



Chapter

Russian bar

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RUSSIAN BAR

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The purpose of this manual is to be an introduction to Russian bar and to help with the fundamental elements of Russian bar technique. The intention is that with the help of this manual, teachers and students will be able to construct their own bar and safely begin training bar technique.

The manual will cover some basics of both single and triple bar work. There are alternatives and variations to the techniques and equipment discussed in this manual and over time students and teachers may discover their own preferences and adjust their practice accordingly.

Trampoline is an essential learning tool for the development of flyers' acrobatic skills. It is advised that the teacher and flyers have a sound knowledge of trampoline technique. This manual will give a limited introduction to how the trampoline can and should be used but further knowledge is essential to become proficient as a Russian bar teacher or performer.

Part 1. / Why single bar or triple bar?

There are some tricks that are much better suited to the single bar. Skills involving handstands for example, are easier on the single bar as the flyer can grip a single rounded bar better than a flat wide bar. The flex and length of a triple bar creates too much power for handstand tricks and could be dangerous for the flyer trying to land in handstand.

On the other hand the potential power of the triple bar allows the flyer to execute and land a much higher level of acrobatic skills.

It takes time for the bases to understand how to balance the flyer efficiently and equally as much time for the flyer to stop fighting for balance and give the responsibility over to the bases.

The single bar is an excellent learning tool for the basic control of balance for the bases and flyers and it is recommended that students spend time working on the single bar as preparation for working on the triple bar.

2.1. Single bar construction

A single Russian bar is one fibreglass pole. Second-hand Pole vaulting poles are widely used. Fibreglass, unlike other materials, is not badly affected by heat, cold or weather. As long as they are not cracked or weakened in some way, they should last a considerable time.

Typically lengths vary between 2.5 and 3.5 metres long, with a diameter of 45-50 mm. The poles that are used for single bars are slightly larger in diameter but shorter than those used for triple bars.

You need to consider the weight of the flyer when selecting a pole. A more flexible pole is used for lighter flyers and a less flexible pole for those that are heavier.

Pole vaulting poles are made with a slight curve. The correct way up should be with the lowest point of the curve closest to the floor (like a smile). Once you have indentified the way the pole bends, you can put a small mark with tape or pen to indicate the top side of the pole at each end. This will help the bases to identify which way to hold the bar.

The central 1 to 2 meters of the pole is taped (e.g. with physiotherapy tape) for grip and also at each end (where the bases will hold it). The very centre of the pole should be marked with a clearly visible piece of tape.

You will need to try different bars to find one with the amount of flex that suits the group. However, the amount of flex of a single bar is not as important as with triple bar work as the tricks performed on a single bar tend to be less dynamic.

If the bar flexes too much one possible solution is to slide a smaller diameter pole inside the existing one.

2.2. Triple bar construction

A triple bar is made up from 3 fibreglass poles bound together to make a flat plank. First check your poles for cracks or general damage. By tapping the poles lightly with a metal object you will hear by a change in sound if there is a crack.

The poles will have a slight natural curve. Place the poles together in such a way so that they all naturally curve downwards.



Part 2. / Construction of the bars

There is no set length for a Russian bar and individual troupes will need to discover what length they prefer. Typically, Russian bars are around 4 – 4.5 meters but it may vary beyond those limits. What is important is that the length of the bar suits the weight of the flyer. A heavier flyer will need a shorter and more rigid bar. Conversely, a lighter flyer will need a much more flexible bar or they will not have the weight needed to bend the bar and generate power from it.

Some poles will have more or less flexion than other poles. If one pole is more flexible than the other two, place it in the middle of the three to ensure that both edges of the bar act in the same way and give the pole rigidity. A more flexible pole on the outside will cause the Russian bar to twist to that side.

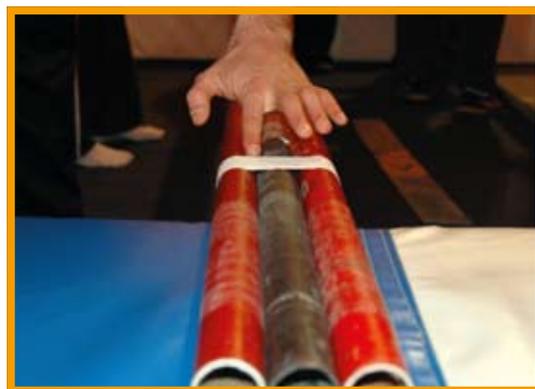
More flexible bars will make the job of the bases easier as it spreads the load over a longer time. Obviously the bar is too soft if the bar flexes excessively and touches the ground under the flyer at the bottom of the tempo.

