



**K-Active®**

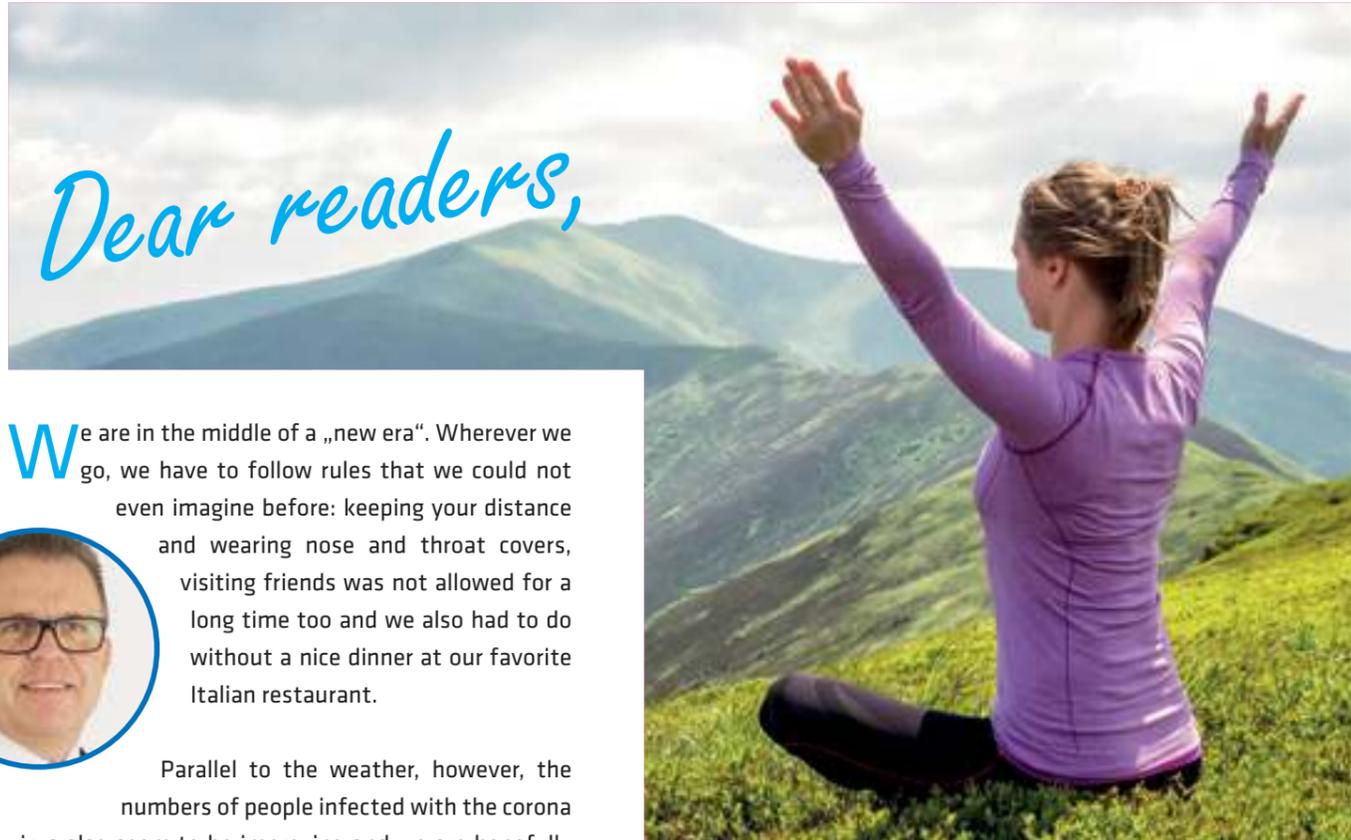
**Life!**

Issue 8 | 06/2020

**„FULL RECOVER CRISS CROSS“**  
by Brahim Boubaker

**ELECTRIC MUSCLE STIMULATION –**  
The effective miracle weapon for your muscles

**MUSCLE CRAMPS –**  
Causes and rapid assistance



Dear readers,

We are in the middle of a „new era“. Wherever we go, we have to follow rules that we could not even imagine before: keeping your distance and wearing nose and throat covers, visiting friends was not allowed for a long time too and we also had to do without a nice dinner at our favorite Italian restaurant.



