Practical Guide of Physical Education (1912 Edition)
by Georges Hébert

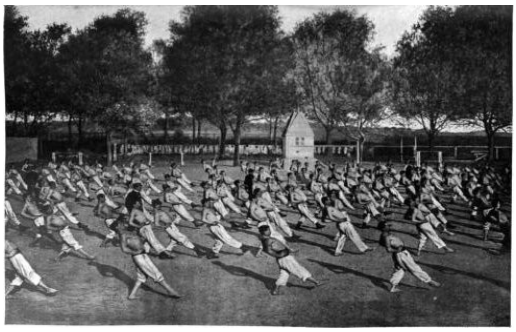
translated into English by Pilou

Foreword

This is a partial and incomplete translation of Georges Hébert's *Guide pratique d'éducation physique*, 2nd edition, 1912. The original work is over 500 pages, encompasses everything from building training grounds to muscular anatomy, and contains detailed theory and practical information. Faced with such a task, I decided to start translating things I was interested in, namely elementary exercises for building strength and flexibility and practical exercises of relevance for Parkour training. The book comes with many photographs, and I tried to keep as many as I could in the text, although I didn't go through the hassle to reference them directly in the text. The translation is far from literal and must contain some bias, although I tried to avoid interpreting or modernizing any of the text. In the very few cases Hébert's work seems at odds with modern knowledge, I added notes mentioning the differences, but kept the original text as well. I plan to include more of the book in later versions, but this should already allow you to build a solid workout in the style of the natural method.

Hoping this will inspire traceurs and traceuses to explore Hébert's ideas on physical education,
Pilou, June 2009

Model training session



Any physical education method should include two components: a learning part aimed at educating the body, improving endurance, strength and flexibility, teaching the basic techniques for elementary and practical exercises like walking, running, jumping, lifting, climbing, throwing, swimming and defending; and an application part aimed at developing to the highest degree the practical abilities, putting them to use, and providing the means to cope with many real life situations.

To well educate the body, these exercises must be incorporated into training sessions planned to logically and gradually combine the different types of exercises. An ideal session should include the following exercises, in successive groups:

Group 1.
1. Walks of all sorts
2. Posture-correcting movements
3. Movements to increase flexibility in the legs, arms and core

Group 2.
1. Elementary exercises of the legs and arms, simple or combined, freehand or with equipment
2. Lifting exercises
3. Throwing exercises
4. Defense exercises: boxing and wrestling

Group 3.
1. Suspensions
2. Planks
3. Climbs of all sorts
4. Balancing exercises

Group 4.
1. Hopping exercises
2. Speed races
3. Endurance races on small distances

Group 5.
Core exercises

Group 6.
1. Jumping and vaulting
2. Races, as in group 4
3. Swimming
4. Games

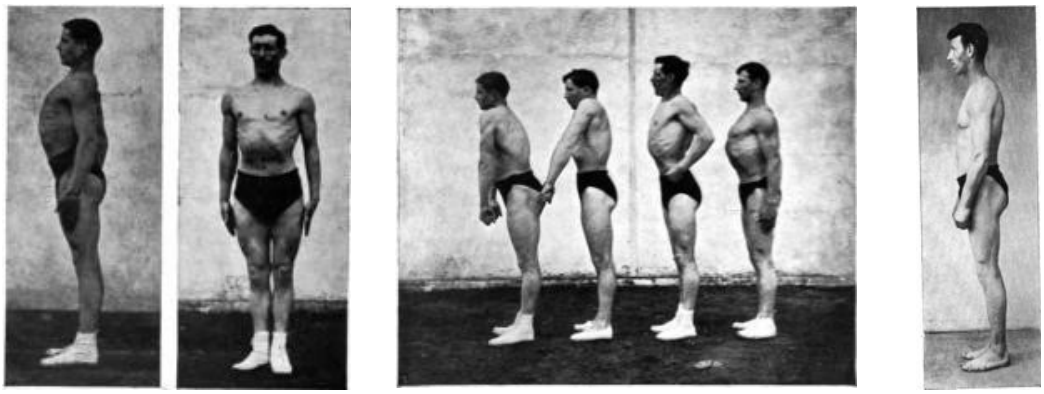
Group 7.
1. Breathing exercises
2. Walks

To build a session from these groups, one can select a few exercises from each group, ideally all of them if time permits. If time is limited, a short session should always exercise all parts of the body in turn rather than focus on a single group of muscles. There should be little or no rest between exercises if the successive exercises are properly planned to target different parts of the body, so one can rest one part while working another. The number of repetitions, the cadence of movement, the choice of easier or harder exercises should match closely the level of fitness of the students, so as to provide increasing intensity but not to over exert the body. Exercise should be daily, a complete session should fit within an hour. Exercises should follow a progression: any difficulty in performing an applied exercise means that the more basic exercises of the same type need to be performed more thoroughly first.

In the following pages, we present multiple exercises for all the elementary and practical types of exercises. Exercises are roughly ordered in terms of increasing complexity and difficulty within each group.

Elementary Exercises

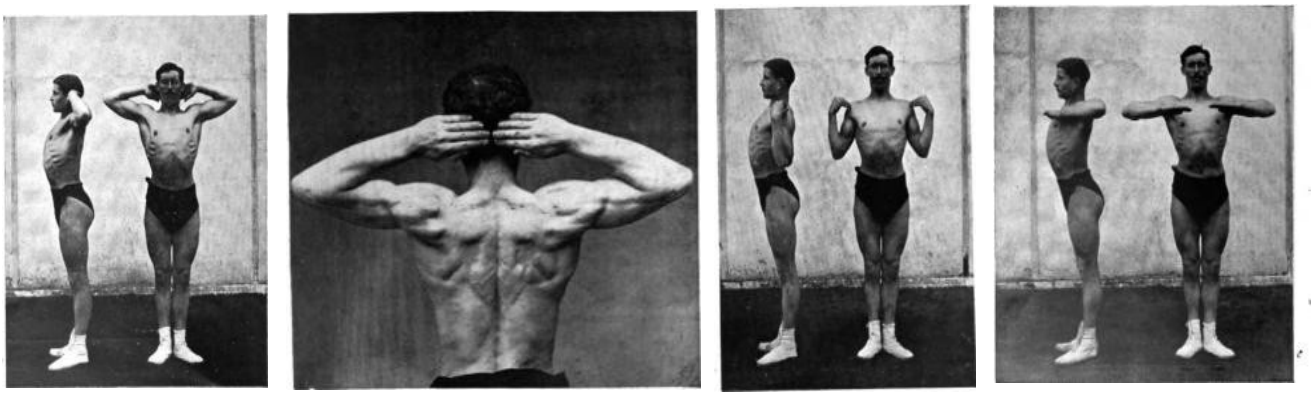
1. The straight posture and the fundamental arm positions



Straight posture: the neck is vertical; the chin is drawn back to force the neck backward; the shoulders are low and thrown back; the core is tight; the hips go forward; arms are loose, hands extended; legs are joined, feet at 60 degrees (first two pictures).

To get there: rotate shoulders backwards, straighten the neck and move the chin back, tighten the belly, straighten the legs, extend the arms and hands down (third picture) .

A poor posture is presented in the last picture.



The four fundamental arm positions: 1. hands to the hips; 2. hands to the back of the neck; 3. hands to the shoulders; 4. hands to the chest.

1. Hands to the hips: from the straight posture, bring the palms on top of the hips, fingers facing forward and thumbs back.
2. Hands to the back of the neck (first and second picture): from the straight posture, move arms laterally to bring hands to the back of the neck, palms flat. Bring elbows and chin back to maintain the straight posture.
3. Hands to the shoulders (third picture): from the straight posture, bend forearms without moving arms or shoulders. Hands should curve slightly to touch the shoulders, elbows are back and aligned with the body.

4. Hands to the chest (last picture): from the straight posture, move arms laterally, elbows back, forearms bent, hands flat facing down, thumbs touching the chest.

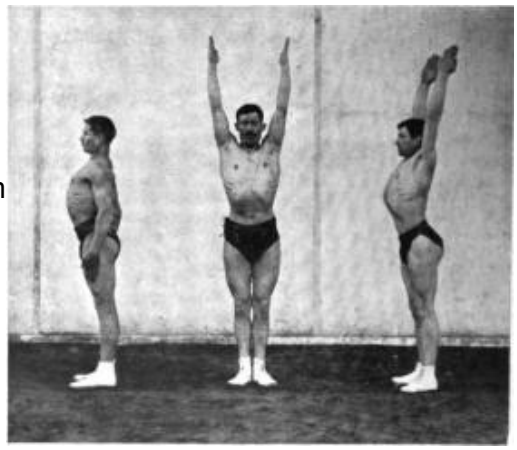
To get there: the arms postion derive from the straight posture: rotate the shoulders back and put the hands to the correct position, straighten neck and chin, core and legs, bring shoulders and elbows as far back as possible.

Straight posture, wider stance: some moves require starting with the legs separated. Start with any of the four fundamental arm positions, then move left leg further to the side while bending slightly the right leg. Center the body, which should keep the straight posture all along.

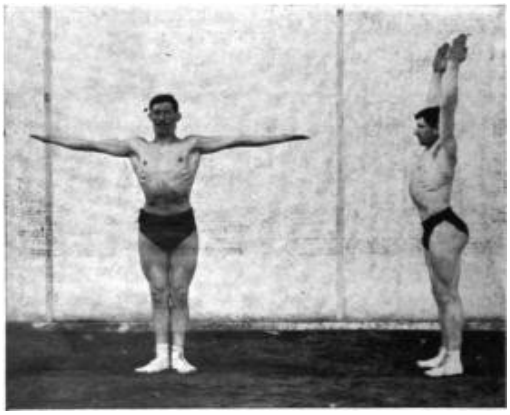
2. Arm exercises

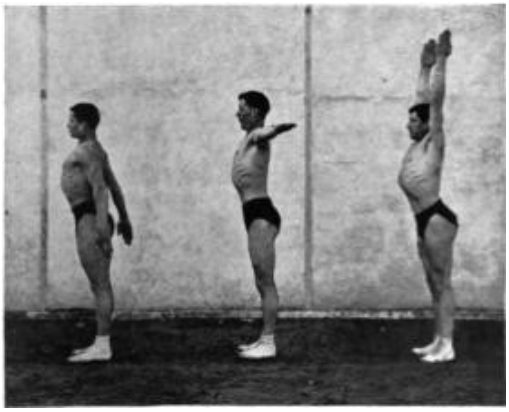
Unless stated otherwise, all moves start from the straight posture.

1. Raising the arms vertically: *Both arms:* raise both arms forward at the same time, keeping them straight. Arms are parallel, palms facing each other, slightly forced beyond vertical toward the back. Go back to initial pose. *One arm at a time:* raise one arm as before, keeping the other one as far back as possible, palm facing back. Go back to initial pose.



