



K-Active®

life!

Issue 7 | 09/2019

THE PERFORMANCE AND REGENERATION CYCLE

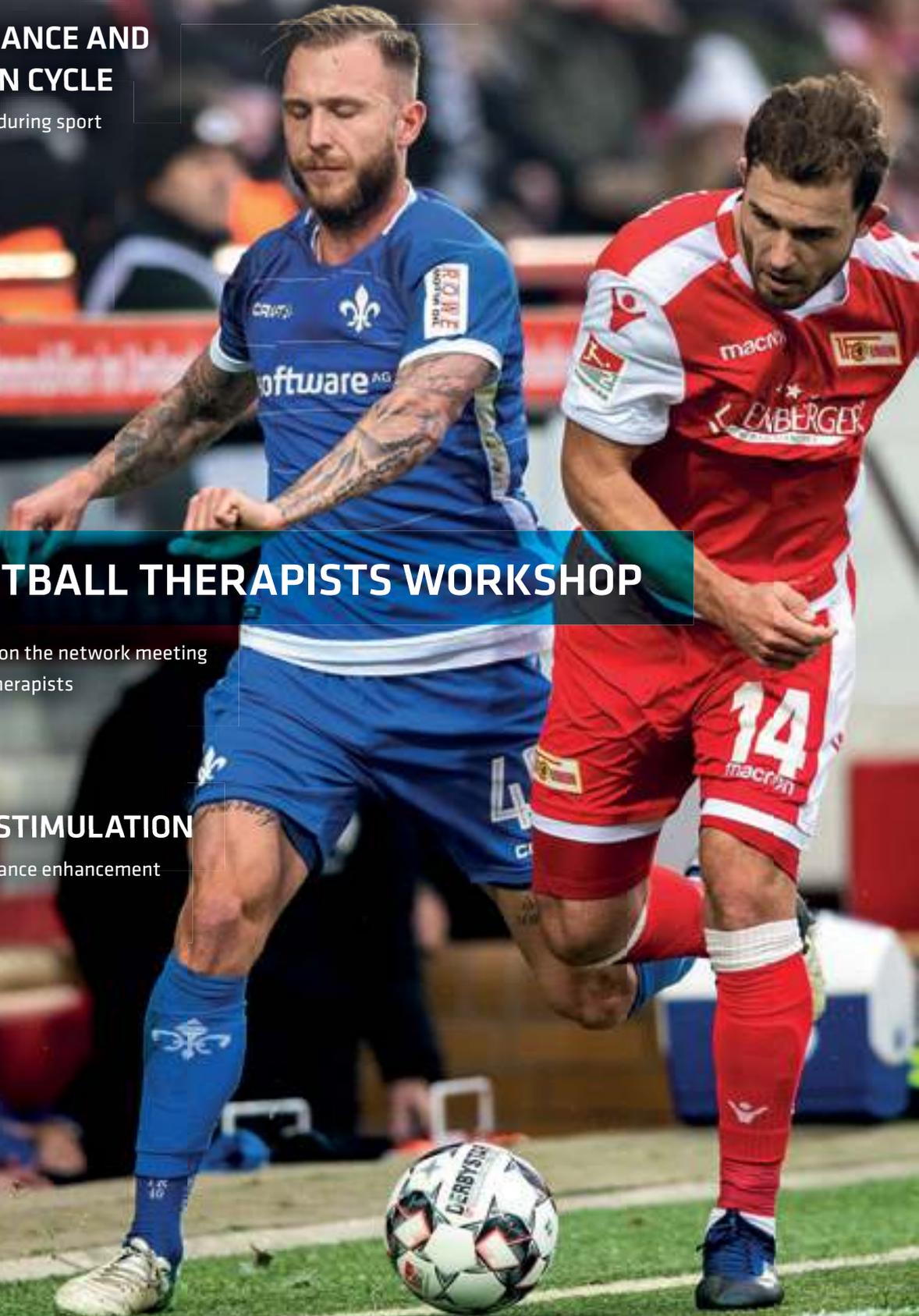
in the daily routine and during sport

1ST BASKETBALL THERAPISTS WORKSHOP

Report and interview on the network meeting of basketball physiotherapists

MECHANICAL STIMULATION

in prophylaxis, performance enhancement and regeneration



Dear customers,
business partners,
friends and colleagues,

In this issue of the *life!*-Magazin (almost) everything revolves around one thing: sport and the fast Return-to-play. In the past months there have been various sporting highlights, which have loos-ened up our everyday life. For example, we were able to support the local school centre in the construction of a putting green for its students, in order to not only relieve them of stress, but also to get them in touch with the sport of golf. (page 11).