Step 1

When you have the poles aligned and at the same lengths, use tape (e.g. physiotherapy tape) to hold the poles together. Place tape in three evenly spaced places along the pole, one at each end and one in the centre. Avoid pulling the tape too tight to avoid twisting the poles. These three strips of tape are just to hold the poles in the correct position.

Step 2

Apply soft setting silicon sealer between the poles. This will fix the poles in place but will not affect the flexibility of the Russian bar. After applying the silicon from the tube, use a wet finger to push it into the gap.



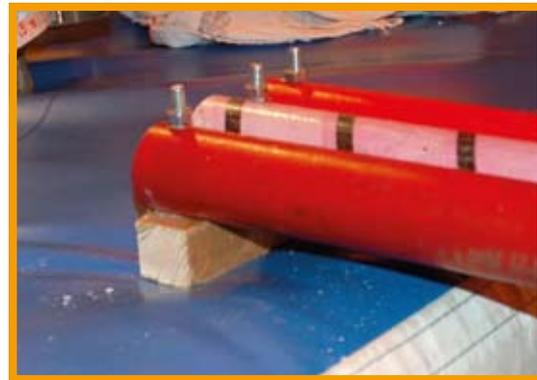
Part 2. / Construction of the bars

In the future, if you want to replace or re-use any of the poles, the silicon is easily removed. Apply the silicon to both the top and undersides of the poles.

Once the silicon has been applied put two or three more binding strips of tape along the length of the pole. Again, this is just to hold the poles in the correct place while you continue to work.

Step 3

At each end of the bar on the underside attach as small section of wood (approx. 3cm x 3cm x the width of the Russian bar). Fix it with bolts that go through the wood and the poles. It is advisable to put wooden stoppers into the end of the poles so you when you tighten the nuts of the bolts you don't crush and damage the fibreglass.



Step 4

To make a flat landing area on the bar a thin and flexible length of board is attached to the top side of the bar in the centre. The base of a snowboard is good for this but any thin flexible wood that will not restrict the flex of the bar will work. The board ensures that the contours of the poles cannot be felt by the flyer and provides a stable landing platform. Take care to ensure the landing area is centred correctly. Use the marks made earlier and then double check with a measuring tape!



The wooden landing strip needs to be slightly narrower than the poles to ensure there is not an overhang (causing sharp edges on the sides of the bar).

Part 2. / Construction of the bars



An alternative to a wooden landing area is to lay rope in the joins between the poles. This will fill the gaps between the poles. The rope only needs to be as long as you want the landing area to be. The rope is held in place with more silicon. It is optional to cover the landing platform with foam. It is more comfortable and safer for beginners or those working in bare feet but can be slightly less stable to land on

Step 5

Turn the bar over and attach foam on the underside of each end of the poles. This is the padding that protects the shoulder of the bases.

The padding can be any thickness (the green foam in the photo). Padding makes it more comfortable for the bases but too much can make the bar unstable on their shoulders and difficult to control.

When constructing a bar for a school, or when the bar will be used by many different flyers, you need to make the padded areas at the end of the bars longer. This makes it possible for the bases to move in towards the centre or outwards to the ends which has the effect of making the bar shorter or longer which will allow flyers of different weights to work on the same bar.

Step 6

The final cover of tape is applied in the same way as tape on a trapeze bar. Overlap each piece of tape by half it's width to completely cover the pole from end to end. When taping over the landing area use your finger to hold down the rubber. This will ensure a nice rounded edge. Again, avoid pulling on the tape too much which will cause the bar to twist.



Part 2. / Construction of the bars



Taping is enough to hold all the rubber in place but extra glue can be used if you feel it is needed. The negative aspect of using glue is that, should a pole need to be replaced; the rubber will be destroyed when removed.

To finish the pole, mark the centre of the bar and the edges of the landing area with clearly visible tape.

Give the silicon one day to dry before using the bar.

Be careful when storing or transporting Russian Bars. They are easily damaged if they are knocked or dropped.

After time the group may start to feel the bar twisting more than normal. This is a sign that the bar needs to be re-glued and re-taped and/or the poles inspected for cracks or damaged areas.

Part 3. / Safety

It is the role of a good teacher to instil into all members of the group that Russian bar is potentially a very dangerous discipline. For that reason, certain safety measures are put in place during training to minimise the risk.

Ensure the training environment is safe. The bases need a clear area either side of the bar so they can move laterally without trip hazards with sufficient matting of an appropriate density and size. At least 2 – 3 meters of mats should be on either side of the bar to allow for lateral travel and falling.

