

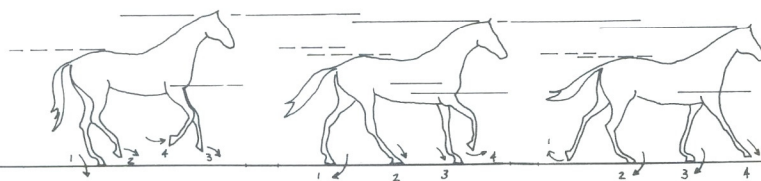
Indication of forward movement in one canter stride, approximately one length of the horse, depending on speed

## 11 *Talent and technique*

Vaulting is by definition the sport of 'doing gymnastic exercises on a cantering horse', so the principles of gymnastics apply, except that we don't use lifeless equipment, but a moving horse.

When we discuss the gymnastic principles involved, we should never forget that this type of gymnastics is performed on a moving, living partner. The best gymnast will only turn into a good vaulter if he is able to become *one* with the movement of the horse. A vaulter who is not capable of timing his own movements in perfect harmony with the canter stride will never achieve optimum performance. This is particularly obvious in all the exercises which need a swing to achieve good height above the horse. The vaulter can't time the swing according to what feels most comfortable to himself, but must do it exactly on the rhythm of the horse's movement.

Indication of up and down movement of croup, shoulder and neck during one canter stride



Beat 1 of the 3-beat:  
outside hind foot pushes  
off

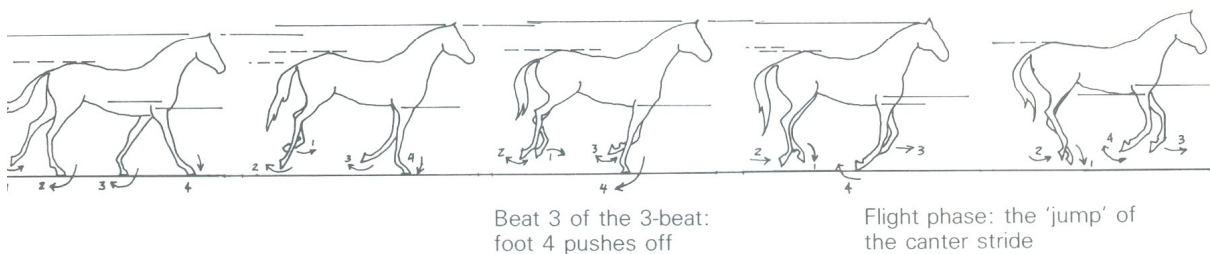
Beat 2 of the 3-beat: foot  
2 and 3 push off diagonally

The horse's movement is twofold: he covers a certain amount of ground within one canter stride, and this forward movement and the resulting speed give the vaulter the momentum which he must use for good mounts and jumps. And also there is an up-and-down movement in the horse's swinging back and croup, which the vaulter uses as momentum for his swings while on the horse.

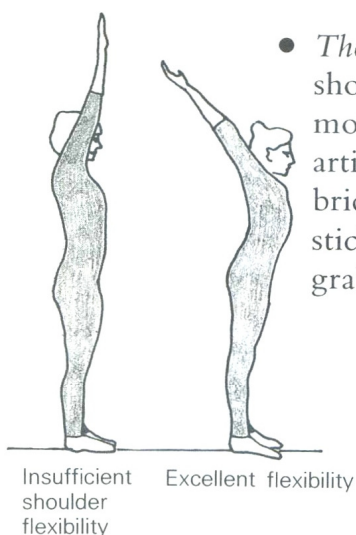
## *Talent for vaulting*

A good potential vaulter needs certain attributes in terms of body build, understanding of techniques and sense of timing. This does not mean that a person *not* possessing all facets of his talent can't enjoy this sport tremendously. As mentioned before, we are not looking at vaulting only as competitive activity. But a vaulter with hopes for a competitive future must possess certain physical motor abilities, without which he cannot achieve the necessary skills.