Our personal commitment to the environment (page 11) rounds off the tasks and experiences of the past few months.

With this issue, we would like to show you how active the therapy and medical industry currently is, both in terms of new research findings and innovative tools that are designed to maximize your therapeutic and athletic success.

I hope you enjoy reading and learning!

Yours
Siegfried Breitenbach

In August we hosted physiotherapists from the highest German basketball leagues, who came together for the **1st Basketball Therapists Workshop** organized by Christian Thieme of the NINERS Chemnitz (pages 8 / 9). Topic among other things: Understanding the performance and regeneration cycle in sports correctly and making the best use of this knowledge for its players (page 4-7).



Some innovations in our product portfolio should help you to stay or to get fit. The **Hypervolt** allows you to use mechanical stimulation optimally even during a short break (page 10). And with the small pocket-sized **Activ5**, there are no excuses for a short workout anymore: Just connect to the app on your smartphone and there is nothing standing in the way of fast but effective strength training or a sporty game – no matter where you are (page 7).

INHALT

- 03 INJURIES TO THE KNEE JOINT – WHAT TO DO?
- 04 THE PERFORMANCE AND REGENERATION CYCLE
- 07 ACTIV5 THE FITNESS STUDIO TO GO!
- 08 THE INNOVATION: SANOTAPE BY K-ACTIVE®
- 08 1ST BASKETBALL THERAPISTS WORKSHOP
- 09 INTERVIEW WITH: CHRISTIAN THIEME
- 10 MECHANICAL STIMULATION
- 11 „HEALTH AND GOLF“ AT HSG HÖSBACH
- 11 WE INVEST – IN OUR ENVIRONMENT

INJURIES TO THE KNEE JOINT – WHAT TO DO?

A poorly executed offense or an uncontrolled defensive action – a sudden stabbing pain and restricted movement: a knee injury can often be the result. We explain various treatment options to you.

First, the severity of the injury is clarified; if necessary, a doctor is also consulted. Because of the many components of the knee, particularly the upper and lower leg, patella, cruciate and collateral ligaments and menisci, it is important to make a correct diagnosis at an early stage. This is the only way to initiate the appropriate therapy, shorten the time to return to competition and keep possible consequential damage as low as possible. The diagnosis also decides on a conservative treatment or surgical procedure.

When the anterior cruciate ligament is torn, various aspects have to be considered before deciding on a surgery. Often the decision is made by a competitive athlete to perform a timely surgery to prevent possible inflammation to the joint, an amateur or a casual athlete usually takes a little more time. Factors and aspects such as age, frequency of exercise, type of sport and workload are considered before a decision is made.

No matter what the decision is: Kinesiological taping can be used to support treatment before and after a surgery. Lymph fans, affixed with the base in the area of the lymph knots and the fans above the knee joint, ensure an increased drainage of the lymphatic

fluid for example. This can significantly reduce the swelling and often the pain.

A webcut application in the area of the recessus subpopliteus (part of the joint capsule) above the patella compresses this area, therefore reducing the swelling in the area of the capsule and at the same time ensuring better sliding behavior and mobility in the knee.



Lymph tapes, web cut and Tape for the anterior cruciate ligament



Hamstrings

A special technique in which the base is applied to the tibial tuberosity (Tuberositas tibiae) and the tape is pulled back- and upwards (with simultaneous flexion of the knee joint) can support the function of the anterior cruciate ligament. This improves the arthrokinematics and promotes the connection and activation of the stabilizing muscles.

A muscle technique on the posterior thigh muscles („hamstrings“) is an effective and „active“ way to reduce the forward thrust of the thigh, corresponding to one of the main tasks of the anterior cruciate ligament.

In order to further improve the increased volume situation in the

structures, it is recommendable to wear an (hospital) anti embolism stocking. This applies additional compression on the entire leg and the swelling is reduced accordingly. It also counteracts a new increase in swelling due to the hydrostatic pressure (acting forces in an upright position) or physical exertion.

These different therapeutic measures can effectively support the body's own healing processes and therefore optimally prepare the athlete for either the conservative or surgical treatment and care. ■

THE PERFORMANCE AND REGENERATION CYCLE

Many things in our life are bipolar. For example, there is light and dark, happy and sad, fit and tired. This list could be continued almost indefinitely.