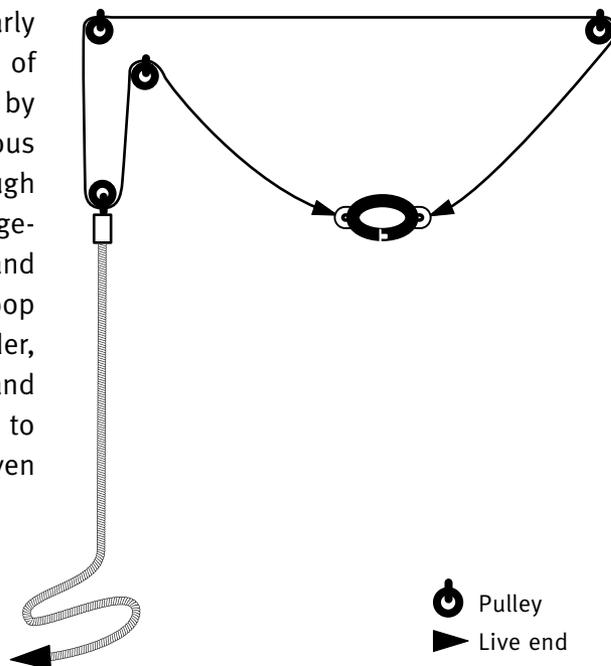
□ 3.1. Communication

The group must develop a few simple and clear key words to make communication efficient and precise. Any member of the group has the right to call ‘stop’ or ‘no’ if they think it is unsafe to carry on or feel something wrong, **at which point activity should cease immediately.**

Bases can kill the power to a large extent if they see the flyer is out of control, but if the flyer tries to stop jumping while the bases are pushing, the flyer can still be thrown from the bar. However, when all three group members are working together and communication between them is clear, the risk of injury is greatly reduced. Both the bases and the flyer must become proficient at killing the bounce when necessary, either when things go wrong, or when a sequence comes to an end. The flyer can train this on the trampoline as well.

□ 3.2. Lunging

A tracking lunge system is particularly useful to follow the lateral movement of Russian Bar. This system is achieved by using a lunge which is one continuous piece of rope from one live end through the two pulleys, down towards the lunge-holder, back up through one pulley and down to the other live end. On the loop hanging down towards the lunge-holder, hang a pulley (wheel in loop of rope) and attach a drop-line for the lunge-holder to hold. When using this system, an even tension on the lines is essential.



The flyer needs to have confidence in the lunge holder who should have a technical knowledge of the skills they are lunging. It takes practice and experience to be a good lunge holder and new teachers should work up from the basic tricks before trying to lunge more advanced skills. Lunging students on the trampoline is a good environment to practise lunge techniques.

Although the lunge is essential for the more difficult tricks, it is important that the lunge is not over used and that neither flyer nor bases become dependent on it. There are many skills at the beginning that can and should be learnt and practised without the lunge. It is absolutely vital that the bases never become complacent or develop lazy habits because they know that the flyer is on the lunge. It is equally as important that the flyer lands and finishes each jump properly and doesn't rely on a 'save' on the lunge. They must all work with the knowledge that the lunge will not always be there. Over reliance on the lunge can make the transition to working off lunge a very difficult one. The lunge holder also needs to make sure they are not over lunging the trick. Too much pull on the lunge will have an effect on the flyer, and if not controlled well can actually restrict the movement or change the way it feels for flyer and bases. Equally, too much slack in the ropes can also be hazardous as the lunge-holder won't have control of the flyer on the descent if needed. The flyer could also get caught up in the ropes.

3.3. Spotting

Security, either psychological, physical or both, is needed when training off lunge. Spotters need to be aware of their own physical limits – for example, smaller people may not be able to spot safely – and the group should also choose their spotters carefully.

The spotter needs to be committed to the task and understand that they are being trusted by the rest of the group to save the flyer from a fall if necessary at possible risk of injury to themselves. Spotters need to understand the communication used by the group and communicate with them when necessary.

As with lunging, spotters must be aware of the tricks that are being performed and sometimes need to get very close into the bar. This may mean at times the bar comes into contact with the spotter which is purely a result of the spotter coming in to catch the flyer correctly as the bar moves towards him. The spotter should aim to get both arms around the waist of the flyer on landing so they have control over all possible directions that the flyer could fall. The spotter should be able to catch and release the flyer again if they know the trick has landed safely.

When every member of the group is ready to work bigger moves off lunge and/or without spotters, every member of the group must feel confident with the level of the tricks they are performing or catching and agree on what they will do beforehand. Doubt creates accidents.