2. Raising the arms laterally: raise both arms laterally while rotating the shoulders back to bring the palms up. Continue all the way to vertical position, then back to horizontal arms. Rotate the shoulders to get back to the initial pose. The lateral position of the arms should be slightly forced beyond the line of the shoulders.

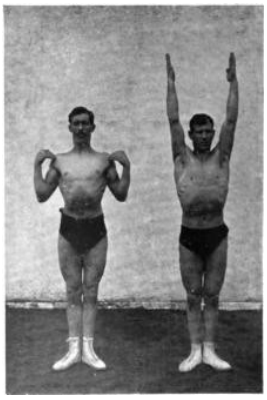


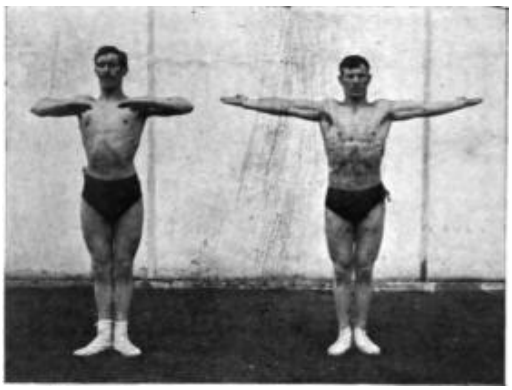


3. Raising vertically and lowering laterally the arms: bring the arms up as in first movement, bring them down as in second, including the rotation of the shoulders.

4. Raising the arms back, laterally and vertically: bring the arms up and back as far as possible, palms facing each other, move then laterally to a horizontal position while rotating the shoulders to bring the palms up,take the arms straight to vertical, palms facing each other, go back to initial pose bringing the arms down in front.

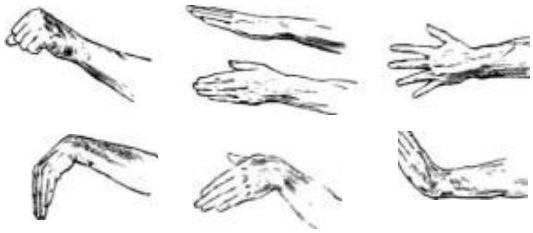
5. Vertical extension of the arms: from the hands to the shoulders posture, *simultaneously* or *alternatively* raise the arms straight and toward the back, then go back to initial pose.





6. Lateral extension of forearms with outside rotation: from the hands to the chest posture, extend the arms laterally, palms facing down, as far back from the line of the shoulders as possible, then rotate the arms to bring the palms up, then go back to initial pose.

The arm movements can be done with the hands following the arms, open with joined fingers, but also with open hands, spread fingers, closed hands, thumb on top, hand in flexion or extension.

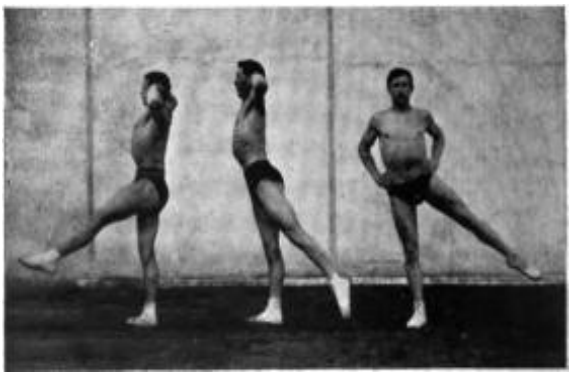


3. Leg exercises

Leg exercises are done with the arms in various positions, by default we are assuming the hands to the hips position.

1. Heel raises: raise the body as high as possible keeping the legs straight, going on the toes.

2. Lifting the leg straight forward: lift the leg straight in front, with extended foot, bringing the rest of the body slightly back, but keeping the straight posture.

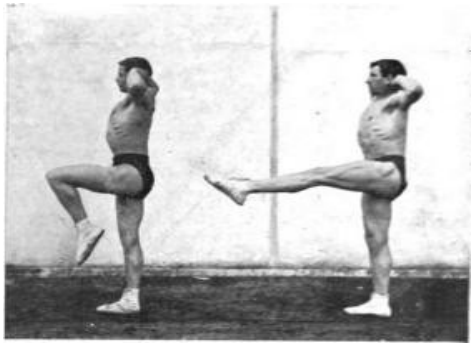


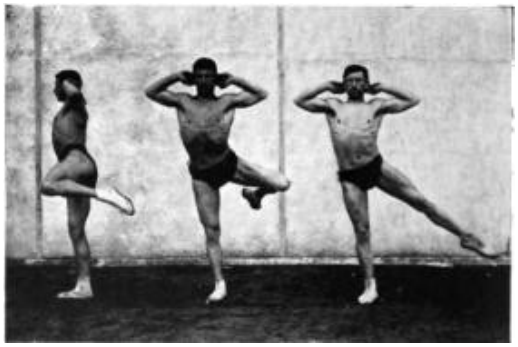
3. Lifting the leg laterally: lift the leg laterally, with extended foot, bringing the rest of the body slightly to the other side, still straight.

4. Lifting the leg backward: lift the leg straight to the back as far as possible, keeping the rest of the body straight and slightly forward.

5. Lifting the leg forward, laterally and back: lift the straight leg forward, bring it laterally, then back.

6. Lifting the thigh and extending the leg: lift the thigh with bent leg, extended foot, then extend leg, then go straight back or bend the leg again.

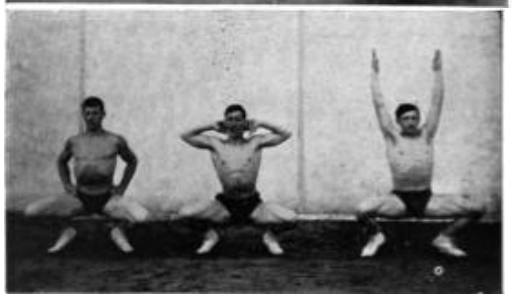




7. Lifting the thigh laterally: lift the thigh with bent leg, then extend leg to straight, then go back.

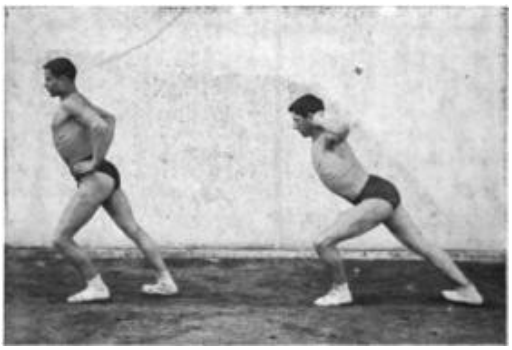
8. Squatting, feet together: going on the toes, squat down opening the knees, keeping the rest of the body straight, then back up.

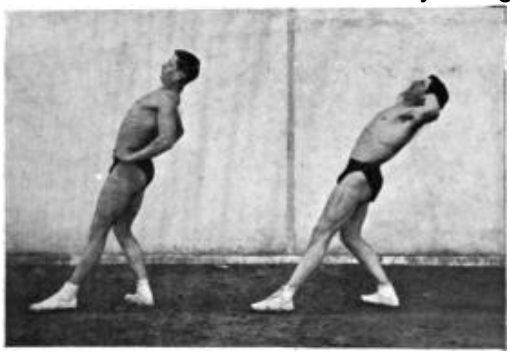
9. Squatting, feet apart: going on the toes, squat down opening the knees, keeping the rest of the body straight, then back up.



[translator's note: these squatting postures are very different from modern squats with the weight on the heels, feet separated, butt back, and the knees never bending beyond the toes. These squats work different muscles, and may strain more the knees.]

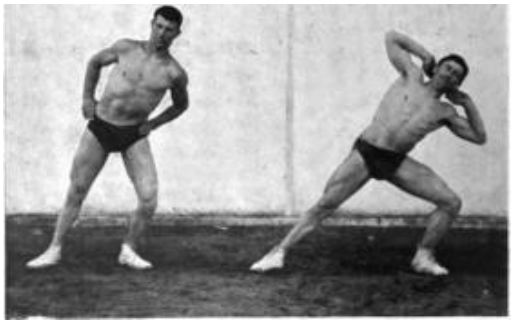
10. Leaning forward: bring left leg in front, both feet facing out, bend left knee forward keeping the right leg straight, bending the whole body forward. Back leg, torso and head make a straight line. Go back and switch legs. The left leg can go obliquely to the left, but shoulders must stay straight.





11. Leaning backward: bring left foot behind, both feet facing out, bend left knee backward, leaning backward and keeping the right leg and rest of the body in straight line. Same to the right; the back leg can go obliquely.

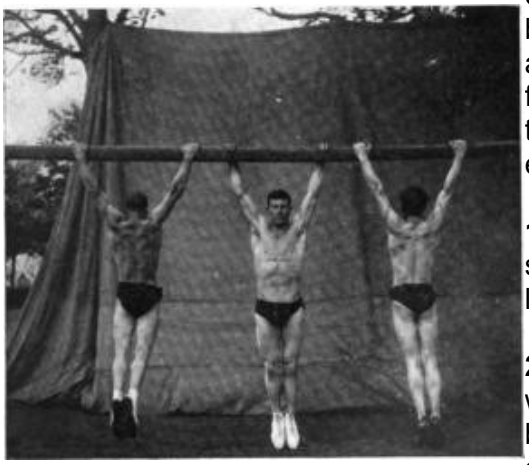
12. Leaning laterally: bring left foot further left, heels on the same line, feet facing out, then lean laterally by flexing the left leg and keeping the right leg and upper body straight. Same to the right, but no oblique variant.



All the leg exercises can be done with the arms in any of the four arm positions, alternating arm and leg exercises in a single repetition or combining arm and leg exercises simultaneously.

[translator's note: in these moves, be careful to keep the knee straight above the toes, and no further.]

4. Suspension exercises



Suspension exercises are done on various objects: bars, beams, tree branches, horizontal ropes, etc. In all cases, the arms must be further than shoulder width apart; hands can be facing in, out, or one in and one out. In straight suspensions, the arms are fully extended, legs are joined, feet and neck are extended.

1. Jumping to suspension: jump up into a straight suspension, breathe a few times, then jump down with a good landing.

2. Widening the grip: in suspension, do a half pull-up to widen the grip as much as possible, then another one to go back to normal, both hands at the same time or one after the other.

3. Pull-up: in suspension, do a pull-up to bring the head above the bar, keeping the elbows aligned with the body. Go down by slowly extending the arms. This can be scaled down by using a low bar, feet touching the ground in front of the bar.

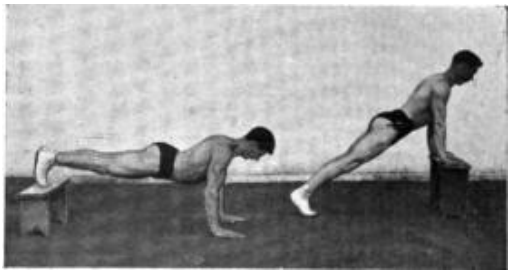
4. L-sit: in suspension, bring the thighs up, legs bent, feet extended, then extend the legs straight into L-sit, then back.