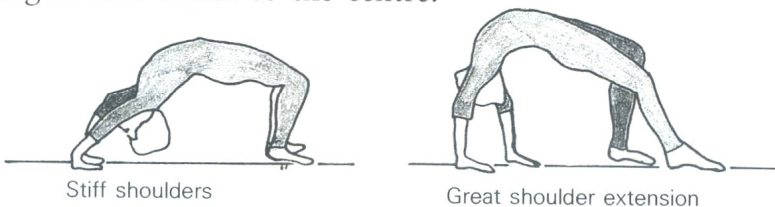
- *The ability to straddle the legs:* by this we do not mean the physical skill of already being able to perform the splits down to the ground — a skill can be learned, if practised, if the ability to do such movements at all is there. Of course, all healthy children can learn the necessary skills well enough (if they do their homework) to make decent show team members, since for this full splits are not required. In a show team the trainer can use the vaulters in the areas where they perform best — but in competition, they must be able to perform all



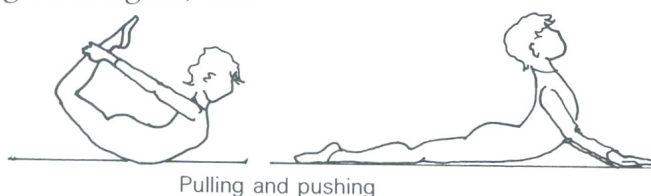
skills to a good level. Serious competitors should be mobile enough in their hip joints to learn the complete splits. The diagrams show some general leg stretching exercises.



- *The ability to achieve shoulder extension:* a certain agility in the shoulder joints will give the vaulter greater freedom of movement, which is necessary for optimum execution and artistic expression in many exercises, like for example the bridge. An exercise to improve shoulder flexibility is passing a stick over your head, back and forth with extended arms, and grabbing it ever closer to the centre.



- *Suppleness of the spine:* a flexible back is a prerequisite for certain freestyle exercises (often in conjunction with suppleness of the legs, as shown in the Bielman, flag etc.). Exercises to improve spine suppleness: bridges, pushing up from the floor lifting torso over the back, then relaxing while exhaling, and lifting back again, etc.



- *Strength of muscles*: this can of course be built up with correct training and regular exercise in any healthy child. Back and stomach musculature are as important as leg muscles and arm strength. Exercises to improve muscle strength: push-ups and chin-ups, sit-ups, general floor exercises, lifting legs all positions.
- The other important part of talent is the capability of the vaulter of understanding and learning optimal technique. Most of this can be explained, but the last fine tuning has to be instinctively grasped by a good vaulter to achieve optimal performance with best timing.

## *Optimum technique*

Technique in terms of bio-mechanics is the flow of movements with an optimal, that is, minimal, quantum of action. This means that the vaulter will perform an exercise in such way as to use the least energy, that is, just enough strength to produce the best performance, therefore achieving highest efficiency which is part of optimal technique. This can only be achieved if the vaulter has certain motor capabilities such as flexibility, endurance and strength. Keep in mind that vaulting is not a power sport: flexibility and endurance are more important than sheer muscle power.

- *Correct timing*: a good sense of timing is hard to teach to someone who does not possess it instinctively. As a trainer you should be able to detect if and when timing is the problem, and try to give useful directions to correct the mistake. For this you must be able to analyse when a push or jump-off etc. must occur, and if you are not a vaulter or gymnast yourself, this may be difficult.