Parallel to the weather, however, the numbers of people infected with the corona virus also seem to be improving and we are hopefully looking towards more normality in our everyday life. We would also like to contribute to this normality with the new edition of the *life!* Magazine: The content is completely **corona-free** – we promise!

Enjoy a little virus-free reading: We will show you a new technique for kinesiology taping, uncover possible solutions for the unpopular muscle spasm and offer you the possibility to apply electrical muscle stimulation („EMS“ for short) simply at home too.

I hope you enjoy reading the new edition of the *life!* Magazine. And even without „Corona content“: please stay healthy!

Sincerely, yours

Siegfried Breitenbach

## INHALT

- 02 EDITORIAL
- 03 NUBIS® – THE THERAPY BENCH THAT FITS IN A BACKPACK
- 03 VISITING THE ROYAL MOROCCAN FOOTBALL FEDERATION
- 04 MUSCLE CRAMPS – CAUSES AND RAPID ASSISTANCE
- 06 EMS – THE EFFECTIVE MIRACLE WEAPON FOR YOUR MUSCLES
- 08 INTERVIEW WITH: JESSICA VIEHWEGER
- 10 „FULL RECOVER CRISS CROSS“

## NUBIS® – THE THERAPY BENCH THAT FITS IN A BACKPACK



The optimal alternative when it comes to mobile therapy beds: NUBIS®.

Instead of laboriously dragging the unwieldy bench, simply pack the inflatable mattress and the foldable frame in the trolley, which is equipped with wheels, but you also can carry it comfortably as a backpack.



Your advantage: You have both hands free



Set up in the shortest possible time, with electric pump



No more tedious hauling to home visits or sporting events



Available in 3 different sizes and with or without a height-adjustable frame



## K-ACTIVE® INTERNATIONAL: VISITING THE ROYAL MOROCCAN FOOTBALL FEDERATION

In February Siegfried Breitenbach, Managing Director of K-Active® Europe and K-Active® Maroc, received a special honor: Dr. Said Zakini, team doctor for the

Moroccan national football team invited in addition to his national medical team, also Breitenbach to the Maâmoura Sports Center in Rabat. The sports center was recently upgraded to a state-of-the-art standard for more than 40 million euros; Among other things, K-Active® Maroc supplied medical devices for this project.



In addition to the visit, the focus was also on a workshop: Breitenbach taught the doctors and therapists in kinesiology taping. ■

## MUSCLE CRAMPS – CAUSES AND RAPID ASSISTANCE

Especially at night it is dreaded – the muscle cramp. It occurs mostly after increased physical exertion and can interrupt your sleep in a quite painful way. But what happens inside the muscle during a cramp and what are the causes for an „attack“ at night?

Evolutionary we are active during the day: we use up energy, empty depots in cells and strain or overstrain structures. The rest period at night helps the body to recuperate from these problems. During the different sleep phases, the body tries to eliminate deficits and builds up new structures to be fit and strong for the new day.

For these regeneration processes, the body needs primarily minerals, as for example Calcium, Potassium and Magnesium. These minerals are used as central atoms for enzymes or as replenishments for depots in the muscles and other structures.

Today's problem is, due to the industrialized food production, that there are not enough minerals and trace elements in fruits and vegetables anymore. On the other hand the food consumption has significantly increased due to hectic and a stressful way of life, causing in many cases a relevant deficiency with negative consequences. Most

important for the body's self-preservation is the significance of a process. If there is a mineral deficiency in the body and the liver would need these substances,

**It takes place in the body everything depends on the value of a process for life support**

than that organ would be supplied instead of a muscle. This means that there is not enough mineral concentration in the muscle cells. The muscular filaments Actin and Myosin can no longer separate due to this deficiency and a muscle cramp occurs.