It is the same with our life, which is divided into phases of performance and regeneration. Accordingly, we can recognize this bipolarity in our daily routine as well.

Day and night rhythm

In terms of developmental history, we were active during the day and by nightfall the recovery began, as there was no electricity,

there is a change to the parasympathetic, which is responsible for our recovery and regeneration.

In the active phase, we consume energy, strain structures and systems or even destroy them. The regeneration then tries to fill up depots for the new physical stress and to optimally restore structures and systems.

According to the individual requirements and wishes of the body, we can and should supply the right substances at the right time. This means giving the body more trace elements in the morning or during the day and after switching to the „parasympathetic“ giving it more minerals by a balanced diet and possible additional products.

This promotes physical as well as mental performance, but also ensures prophylaxis in order to be better protected against physical overloads and illnesses.

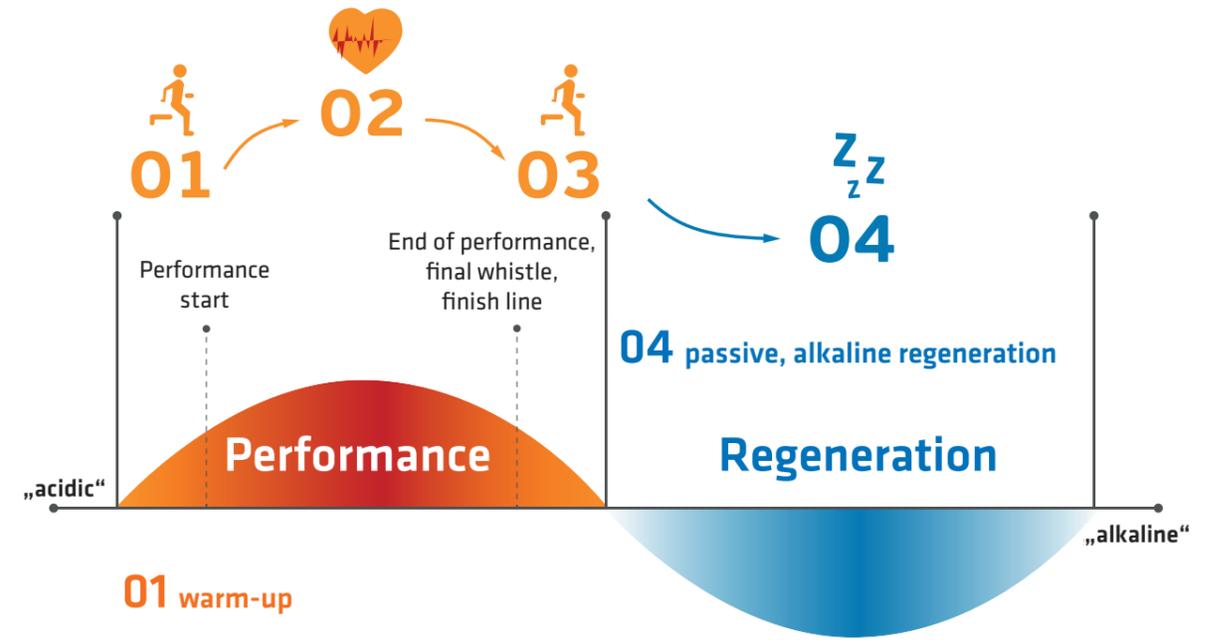
It is especially important for athletes to know these rhythms and to integrate them into their positive training and competition processes.

Therefore, the right food intake, the use of additional products, sleep times and stress periods should be selected in such a way that performance is optimized, but physical overloads and injuries can be avoided.

During the **activity or „sympathetic“ phase**, more trace elements are required, while in the **regeneration or „parasympathetic“ phase**, however, more mineral substances are required. Muscle cramps usually do not occur during the day, but rather at night when the body needs minerals for its regenerative processes. If there are not enough minerals available, the body prioritizes them: for example, the liver becomes a sufficient amount, but the muscles on the other hand too little and a cramp develops.

TV or other modern activities in prehistoric times.

