# SYSTEM AND METHOD FOR MORE EFFICIENT AND REVOLUTIONARY THE STRENGTH OF THE TRUNK AND LEGS

# - INJURY PREVENTION AND RECOVERY AND IMPROVEMENT OF FITNESS FOR ATHLETES -

**QUADRICEPS** 



**HAMSTRINGS** 



LUMBAR Y GLUTEOS



STRETCH EXERCISE: ISCHIOS AND LUMBAR



DECONTRACTING THE LUMBAR AREA

#### IMPORTANCE OF MUSCLE STRENGTH IN HUMANS.

Given that muscle is the support of the bone structure (skeleton), we can immediately realize the importance for the proper functioning of our organism. The musculature, without which we could not hold us up, from birth goes gradually increased to approx. 16, with normal physical activity. The musculature may be higher or lower, depending on the lifestyle made (very mobile – practice sports - fitness - fitness, etc.).



This human skeleton standing could not be sustained if it did not count on the corresponding musculature.

By stretching and subsequent muscle contraction (due to its ability elastic), muscle allows the movement of our body.

Thanks to muscle contraction we can run, walk, jump and move doing some efforts from lowest to highest degree of difficulty.

Depending on our muscles we can make a greater or lesser effort (running more - lift heavier loads - etc.

If our body we require more effort than is trained in depending on the development of their muscles, they can "protest" and appear one injury.

Because it is very important to develop a set of core muscles, which are the mainstay of our skeleton.

A more physically demanding (especially in sports), the greater should be the muscle development work (weightlifting).

## LET'S SEE WHERE THESE ARE LOCATED IN THE HUMAN BODY MUSCLES:

A sedentary lifestyle, aging, weight gain, decreased strength, poor postures when working (eg. sitting at a computer many hours), lift weights and loads exceeding our forces and especially the lack of adequate fitness exercises, contribute to our body "protest" and the discomforts appear on the back

(Lumbago and sciatica), knee problems climbing hills and stairs (lack of strength in legs), caused by weakening of the quadriceps - hamstrings and calves-soleus.

They are also frequent, severe pain in the neck and severe headache due mainly to lack of cervical musculature, and frequent occurrences of osteoarthritis in mented areas of our body.

Osteoarthritis, desviamiento spine (lumbar pain), early herniated discs, some inflammations of joints, etc. etc., usually much of the cause of the ills of modern society. The most immediate medical solution is anti- -inflammatory painkillers, B vitamins (especially B12), calcium, etc. They also tend recommend a physiotherapy or remedial gymnastics and rehabilitation in a gym. Similarly, there are usually encouraged to lose weight, so that the joints "Protesters" are not so overloaded, for which they must undergo a proper diet, and physical exercise to burn fat (jogging-jogging). The latter solution and less desired, is to undergo an operation to solve the problem (eg hernia discal).

## FOOTING -JOGGING (FUND OR LONG TERM CAREER CONTINUED):

Many adults over 30 years of age, people go to the streets to run to do FOOTING, running distances up to 10 km or more, believing that this would cover two functions fundamental

- 1) Burn fat and lose weight
- 2) Improve your overall fitness

Probably the first function is fulfilled and the intended purpose is achieved. The second function under the premise RUN is enough to be in good physical shape, can be valid for encouragement CARDIOVASCULAR-MUSCULAR ENDURANCE, but very probable, that a scarce strengthening the muscles of the lower body, favoring the emergence of some injuries due to a pathological overload. Nothing better for runners, football players, basketball players, tennis players, etc., to prevent wear on your joints and improve their physical performance that adequately train the muscles of your lower body and gluteus- lumbar area with bodybuilding exercises that later indicate, that are the reach worldwide for its simplicity, low cost and highly effective.

MUSCLE STRENGTHENING OF CERVICAL-QUADRICEPS-HAMSTRINGS-GLUTEUS AND LUMBAR, MAY BE THE FINAL SOLUTION AND THE PERMANENT CERVIALGIAS AND SLACK LEG AND JOINT PAIN IN THE KNEES.

Massage and physiotherapy treatments, improve muscle performance, toning and good overall performance.

