

Importance of strength development in long distance runners.

To speak of strength in the human being is to speak of a motor quality (in addition to strength, there are another motor qualities as: speed, endurance, flexibility and coordination) and all of them in one or another way are related to each other, with strength being the one with the highest relevance. Strength is the ability to overcome or counteract a resistance through muscle activity, and can manifest in Isometric (static), that is when during work the muscles do not vary their length. Isotonic (dynamic) which produces a change in the length of muscles during its tension, where two variants are distinguished: The concentric, which is maybe the most common type of muscle contraction. For example when we flex the biceps, the movement Concentric is what we do when lifting weight, where we will notice that there is an enlargement of the muscle, which is due to the approximation of the contractile units of the muscle.

Eccentric, when an action is taken against the resistance with a simultaneous extension that elongates the muscle and that unfortunately sometimes coaches tend to not pay attention. So, for example, when you drop a dumbbell during a muscle extension biceps, the muscle slowly stretches and you will not see the increase in volume that you could observe when it contracted, although a certain level of contraction persists for the most part movement, in addition to maintaining a stimulus by the nerve impulses on the units of movement, although less than during the concentric phase. In short, the eccentric movements are those in which the muscle fibers are stretched, while the concentric ones have to do with the contraction of the muscle fibers.

Once these concepts were clarified, and after conversations with outstanding friends, runners with excellent achievements in distance races, many of them world record holders, Olympic finalists, and winners of the most prestigious races in the world, all coincide in the importance of maintaining a good program of development and maintenance of strength, without this necessarily implying an increase in body volume, which will not affect the values of the athlete's maximum oxygen consumption, or a deterioration in speed or a decrease in the ability to perform.

There are various methods for the improvement of strength (slopes, training circuits, plyometric, running in sand, weights and others)

We believe in teamwork, so knowing the benefits that maintaining the strength has in resistance runners, especially when it comes to maximizing its running economy, the improvement of the running technique, the amplitude and frequency of the strides, the flexibility, and injury prevention, making it ideal for when someone asks for advice to improve their racing times, it would be best to recommend to them and they should emphasize these fundamental aspects for obtaining good results in the long distance races (not mentions the genetic character since it can never be modified) pay a close attention to your aerobic efficiency, have a greater efficiency for the uptake of oxygen by the respiratory system and its subsequent transfer by the cardiovascular system and use by the tissues, do not leave aside the invisible training (feeding, hydration, rest, sleep, etc.) and for last, improve your career economy (technique, strength coordination, etc.). In this particular is it is advisable to visit a good physical trainer, since you cannot hesitate when it is time to prepare runners, so it is necessary to go to those professionals to attend

the weaknesses that can be found according to the specificities and characteristics individual of each athlete.