Our body's own systems have developed in accordance with these guidelines of nature. In the early morning, for example, our vegetative nervous system switches to the sympathetic, which is responsible for our activity. In the evening



- 01 warm-up
- 02 athletic performance phase
- 03 cool-down - active, acidic regeneration

Performance and regeneration phase in sports

The **performance and regeneration cycle** is divided into 4 different phases, whereas the **warm-up** and **athletic performance phases** are considered to be equivalent. The main focus in these phases is to introduce the performance level of the human body to the physical strain or to keep the athletic performance at the maximum as long as possible. The pH value in the tissue changes in the „acid“ direction in order to make the tissue more penetrable and more efficient. The athletic performance consumes energy and materials and destroys structures. At the same time, metabolic processes can, for example, take place with insufficient oxygen supply, which among other things leads to the formation of

lactate and then to fatigue if the concentration increases.

The athletic performance consumes energy and materials and destroys structures

The aim of the **cool down** is to further break down these metabolic waste products during the „**acid and active regeneration**“ (tissue is still in the acidic range) by, among other things, light stress stimuli with increased breathing volume. The moderate movements also significantly promote the flow rate of the fluids between the cells, the extracellular and intercellular mass transfer and the circulation via the various vascular systems with arteries, veins and the lymphatic system.

Therefore, metabolic waste products and structural debris can be broken down furthermore, which results in a „cleaning“ of the structures, a change in the pH value and a flushing out of neuro active substances etc., and thus contributes to optimizing the regeneration.

The **alkaline regeneration** is primarily about „cleaning“ the cell, making the lost substances available to it again and rebuilding new structures and increased substance depots in the cells through the so-called supercompensation reaction in the body. At the same time, these processes support the „alkaline“ consolidation of structures and promote physical and psychological regeneration. The tissue's pH-value changes toward the alkaline direction. ▶

Products for the support of the performance and regeneration phases

As already described, the body needs products for its **warm-up as well as for the performance phase and for the acid regeneration** that offer support for the "acidification" of the tissues. In addition to acidification, activated trace elements such as iron, copper, selenium, etc. are very helpful, as they are necessary for the oxygen transport, but above all for the production of enzymes. Enzymes are biocatalysts that run metabolic processes with lower energy consumption. With the appropriate supply, the tissue can be prepared for the physical stress, but can also achieve higher and longer performance.

Depending on the requirements, there is the possibility of using these activated trace elements in liquid form or as a cream, e.g. First Aid Spray or First Aid cream from K-Active®.



In the alkaline regeneration, the need for minerals is very high. Among other things, the cell loses mineral substances because lactate (intermediate product of the metabolism) is a problem for the cell. As a result, the mineral combines and both are flushed out of the cell. In order to compensate for this loss or even to increase the supercompensation, it is advisable to add activated minerals such as

calcium, potassium and magnesium using the **K-Active® Relax Cream**. Therefore, allowing the body to rebuild the regeneration of structures faster and better.

Summary: Evolutionary history shows, the body always works in rhythms. These should be applied in our "normal life" through a healthy lifestyle, but also should be un-

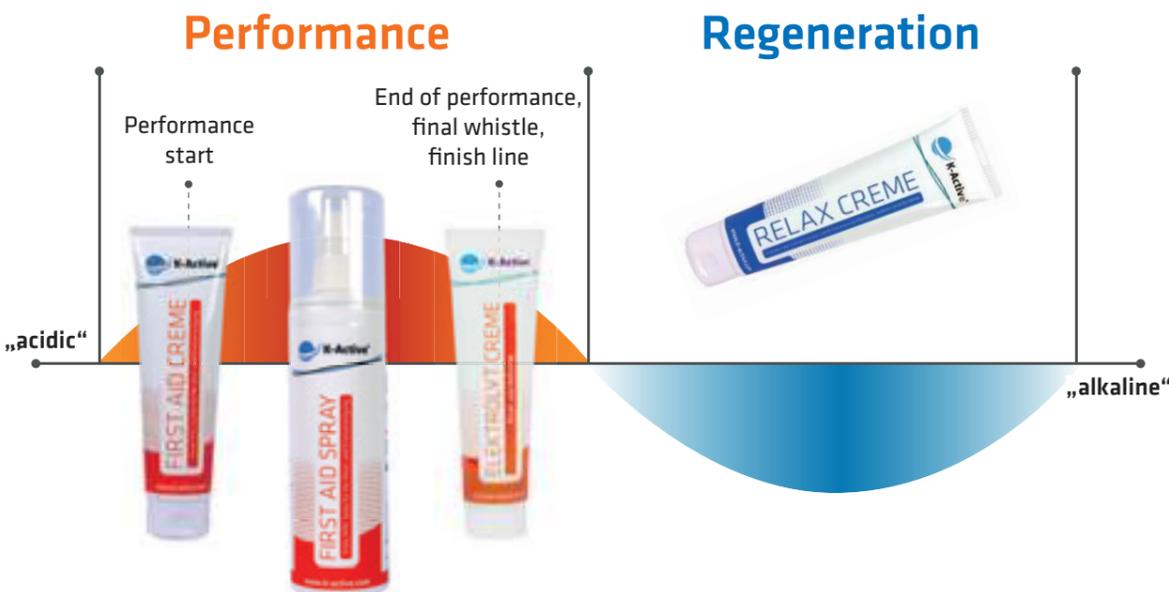
derstood by all athletes and their coaches in order to optimally design stress stimuli and regeneration times. In addition, these should also be considered to ensure a balanced diet at the right time of day or adapted to the training and play times. In addition, subjective (frequent susceptibility to infections) or objective (blood tests) findings

