

Compex[®]

Your intelligent training partner



***HOW TO IMPROVE
YOUR WOD
WITH COMPEX***

FUNCTIONAL TRAINING AND ELECTROSTIMULATION

INTRODUCTION

Functional training combines gymnastics, weights and endurance sports.

Functional training athletes have to be proficient in a huge variety of disciplines. They run, row, climb rope, jump, move objects and practice Olympic weightlifting movements using dumbbells, gymnastic rings, boxes, kettlebells, bags and other items which serve as training aids.

Functional training focuses on the development of ten athletic skills: cardiovascular and respiratory endurance, muscular endurance, strength, flexibility, power, speed, agility, psychomotor, balance and accuracy. The aim is to develop the capacity to train with greater intensity for extended periods, utilising a variety of muscle groups.

The WOD (Workout of the Day) is built around three principles. Firstly, the movements are functional, or in other words, natural and easily transferable to everyday life: pushing, pulling, jumping, running or lifting a heavy object.

Secondly, the training is constantly varied. Rather than allowing the body to sink into a familiar routine or rhythm, and thus lessening the benefit received from the workout, functional training means you never know what to expect; training might include circuits one day (a sequence of exercises in a given time or for a set number of repetitions) and a singular activity the next: running or pure strength (such as deadlifting, backsquat or shoulder pressing).

Finally, training is always at high intensity; flirt with your own limitations: run as fast as possible, raise the bar with more weight, push yourself.

Compex can be an the ideal partner to help you warm up the muscles, prevent injuries, recover better and faster, and even develop strength.

In the next few pages you'll see outlined the Compex programs recommended for functional training athletes.



1. PHYSICAL TRAINING

AUGMENT YOUR STRENGTH AND ENDURANCE TRAINING WITH COMPEX

PROGRAMS FOR STRENGTH

How does it work? Why Compex will allow you to recruit more muscles.

The practice of functional training requires you to develop significant strength levels, but also the ability to maintain this high level of strength over a long period of time. Physical preparation for this type of training must first focus on increasing maximum strength, and secondly, on enabling the muscles to repeat powerful contractions for the duration of the training period, without tiring.

The Compex **STRENGTH** program engages the quick muscle fibers (type IIb) which develop high levels of strength. The contractions induced by the stimulation are extremely powerful but short, with long intervals between them. Increasing the intensity of the electrical pulses throughout a session recruits a higher percentage of muscle fibers (sometimes more than are willing!).

The **RESISTANCE** program focuses on different muscle groups and consists of less powerful contractions which can last for several seconds and are separated by short periods of respite. This is a demanding workout used to push muscles to fatigue and thus improve their ability to perform exercises at high intensity for longer.



GENERAL RULES: HOW TO USE

- The recommended preparation duration is 2 CYCLES (3-5 weeks).
- During the preparation, the same muscles will be stimulated 3 times a week; the first program used is STRENGTH followed by RESISTANCE.
- A transition/interval week can be scheduled between the first and second cycle with only one session in the week (for recovery of the muscles).
- It is not advisable to target more than 2 muscle groups during a training period, but you can alternate between a lower limb muscle and an upper body muscle.
- It is recommended to prioritise the quadriceps muscles in regards to lower limb stimulation. In relation to the upper body, according to what you wish to achieve, you can stimulate the large pectorals, biceps or latissimus dorsi.
- The 3 weekly sessions should be distributed as evenly as possible throughout the week; Compex sessions should take place on days either without training or without a demanding workout.
- The key factor in getting the most out of electrostimulation is adjusting the intensity. The intensity should always be at your maximum tolerance level, or in other words, the highest setting you can bear with reasonable comfort.
 - The intensity determines how many muscle fibers are recruited
 - The higher the intensity, the greater the progress of the muscle development +++
 - It is important to progress during a session as well as from one session to another. Keep increasing the intensity (if you can)
- The combination of dynamic exercises with stimulation does not add any proven efficacy and should be reserved for very experienced athletes working under the supervision of a physical trainer.
- However, it is advisable to voluntarily contract the stimulated muscle during stimulation (without moving the limb); this provides additional comfort and facilitates the progress of the muscle.
- The full preparation regime can be repeated 2-3 times per season

IMPROVE CORE STABILISATION

CORE STABILISATION PROGRAM

The bottom of the spine is an important bridge which allows transmission of forces between the upper and lower body, and when all is well, ensures mechanical efficiency.