Part 4. / Basics of single bar

There are three main positions for single bar work; waist height, chest height and above head height. At all levels the bases must have good posture to protect their backs. At waist height, the bases should stand as up-right as possible, arms slightly bent to ensure the bar doesn't hang too low and with the weight of the bar in the palm of the hands not just the fingers. When holding the bar at chest height, keep both elbows down to ensure the hands are rotated enough so the weight of the flyer is again, taken on the palm of the hands and not on the thumbs.

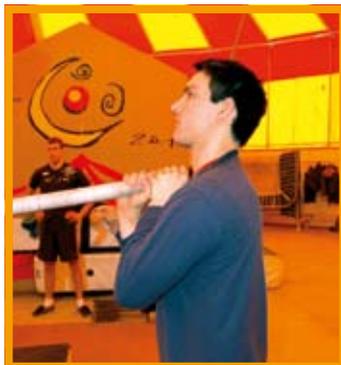
When holding the bar at chest height or overhead, have the back hand covering the back edge of the pole. This will ensure the base is not injured by the hard end of the pole as it is covered and protected by the base's hand.

The three main grip positions used by the bases:

Waist height



Chest height



Above the head



Note: The porter should have his body aligned. Shoulders should be more flexible than what is shown on the pictures.

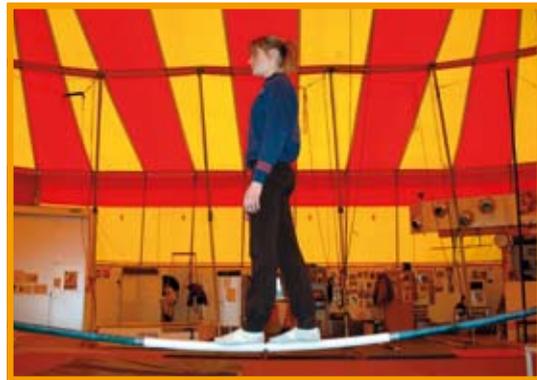
When lifting from the waist position to the chest position, the bases use a cross hand grip. Using a gentle tempo, the bases lift the bar and the flyer to around chin height where the hands are rotated under the bar to the normal chest height position. Some bases like to rest their hands on their chest to help support the weight of the bar as they search for the balance.



Part 4. / Basics of single bar

The grip change can be either one hand at a time or both together. As long as the bar doesn't spin, which will obviously disrupt the balance of the flyer, either method is acceptable.

- The tempo and lift are gentle to ensure the flyer doesn't lose contact with the bar.
- The bases should maintain the bar in front of the body and move the whole body to move the bar under the flyer in order to search for the balance. Never move the bar using the arms alone. Bases should avoid balancing on one foot and aim to keep their weight distributed over both feet.
- When moving from side to side, bases must not cross the feet, but must instead move in a crab-like fashion. Aim to make the movement smooth and controlled.
- When the flyer mounts the bar, the bases squat low enough so that the flyer can step on easily. Bases can rest the elbows on their thighs until the flyer steps on. The flyer places the back foot on the bar first and then places the front foot to stand. This is easier for the flyer than trying to find the bar behind with the back foot.
- As soon as the flyer's second foot is in place on the bar, the bases can stand up and begin to search for the balance. Once standing, the flyer's weight should be evenly distributed on both feet, making sure the feet are in line (one foot in front of the other) and perfectly on top of the bar.



Part 4. / Basics of single bar

One of the initial difficulties for flyers is to resist the temptation to find their own balance and to allow the bases to find the balance for them. The flyers should keep their arms down by their sides, fingers lightly touching the sides of their thighs. This stops the flyer from using their arms to balance. If their hands are sliding up and down their thighs it shows that they are trying to balance themselves by using their upper body and not allowing the bases to search for the balance. 'Fixing' their fingers against their legs in one position will help to stop this.

Having more experienced flyers work with beginner bases and vice versa will help the less experienced people to focus on their technique and understand their role in the group.

- The flyer must keep the legs strong and the upper body relaxed.
- When balancing the flyer, the bases should look at the torso of the flyer to spot movement early and react accordingly.
- The flyer should keep the head straight and look at the end of the bar.
- The bases can make fine adjustments with the arms and shoulders but any larger corrections must be done by moving the feet. The bases must react quickly but not suddenly to any movement.

A good balancing exercise for both flyer and bases is for the bases to swing the bar from side to side. The flyer must get used to not reacting to being off balance and the bases practise working together to control the flyer's movement.

Bases could also practise balancing objects on the bar. It is advisable to use something soft or something that won't hurt anyone if it falls. This exercise ensures that the bases are fully responsible for the balance and can be done at both waist and chest height.

When starting work on the tempo jumps, the flyer initially does no leg bend but simply maintains a standing position while he/she is 'bounced'. Once the bases have control of this step the flyer can add a leg bend and push to increase the power.

