

Limitless athlete

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A global non-compensated stretching aims to recover and maintain a correct posture and a good muscular functionality.

Athletes' reality is a special world, in which self-affirmation, inspiration, creativity and daily hard work have to find a meeting point leading to a special result that goes further than the established limits. This is what a limitless athlete, i.e. a champion, is. Only with these premises can athletes reach those aspired goals and be happy for the results that will reward them for all their efforts and sacrifices.

Physical and psychological preparation is made of projects, itineraries, steps, hard work. There is no space for weakness, doubts, and "lazybones". Athletes' energies must be channeled, guided, and used in a wise way, skillfully, scientifically, and with observation ability. Nowadays a well-done muscular strengthening, an endurance-based workout, and a perfect diet are not enough. It is appropriate and fundamental to prefer a careful and deep kinesiology and postural observation first. Such observation is necessary to understand how athletes manage their movements and technical gestures. An altered posture will result in altered functions, and difficult or altered functions and technical gestures will lead to at least compromised results. Strengthening a muscular structure with problems means to automatically strengthen the problems as well. This is why it is first of all appropriate to be able to do a kinesiology and postural evaluation, to correct alterations, and, only then, strengthen a valid and stable structure. Only by following this order, we will have strengthened real athletes capable of going beyond their limits.

Let's make a comparison without any will to diminish athletes. Imagine you have a car with the handbrake accidentally inserted (this situation can be compared to excessive muscular tensions, or even better, to "muscular retractions"). The test driver, who is dissatisfied with the engine performance, ask the mechanic to increase the power of the engine (in athletes case, there could be a trainer dissatisfied with an athlete's performance, who works to strengthen athlete's muscles. Going back to the example of the test driver, it is obvious to say that the best thing to do would be to loosen the handbrake so that the engine could express itself naturally and without any waste of energy or breaks destruction. The same would happen to the athlete.

There is no human body without muscular breaks, hidden excessive tensions, retractions¹. For what these muscular retractions are concerned, they can be compared to an accidentally inserted handbrake and it is easy to understand that joints will be one of the main targets on which the forces and the effects of always tense, retracted muscles and wrong postures will be unloaded. It comes natural to ask why, although professional athletes always do a lot of stretching, they can adopt wrong postures or have classical and frequent disturbs, such as cramps, sprains, pulled muscles, articular lesions, tendonitis, bursitis, synovitis, etc.

If the physical preparation of an athlete (and not only of an athlete) were made keeping into consideration all the needed postural and kinesiology factors, there would be a reduction of traumas and a proportionate improvement of the results. It is not possible to think that a car with an improper wheel alignment, even if it is just of a few grades, can realize the same performance and have the same stability on the road as if it had the right alignment. The same happens with the body. A minimum inner rotation of a femur, a forward rotation of a shoulder, a small reduction of the ankle movement, a blocked diaphragm that is substituted in its functions by the accessory breathing muscles, an excessive or reduced lordosis, will inevitably determine limits in functionality and therefore in efficiency.

Being able to eliminate these incongruities, improve posture, give the athlete the correct proprioceptive information, means to reduce and eliminate the “brakes” and therefore athlete’s limits.

Here is the importance of being able to observe and recognize a correct posture. A careful examination will show interesting data that will give to technicians, physiotherapists and doctors all the instruments they need to intervene in the best possible way and to give the athletes all the possibilities they need; in other words, to help athletes growing and improving their condition without limitations.

We are talking about an innovative method, both under a sportive and a general antalgic perspective: the “global non-compensated muscular stretching”.

What is the meaning of this term?

The term “stretching” is well-known everywhere and is identified as an activity which is useful for the general wellness of the body. However, people give it a secondary role and do it in an old way. It is enough to observe how many athletes practice and then do stretching. There is no need to comment.

Which is than the difference between the classical stretching (the one described by Bob Anderson) and the global non-compensated muscular stretching?

¹ Sarcomeres that over the time have progressively been fixed and blocked by the connective tissue being shorter than usual, due to an automatic mechanism of body economy.

First of all, let's see the task and the role of the muscles: their main function is to make the body move thanks to a contraction. It will be the antagonist muscle which will take the joint back to its initial position, since no muscle is able to auto-stretch and to go back to its original condition. Muscles only know how to contract, so their natural tendency is to become more and more short than their ideal condition. Both hypokinesia and hyperkinesia lead to the shortening of the muscles. The connective tissue fixes the sarcomeres in a not properly stretched position and does not allow them to regain their initial length autonomously.

The aim of the global non-compensated muscular stretching is to restore and maintain a correct posture, a good muscular function and a consequent general wellness. We are talking about a wellness that can be conquered through a new way to work on the body, to gain conscience about ourselves and to eliminate our brakes, muscular tensions, articular and breathing blocks, bad synergies, poor sport results, and any kind of pain. Here is where a limitless athlete originates.

This new and revolutionary technique uses a multifunctional tool which can imprint correct postures and global muscular stretching, and above all it allows eliminating all the compensations the body uses any time one tries to stretch any muscle, trying to escape from the tensions.