can lead to recommending additional products for athletes for external and internal use. Sleep times are also very important, since the regeneration in the body is intensively promoted there. New studies also show, that for example neural connections which were created through coordination training are checked during sleep times and these connections are then reduced to a minimum, so that the nervous system can subsequently work optimal and with less energy expenditure.

It is also very important to shield yourself from electro smog as much as possible during sleep. This also includes not having the mobile phone in the bedroom or switching off the WIFI overnight.

The body is a very sensitive system and needs support in many different ways in order to achieve high performances and to protect itself against physical overloads, injuries and illnesses. ■

More information at: www.k-active.com



THE FITNESS STUDIO TO GO!

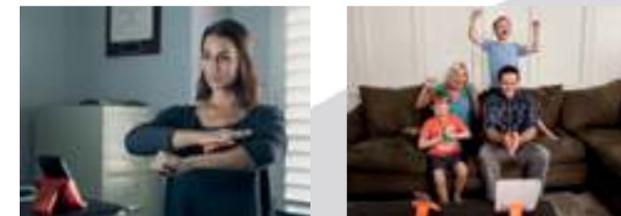
activ5 activforce

The **Activ5** is an innovative training device from the USA.

The small, handy format and the connection to your smartphone enable an intensive workout wherever you are: whether on the beach, during lunch or on the sofa.

A variety of free games for smartphones and tablets also make it the perfect play device for children, because here are fun and sport easily combined.

No matter whether you train hard and measure your results, document the progress of your patients or just want to have fun with the family: the **Activ5** und **ActivForce** are the right companions. ■



More than 100 workouts and 1000 exercises



Play and exercise at the same time



Whole body exercises for every fitness level



Measures over 90 kg of muscle strength

THE INNOVATION: SANOTAPE BY K-ACTIVE®

Steffen Barth, physiotherapist and owner of outpatient semi-inpatient rehab therapy and wound healing centers nationally and internationally, relied on gold and silver for the development of his „Sanotape“ product.



Inspired by Chinese medicine – gold gives energy and silver takes it – he developed a wafer-thin gold and as well a silver foil, which is applied to the skin by means of an airtight carrier. This „Sanotape“ and the body now each represent an electrode. The sweat, which is formed under the airtight protective film, can reflect body heat and electromagnetic radiation and

increase the body's own currents. Now these processes can additionally support the body in its performance and regeneration cycles.

Experienced users report a volume reduction and pain reduction in the area of the tape, mostly due to an improvement in the inflammatory processes. A lower skin temperature can also be observed in the area of the application.

The areas of application of Sanotape are diverse: whether for pressure points and blisters, the treatment of scars or a wide variety of pain problems - both in human and in veterinary medicine.

Already initial studies can partially prove the effects scientifically; more studies will follow in order to better understand the mode of action and mechanisms. ■

INTERVIEW WITH: CHRISTIAN THIEME

Physiotherapist of the NINERS Chemnitz

K-Active®: Mr. Thieme, with the NINERS Chemnitz you have decided to look after a basketball team. What do you particularly like about this sport?

Thieme: „I like fast sports with quick changes in direction and speed. As I like the physique the boys have to show on the court. I've also looked after ice hockey teams before.“



K-Active®: In basketball there are usually only one-year contracts and then the team is put together again. How do you cope with these constant changes?

Thieme: „Actually very good, because our processes are always the same in the end and I like getting to know new people again and again. If you have a good relationship with some players, you stay in touch even beyond the contract.“

K-Active®: How is your medical team set up?