5. L-sit up: in suspension, bring the straight legs up from L-sit into a vertical position, then back.

6. L-sit with wide legs: in suspension, bring the legs straight into a L-sit, then spread them as much as possible while staying horizontal, then back.

Suspension exercises can also be done moving forward or backward on a long bar or parallel bars. These can be done with extended arms, bent arms, straight legs, or in L-sit position.

5. Plank exercises



In plank, the hands are flat on the ground, slightly beyond shoulder width, fingers pointing forward, arms straight. The legs are extended, toes touching the ground, the entire body straight. Planks can be made easier by resting the hands on an elevated object, or harder on resting the feet on an elevated object.

1. From standing to plank: three different methods:a) bend the legs and put both hands on the ground in front of the knees, shoot feet back, shoot feet back in, stand up; b) bend the legs and put both hands on the ground in front of the knees, shoot hands forward keeping the feet at the same place, bend arms and push back, stand up; c) put hands forward and fall straight into plank position, go back using one of the previous methods.

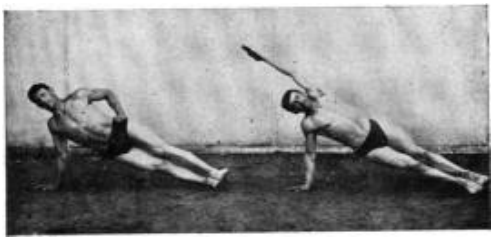
2. Wide arm plank: from plank, push up and send the arms as wide as possible, then push up and send them back in. This move can be made harder by sending the arms as far forward as possible.

3. One arm plank: from plank, spread out both legs, bring all the weight of the body on one arm, hold the other one to the side of the body or straight above the head.

4. Push-up: from plank, push down to get as close to the ground as possible without touching, then push back up.

5. Side plank: from plank, lift left arm while rotating the body, put left hand in one of the fundamental positions or perform one of the arm exercises. The rest of the body keeps the straight posture. Same on the right side.

6. Side plank with leg up: from side plank position above, lift the left leg up on the side, then down.

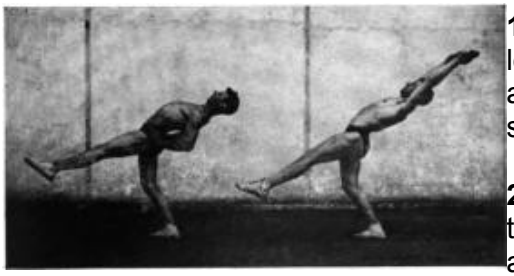


Plank exercises can include quadrupedal motion exercises as well.

[translator's note: this early edition did not consider quadrupedal motion as a separate subject, thus it is entirely missing. If someone has a copy of the “quadrupédie” pamphlet, we might be able to add them back.]

6. Balance exercises

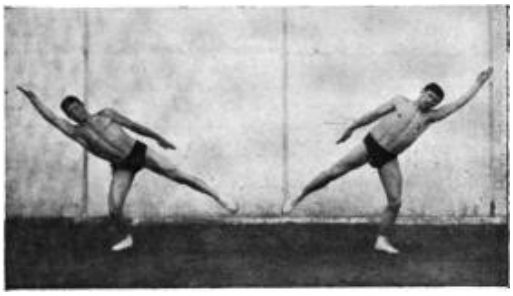
Like the leg exercises, balance exercises can be done with the arms in any arm positions. By default we assume the hands to the hips.



1. Balancing the leg forward: from straight posture, extend left leg in front, leaning back and bending the other leg as much as possible, then go back. The left leg, torso and head must stay in a straight line. Same on the right side.

2. Balancing the leg backward: from straight posture, extend the left leg backward, leaning forward to maintain a straight line and bending the right leg, then go back. Same on right side.

3. Balancing the leg to the side: from straight posture, extend the left leg to the side, leaning to the right with the rest of the body and bending the right leg, then go back. Same on right side.



As with the leg exercises, the balancing exercises can be done with arm exercises, simultaneously or one after the other.

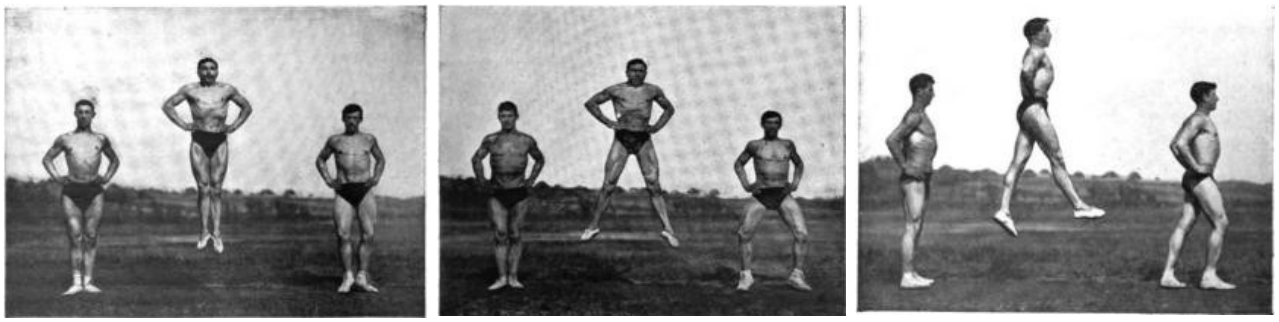
[translator's note: like the legs exercises, balancing can be more strenuous on the knees than it appears. Be mindful of keeping the supporting leg as straight as possible, and never force a movement past your balance point.]

7. Hopping exercises

Hopping exercises are done hands on the hips, jumping mostly in place, feet landing on the toes, open. The rest of the body keeps the straight posture.

1. Hopping on joined legs: bend the legs slightly to jump up, extending the feet, land on the toes and jump right back up, bending the legs as little as possible and keeping a continuous pace. Work on jumping higher and faster.

2. Hopping and spreading the legs to the side: when hopping up, spread the legs slightly while in the air and land with legs apart, then join them back at the next hop.



3. Hopping and spreading the legs front and back: when hopping up, bring right leg forward and left leg back before landing, then switch the legs at the next hop.

4. Hopping with crossed legs: when hopping up, cross the legs, bent, before landing, then switch at the next hop.

5. Squatting hops: go into a squat, then hop while keeping the squat form.

6. Tuck jumps: when hopping up, tuck the knees up as far as possible, then shoot the legs back down before landing.

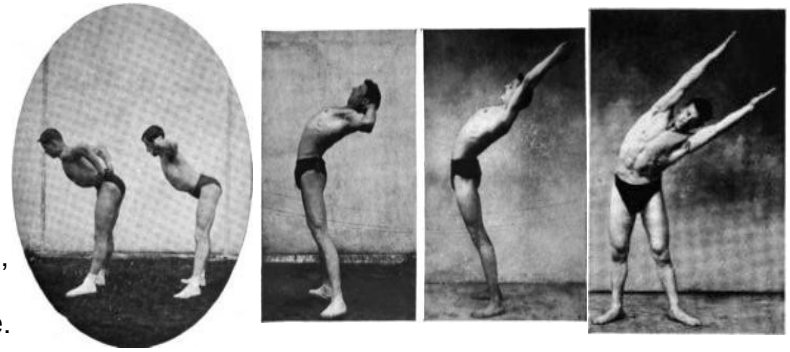
8. Core exercises

Like leg exercises, core exercises can be done with the arms in a variety of poses. We assume straight posture, hands to the hips by default.

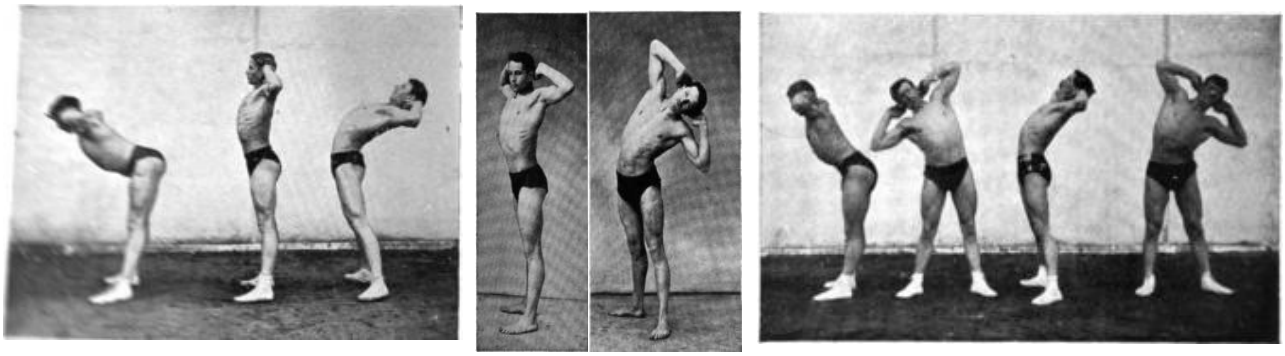
1. Bending forward: bend the torso forward at the hips, back straight, legs straight.

2. Bending backward: bend the torso back, keeping it straight.

3. Bending to the side: with spread legs, bend the torso to the side, keeping everything straight and in the same plane.



4. Bending forward and back: with spread legs, bend the torso forward, then all the way back, then straight.



5. Torsion with bending: with spread legs, rotate the torso to the left and bend forward, then back straight, then to the other side.

6. Full rotation: with spread legs, take the side bending position, then move directly to the backward bending position, then to the other side, then forward. The line of the shoulders should stay parallel to the line of the hips.

Core exercises can also be done with all sorts of arm exercises, but also with varying leg postures, or with the body horizontal in any orientation.

Core exercises can also be combined with head movements: bending forward, backward, to the side, torsions, rotations. As head and core moves are similar, it is good to use the same groups together.

9. Breathing exercises

Breathing exercises are done like arm movements, but at a slower pace, breathing in while bringing the arms up and out while lowering them.

1. Breathing with forward arm motion: breathe in and out while bringing the arms up and down in front.

2. Breathing with lateral arm motion: breathe in and out while brining the arms up and down laterally.

3. Breathing with forward and lateral motion: breathe in and out while bringing the arms up in front and down laterally.

4. Breathing with backward and lateral motion: breathe in and out while bringing the arms as far back as possible, then laterally up, then down in front.

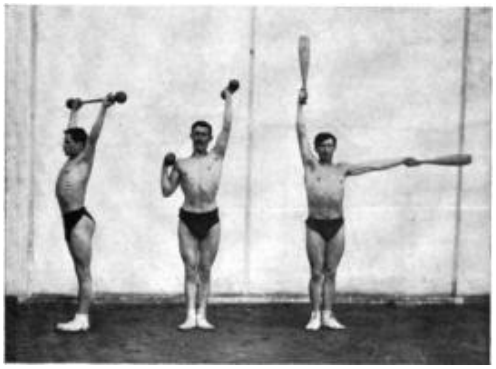
5. Breathing with vertical motion: from hands to the shoulders, breathe in and out while bringing the arms up and down vertically.