The global non-compensated muscular stretching has been created both for common people and athletes' needs, as it allows regaining a physical wellness that had been lost and giving the chance to express people's own potentialities in a correct and balanced way like never before. With this method it is also possible to perceive our body better, improve the neuromuscular coordination and so synergies, dynamism, reducing or eliminating the chance of muscular traumas (cramps, pulled muscles, etc.).

Everybody knows that everyday life, stress, traumas, etc., cause to the muscular tissue a continue tension which over the time will evolve in muscular retractions and therefore loss of muscular length, with a consequent articular stiffness. Athletes know this mechanism, too.

When you do classical stretching on a muscle or a group of muscles, you obtain a part of stretching of the directly interested fibers, and another part of "apparent stretching" that is borrowed by other muscular districts, which are forced to cede part of their length. Such mechanism (which will give a false mobility) is called "**compensation**". (On one side the body stretches, whereas on the other one it gets shorter, as if you had a short blanket and you pull it towards your face, your feet will remain uncovered).

It is extremely easy to observe what has just been said in an athlete who is doing the classical stretching for the femoral muscles, for example when he sits down and bends forward moving his trunk and head towards his knees. Since the forward flexion is possible thanks to the coxofemoral joint, an anterior flexion of the whole trunk is not justified. In fact, this gives the illusion of a good mobility and flexibility, but in that movement the muscles of the rachis lend some of their length to the femoral muscles. Ask a person bending in that way to sit down on the ground with back erect, legs stretched and feet in

“hammer position”. Now lean a staff against his/her sacred bone and the entire column and ask him/her to keep the contact with the staff while trying to bend forward. It will be difficult, or even impossible, for most people to bend and touch their thighs with their trunk, by using only the joint in charge for that movement. In fact, it would surprise you and the person to see that his/her mobility was a bluff towards him/herself and the whole world. Moreover, every time we try to obtain something which is not physiologically possible, the whole body uses compensations of any kind, creating tensions and problems elsewhere. Sometimes it can even cause reductions or inversions of the curvatures of the vertebral column.

All this happens because muscles are concatenated one to each other (muscular chains), and they all have a given length and are not easy to stretch the way and where we would want them to. The body is an expert in creating compensations, which gives us the illusion of having improved a part of our body, but that in other parts generates articular coaptation, axial rotations of joint heads, hyperkyphosis, hyperlordosis, scoliosis, rectifications of the curvatures of the column, etc. Such compensations can be temporary or permanent.

When we do stretching and feel the muscle pulling, it does not mean almost anything, since a stretching which is not global will be interpreted by the superior nervous centers as a destabilizing postural element. This destabilization will create an alarm for which the posterior nervous centers will try to bring bones, muscles and joints back to their previous postural condition or to an alternative balance. This is why an athlete who has been doing analytic stretching for years and who stops for some days will see his/her mobility drastically reduced.

A global non-compensated muscular stretching acts instead on those muscles or muscular districts that are responsible for wrong postures, pain, altered perception of the body, poor sport results, wrong muscular synergies, and therefore in the direction of a “**primary cause**”. Using this method is important to remember that the whole muscular structure is organized in “muscular chains” and so if you try to stretch a part of that chain, you have to stretch in a coordinate way also the other muscles of the chain, from the head to the feet. The single muscles are the rings of a chain, diaphragm included. That is why a correct global non-compensated muscular stretching needs to be accompanied by a proper breathing according to the subject’s needs and posture.

Compensations are reduced or impeded by the usage of Pancafit®, an essential tool for the global non-compensated stretching. Thanks to this simple tool it is possible to obtain notable results on postures, sport performance, pain (pulled muscles, tendinitis, synovitis, bursitis, cervical pain, lumbago, sciatica, slipped disc, arthrosis, diaphragm blocks, etc.), and a general correct and balanced articular mobility.

During the vocational education courses (reserved for workers in the sectors – instructors, professors, physiotherapists, sports trainers, etc.) one of the first elements we give to the students is how to do a

proper postural analysis. Posture is like an open book, in which you can read, reckon and evaluate, through specific postural tests, the hypothetical primary cause (it can be an old trauma, an accident, protracted stress, bad postures at work, etc.) responsible for articular stiffness, bad synergies, altered ways of walking, moving, breathing, etc. The main aim of the global non-compensated muscular stretching is to act, as we said before, on the primary cause which had created an effect, a postural alteration which in turn will cause further pain or functional alterations. As a matter of fact, any trauma or pain the body experiences, will start a system of “antalgic compensation” or “functional compensation”.

Let’s see how a trauma develops. A person feels pain in one foot (for a small sprain) and he/she will limp to avoid the pain. This will cause a muscular tension as temporary defense. However, if such cause persists over the time, those tensions will get fixed and following a law of “body economy” become irreversible. Here is the difference between tension and muscular retraction: whereas tension can be immediately reversed, retraction cannot be spontaneously reversed, unless you act using specific and dedicated techniques, such as the exercises of global non-compensated muscular stretching.

