructor emphasized flexibility in the lower extremities IN ORDER to prevent the rider from applying a downward force on the stirrups. We now understand WHY the instructor advised us in this direction.

In summary: WHY does our instructor focus on flexible legs and ankles while firmness is beneficial? This is because the instructor's first goal is to train the BinT rider to overcome the subconscious muscle reactions (i)-(iv) discussed above. These types of problems must be corrected before a rider can begin to approach a successful sitting trot. To overcome these muscle reactions the rider is instructed to relax and soften his leg and ankle muscles i.e. to avoid pressing down on the stirrup.

Why don't we just learn the sitting trot with feet out of the stirrup? Roger will provide an answer totally from his own personal experience (which might not apply to you). Answer: I was scared to death of falling off of the horse!!! I needed to feel that I could use the stirrups to catch myself if I started to fall.

A Rider does a Successful Sitting Trot

Shall we follow the motions of a rider during a more successful sitting trot? For completeness we will.

In (a) human is very close to the saddle (i.e. at the saddle)

In (b) the human feels increasing weight because he is being slowed down by the saddle. He now feels his rear end is being pushed against the saddle. His torso compresses, his behind fat compresses, and since his behind has now become closer to the horse this results in a small flex in his legs at the knees, as well as in hips and ankle joints. These changes are very small.

In (c) the human has maximum weight. Although his up/down motion is totally stopped, it's like he is at the bottom of a valley on the roller-coaster and he feels the heaviest.

In (d) the human is being pushed upwards by the horse's strong legs. The weight added by acceleration is now added to his own original weight from gravity. The rider willingly permits this push against his seat and sits comfortably against the saddle. His seat flexes slightly to accommodate the horses hip motions in an up/down and forward/backward direction. He does not push with his feet, if anything he consciously ensures the contact between foot and stirrup is very gentle. The rest of his body remains firm. No flexibility in neck, shoulders, arms or back.

In (e) the human's weight decreases to zero and he gets into suspension, the horse is also weightless and in suspension. Since the riders soft bum cushion has expanded to push him upwards his contact with the saddle becomes gentle.

In (f),(g),(h),(i),(j) the human is weightless, suspended in the air but remaining close to the saddle but not pushing against the saddle. Both are weightless and moving through the air together.

The horse now begins its second cycle of steps (i)-(j), and the rider starts the cycle in the same position as before.

In (a) the rider is close to his saddle, and the cycle repeats

Yes!! This rider is now doing a successful sitting trot. He remains close to the saddle, with good suppleness in his lower joints including his hips, knees and ankles. The rider's head, neck, shoulders, back and pelvis are firm (but not entirely rigid). His arms bend very slightly in order to keep the reins at the appropriate locations.

CONCLUSION

Are we learning how to do the Sitting Trot?

The beginner rider: Don't do the trot until your core strength develops and your muscle control is sufficient that your balance is good. You must be comfortable on the horse.

The BinT, beginner rider who is first learning the sitting trot: Put all your weight down into the seat of the saddle and remember that any push downwards with the legs and hips towards the stirrups must be avoided. One must be firm, but try to avoid being stiff. It is crucial that your feet are always only lightly touching the stirrup i.e. keep your feet weightless in the stirrups.

Once good riding skill has been developed the rider concentrates on maintaining good posture and correctly and clearly giving instructions to the horse. Remember that almost all instructions to the horse are conveyed through your lower extremities, little through the reins. Our instructor once pointed out that the reins are there just for "looks".

The MOST important reason that we wrote this document is so that we know and understand WHY these and other instructions are provided by our riding instructor! We hope we have made some progress.

Later Thoughts from Roger (a BinT)

Several weeks have passed since I began writing the document you have just read. During the early days of writing I was learning how to do the sitting trot (I was a BinT). I held onto my saddle for dear life just to prevent my possible ejection from the horse. I believed that performing the sitting trot was impossible. I began writing to try to understand WHY it was so difficult.

As I was editing and trying to clarify my writing, I decided to try to use my own ideas to help learn this heretofore impossible task.

It was successful. I found some reward from the thoughts I was writing.

But why am I writing again some weeks later? Today was my first ride of sitting trot while holding my reins. What does it feel like? I feel like I'm one with the horse and that requires no special efforts of muscles or control. It now feels effortless and completely natural in every way. If this document did not exist and I was asked to write the paragraphs you just read, I could not.

Wait a moment! Why not? That word "WHY" appears again! I believe that I could no longer analyze and probe this technique with those now-gone 'eyes of the beginner'. Those eyes could see me bouncing on my horse and see that I was helpless and out of control. They were so intimately connected to that feeling that its analysis was feasible. I wrote what that feeling was telling me to write. Today I could no longer see and feel those things in the same light.

I pray that if you are a BinT, these paragraphs will help you trot through the same passageway that I have just emerged from.

Roger

Thoughts, experiences? Please let me know: roger@rogerguevremont.com

The author

Roger Guevremont, retired from a scientific career. The primary product of his research work was FAIMS, a technology described on his web page: http://www.faims.com. After a highway accident that cost him a leg, he faced the world with new eyes. Horseback riding suddenly put new legs into his life. More can be found at

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