## IMPORTANCE OF PROPER STRENGTH IN HIGH PERFORMANCE ATHLETES.

Current sports, especially elite athletes, (high performance

Sports and professionals) requires high performance of physical exertion, for which it is essential to a perfect and extraordinary physical condition, thanks to which it can perform at maximum, with minimal risk of injury. It should be noted that the practice of an activity sport of long duration, with constant changes of pace and intensity of effort, with sudden braking and torn, side racing and jumping, as in football, basketball, tennis, handball, volleyball, athletics, etc., organic and aerobic endurance (muscular endurance), which working intensively with these sports should be accompanied, lest they origine muscle stress (which ultimately can trigger the onset of various injuries lower body joints and lower back for wear), a good job of muscle strengthening core muscles involved in athletic effort. So Much in everyday life, as in sport, especially in elite athletes performance core muscles to develop are:

## QUADRICEPS - HAMSTRINGS -GLÚTEOS - LUMBAR

During the 40 years I've been coaching athletics, first as coach and club currently coaching RFEA in the CENTER OF HIGH PERFORMANCE SPORTS Sant Cugat, have trained many athletes specialties pole,

speed, high jump, long jump and triple -vallistas, pitchers, etc. Who have beaten more 30 times a record of Spain, obtaining the gold medal in more than 50 times Championship of Spain, one of them even won the bronze medal at the JJ: OO. Barcelona and one silver medal at the Championships. World Junior (both pole vault). Experience acquired training with TIRANTE MUSCULADOR, many of these elite athletes

national, and my permanent contact with the trainers of other sports (football, tennis, basketball, etc.), I have been confirmed and demonstrated excellent performance and efficiency in the muscular development.

# BODYBUILDING STRAP QUADRICEPS-HAMSTRINGS-LUMBAR BUTT.

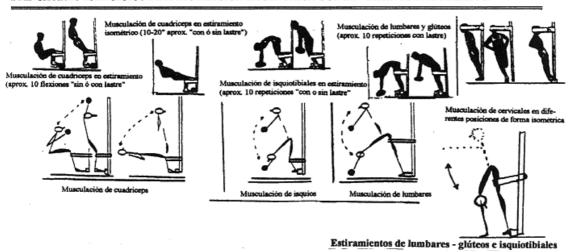
I have found through many years of experience and research, both personally, as my training partners, the good results obtained in the development of so-called ECCENTRIC muscles form = STRETCH. The use of TIRANTE not involves risks, and its low cost is affordable to everyone. The ROD is a means very REHABILITATION CENTERS effective to recover injured people, processes recuperatorios post-operative and post-traumatic. Among the physical reclaimers, especially football, WORK OF MUSCLE RECOVERY in fibrilares- contractures-breaks lumbago-sciatica, joint problems knees, has been very effective, shortening the recovery of some lesions in several months.

## BODY SHAPE WITH "STRAP MUSCULADOR" DE CUADRICEPS-HAMSTRINGS-BUTT-LUMBAR AND CERVICAL

It is the system more effective and revolutionary method for the fitness of the body. Injury prevention and recovery and improvement of the physical condition of athletes and people in general.

In TIRANTE MUSCULADOR, may develop such musculature in any place where it can be fixed (post-tree-lamp-rail-trellis-football goal, etc). How Come fulcrum for feet for non-slip, can be used, a brick, a wedge of wood, a curb the foot of a partner or an inclined platform fixing feet, specially designed for me, to be used for training with TIRANTE. It can be above anywhere in the bag or tied at the waist, as it weighs little and bulges. Are supplied with an adjustable belt "EXTENSION" by 1.30m in length, for use in different places and circumstances that require it. Replaces four weight machines expensive for its low price and is available to all budgets.

#### PRINCIPALES EJERCICIOS DE MUSCULACIÓN EXCÉNTRICA CON EL "TIRANTE MUSCULADOR"



### KEY BENEFITS OF USING THE "TIRANTE MUSCULADOR"

- a) Muscle stretching exercises "eccentric" (hamstring-buttocks and lower back) -improves the flexibility and is descontracturante
- b) Since the predominantly eccentric contraction, increased muscle tension is created, ie greater gains in strength and muscle elasticity.
- c) There is a higher incidence of elastic tissue, so that muscle hypertrophy is longitudinal and transversal no.
- d) All persons and especially elite athletes, who have used the TIRANTE, have improved very quickly your fitness and athletic performance and they do not have injured as easily as before.
- e) That it can carry sports trip or vacation in the bag, to train where go.
- f) Lack of risk in their use to develop the quadriceps and hamstring. In typical "Squats" with dumbbell weight on the back, there is great risk of spinal injury vertebral and intervertebral discs, as well as the knee joint, especially in female athletes, should ensure the waist with a belt lumbar protection. This One risk is minimal use of the ROD.