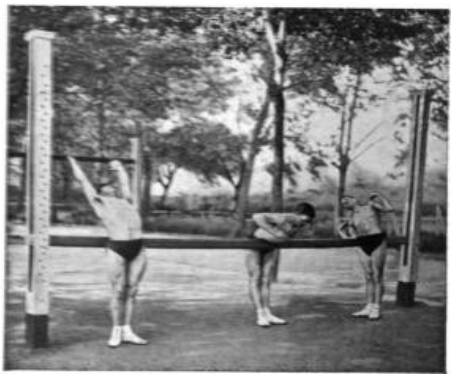
6. Breathing with horizontal motion: from hands to the chest, breathe in and out while extending the arms out and in horizontally.

Breathing exercises are improved by going on the toes when breathing in and back on the flat of the foot when breathing out.

10. Exercises done with special equipment

Movements of the arms, legs and core can be done with special equipment such as weights, dumbbells, elastic bands, clubs, benches, bars, etc. Although these are not necessary, and ample muscular development comes from executing the above motions freehand and to the fullest, they can be useful to bring variety to the exercises, they enhance muscular development in the arms and shoulders (weights), various muscle groups (elastic bands), or the forearms (clubs). Static structures like benches, bars, provide an anchor to fix parts of the body while providing more amplitude or more localization for a given exercise. Using large weights is however not recommended, as it results in an excessive muscle growth not matched by the development of the rest of the body. Weights are not recommended or useful for children.





Practical Exercises

1. Walking

Walking is the most natural means of locomotion, the most economical, improves endurance, leg strength, and promotes good breathing and blood circulation.

Walking is done by moving the legs alternatively, pushing with the foot and extending the leg, one leg after the other. When walking, the body stays in constant contact with the ground with one foot, and with both feet at transition times.

A walk is a succession of steps, the length and the cadence of step determine its speed. At low speed, length of step increases naturally with an increase of cadence, but stops and even decreases when the cadence is too high. Experience shows that the pace where the length of step is the highest corresponds to a cadence of about 140 steps a minute in the adult. The fastest walk is not done at this longest step but at the slightly faster cadence of 170 steps a minute. On the other hand, a pace of 110 to 130 steps a minute is more economical, allowing for more efficient long distance walks.

To improve speed in walking, it is better to work on increasing the length of step rather than the cadence. The mechanics of walking are acquired from natural practice and don't need to be taught. The muscles used in walks can be strengthened by:

- walks on the toes or the heels,
- walks with very long steps,
- very fast walks on short distances,
- slow walks with elevation of the thigh to horizontal and extension of the leg forward.

Posture is improved by maintaining one of the fundamental arm positions while walking. Breathing is made regular by aligning it with a fixed number of steps, usually 5 or 6, and can be amplified by breathing exercises and songs. Walking should be done on all types of terrain, in cities and on the countryside, over hills, into fields, etc.

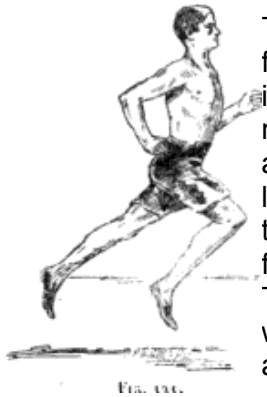
Endurance walks: long walks will require a slow pace, under 130 or 140 steps a minute. The walking posture should be as follows: the chest is slightly tilting forward; the foot touches the ground without shock, almost flat, heel first; the front leg is slightly bent when the foot reaches the ground; the contact point on the foot travels from the heel all the way to the toes; the rear leg is straight, the upper body straight with the chest open; the arms are slightly bent and swinging lightly, opposite to the legs.

Speed walks: faster walks are limited to short distances. Any walking pace about or beyond 170 steps a minute is pointless, as running will then become more efficient, or running and walking in turn. There are two possible ways of walking at a fast pace. The first is the previously described posture, but increasing the forward tilt of the body and the bending of the front leg with the increased cadence. At high speed, a powerful push off the toes of the back leg reduces the time of two feet

contact with the ground, making a move closer to running, the body being very forward, as if falling with each step. The second method is to stay as vertical as possible, with straight legs. The speed is gained from a faster movement of the leg from back to front. The fast motion of the legs and the shock of the foot hitting the ground makes this method very tiring. The first method is practical in all occasions, in particular when carrying something. The second method is very unpractical, and only to be used in races.

2. Running

Running is the fastest means of locomotion, and the most important of physical exercises. Running involves many muscles of the body, improves breathing and endurance, and develops strength and agility of the lower limbs. When running, the body is projected forward, each foot touching the ground in turn. There is only one foot on the ground at most, and the body is suspended between steps. Indeed, like a walk is a series of steps, a run is a series of jumps, from one foot to the other one. The running speed is the product of the length of the jump by the cadence. The faster the cadence, the longer the jumps; unlike in walking there is no decrease of the jump length with very fast paces. Like in walking, there are more efficient cadences in running: about 170 to 200 jumps a minute for a sustained endurance pace, up to 230 for a faster run, and no more than around 350 for very short sprints. Cadences lower than 170 jumps a minute are particularly bad, as the body uses a lot of energy to cover a rather short distance, and the slow pace induces a wasteful vertical jumping motion.



The length of the jump depends on the strength and direction of the impulsion from the leg in contact with the ground, exactly like a one-legged length jump. To improve the length of jump, it is important to limit the amount of vertical momentum while reaching further forward, which is done by pushing the leg back as far as possible. The foot of the leg reaching forward should land flat, with the leg bent, so as to be faster past the vertical position, able to propel the body. By throwing the front leg forward, one could also make a longer jump, but the leg is further from vertical and the heel hits the ground, inducing repetitive shocks. Touching the ground with just the toes reduces the stride and make the calves work harder. A flat contact brings the leg directly to the vertical position while absorbing the shock of the jump.

[translator's note: there is no usual distinction made in French between the toe area and the ball of the feet; instructions to land on the toes in running and jumping are likely to mean to land on the ball of the feet or on the toes and ball of the feet.]

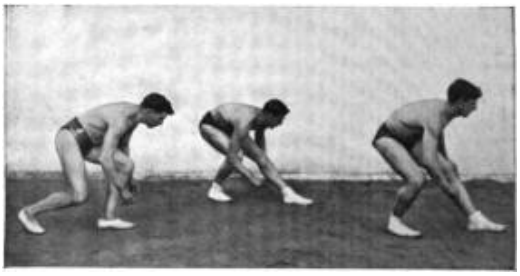
The work of the legs is only secondary in running, the value of a runner depends first on his breathing. A run should be a long succession of deep cyclic breathing movements. At the fastest paces, such breathing is impossible, this is why races at maximum speed cannot last more than 20 seconds, corresponding to about 100 to 150 meters.

Running is a great way to increase endurance, but one must be careful of adapting the exercise to the fitness of the runners, especially limiting the length of faster runs. Like walking, running is a natural

movement acquired by practice. The muscles can be trained further by running on the toes, or by running slowly with long jumps. The breathing is made regular by aligning it with a fixed number of jumps, always the same (about 5 to 8).

Endurance runs: runs of medium cadence at 170 to 200 jumps a minute are best for long distances or when it is unnecessary to rush and tire oneself much. The best posture is as follows: the body slightly tilted forward; the foot reaching the ground flat, without shock; the leading leg is bent and vertical; the back leg is fully extended; the arms are bent and swinging smoothly; arms and front leg bending more with increased speed. Breathing is aligned with the cadence, with deep, long breaths. Avoid any vertical hopping motion, overextending the front leg, contacting the ground with the heel, rotating the body, breathing fast or irregularly. In long runs, start and finish always slower, finishing up with walking, core and breathing exercises.

Speed runs: faster runs go beyond 200 jumps a minute, and can become sustained only with training. Maximum speed runs can reach 350 jumps, and must be trained on short distances of 30 to 150 meters. The most efficient posture is as follows: the body starts bent forward but go back to vertical after a few steps and stays vertical, even bending backward at the end to slow down the pace; the impulse of the back leg is as strong as possible; the front leg is bent lower, foot still reaching the ground flat; the arms are swinging more vigorously. A great exercise to improve the body's ability for sudden, violent effort is the start of speed races. Races can be done with prepared or unprepared start. For unprepared starts, one can stand straight, sitting or lying down, facing any direction. At the signal, jump to face the correct direction and start the run In prepared runs, the body is bent forward, legs apart and ready, weight on the front or back leg. Speed runs are the most practical to train as a quick means of transportation or a rescue exercise.

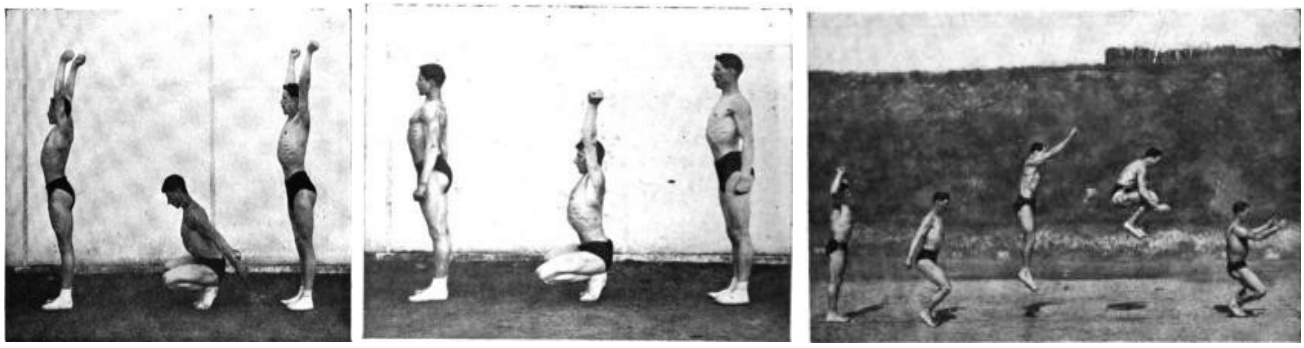


3. Jumping

Jumping consists in giving an impulse of the body to go over a space or an obstacle in one jump. Jumps strengthen the lower limbs and the core, train the legs to absorb impact, improve agility and balance. Applied jumps over an obstacle also work on fear, improving confidence, focus and readiness.

Jumping can be decomposed into four parts: the preparation, the impulse, the suspension and the fall. The preparation consists in bending and loading the legs while sending the arms back; the impulse is the explosive extension of the legs while bringing the arms up and forward; the suspension starts when the feet leave the ground, the legs are brought to the best position to overcome the obstacle, while the arms go down; the fall consists in absorbing the impact from the jump, when touching the ground, feet reaching and legs bending to absorb, arms used to maintain balance. The movement of the arms is very important in the jump and help get a greater impulsion and regain balance during the fall. Training should start with long jumps and high jumps, first without and then with a run-up. Follow this with a very slow progression into deep jumps, and make sure to work on a soft surface. Applied jumps with real obstacles should only occur when the legs are strong enough and the fall sufficiently trained to be safe.