Anyone can use for him/herself the technique of global non-compensated muscular stretching, since it is very easy and gives great results, without contraindications or age limits.

Proposals of global non-compensated muscular stretching exercises



Figure 1

Exercise 1 – It allows making the posterior muscles of the thigh work, due to the closure of the tibio-tarsal angle. The posterior muscles of the thigh and of the lumbar region work thanks to the closure of the coxofemoral angle, whereas the back works thanks to the action of the arms. There are infinite variations and therefore strategies that can be applied to this exercise, obtaining with any variation different points of tension. Depending on the angle of the feet side of Pancafit®, where the hands lean, the angle of the knees,

the rectification and the stretching of the column, the pressure of the pelvis backwards or upwards, it is possible to obtain various results, all of them different from the others, interesting and incomparable. By doing this exercise often contradictory and unmotivated tensions are showed by the subject, as a testimony of the interaction among the muscular chains. Breathing must be done in a proper way, preventing the diaphragm from acting negatively on the column (both through ribs and pillars), and so allowing muscular tensions that otherwise would stay hidden to emerge; and such results are not easily reached with other techniques.



Figure 2

Exercise 2 – It allows stretching the quadriceps muscle respecting the axis of knee joint (which does not happen with the classical hurdler's pose) and using many different levels of work intensity. It is possible to lift the legs side and by doing this the femoral muscles will work, too, even if they result apparently relaxed. The quadriceps will be solicited and stretched as well, thanks to the retroversion of the pelvis imposed by the relaxed leg. It is otherwise possible to act from the back side, by lower it and stimulate a

retroversion of the pelvis which will create more tension in the quadriceps, but not in the femoral on the other side. This pose, apparently easy but actually very demanding, offers a lot of advantages: the stretching of the quadriceps is done in total respect of the knee joint. Moreover, it is possible to stimulate both the quadriceps in the same way and with the same intensity, due to the fact that the angles of work, once the therapist has chosen them, remain fixed. Finally, while the quadriceps is working, the femoral of the other side is stretched and the same happens with the column by using in the best possible way also the breathing.



Figure 3

Exercise 3 – It works with a pose which gets as close as possible to 90°. Such position creates a notable tension and makes the posterior muscular chain work hard. The hands are on the dedicated adjustable handles which run parallel to the column axis. This maneuver will immediately show all the inappropriate tensions which make the required movement result difficult. There will be asymmetries, tensions in the arms and in the back, which can reach the lumbosacral region and sometimes the calves or the feet, following the principle of the muscular chains. Such exercise is

fantastic for those who have a kyphotic attitude and the tendency to close forward with the trunk. Also in this case many different variations are possible: the angles, the rotation of the arms, the action of the shoulder blades, the level of stretching of the arms, all these elements can be changed in order to stimulate the areas the therapist wants to modify. A correct breathing is always required.



Figure 4

Exercise 4 – It is great, since it acts on the lumbosacral region, on femoral and dorsal muscles, involving all the other muscles of the posterior muscular chain. By doing some simple exercise on the feet it is possible to involve even the cervical region. The resulting general mobility is incredible and this kind of exercise is also recommended for those who suffer from rachis pain. In this pose as well, exercises on the arms can be added, whose results will of course be different from those of the previous exercise, due to the different

gravity action. In this position it is possible to stimulate the diaphragm in a particular way, also taking advantage of gravity, by acting on the abdominal wall and therefore on the viscera. The diaphragm is stimulated to move upwards more than it happens with other techniques. This is extremely important, since tension and everyday life lead the diaphragm to fix in a progressively contracted position, which is always lower than an ideal functional condition. We all know that a tense diaphragm can be responsible for various problems: intra-abdominal tensions, hiatal hernia, problems of venous return, lymphatic system, intestine, and bladder. It can also cause problems at the cervical region because it delegates its task to the breathing muscles since it is not able to fulfill it anymore. This is why it is necessary to be able to treat it properly. Some of the poses proposed are focused on the diaphragm and aim to make it regain its ideal functionality.



Figure 5

Exercise 5 – It involves mainly the cervical region, the trapezius muscles and the arms. Many variations are possible. This exercise works on the neck and acts till the hands. Tensions increase especially depending on the kind of sport practiced. Those who play tennis, fencing, body building, etc., will feel remarkable tensions and will have great benefits. It is also extremely recommended to those who suffer from epicondylitis or who are affected by the carpal tunnel syndrome. There are many possible exercises (exercises of global non-compensated muscular stretching, exercises of

tonification with the specific accessorize, exercises to reshape and reprogram the curvatures of the column with specific pads for the cervical and the lumbar region, exercises of proprioception, of mechanic decompression for venous and lymphatic flow problems, ideal postures for the relaxation, etc.), all of them respecting the idea of globality, since wellness is to be found in the whole.

For more information on the Raggi Method®- Pancafit® please address to Posturalmed S.A.

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