## AS USED CORRECTLY "TIRANTE MUSCULADOR" IN TRAINING

Before you start with the TIRANTE muscle, it is advisable session heating, running a minimum of 10 minutes gently, then a session of stretching and abs. As a first training exercise will be held:

STRETCH EXERCISE OF LUMBAR-BUTT-hamstrings and calves

They shall be at least 10 repetitions of stretching and flexibility of the area Lumbar glutes and hamstrings (also twins).

Exercise also descontracturante if suffering from low back pain or sciatica. It is also musculante of the lower back.



## STRENGTH OF QUADRICEPS IN STRETCH (ECCENTRIC) ECCENTRIC WITH TIGHT MUSCULADOR

Quadriceps Strength = 10 repetition. With weight or no weight on the hands We, depending on muscle strength the acting individual.





"Tendon thickening PATELLAR" STRENGTH OF hamstring IN STRETCH (ECCENTRIC)

Strength eccentric hamstring. 10 repetitions with a weight on your hands or without weight depending on the strength of acting individual.



## ECCENTRIC STRENGTH OF LUMBAR AND BUTT

Eccentric Muscle lumbar and glucose theos. 10 repetitions with weight on hands or weightless, dependent on the strength of acting individual.



The duration of isometric exercise (static) will be 10-20" depending on the strength of the person performing the exercise.

## ATTENTION:

Starting position – 1

By training the hamstring, gluteus also slightly muscular the lumbar and By training the lumbar and gluteus, hamstring also slightly muscular.

### STRENGTH OF SOLEUS AND TWINS



Extension ankle – 2 Isometric position approx. 10 "



Starting position - 1



ABDOMINAL STRENGTH AND COMBINED QUADRICEPS = (FOR ATHLETES very muscular)

Initial position 1







REPEAT SUCCESSIVE POSITIONS: 2 -3 -... 2-3 2-3 -.... -... UP TO 5 x (and return to position 1)

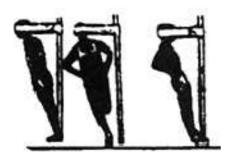
## TRAINING WITH "STRAP MUSCULADOR"

For athletes and athletes trained in their weekly training Schedule muscular, recommend the use of TIRANTE = 3 times a week = alternate days (Monday-Wednesday and Friday). 5 foll must be performed days of strength training quadriceps-hamstrings and glutes and lower back, with 10 repetitions, except the last, in the the abdominal and quadriceps combined, which by its hardness, only 5 repetitions performed of each year. The initial exercise of lumbar stretching, will only be done at the beginning of muscle training with TIRANTE (10-repetitions). The use of additional burdens on hands or neck, very muscular athletes to increase muscle hypertrophy, with consequent improved muscle. Between exercises, always take some dynamic, up and down a plington or raised step, with ten repetitions boats. It is also recommended to perform incremental runs 40-50 m, among bodybuilding exercises for stimulate fast muscle fibers.

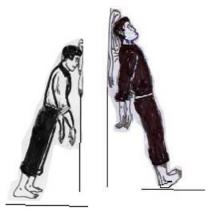
Well done training with TIRANTE can replace all or part the weight training in those athletes engaged in running and jumping to base their training (runners-jumpers-hurdlers-players-players-players of balonmano- volleyboletc.-etc. It is the ideal system for athletes bodybuilding back problems and knees, as well as in the recovery of many joint injuries, in which a load the back is not recommended.

THE NOVICE TRAINED ATHLETES AND LITTLE muscularly, must reduce burdens, repetitions of the exercises, and training days. It should be account, especially in the training of quadriceps, that the greater bending legs, and more trunk tilt back, there is greater load on the quadriceps, and higher voltaje muscular and difficulty performing the exercise, and recommended 10 repetitions. The same considerations must be taken into account for seniors, who play sports occasionally to keep fit.

### STRENGTH OF CERVICAL (KEYSTONE)



Strength of cervical isometrically (static). The TIRANTE be subject to a post-trellis-tree-etc., Are introduce the head in one of the holes thereof, leaving fall sideways, forward and backward suspended from TIRANTE (See drawings). For attachment can be used the "EXTENSION" orange. The work must be isometric over a period of 4-6 "- approx. 3-4 repetitions.



This type of exercise replaces manual pressure uncontrolled and very exhausting. It must be started under a but, over time, such that in use training. These exercises should be controlled by a doctor or physiotherapist