Proper maintenance of this area is therefore essential for better performance during almost all WODs, but also, to reduce the risk of injury around the lumbar region.

The functional training athlete should incorporate regular 'armouring' sessions into their regime, consisting of stimulation of the abdominal and lower back muscles along with exercises suitable for postural muscles (not utilising fast fibers).

The advantage of core stabilisation with Compex is twofold: it significantly reduces pressure on the lower back whilst giving the lumbar-abdominal muscles an intense workout.

GENERAL RULES : HOW TO USE

- Aim for 3 'Core stabilisation' sessions per week (3 to 5 weeks)
- Exhale slowly during each contraction.
- At the end of the regime, it is advisable to keep up 1 session per week using the same program in order to maintain the muscle lining.



2. WARM UP WITH COMPEX

WARM-UP PROGRAM

This program supplements warming up, ensuring optimal muscle-condition during a WOD. It's designed to improve muscular explosivity and delay 'nervous fatigue' (physical or psychological) during repetitions of high-strain movements which require maximum effort.

A Warm-Up session is short (about 9 minutes) and can be completed before the start of a WOD. A special regime incorporating the muscle activation Warm-Up program will allow you to achieve superior performance from the very start of the WOD.

The Warm-Up program generates a kind of beat interspersed with contractions from the stimulated muscle (muscle twitching). This specific type of muscle activation leads to a sharp increase in blood flow and improves the contraction capabilities of the muscles stimulated.

To benefit optimally from the effects of stimulation, make sure to adjust the intensity according to your needs. Stimulators with mi-Range functionality (muscle intelligence) can provide information about the minimum effective intensity, while the Compex SP 8.0 automatically adjusts the intensity of the stimulation until you reach the ideal level. This is mi-AutoRange functionality.

POTENTIATION PROGRAM

Compex SP8.0 also offers the Potentiation program. Like the Warm Up program, this should be completed before beginning a WOD. This program is shorter (less than 4 minutes) with the principle function of improving muscle contractility. It is essential to complete a preliminary warm-up before using this program as Potentiation does not increase circulation in the same way as the Warm Up program.



3. RECOVERY

IMPROVING RECOVERY WITH COMPEX

Functional training sessions can cause a state of temporary, but heavy, fatigue. The accumulation of toxins produced from exertion and alterations in the muscle fibers contribute to this condition. A proper training regime must incorporate workout routines but also recovery between workouts (or indeed competitions).

Training before the musculature has regained its potential can mitigate the benefits of a workout or worse still lead to complications caused by over-training. Electrostimulation can accelerate the muscle recovery process after an intensive effort, exploiting several key factors:

- Increased blood flow to the muscles drains toxins.
- Increasing endorphin and enkephalin (natural substances with analgesic properties) production reduces muscle soreness
- Decreasing muscle tension has a relaxing effect on the muscle fibers.

Unlike muscle building programs, the Training recovery program does not cause powerful contractions. Rather, it induces simple muscle twitches, providing a massaging sensation. The practical guidelines for using this program (intensity, positioning of the electrodes, body position) are the same as for the Warm Up program.

FURTHER TIPS

- Use this program after each workout, within 3 hours.
- Like all Compex programs, Training recovery can be used on all muscle groups highly stressed during WODs.



4. PAIN MANAGEMENT

PAIN RELIEF WITH COMPEX

Functional training is very demanding on the joints, muscles and tendon structures, especially when a WOD technique is poorly executed due to tiredness or another factor.

Some injuries like tendinitis (tendon pain) are particularly common among athletes and can be relieved by 'painkiller' programs widely employed by physiotherapists. An mi-TENS program should be used during the acute phase of the injury where it is advised to avoid placing pressure or weight on the afflicted tendon. This program provides a sensory stimulation which helps fight pain and is available on many electrostimulation models. The mi-TENS function regulates intensity, preventing it from reaching an undesirable level, improving the effectiveness of stimulation during a period of injury.