Unlike walking and running, learning to jump can be decomposed, as in these three preparatory exercises:



1. Preparation and impulse: with the arms up and vertical, hands into fists, bend the legs while going on the toes, knees, toes and heels joined, lowering the arms straight to bring them behind. Then explode up (staying on the ground) while bringing the arms back to vertical.

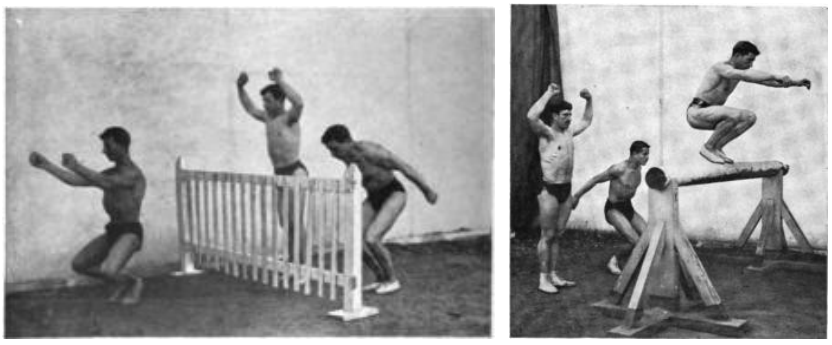
2. Fall: bend the legs while going on the toes, heels together, knees and toes open, arms up and vertical, then go quickly back to standing, lowering the arms. In practice, the fall is not decomposed, the arms are only brought up enough to bring balance back. The legs should resist the fall to avoid landing too low, but never land with straight legs.

3. Chain all four movements: preparation, impulse, then jump up and land as in the first two exercises.

Jumps with and without a run-up

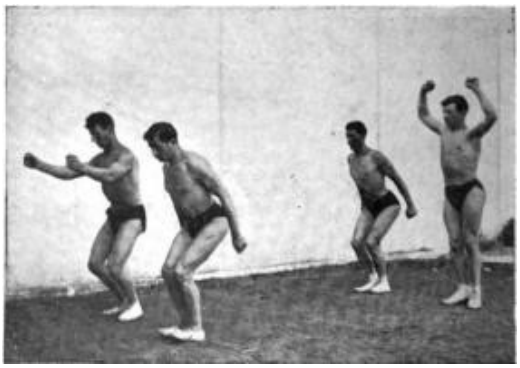
1. Standing high jumps

going over an obstacle: start facing the obstacle, feet together, at a distance about half the height of the obstacle. Bring the arms in front, hands closed, then bend the legs going on the toes and bring the arms back (preparation). Extend the legs and bring arms up (impulse), go over the obstacle tucking the legs in, keeping the arms up. As soon as the obstacle is passed (suspension), extend the feet toward the ground and lower the arms. Touch the ground with the toes (fall), legs bent without excess, arms balancing.



going onto an obstacle: perform the preparation and impulse as above. Land on the obstacle, legs tucked, arms up. In this type of jump, there no real suspension or fall happening, one can arrive fully squatting on the obstacle.

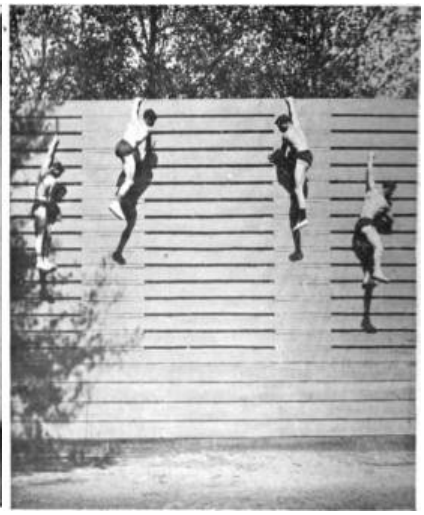
2. Standing long jump: start from the edge of the obstacle or open space to pass. Bring the arms in front, hands closed, then bend the legs going on the toes and bring the arms back (preparation). Tilt the body forward, then extend the legs and bring arms up (impulse). Give the impulse at the moment where the body starts to fall forward. The bring the arms down (suspension). The feet touch the ground together in front of the body, heels first (fall). It is not necessary to tuck the legs as much in long jumps, only the thighs must be bent. Landing on the heels is acceptable as the momentum is mostly horizontal. However, one must be careful if the ground is slippery.



3. Depth jumps

simple jump, facing forward: start facing forward at the edge of the obstacle, squat to lower the height of the fall and put both hands on the edge (preparation). Leave the obstacle without a jump but bringing the body forward horizontally, so as to avoid falling straight down (impulse). During the suspension, reach down with the legs, and keep the arms lowered. Touch the ground with the toes, resisting with the legs to avoid squatting too low.

Simple jump, facing backward: start at the edge of the obstacle, facing backward. Do everything as before, being careful to push away with the hands when leaving the obstacle, and to keep the body tilted forward to avoid falling on the back upon landing.



Forward jump, sitting: sit at the edge of the obstacle, legs down. Put both hands on the edge, fingers facing forward, leaning forward. Push away with the arms while throwing the legs forward. If the obstacle allows it, swing the legs a few times before jumping.

Backward jump, hands pressed: from a holding position with the hands on the obstacle, bend the arms to get on the stomach, then throw the legs backward. If the obstacle allows it, swing the legs a few times before jumping.

Vertical jump, from a suspension: if suspended by the hands to a bar, swing the legs forward, then when they go backward do a small push up with the arms and open the hands right away. Avoid dropping from a static position, as it makes it difficult to regain balance. If swinging already, the best is to let go when the legs are going backward. If jumping when the legs are going forward, send the upper body strongly forward to avoid falling on the back.

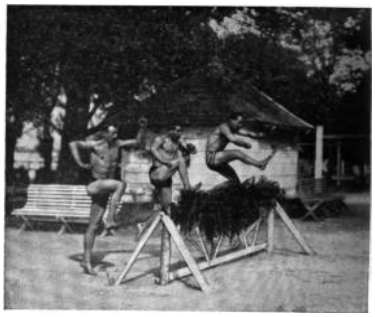
Vertical jump, from hanging to a wall: take one hand off the wall and bring it at waist level, push strongly with hand and leg away from the wall.

Depth jumps done from a height or on hard surfaces are dangerous for the feet, the ankles and the knees. It is necessary to train progressively from lower to higher jumps. On a hard surface like stone, earth, wood floor, jumps of about 2 meters already put considerable strain on the feet. On a prepared ground like sand or well turned earth, a trained person may jump up to 4 meters without harm.

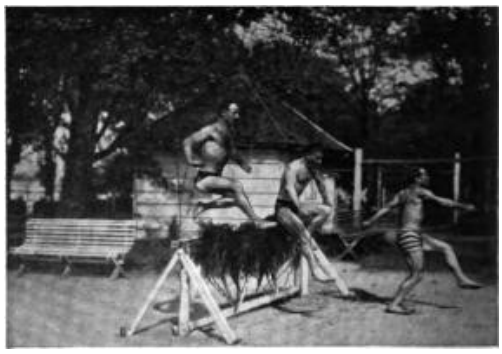
4. Running high jump

Jump over an obstacle: the jump is done on one foot, after a run-up of 5 to 10 meters. The upper body is vertical or slightly back. The arms are brought forward at the time of the jump, then the obstacle is passed either by bringing the legs bent under the hips, feet close to the thighs, or extending the feet in front, keeping the chest forward. Arms are kept up until the obstacle is passed, then lowered as the legs are extended down. Land on the toes, legs bent, arms balancing.





Jump onto an obstacle: start on one foot as above, then jump onto the obstacle with the legs bent, feet close to the hips, arms up. This type of jump is useful when what is beyond the obstacle is unknown.

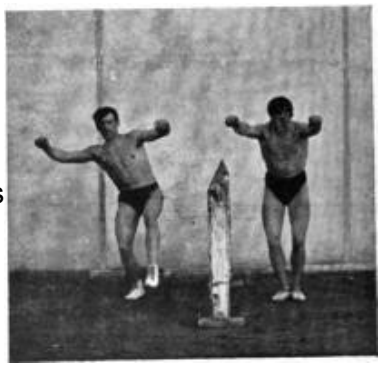
Jump while maintaining the run: start on one foot, jump over the obstacle by passing the other leg first, then the jumping leg. The first leg is very bent, knee up, the other leg to the side or under the body. The chest is leaning forward during the jump. Land on the first leg, on the toes, then throw the jumping leg forward to keep running.

5. Running long jump

with a long run: like the running high jump, this jump is done from one foot after a run. In this case, the run must be long enough to gain maximum speed, as the speed of the run determines the length of the jump. The chest is slightly forward during the jump, the legs are joined but don't need to be tucked. During the fall, the heels touch the ground first, the arms go down and back, and then forward and up again to regain balance.

With a single step: bring the left foot forward, bend the right leg and bring the weight of the body on the right leg while throwing the arms back (preparation). Extend vigorously the right leg, then the left, while bringing the arms forward and up (impulse). Bring the legs together during the suspension and land on the heels. This jump doesn't cover more distance than the standing long jump, but is easier.

6. Side jump



standing side jump: stand close to the obstacle on the side, feet together. Bring the arms up and forward, then bend the legs while throwing the arms back (preparation). Extend the legs vigorously while bringing the arms up and forward and leaning toward the obstacle (impulse). Raise the legs straight one after the other, the one closest to the obstacle first. The knee comes to meet the chest, still leaning toward the obstacle, arms up. After the obstacle, lower the arms (suspension). Land on both legs successively, on the toes (fall).

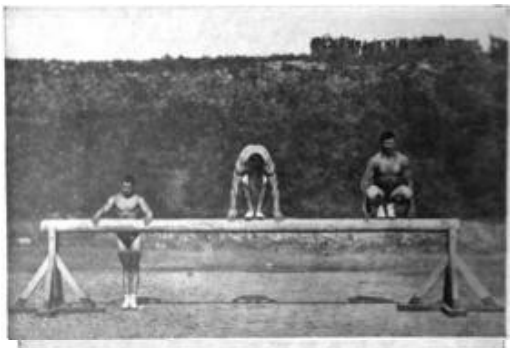
Standing long side jump: bring the arms to the side opposed to the jump, while leaning in the jumping direction with bent legs (preparation). Throw the arms in the jumping direction and extend the legs (impulse), land on the flat of the feet, legs slightly bent, and go back up right away, arms balancing.

Running side jump: the run is almost parallel to the obstacle, the jump uses one leg. Assuming a jump to the right side, jump from the left foot, and pass the obstacle first with the right leg extended in front, then the left, arms up. After the obstacle, lower the arms and land on the toes of the feet, first the right then the left.