- With jumps and somersaults, it is the responsibility of the flyer to maintain their position over the centre of the landing area - to come down feet first without travelling too far forwards or backwards. Although the bases could adjust their position forward or back to compensate, this complicates their job and can be dangerous. It is easy for one base to pull the bar from the other base's grip or to push the bar and cause the other base to fall backwards.
- When working with the bar above the head the bases need to ensure they keep a strong back position. With the arms above the head, it is more difficult to stabilize the lower back and therefore teachers and bases should look out for incorrect postural positions. At times the strength of the bases will be a limiting factor and physical preparation and conditioning needs to focus on stability and strength, particularly of the lower back.

This is the correct position of the bar over the head.



If the bar is taken too far over the head there is a chance that as the bar descends it will come down onto the head of the base or the base will have to arch their back to avoid the bar hitting the head.



In this picture the bar is too far forward. It will be impossible for the base to control the descent of the flyer.



4.1. Handstands on the bar

For handstands on the bar, the wrists of the flyer must be directly on top of the pole with a slight inversion of the arms to avoid straining the wrist. Too far either forward or back will make the bar twist and balancing the flyer then becomes difficult.

At the beginning the flyer should practice the handstand with their hand open (fingers pointing to the ground) as opposed to gripping the bar. This will ensure the flyer is not attempting to control the balance and that the palms of the hands are properly placed. If it is too far back, it will hurt the wrists, if it is too far forward, it will make the bar rolled and feel unstable.

Part 4. / Basics of single bar

The mount to handstand position is from front support on the bar. The flyer may need to bend the legs to avoid touching the floor. Some flyers do it with straight legs, tilting their body forward more, keeping their feet clear of the floor. It is also easier when the control is better and there is no mat on the floor. The bases make a circular motion following the movement of the flyer, pushing behind the centre of mass on the way up, and then back under the flyer as they pop the flyer into handstand.

Initiating the return to front support from handstand can be done either by the flyer breaking the shoulder angle or the bases moving the bar from under the flyer. Either way, the bases need to bring the bar towards the flyer's hips to slow and control the descent.

4.2. Suggested skill progression for single bar

- Climb on the single bar at waist height with a spotter
- Practise falling safely sideways
- Climb on the single bar alone
- Holding balance at different height
- Handstand with a spotter at waist height
- Handstand at different height
- Coming down of a handstand with a spotter or with lunge
- Going up on a handstand with a spotter or with lunge
- Going up and down in a handstand position.

Part 5. / Basics of triple bar

5.1. Bases' posture and position

The bases stand facing each other, both with the bar on the same shoulder. The majority of people prefer the right shoulder.

It is not absolutely forbidden to have the bar on opposing shoulders, (i.e. one basing on right shoulder, one basing on left shoulder) but it's a lot better on same shoulder. If not, the bases would both be standing to one side of the bar (meaning that the flyer would always be off centre to them) and the bar would tilt or tip off the shoulders easily.

Both bases lean slightly forward creating a slightly wider and more stable base. This also compensates for the outward push of the bar which occurs after the bar flexes and the flyer is projected upwards.

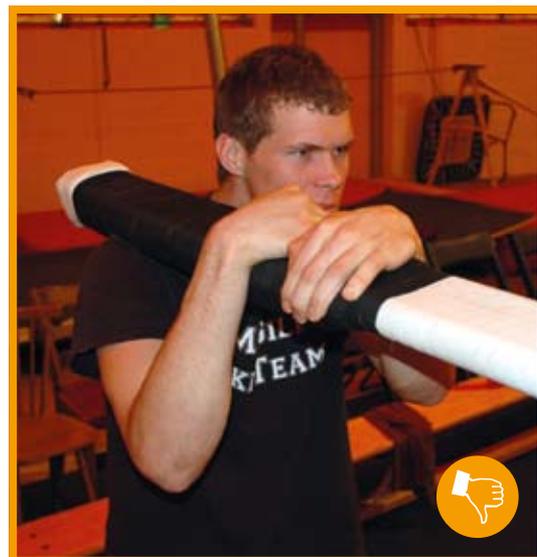
The base lifts his outside elbow to ensure the bar is kept as flat and as stable as possible. The base places his hands on the bar to add power and stability. The arms should be extended at a comfortable distance from the body. It is personal preference as to whether the right or left arm is in front.



Correct position



Incorrect position



Part 5. / Basics of triple bar

The base's legs should be apart but if they are spread too wide, walking sideways obviously becomes more difficult.

Keeping his chest in, the base needs to shift his torso slightly to the left (assuming the bar is on the right shoulder) so that the bar sits over the centre of the space between his feet. He should then feel that weight is distributed evenly on each foot with no strain on the back.