Such a deficiency should primarily be prevented through good nutrition. There is also the possibility to supply the body with activated minerals through the skin. With the

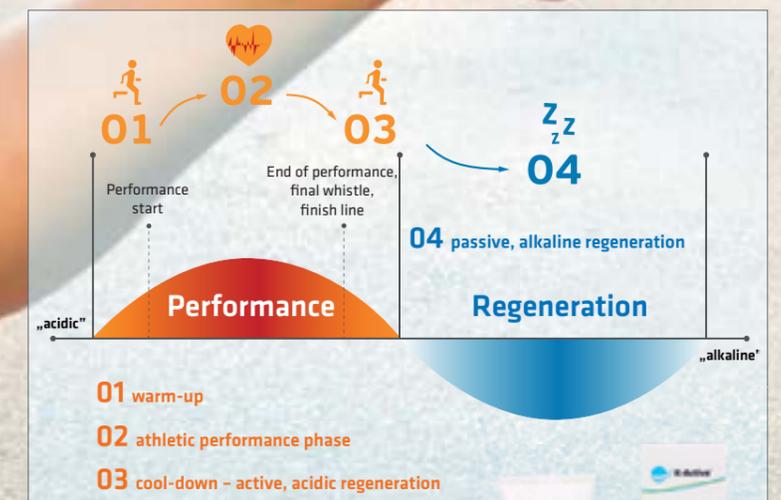
charged ions it is possible to overcome the natural skin barrier and to be available for the muscle metabolism.

As per the daily rhythm we recommend to apply the K-Active® Relax Cream after 4 p.m., even 2 times, because the substances are needed in the recovery period and the parasympathetic activity.

During physical activity it would be useful to supply the body with the K-Active® Relax Cream in the basic regeneration period (see report on

Performance and Regeneration cycles on our Homepage).

Take advantage of these simple possibilities to prevent muscle cramps and to keep your body healthy and efficient!



## ELECTRIC MUSCLE STIMULATION – THE EFFECTIVE MIRACLE WEAPON FOR YOUR MUSCLES

Electric muscle stimulation, or „EMS“ for short, is a mega hit. EMS studios and EMS offers are popping up like mushrooms and promise to get your body and muscles in top shape with only short applications. But what is behind the training method and what are its advantages and disadvantages?

**diPulse**  
SMARTWEAR

by K-Active:



Basically, muscle contraction occurs when the motor area of our brain generates an impulse that reaches the muscular fibrille via a nerve and the motor end plate. This electrical impulse activates the actin and myosin filaments, which control the contraction of the muscle.

This activity of motor control points is usually closely related to our sensory system. In physiotherapy, people often say „no motor skills without sensors“. For example, if a joint is physically overloaded or injured, the brain receives information about the condition and evaluates and processes this information accordingly. In such a situation, further maximum stress on the joint due to maximum muscle activity makes no sense. This inhibits the motor skills and limits the activation of the muscle.

### Electrostimulation

For this reason, electrical impulses are set very early after injuries and operations in order to train muscles again and to bring them up to normal loads. Different forms of current are used in connection with special frequencies in order to enable muscle contractions even without an impulse from the brain.

In addition to these options, electrostimulation was used in Russia in the early years to improve the athletes' performance. Certain muscles or entire muscle groups are stimulated in addition to the already intensive training, whereby they are built up even stronger and the performance options continue to increase.

### EMS Applications

In the past, electrical currents were mostly generated by devices and transferred to the skin via cables and electrodes. Nowadays, electrodes are integrated into skin-tight shirts and trousers, for example, which are still connected to a control unit via cables. This form of application makes it possible to train individual movements or movement sequences parallel to electrical stimulation. A symbiosis of conscious and externally generated muscle activity emerged.

### NMES Applications

The company diPulse has further developed this idea and now makes this training method possible completely without restricting cabling. The application describes diPulse based on physiological

requirements as »NMES«: neuromuscular electrical stimulation.

In cooperation with the partner company FENC, a specialist in high-tech functional clothing, highly complex textiles with fully integrated and very large contact surfaces made of carbon nano tubes were created.

### „NMES“: Neuromuscular electrical stimulation.

At certain, easily accessible muscle points, the conductor tracks are connected to so-called „stims“ via two magnetic contacts, which receive impulses via Bluetooth Smart from the outside and can then transmit electrical signals to the conductor tracks in the textile fabric. This process is controlled via an app and Bluetooth Smart on the smartphone or tablet.

At NMES, movements are neither restricted by restricting clothing nor by wiring and a wide variety of training options are possible, for example in the areas of endurance, strength, hypertrophy training and many more.

EMS training with (left) and without wiring (right)



In contrast to other EMS applications, only two muscles are activated at the same time for health reasons, otherwise overloading could occur in the different body systems. This protective function is one of several distinctions to the Functional Fitness Training in studios accompanied by trainers.