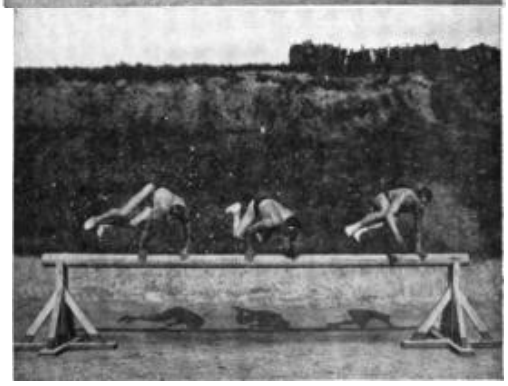
Depth side jump: proceed as in the depth jump forward or backward, far enough from the obstacle pushing away with the hand.

7. Combined jumps: any combination of jumps 1-6. Make sure to always land on the toes after any jump, even a long jump, every time the landing point is lower than the starting point. Combinations may include: *high long jump, high depth jump, long depth jump, high long depth jump, long depth jump from sitting or hands pressed, long depth jump from a suspension.*

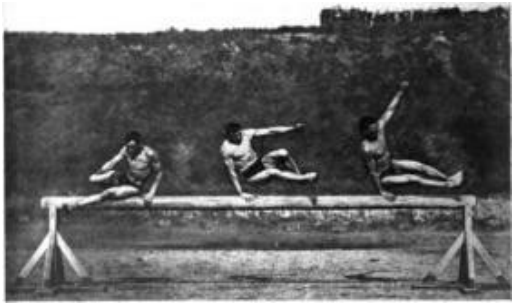
Jumps with hands on the obstacle



1. Jump onto an obstacle
from standing: put both hands on the obstacle, jump while pressing from the wrists, land on the obstacle with both feet between the arms.
from running: run up a few steps, jump from both feet, reach to put the hands on the obstacle and proceed as before.



2. Jump over the obstacle with legs on one side of the arms
from standing: put both hands on the obstacle, jump while pressing from the wrists, swing the legs to one side, remove the hand in front of the body and land on the other side.
from running: same move after a quick run-up, jumping from both feet
from a hand hold: bend the body forward on the hands, arm straight, then swing the legs back and forth and then over the obstacle to the side as above.



3. Jump over the obstacle with one hand
from standing: stand sideways, one hand on the obstacle. Swing both legs in front as in the side jump, the leg closest to the obstacle first.
from running: proceed as above from a run-up, jumping as in the running side jump.

4. Jump over the obstacle feet between hands
from standing: put both hand son the obstacle, jump while pressing from the wrists, bring the legs between the arms, tucked in.
from running: proceed as above from a run-up, jumping on both feet.

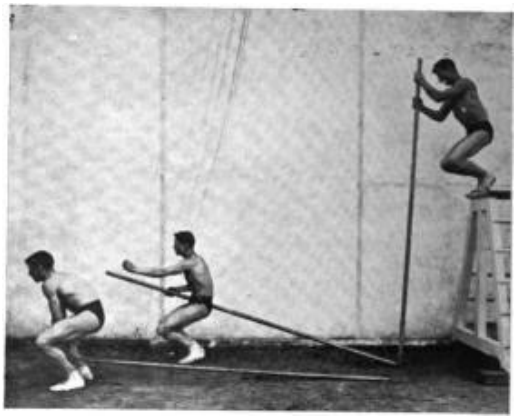
When an obstacle is made of several horizontal bars arranged one above the other, proceed as follows.

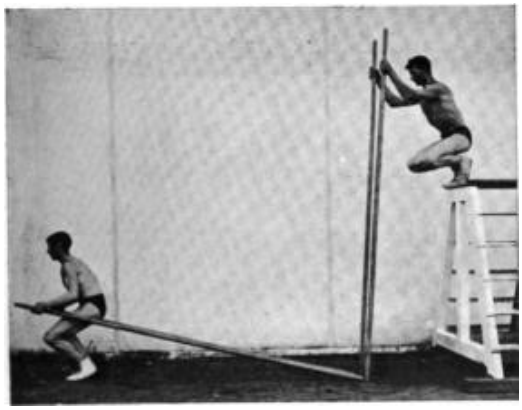
1. Jump between the bars: put one hand on the lower bar, one on the higher bar. Jump between the bars, bringing the legs together in front first. Pull the body up with higher hand, push back with lower hand.

2. Vault over the higher bar: put both hands on higher bar, going on hand hold, then reach down to the lower bar with the left hand. Rotate the body toward the right above the bar, legs straight, holding and pushing with the lower hand. Let go with the hands and land.

Jumps with a perch

[translator's note: these jumps are deemed unpractical but included for the sake of completeness, thus translation of this part will wait].





4. Swimming

[translator's note: this entire chapter is currently omitted. Avid swimmers with some French proficiency are encouraged to give it a try, though, as it is one of Hébert's most highly regarded guidebooks.]

5. Climbing

Climbing consists in raising or moving the body using the arms or the arms and legs from a suspension or a holding position. It is one of the most useful practical exercises: climbing is important in many different situations from reaching a high place to passing an elevated obstacle to fleeing from danger vertically. Climbing with the arms and legs recruits the muscles of the entire body, in particular the core and upper limbs. However, climbing can be a detrimental exercise: it requires violent efforts from muscles which physiological function is not the locomotion of the upper body; it can encourage an excessive development of upper body musculature and slow regular growth in teenagers; it requires a posture of the shoulders that compresses the thoracic cage. Climbing can also be very beneficial to the development of upper body strength, but only in moderate amounts and using the legs as much as possible to reduce the strain on upper limbs hold. Exercises to correct the posture of the shoulders should be combined with climbing whenever possible. Among the following exercises, almost none have a deforming effect. However, many of the playful exercises in gymnastics have a deforming effect and should be avoided. Progressive training in climbing starts with simple suspension exercises and climbs on ladders, double ropes or bars where the elbows can be kept in the plane of the shoulders and the chest open. Only then comes climbing on the rope, first using the feet. Finally, train topping out. Being able to climb some distance on the rope with only the arms is a good criterion of climbing abilities: other exercises come easily when this is mastered.

Climbing vertical ropes, bars, etc. fixed or free standing

1. Climbing with arms and legs, pinching the rope: hold the rope as high as possible, put the right knee and front of the ankle behind the rope, the left calf pressing in front of it. Climb up with the arms, bend the legs bringing the knees up high. Press on the rope with the legs, bringing the arms up one after the other and continue. To go down, move the arms below one another in turn, while pressing on the rope with the legs.

2. Climbing with arms and legs, rope rolled around one leg: hold the rope as high as possible, pull up, bring the knees up. Let the rope go between the thighs, rolling it around one leg behind the calf onto the front of the ankle. Press on the rope with the sole of the other foot at the ankle. Take the hands off the rope one after the other, reaching up, straightening the legs. Pull up again, letting go of the rope with the legs or letting it slide around the leg. Bring the knees up, and roll the rope as before. When the rope is free standing, bring the legs forward rather than keeping them vertical, to provide a better grip for the feet. To go down, move the arms below one another in turn, while pressing on the rope with the legs. This climbing method requires more work from the legs, but the pose can be held for a longer time, to rest the arms or to free one or both hands; if letting go of both hands, the rope must go behind the back to avoid falling backward.


3. Climbing with the arms only: hold the rope as high as possible, reach up with one hand alternatively, keeping the legs bent up, rope between the legs or to the side. Go down in the same way. This method is useful to reach quickly a close height or to momentarily relieve the legs in a climb. It is an important exercise to practice for the climbing muscles.

4. Climbing on two ropes: grab one rope in each hand, and climb using one of the above methods, rolling one rope around the leg if needed. This method has little practical use, but is a great exercise for practicing, keeping the chest open and the shoulders out.

Climbing inclined ropes and chains

Inclined ropes are ropes fixed at both ends, having some inclination, even to be horizontal. It is useful for climbing on scaffolds, going down from a window to the ground with a rope in a fire, etc.

1. Climbing with both hands, rope under the knee: to go up or down, keep the rope between the legs, folding one or both calves on the rope, or bring the legs with calf on the rope one after the other, moving opposite arm and leg at the same time, or keep the rope on the side, one calf resting on it. Hands are moved one after the other in all cases. This climb should be practiced going up and down, head first or feet first. Keeping the head higher is the most efficient method.



For ropes making an arc, if the head starts higher, it will become lower than the feet past the middle of the rope. To always keep the head higher, proceed as follows: at the middle, if the right leg is folded above the rope, turn the body to the right and reach beyond the leg with the right hand, then the left while bending the leg to keep it engaged on the rope. Bring the left leg under the rope, then fold it above the rope before removing the right leg. Note that turning to the other side would make the leg go right away.

2. Climbing with both hands, one heel hooked on the rope: same method as above, using the heel rather than the folded leg.

3. Climbing above the rope: it is sometimes necessary to climb like this to reach an object or free one or both hands. Hold the rope with both hands and one leg, foot hooked on the rope, the other leg straight and balancing. This method is completely unpractical on arc-shaped ropes.

4. Climbing with the hands only: being suspended by the hands, move one hand after the other to progress up or down. This method is a good strengthening exercise, and is useful for instance if the legs were to slip from the rope.

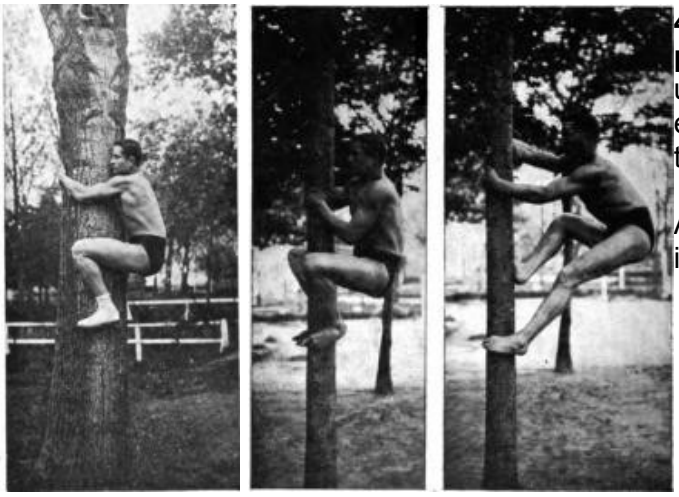
Climbing beams, masts, columns and other vertical bars

This way of climbing can be useful to reach a ceiling from a side beam, to move around a boat, to climb trees, etc.

1. Climbing with crossed arms, leg front and back: grab the mast as high as possible with both arms crossed, hugging the mast, bend up the legs as much as possible, one with the calf around the mast, the other with the front of the foot pressing against the mast. Extend the legs and reach up with both arms, then hug the mast tightly while bending the legs up, etc. To go down, perform the same movements in opposite order. This method is the most effective unless the mast is too thick.

2. Climbing with crossed legs: here, both legs are kept around the mast and crossed. A successive pressing of the upper and lower limbs as above allows to go up or down. This method is not very good to go up, but is efficient for going down or staying at some level, on masts of limited width.