If the bases are different sizes, one needs to straddle slightly more than the other to compensate. The taller base should be at the back as the slope of the bar is more comfortable this way for the flyer. Also, in general, taller bases are stronger and more able to cope with the extra weight if the flyer loses control and travels backwards on the landing (more usual than forwards).

□ 5.2. The 4 tasks/stages for the base

1 Balance

- The bases need to react as soon as possible to any loss of balance of the flyer. Their movements must be smooth and not jerky.
- Bases should keep their legs slightly bent so they can react quickly and smoothly, moving sideways as necessary, without crossing the feet.

2 Push

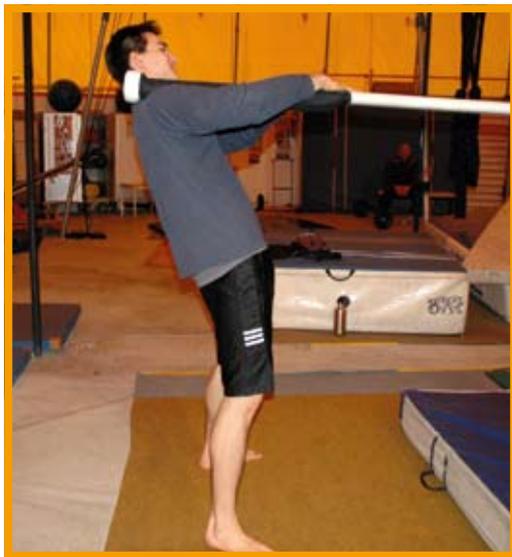
- To charge the bar, the bases flex in the hip and push down on the bar to increase the flex of the bar.



- They should bring their weight well forward over their toes to compensate for the resulting push back from the bar. Bases are pushing the bar down with their hands. (it will keep the back position right and it will keep the bar from rebounding from the shoulders on take off and on landing.)
- The speed of the tempo needs to be adjusted with the different weight and height of the flyer and also the flex of the bar. Bases will be able to feel when the timing of the push from the flyer is correct.

3 Place the bar under the flyer

- The bases should watch the torso of the flyer. The bases can picture the rectangle shape formed by the shoulders and the hips and should aim to keep the rectangle straight and above the Russian bar. The bases should not watch the feet or legs of the flyer.
- It should always be the aim of the flyer to land in the centre of the bar. However, if the flyer travels backwards on landing, either the base at that end must bear the extra weight of the landing or both bases move to get the bar under the flyer. Moving in this direction is difficult for the bases as it is hard to maintain a good catching position. It can also be dangerous (as outlined previously) and the chance of injury is greatly increased.



4 Catching

- The bases should come up as high as they can to catch the flyer. Some bases will jump to get the bar to meet the feet of the flyer as soon as possible. This means the flyers fall less and the bases can spread the force of the landing over a larger distance. These two factors combined will make the landing much softer.
- A good exercise to help bases to work together is to have someone throw a ball (e.g. a juggling ball) into the air and the bases aim to get the bar under the ball.

Part 5. / Basics of triple bar



It is the bases' job to place the bar under the centre of gravity of the flyer and the flyer's job to ensure that their feet are placed directly under their centre of gravity for landing with the feet aligned correctly. If the flyer has made a major error and is, for example, falling sideways, the bases will have no choice but to place the bar under the flyer's centre of gravity even if it means the flyer will land on the bar on their side. It is still much safer to land sideways on a flexible bar than on the hard floor.

- With jumps and somersaults, it is the responsibility of the flyer to maintain their position over the centre of the landing area. Excessive travel forward or backward, is not acceptable and training (trampoline training is an essential tool here) needs to focus towards staying directly over the centre of the bar.
- The bases must have knowledge of the tricks being performed. It is important that the bases know what to expect and can see if a move has been under or over rotated.
- If the flyer loses balance forwards or backwards and needs to walk along the bar to regain control, the base can put up one hand as the flyer approaches to prevent them falling on top of the base, over the base, or off the back end of the bar.



The bases are constantly searching for the balance of the flyer including when the bar is flexed under weight. It is important that they return to a comfortable standing position as soon as they can as it can be very hard on the knees and tiring to search for the balance in a prolonged squat position.

It is also important that the bases understand and practise what happens when something goes wrong. A good exercise is for the flyer to jump deliberately without having perfect balance – on someone else's command for example, whether they are ready or not. The bases then get to build awareness and strength in areas outside of the ideal position.

5.3. Flyer training

Note: All the flyers should have done acrobatics prior to learning Russian bar and practised on how to land and crash safely going forward, backward, sideways, under rotating and over rotating somersaults.