In addition to shirts and pants, there is also a knee bandage. In case of knee joint problems, the quadriceps muscle and especially the vastus medialis muscle are activated only to a limited extent; consequently, they recede. The knee bandage enables the targeted (re) building of this muscle group to ensure the stability of the knee. In addition, there is also a belt specifically for stimulating the abdominal and back muscles to strengthen important muscles in case of back problems and to be able to perform movements in the correct co-contractions.

The app for smartphones and tablets opens up a wide range of applications, for example with TENS, massage or rehabilitation applications.

**Summary:**

„Life is movement“ – For this we need the many functions of our body. The muscles play a crucial role in this; therefore, it should be trained in a variety of ways. Especially when the optimal connection of the muscles is not possible due to injuries, operations or degenerative problems.

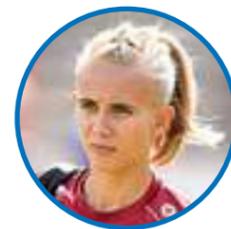


The „Stims“ receive the electrical signals via Bluetooth from the smartphone

**NMES is a great way to stimulate the muscles in a targeted manner. However, the method should be supplemented by a variety of movement patterns in order to integrate the newly acquired strength also neuromuscular into the „human system“.** ■

**K-ACTIVE®-INTERVIEW WITH: JESSICA VIEHWEGER**

**Physiotherapist at the 1. FFC Turbine Potsdam**



Jessica Viehweger

**K-Active®:** Ms. Viehweger, do you have a full-time job at the 1. FFC Turbine Potsdam in the women's national soccer league?

**Viehweger:** „As part of the medical network, I work at Physiotherapy Schultz. I work there for three days in the mornings and the afternoons and the rest of the week

I dedicate myself to treating the girls at Turbine Potsdam.“

**K-Active®:** What difference do you see in general between the men's and women's national soccer league?

**Viehweger:** „From a purely sporting point of view, men's football

is of course much more dynamic and athletic than women's football. However, it should be noted that women's football has also developed a lot in this regard. The big difference though, lies in the financial area and in the recognition. There are worlds between the salaries of men and women. In the national soccer league, there are by far too few professional players who can live on their club sala-

ries, for instance not a single one with us. Most of them study, go to school, learn the German language or work.“

**K-Active®:** What special problems and injuries are there in women's sport?

**Viehweger:** „I would not say that there are special problems in women's sport. Studies have shown, however, that women are three to ten times more likely to tear their anterior cruciate ligament. This is partly due to the weaker connective tissue of women and the anatomical difference to men. Women have a wider pelvis and therefore often tend to have an increased internal rotation in the hip and an increased X-leg position.“

**K-Active®:** How is the medical team at Potsdam structured and what does your daily work with the players look like?

**Viehweger:** „Our medical team consists of our team doctor Dr. Torsten Gieschen, chief physiotherapist Thomas Schultz, the physiotherapist of the second team Jacob Zimmermann and myself. In addition to the treatments, I train the injured players during

*We live*  
**#partnership**

the training sessions. Furthermore, my work also consists of bureaucratic tasks, orders of medical material and equipment, phone calls with the trainers, the Doc and Physios, as well as the planning of treatments and rehabilitation units.“

**K-Active®:** Since 2016 the 1. FFC Turbine Potsdam and **K-Active®**



**K-Active®:** What excites you personally to work in the top-level sport?

**Viehweger:** „Above all, the pressure to get every player and especially injured player to be able to train and play again in the shortest possible time. Working with competitive athletes is also completely different from working with normal patients. The professionals have the absolute will to return to the field as quickly as possible and just do everything for it.“

**K-Active®:** Female therapists are seen at more and more male professional teams. Would this also be a goal for you in the future?

**Viehweger:** „Of course, I could imagine looking after a male professional

team; it would be a new challenge and the pressure would probably be even higher. However, I honestly have to admit that my heart is very attached to Turbine Potsdam. Here I got the chance and opportunity to work in professional sports right after my apprenticeship and I am very grateful for that.“ ■

have been cooperating. In which areas could the medical team benefit from that?  
**Viehweger:** „Above all, we benefit from the **K-Active®** Tape and other products such as Leukotape, Gazofix and the ointments that you sell. The **K-Active®** Tape and the Leukotape are our daily companions in training and games – nothing works without them.“



## „FULL RECOVER CRISS CROSS“ by Brahim Boubaker

Brahim Boubaker

Who has never experienced it: the muscle is blocked and you have the feeling that it tears during the next uncontrolled movement. And then you ask yourself: how do I get fit fast and when are my muscles optimally ready for sports and work again?