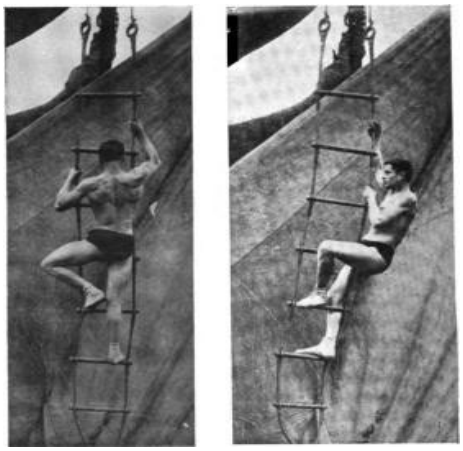
3. Climbing with arms holding the mast, legs on both sides: this is a method for a mast that is too wide to cross arms or legs around. The lower limbs are used by strongly pressing against the sides of the mast with the feet and the knees.



4. Climbing with hands and the feet, without pressing the knees: this method is preferably used bare feet and with masts of smaller width or even a straight rope. It is a harder way, but faster than the other techniques.

All these climbing techniques have a particularly intense effect on the abductor muscles of the legs.

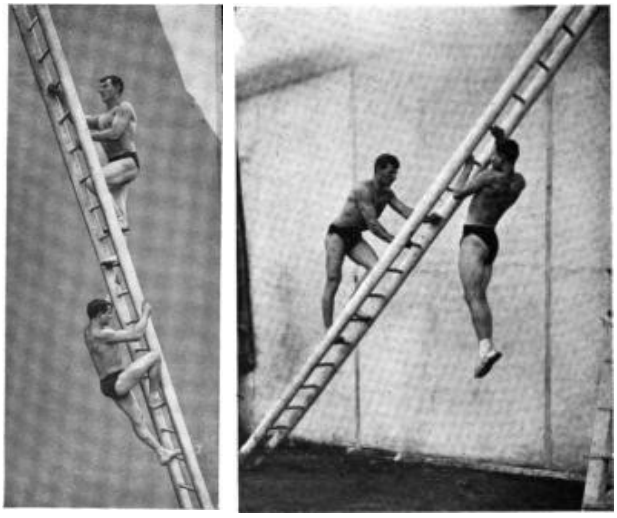
Climbing ladders and vertical parallel bars, straight or inclined



There are two sorts of ladders: rope ladders and regular wooden or metal ladders. Climbing on rope ladders can be done as follows:

1. Climbing on the ladder: grab the sides of the ladder as high as possible, put both feet on a rung, knees open and out, weight on the outside of the feet. Reach up on the side with the left hand while moving the right foot up one rung, and repeat on the other side. Use the same method to go down. To be efficient, move the arm and leg simultaneously while keeping the torso straight, and avoid letting the legs go forward which would require more work from the arms.

2. Climbing on the side of the ladder: grab one side of the ladder, put both heels on a rung, feet pointing outside and legs around the ladder side. Climb as above, moving one arm and opposite foot at the same time. This method is much faster and easier than the first one.



On wood or metal ladders, one can use the following techniques:

1. Climbing on top or under with the hands and feet: put the feet on the rungs and the hands either on the side or the rungs. Go up moving either the same leg and arm or the opposite leg and arm (better solution) at the same time. When climbing from the underside of an inclined ladder, pushing hard with the legs and keeping the body close to the ladder will lower the work of the arms. Climbing on top of the ladder being easy, this skill must be practiced to increase speed walking and even running on the rungs.

2. Climbing under the ladder with the hands only (inclined ladders): put the hands on a rung, go up or down by moving the hands, keeping the rest of the body hanging straight. This method is the most practical one in the case of very inclined or nearly horizontal ladders. It is also a great exercise for the climbing muscles.

It is sometimes necessary to go under the ladder from above, or on top from below, without going all the way up or down. This exercise is easy when the ladder is fixed, but otherwise you must proceed as follows to avoid tipping it: being above and close to the ladder, bring the left foot on the right side of the rung, and the right leg outside the ladder. Bring the left hand to grab the right side, at shoulder height. Then, reach under the ladder with the right hand for the rung just above the left hand, aiming far from the body. Pull hard with the right arm, bring the right foot under the ladder, onto the same rung as the left foot. Finish by bringing the left foot and hand on the underside of the ladder. Use a similar technique to go from under to be on top of the ladder.

A ladder may have broken rungs; one can still climb it using one of the following methods designed for any type of vertical or inclined parallel bars:

1. Climbing with hands and feet, knees inside or outside (vertical bars): reach up the bars with the hands, go up by flexing the arms. Bend the legs and press them against the bars, either knees inside and feet outside or knees outside and feet inside. Press in or out with the knees, depending on their position, and reach up with the hands. Bend the legs up, and repeat the motion. Same method for going down.

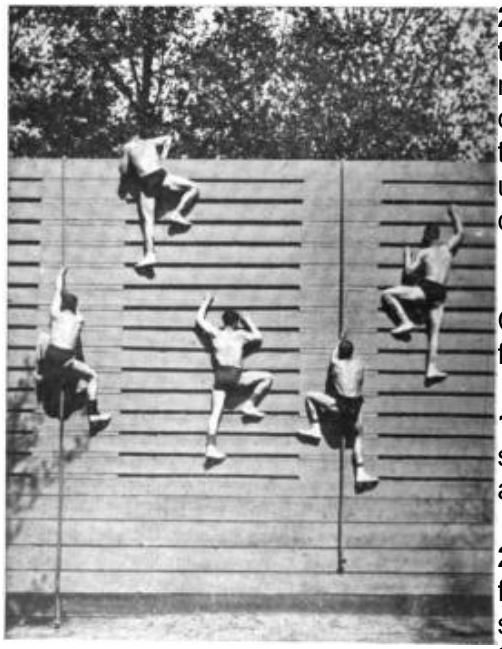
2. Climbing on inclined bars: *from above:* do as in the previous method. *From under:* bring the bars in the fold of the knees or the heels as in the climbing methods for a single bar.

Climbing along a wall

Climbing up and down walls finds many applications, whether to escape a fire, go down a well, get out of the water, using a rope, a beam or the surface of the wall. The ways to climb up ropes, beams, etc, are as follows:

1. Climbing with the hands and feet: grab the rope, pole, beam with the hands and place it between the legs or to one side. Bring the legs up on the wall, knees as open and high as possible, feet pointing outward. Climb by moving hands and feet in succession, or moving opposite limbs together, or moving on side after the other. The most efficient method consists in keeping the rope between the legs and moving opposite limbs together. The legs provide a push upward and slightly away for the wall. The body must stay close to the wall, the knees out and open to reduce the work of the arms

and climb faster.

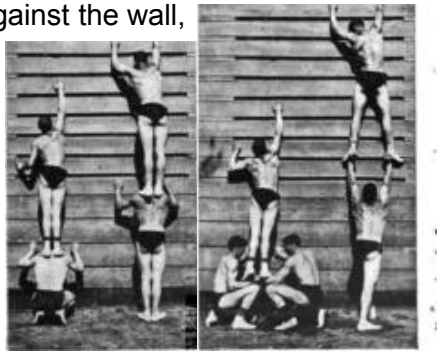


2. Climbing with the hands, holding the rope between the thighs, feet resting on the wall: reach up with the arms on the rope, bend arms and legs, press the rope between the thighs, crossing the legs if needed, and use the feet to stay away from the wall. Reach up with hands and repeat. This method is useful when the wall is too slippery for the feet, and the rope can be kept far enough from the wall.

Climbing can also be done without any device, with one of the following methods.

1. Climbing using the wall surface: if the wall has an irregular surface, holds, etc, one can climb using these to rest the hands and feet, keeping the body close to the surface of the wall.

2. Climbing with the help of someone: the helper squats facing the wall, hands resting on it. Stand and balance on his shoulders, hands on the wall. The helper then stands up with the climber. If needed, he can grab the climber's feet and extend the arms further up. Alternatively, the helper can stand back against the wall, hands crossed in front, palms up. The climber puts a foot on the hands and walk up, to go further he can put his other foot on the helper's shoulder.



3. Climbing with two helpers: the two helpers kneel sideways to the wall, facing each other, closest knee to the wall on the ground. They lock the opposite hands, palms up. The climber steps on the hands and puts his hands on the wall, then the helpers stand up, using their free hand against the wall. Alternatively, the helpers can stand facing the wall, locking the inside hand between them, and the climber steps first on their hands then on their shoulders.

Pulling oneself up

Pulling oneself up consists in going from a suspension to a hold on the arms, or going from below to above the obstacle. Pulling up is probably the most important climbing exercise, as it is almost impossible to finish a climb without having to get on top of something.

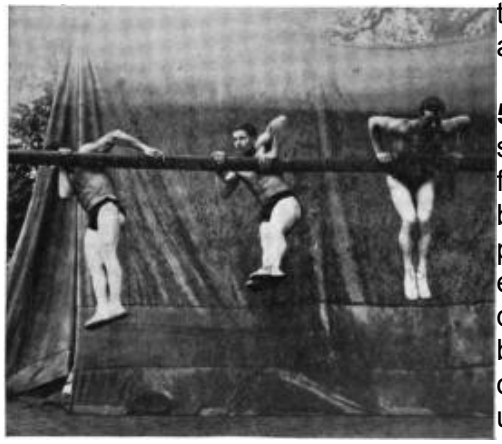
1. Pulling up by rotating the body backward: from a suspension under the beam, pull up with the arms, bring the legs as high as possible in front of the beam, then above by bending the body backward, still pulling with the arms. Keep rotating until the stomach is above the beam, then hold straight. Go down by the opposite movement. This method has very few practical applications, as it requires a

bar with leg space and small enough to provide a good grip. However, it is a good exercise of the core muscles. To that end, it can be made harder by bringing the legs up high before doing the pull-up with the arms.

2. Pulling up on one leg and the forearms or wrists: from a suspension under the beam, pull up with the arms, bring the legs as high as possible in front of the beam, then lean the body to the right and hook the right leg, calf above the beam, on the right side of the hand. Get on top by either bringing the forearms flat on the object, then spreading apart the hands, or using the wrists, bringing the forearms straight up above the beam. In any case, swinging the other leg up and down will provide momentum for the climb just before getting on top. Once up, unhook the leg to go onto a straight hold. Go down by the opposite movement. This method is the easiest for pulling up, but requires a bar or a small beam with good grip and enough space to swing the leg.

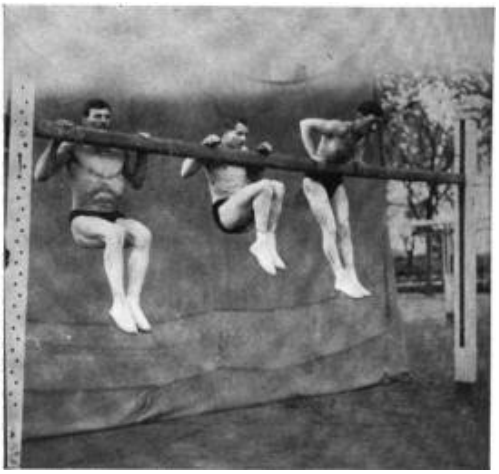
3. Pulling up on the forearms: from a suspension with hands close, pull up with the arms while bringing the legs up high. Bring both forearms up on the beam, letting go with the hands, and swinging the legs vigorously up and down to help the tilt of the body forward above the beam. Get above the bar spreading the hands apart, and rest the stomach on the bar before going into the holding posture. Go down with the opposite movement. If climbing a wall or if there are objects behind the bar, the legs can use them to push up and away and help in the pulling motion. This method is the most practical in most circumstances.