During the chronic phase of injury, as well as for issues with persistent muscle spasms, the program MUSCLE PAIN (Endorphin) can help by improving blood supply to the tendon or muscle, aiding recovery. Some models offer additional programs to relieve specific pain-areas (neck, lumbago etc).

RECOMMENDATIONS FROM OUR AMBASSADOR-ATHLETES, 2016

RAPHAËL LAUKAU MONPTELLIER BOX

“ Functional training athletes often work the same body part two days in a row. Even if the exercises differ from day to day, one could, for example, run one day, squat the next, weightlift the third, and thereby work the legs 3 successive days. Compex can become strategic in maintaining the level of intensity in consecutive workouts employing the same muscle groups.

The volume of intensive training can easily reach 5 sessions per week. At this frequency, athletes should regularly see medical and paramedical professionals (physiotherapists, osteopaths) to monitor their health. People who think Functional training is dangerous often neglect the basic maintenance of their body.

Without replacing health professionals, Compex is one of the tools we recommend to maintain the body, reduce pain and improve recovery. Compex STRENGTH programs are also beneficial for competitive athletes, and easy to implement with new wireless versions.

In addition, the ACTIVE RECOVERY programs are a huge benefit, both when training and competing, between events and after tests, accelerating the return to service of a muscle group.

Finally, its compact format makes Compex ideal to use when traveling, both to take advantage of hours which normally couldn't be used for training and to reduce the consequences of a flight/trip spent sitting or static. ”

Raphael Laukau helped us write this training guide.

OLIVIER LÉOTY LARENE - CARRE SENART BOX

“ The Compex SP 8.0 has become a valuable ally in my physical preparation, in particular with recovery and pain management. Past the age of 40, daily workouts require more recovery time than when I was in my 20s. That's why I always use my SP 8.0 after each training session. The TRAINING RECOVERY program coupled with the REVIVING MASSAGE significantly contributes to recovery and muscle regeneration.

High Level functional training heavily strains every part of the body, and joint and tendon pathologies such as tendonitis can become recurrent and debilitating. Having had a lot of worries with my patellar tendons, the SP 8.0 program TENDINITIS worked miracles. Every time it was necessary, I applied the electrodes to my knee. Within weeks, my pain has decreased noticeably and it allowed me to return to a heavy workout... reborn!

The SP 8.0 is also very effective with strength-building exercises such as the squat. I combine the program with my EXPLOSIVE STRENGTH workout to mobilize more fibers and it shows, especially after the sessions; the muscles experience greater nervous fatigue.

Finally, during competitions, between 2 events, the WARM-UP program allows me to maintain some degree of muscle "alertness" so I can more quickly get in the arena and operational. Compex wireless products offer a major advantage in that you can position them around clothing and move freely without tangling the cables.

The effectiveness of Compex SP 8.0 is well established today and is a valuable ally for those looking to perform at a high level, as well as those seeking everyday comfort around their training. For me, it has become essential. ”



SOPHARA SAM LARENE - CARRE SENART BOX

Achievements

Kip my cup 2013; Brussels Throwdown 2013 and 2014; Italian Throwdown division team 2013 Individual and 2014; Athens Throwdown 2014; French Throwdown 2013 and 2014 in Division Individual and Team 2015; Cop Fittest 2015; Belgian Throwdown 2015 team division; Super Team Cup 2015 team division

“ *Compex has become an indispensable tool in my training because it serves well when warming up, in recovery after intense sessions and in the treatment of small daily pains.*

Functional training is very demanding on the shoulders and knees, which is why we're very prone to tendonitis. I use the Compex TENS program as soon as I feel abnormal pain in my tendons in order to continue to train effectively and mitigate the pain.

I also use the COMPETITION RECOVERY program, especially during events where you have to chain several tests consecutively with limited recovery time; this helps reduce muscle fatigue after exercise.

Lastly, two or three times a week, I like to use the CORE STABILISATION program late in the session, as it means a more targeted and intensive workout which takes less time.

Compex has helped me to improve my training regime and recovery more rapidly, without having to worry about any pain. ”



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