**B**rahim Boubaker had these thoughts too. Boubaker is a Physiotherapist from Tunisia and an instructor at **K-Active®**. Since many years, he works at the al-Wakrah soccer club in Qatar and gets confronted again and again with this problem. Therefore, he developed a new technique for the kinesiological taping method.

### Objectives of the technique

This technique is most useful as a prophylaxis or in the second half of the healing process after an injury, because its objective is to stimulate the bodily functions and to optimize the self-healing process. Boubaker's idea was to shake-up the affected structures. But what for? Imagine a ketchup bottle: after it is shaken really good, the ketchup comes out much more easily.

Transferred to medicine, this process is called „Thixotropy“. With this frequent occurrence in the

body, gel liquifies under the influence of shear stress (as for example stirring or shaking). By ending this process from the outside, they solidify again.

Conclusion: The viscosity of the gels changes. Boubaker's idea is comparable to „kneading something until soft“.

### The Technique

The “suppleness of the gels” is also desired in the affected body areas. To achieve this, Boubaker cuts off the lymph tails at the base of the Lymphatic Fan. By doing this he gets 4 narrow and thin strips.

The base of such a strip, in our example a thigh injury, is placed in the neutral position towards the body. The body area where to be applied on is then pre-stretched as far as possible and the strip is

placed on it without any tension. With a little distance to the first, the remaining strips are applied using the same technique.

In the resulting spaces, four more strips are put on in the same way from the opposite side. This appli-

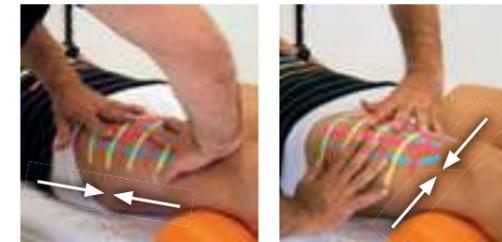


cation creates sensory stimuli in the longitudinal direction of the tape. In addition, by putting the tape onto the pre-stretched skin,

the tape and the underlying structures get pulled towards the inside. Three more stripes follow each other with a little distance in between.



The same thing happens here again too in the opposite direction. The bases of the strips are laid out medial (=inside) and the pull of the fascia technique pulls the structures outwards.



Relief directions

so-called convulsions are created, which lift the skin and the underlying structures. The lymphatic reflux is intensively supported, whereby the overloaded or injured area is cleaned of waste materials and structural debris and the pH value is changed.

The strips, which were applied in a longitudinal and transverse direction of the muscle, similar to a lymphatic or fascia technique, relieve the structures massively and mechanically” knead them soft“. The system also has a positive influence on both the vascular system and the intra- and extra circular fluid shifts. And the receptors in the affected area

In addition, the areas are better supplied via the arterial system: with an increased fluid shift between the cells, structures are optimally rebuilt due to the increased supply situation.

K-Active® PreCut Lymphatic

Then additional strips are put on, this time across the muscle. The base is in the lateral position (=outside), the rest of the strip is put on and fixated with the fascia technique, with vibration and a slight pull inward. By that,



transmit a lot of sensory information to the vegetative and central nervous system.

All of the changes mentioned together put the region in a “gentle state of exception” that can optimize the diverse functions of the body.

### PreCut Lymphatic Fans

In order to save a lot of time when affixing “a Full Recover Criss Cross” application, there are already pre-cut lymphatic fans (for example **K-Active®** Tape Pre-Cut Lymphatic). A 7.5 cm wide kinesiological tape is cut five times, creating six even, narrow strips. By cutting the tape off at the base, the strips can be made that way.

### Variations / Varieties

The bases of the lymphatic Fans can also remain as such, in order to achieve similar positive results.

**Summary: Brahim Boubaker's years of experience as well as many other colleagues**

**show that although this special technique requires a little more time and energy, it can also lead to extraordinary results when used in prophylaxis, but also after injuries.** ■



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