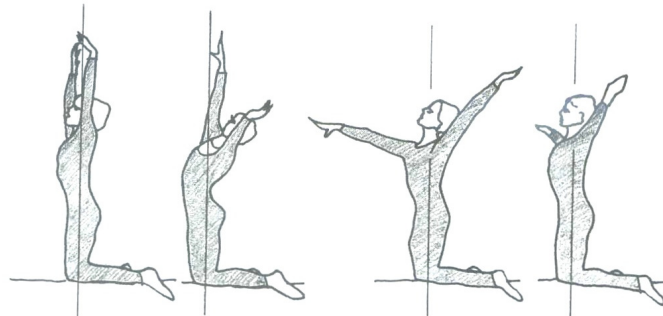
Many beginners have timing problems, not because they can't feel the movement of the canter stride, but simply because they do not yet possess the necessary body control and precision



to perform moves fast enough to fit them onto said canter rhythm. Here it greatly helps to practise swings etc. on the barrel in varying speeds. Ask them to speed up the swinging exercises and so slowly get them to learn precision – which means enough body control to decide themselves how fast or slow they want to perform a move.

- *Correct body posture*: body posture has two components: the technically correct posture and aesthetical body posture or 'artistic expression'. It is clear that the artistic expression of body posture comes into play after the technically correct posture has been mastered, and must never work against the technically correct one.

*Technically correct body posture means the position of*: holding the extremities (hands, arms, legs, feet), the head, and the torso in a certain position (the correct one depends on the exercise) and also correctly in relationship to the horse. It is this position which will allow the vaulter to achieve maximum effect with minimum effort, and correct body position applies to static and dynamic exercises equally. It also depends on correct body tension, which is discussed below.



Technically correct posture remains the same despite variation in expression

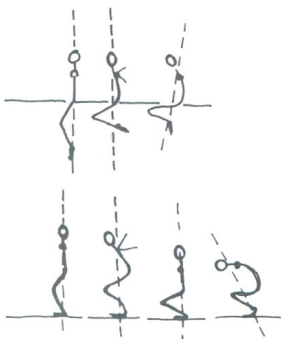
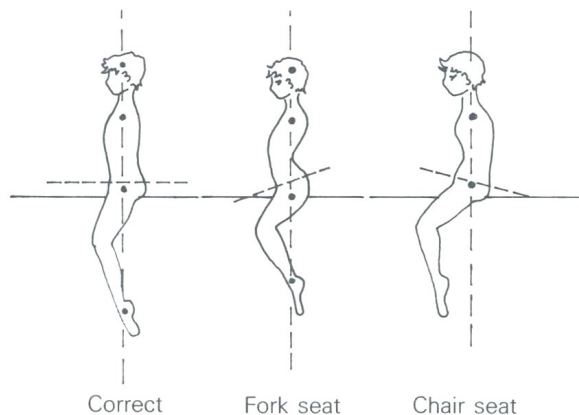
*Expression in body posture means expression while holding a position*: the extremities, head and torso should achieve an aesthetical show effect, without affecting the technically correct posture adversely. Artistic expression can be achieved without

changing the technically correct posture, by varying the posture of arms, head, torso, toes and fingers. In the example shown the technical posture of the kneel remains unchanged, while posture above that line may vary. Optimum execution of an exercise means having achieved the *sum* of very good technical posture *and* very good aesthetical posture.

- *Correct holding*: part of holding himself correctly in an exercise presupposes that the vaulter is positioned in the right spot on the horse. Take an example of the flag: when the supporting leg is in the wrong spot on the horse's back, the vaulter will be off centre with his gravity point and needs significantly more strength (in the supporting arm) to maintain balance. (No optimum action quantum achieved, he is wasting energy to make up for a mistake.) The supporting points in any exercise (three in the flag: the arm, the knee and – all along the shin – the foot) must receive even weight distribution to result in best efficiency and balance. Refer to the chapters on the compulsory exercises for description of correct position on the horse.

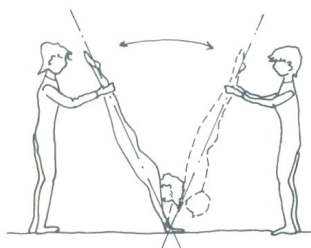
The other aspect of holding is how the vaulter holds his own body in regard to the relationship of different body parts to each other and to the gravity point. Let's take the simple example of the basic seat. As described under the compulsory exercises, the vaulter must achieve a straight up-and-down line, vertically from head to shoulder to hip to ankles and pointed toes, when seen sideways. The knees must be pushed down, that is, they must stay as close to that vertical line as possible, although they deviate from it a bit, because of the curvature of the horse's belly. And this is not only for aesthetic reasons, but rather because it is technically correct. Let's analyse what effects are to be seen, when deviating from the correct position.