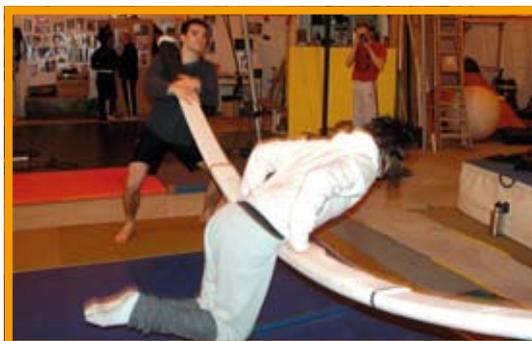
After the flyer is comfortable with the correct standing position and allowing the bases to be controlling the balance, before any jump training is started, the flyer should practice walking backward and forward along the bar. This will help prepare them for the inevitable loss of balance that occurs during training.

1 Mounting the bar

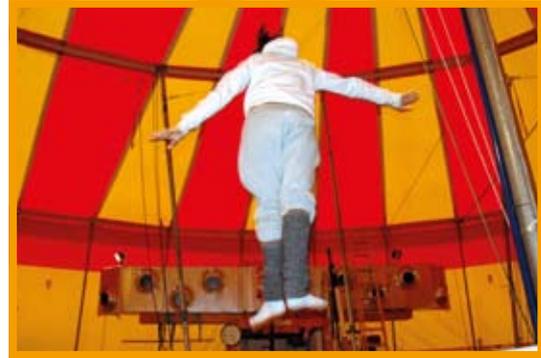
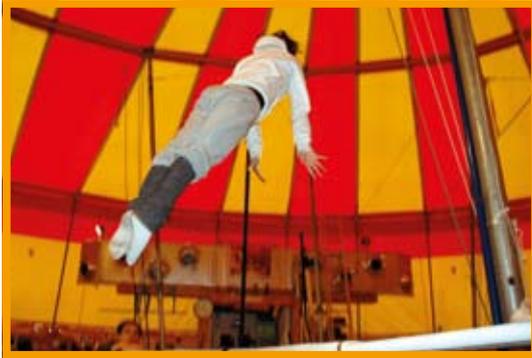
There are several ways to mount the bar. Initially it is best if the flyer can step on. This will mean the bases need to squat low enough to allow an easy step for the flyer. The flyer may need to be supported by the teacher.

A more advanced mount is from front support onto the bar:

- The flyer starts facing the bar, and with a jump, places his/her weight onto the bar on hands and the hips (front support), bending the legs in as the bar goes down. The bases follow the flyer's tempo and add power to charge the bar. As the flyer leaves the bar, they push through the arms, come upright, while the flyer makes a 1/4 turn and land on the bar facing towards one of the bases. The feet land in a turned out 4th position, turned to the outside.



Part 5. / Basics of triple bar



2 Foot positioning for the flyer

When standing or jumping, as on the single bar, the flyer has one foot in front of the other either side of the centre line. The flyer will need to discover which foot they prefer to be in front. The feet should be in-line and central on the bar. If either or both feet are out of line or too close to one edge of the bar, the bar can twist.

Correct foot position



Incorrect foot position



To land back on the bar after a jump the flyer must be in 4th position.



This position is much more stable way to land than the feet in-line position where the ankles are at more risk of twisting injuries. The flyer should have straight legs but must not be locked. Locked knees could be forced into hyper-extension upon landing. At the beginning flyers may try to bend their legs to absorb the landing as they may do on the floor. However, they must learn to keep the legs straight to allow the bar and the bases to absorb the energy from the jump. The flyer can then bend their legs to absorb the recoil of the bar if they want to stop jumping, in the same way you would kill the bounce on the trampoline. When on the bar the flyer should aim to keep both feet flat on the bar. It is tempting to lift the back heel.

3 Initiating the jump

Before initiating the jump, the flyer waits for the bases to find the balance – when they do; the base in front of her will give her a clear (usually audible) sign that they are ready. The flyer makes a gentle rock back onto the back foot lifting the toes of the front foot which signals the start of the tempo which the bases will follow. This move is purely a signal to them and has no other function. The tempo continues with a rise on two feet (arms rise with the uplift), a leg bend with the feet pushing into the bar (arms down by sides) and then the push out which is generated by the bar flexion (arms raise on jump). Achieving the correct synchronisation of the leg bend and the arm lift will have a significant effect on the power and stability of the jump and the timing of the bend and push will take time to perfect. The flyer is trying to bend the bar as much as possible to create power and should initially start this work on the trampoline. The bases need to feel and understand the difference between the right and wrong timing of the flyer's push and must tell the flyer what they feel. During the leg bend phase, the bases must continue to search for the balance. At the beginning it is common to lose control and send the flyer off the board at an angle.