4. Pulling up alternatively on the wrists: from a suspension, pull up with the arms while bringing the legs up in front. Bring the weight of the body on the left wrist, and make the right arm vertical. Shift the weight to the right side with a slight left torsion of the body, and pull the left forearm above the bar, helping by moving the legs up and down. Push strongly with the arms to rest the stomach on the bar before going into the holding posture. Go down with the opposite movement. As before, if there are objects or a wall under the bar, the legs can use them to push up. This method is convenient on bars with a good grip, and does not require to let go like the previous method.



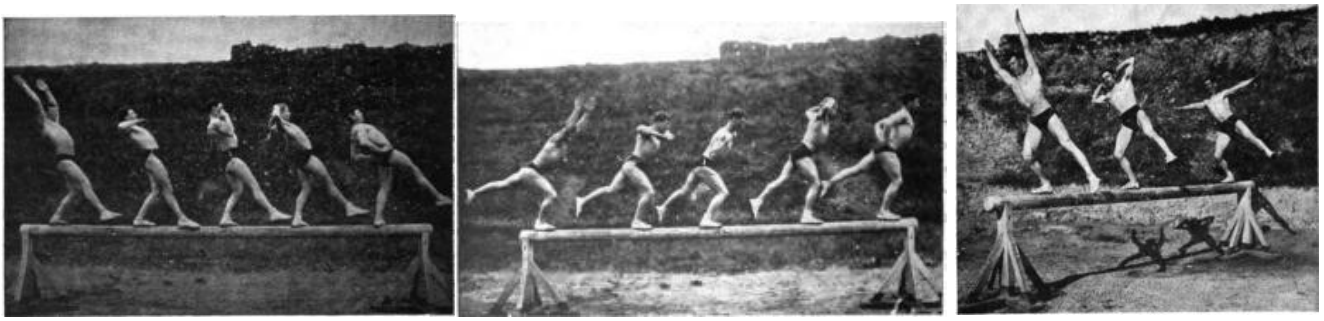
5. Pulling up simultaneously on the wrists: from a suspension, pull up with the arms while bringing the legs up in front. Engage the wrists above the object with a strong push, bringing the weight on the hands flat toward the back of the palm, turning the fingers inward if needed. As the wrists are engaged, bend the arms, then vigorously swing the legs up and down and pull over the bar, keeping the elbows close to the body. From there, reach the holding posture. Go down with the opposite movement. As before, if there are objects or a wall under the bar, the legs can use them to push up. This method is

not much harder than the previous one, and depends on the good placement of the wrists and the swinging of the legs. Of all methods, it is the fastest.



Reaching high places without vertigo

To reach a high place, one must first become insensitive to vertigo. Vertigo is a sort of stunned state where one looses will power and the proper notion of things, caused by feeling the void below or lacking confidence. One can conquer vertigo with gradual exercises meant to improve balance and reduce the fear of the void.



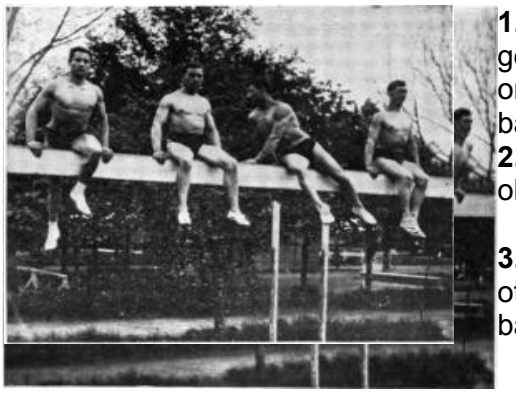
1. Balancing: on an elevated object, perform the following exercises: forward raise of the leg; backward raise of the leg; side raise of the leg; forward balancing of the leg; backward balancing of the leg; side balancing of the leg. The hands can follow the fundamental positions or help maintain balance.

2. Fighting the void: gradually go onto higher and higher places, first using safe and easy means: stairwells, ladders, stools, etc. Once up onto a safe location, look down toward the ground. When more assured, climb up with some of the more demanding climbing methods described above.

Reaching a hazardous spot

One may have to stay on a spot after climbing, to take a break, help someone, recover an object, etc. This is not an issue if the spot is safe, but is harder if there are dangers of loosing balance or falling.

After a climb followed by a pulling up, we find ourselves holding on the arms and stomach, and we seek to leave this posture to sit, straddle or stand on the obstacle depending on the circumstances. The following exercises must be done on a low object first, before trying them on high places.

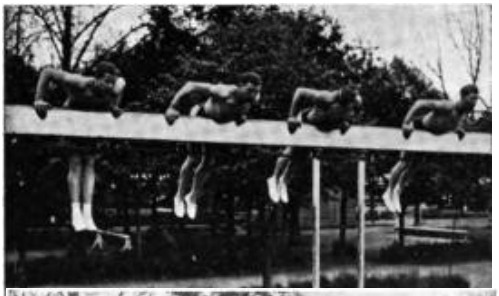


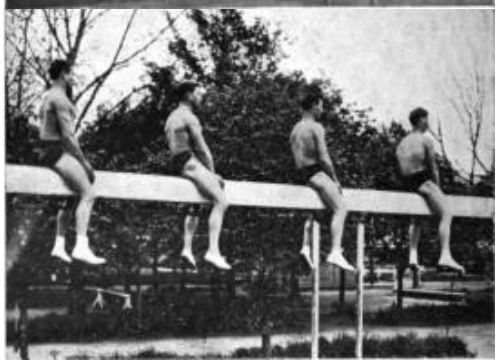
1. Sitting from a straight hold: turn around on one arm, letting go with the other hand and leaning the body forward, or bring one leg over the object, then the other. Do the opposite to go back to a hold.
2. Straddling from a straight hold: bring one leg over the object. Do the opposite to go back to a hold.

3. Standing from a straight hold: bring the knees one after the other on top of the object, then stand up. Do the opposite to go back to a hold.

4. From standing, straddle the object and back: bring the feet together, bend the legs down, put the hands on the object, close to the feet, fingers out. Bring the weight of the body on the wrists and lean slightly forward, move the feet slowly on both sides of the object, sit. To go back up, put the hands close to the thighs on the object, swing the legs a couple of times backward and get the feet on the object, then stand up.

Passing a dangerous spot





By a dangerous spot we mean a narrow passage, beam, bar from which a fall is possible. Depending on the type of obstacle, use one of the following methods:

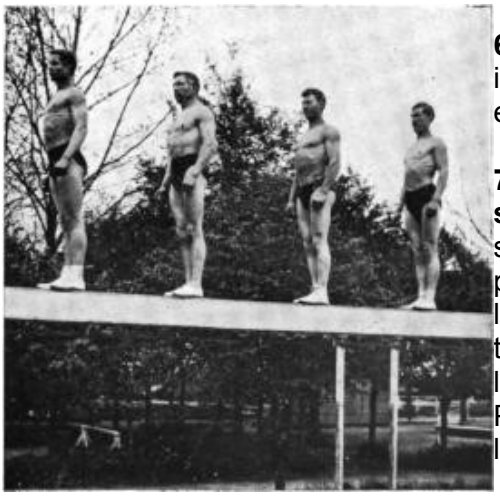
1. From a hold, move sideways: to go left, press the stomach and bring the right hand next to the right thigh, fingers forward. Bring the left hand out and pull the body up and toward the left hand, then go back on the stomach. Repeat the move to keep going left, or reverse to go right.

2. From sitting, move sideways: to go left, bring the right hand next to the right thigh, fingers forward. Bring the left hand out and raise the body up and toward the left hand, then sit back on the object. Repeat the move to keep going left, or reverse to go right.

3. From straddling, move forward: reach in front of the thighs with the hands, thumbs up and fingers out, raise the body with the arms, balancing with the legs and move to sit forward, hands touching the thighs.

4. From straddling, move backward: put the hands in front of the thighs, thumbs up and fingers out. Swing the legs forward then back, raise the body backward with a strong impulse from the wrists, bring the hands close to the thighs again and go on.

5. From standing, walk forward: bring one foot in front of the other, heel pointing toward the middle of the other foot, arms out for balancing, and keep going with the feet pointing out, eyes looking just in front of the feet. Smaller steps help maintain a better balance.

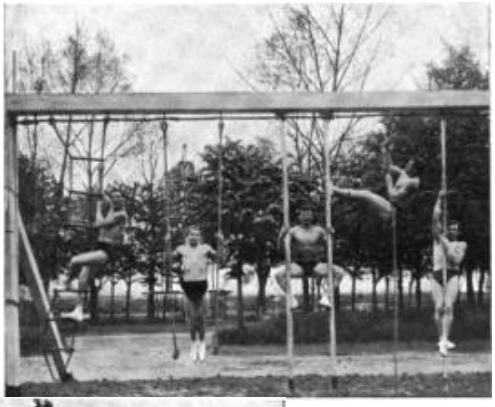


6. From standing, walk backward: perform the same steps as in the forward walk, with extra care.

7. From standing, walk sideways: stand sideways, feet together pointing slightly out, arms loose. Bring the right foot to the right followed by the left foot, and so on. Proceed similarly to go left.

8. From standing, turn around: turn on the spot using the arms to stay balanced.

Climbs of all sorts



Perform climbs and progressions of all sorts on horizontal, vertical or inclined surfaces using the arms and legs or the arms only. Use all sorts of buildings, trees, ropes, beams, etc. Learn to stay in suspension in different ways: using one hand, one hand and elbow, one hand and arm locked at the armpit, both elbows, both arms, head down with hands and calves, head down with calves only, head down with one calf, etc. Train to maintain the suspension for longer times, using will power to fight muscular tiredness and pain. Such exercises are important for any situation where safety rests on a sure hold from the hand.

6. Lifting

[translator's note: this chapter has not been translated, but is likely the next on the list as many Parkour practitioners are lifting enthusiasts as well.]

7. Throwing

[translator's note: as above, this chapter is yet to be translated, but will follow as well.]

8. Defending

[translator's note: this chapter mostly looks into boxing and wrestling, as oriental martial arts were still mostly unknown at that time. There is currently no plan to translate it, as more efficient techniques of defense have likely appeared.]

Games, Sports and Manual Work

[translator's note: this chapter has mostly a historical interest (old games!), and will wait for now.]

Building a work out program

[translator's note: this chapter is mostly aimed at helping educators build a team training program, although it has good advice for the individual.]

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