If the vaulter pulls up his knees, he must tilt his pelvis backward in order not to lose his balance on his seat. His hips



and pointed toes will leave the prescribed vertical line, and his arms will try to make up for the shift in gravity point by overstretching to the back, while his head tilts to the front. The loss of balance is obvious even in the stick-man drawing.

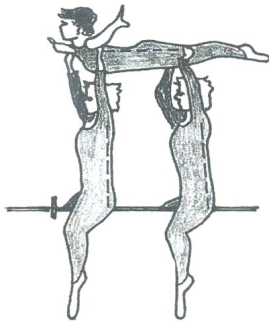
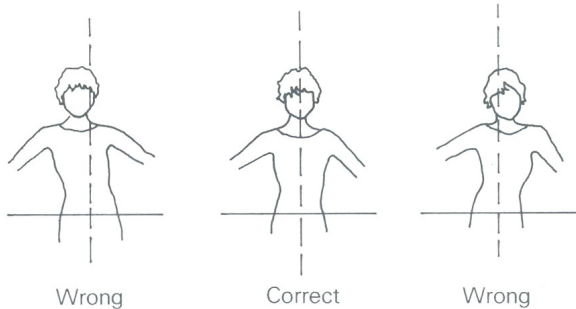
Another example is the stand: observe the summation of mistakes which occur when the vaulter tries to correct one evil with another. A tilted line in these drawings means loss of balance — or a fall.



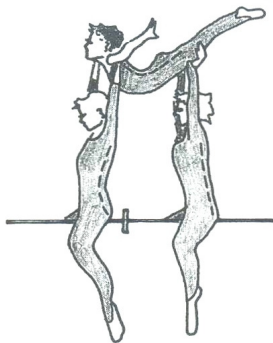
Exercise for improving  
body tension

- *Correct muscle tension:* part of correct holding is also correct muscle tension. The vaulter may hold his body neither limply, nor tensely or cramped up. All joints and muscles must be supple at all times to absorb the horse's motion softly and fluidly. Loss of balance always means that the vaulter will tense up in an effort to regain control. A good way to train for adequate body tension is to tip a vaulter back and forth between two supporting partners, while in the handstand. Make sure the whole body follows the tilting movement, not just the legs through curving the back! Explain to young vaulters that they must feel as if somebody pulled them up the ceiling by their toes, and the only joint moving in the exercise should be the wrists.

Overextending muscles or joints by force has the same effect of tensing up: this is why flexibility plays such a major



Correct



Wrong

role. To achieve with ease the holding of a difficult and extended posture without stiffening up with the effort, is what optimum body posture strives for. We have all experienced the effect it has on our neck and back muscles when we squeeze the telephone receiver under the same ear, or carry the heavy purse always on the same shoulder. We instinctively try to make up for the one-sided stress by tilting other body parts, in order to get the whole 'configuration' back into plumb! So if your sitting vaulter kinks in some way, as seen here from the front, he has to adjust it with another wrong kink somewhere else to regain balance. Thus mistakes multiply, the further he deviates from the correct posture, and therefore the more his muscles tense up with the effort – the further away he gets from optimal technique

- *Loss of strength through incorrect posture:* You also know that incorrect posture diminishes strength. Chiropractors make their livelihood from people disregarding that. When lifting a heavy object from the floor, you should keep your spine straight and lift out of the knees, that is, the back and leg muscles. The same applies to vaulting: a lifting underman needs all his strength, and must be able, through his correct posture, to use his muscles efficiently and minimize stress on the joints. For more information on correct training of team kur exercises refer to chapter 24.