Before any somersault training on the Russian bar, it is important that the group masters the foundation skills. It is important to control the balance before jumping and then, they should be learning to jump high and consecutive jumps before learning somersaults, not only for the bases training, but also to feel good about rebounding on the bar. This way, they will not panic if they rebound after a somersault.

The trampoline will be one of the most important learning tools for the flyer. All acrobatic skills should be mastered on the trampoline first. The obvious benefit of trampoline training is that it requires only one person. It is much less labour intensive than working on the Russian bar where the bases must be present to train. The flyer must prioritise developing the correct and most efficient technique for somersault rotation and twisting rotation, and focus on consistent and accurate landing.

Part 5. / Basics of triple bar

The common mistake made by flyers is to initiate somersault rotation from the head. This will most likely limit height and cause unwanted and unnecessary travel. The flyer must always land on the central point of the trampoline and teachers need to strictly enforce this. Students that travel on the trampoline are using an incorrect technique which will not translate successfully onto Russian Bar.

5.4. Suggested skill progression for triple bar

- Climb on the bar with help
- Hold the balance
- Walking forward and backward
- Hold the balance while the bases are moving sideways on purpose
- From support, push but landing beside the Russian bar
- Mounting on the Russian bar from front support
- Little swings while keeping the feet on the bar
- Small straight jumps (only the bases kill the jump)
- Medium straight jumps (flyer and bases kill the jump)
- High straight jump (the increase of height should be done progressively and there has to be a consensus between all the students involved and the teacher).
- Consecutive straight jumps at low and medium height
- Tucked back somersault
- Piked back somersault
- Straight back somersault
- Back full.

Getting the height

It is important to use all the joints (toes, ankles, knees, hips, shoulders) because every joint that is extended, increases the force applied on the bed. Often the student will bend the knees on take off, or not fully extend the hips so they lose power and height. To get the maximum height, the muscles need to be contracted when you make contact with the bed and as the bed goes down. A downward force needs to be applied while the bed is pushing up, by contracting all the muscle groups and extending the joints.

Rotation

In order to rotate, the centre of mass has to be moved before the upward vertical force is applied and the body needs to be as straight and as tight as possible. It is essential to keep maximum body tension up to the last point of contact with the bed. The rotation doesn't come from the head or upper body but from the contact with the bed.

Arms

Lifting the arms on take off doesn't produce the rotation but it does produce more power in order to get higher. In all basic jumps, the arms should be lifted all the way up by the time the top of the jump is reached and are kept there until the body is coming down. This will develop the habit to have the arms up longer. This is important for more advanced elements, especially twisting skills. Because there is a reaction for every action, reducing any unnecessary arm movement will increase stability.

Training habits and pointers

It is a good idea to start a skill with a minimum of jumps. It usually takes between 3 and 5 jumps to reach the maximum height, depending of the level of the student. The students could bounce once more to get used to their height and then go. This encourages bouncing with a good technique (good timing with the bed). It is also good to practice controlling and adapting even if the bounce is not perfect. A useful skill to have for Russian bar where the synchronisation of, the timing of the bar and the two porters is not always correct. However, safety should never be compromised so, they should go if it is not perfect, only if it is not dangerous.

Students should be taught at a low height at the beginning, but as the control is improving they should be encouraged to increase their height.

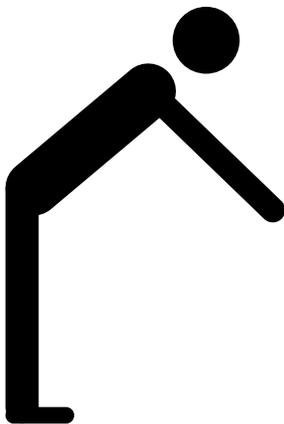
To help the students learn faster, whenever possible, have them do the actions on the ground first, then on the trampoline at low height, before attempting it higher. Have

Part 6. / Trampoline Training

them perform a modified version of the skill but in a position that requires more work e.g. If they wish to learn a tucked single somersault, doing a $3/4$ somersault in a straight position first will mean they have the necessary rotation when they use the same take-off as in the straight but tuck when they are in the air.

Body position on landing

When landing from somersaults, the body should be straight and with the arms by your sides. This position should be kept as long as possible, then, right before touching the bed, the hips are slightly flexed and the arms raised so that when touching the bed, the body should have the position showed below:



This way, the centre of mass is over the base of support (the feet) and the body should reach vertical at the bottom of the bounce in preparation for take-off for the next jump. The same technique will be applied on the Russian bar.