Thieme: „We have a total of 8 doctors under the leadership of a team doctor, two clinics, a rehabilitation center and my team, consisting of 15 physiotherapists and two therapists during training and game operations.“

K-Active®: Are there automatisms in the times before, during and after the game?

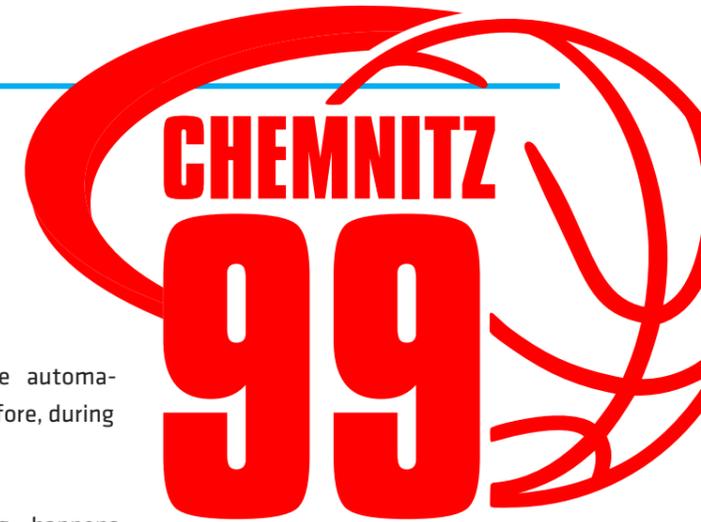
Thieme: „Everything happens automatically, whether it is preparing jerseys, bottles or towels, taping the players or watching the boys during the game. Everything runs with like a tunnel vision. Usually, you are not approachable.“ *(winking)*

K-Active®: In this fast and athletic game, physical overloads and injuries are often inevitable. Which of these do you need to treat most frequently?

Thieme: „The most common are ankle, knee and muscle injuries. Broken nasal bones and lacerations are also very common, but they do not result in long downtimes.“

K-Active®: How do you treat these overloads and injuries therapeutically?

Thieme: „The most important thing is prophylaxis in the sense of stabilization training of the ankle and hip. The first aid treatment of the injuries begins immediately on the sidelines with ice and compression treatment. Immediately after the diagnosis is made, the individual therapy begins, which



is usually accompanied by manual lymphatic drainage and lymphatic tapes. It is important to know that therapy can not shorten the healing time, but rather optimize it, even if the trainer's ideas are a little different.“

K-Active®: In your daily work where can you benefit from the cooperation with K-Active®?



Thieme: „K-Active® is our most important supplier with a very large selection for individual needs for every type of supply, prevention and regeneration material. We very much appreciate the quick delivery of the products within 2 days“ ■

1ST BASKETBALL THERAPISTS WORKSHOP

On August 24th Christian Thieme and K-Active® invited to the workshop in Hösbach.

The goal: to create a network among the therapists of the basketball teams of various leagues. And the invitations were gladly accepted! Physiotherapists from the BBL, DBBL, ProA and ProB came together in the K-Active® training center. Heike Friedrich also ensured a presence from wheelchair basketball.

The professional program was diverse and ranged from sports and kinesiological taping to anatomical structures and physiological processes in the body to the

presentation of training methods and proven products. During the breaks and at dinner together, people networked and personal experiences were exchanged.

Due to the very positive response and the great interest of the participants, everyone involved agrees that the basketball therapists' workshop will have to take place again for the second time next year. We're looking forward to! ■



Bogdan Suciu demonstrates a tape application on the knee



Workshop in the K-Active® training center



Participant tests the new Activ5

MECHANICAL STIMULATION IN PROPHYLAXIS, INCREASED PERFORMANCE AND REGENERATION

A pioneer in the field of mechanical stimulation is Prof. Vladimir Nazarov from Russia.

After his career as a professional gymnast ended, Prof. Nazarov had the goals of increasing flexibility, but also strength and coordination. He also strived for faster regeneration after training and competition.

Biomechanical stimulation as described by Nazarov

In addition to his own knowledge, he also used anatomical and physiological knowledge from the former GDR to develop devices for mechanical stimulation. He named his method the BMS - „Biomechanical Stimulation“.

Amplitudes and frequencies are precisely defined in the various devices. These different stimuli enable, for example, an improved fluid shift between the cells with simultaneously improved oxygen and nutrient supply via the arteries. At the same time, the removal of waste products and structural debris via the venous and lymphatic systems is optimized.

After stretching muscle structures using the vibrations, you can achieve an incredible increase in the movement amplitude. There are different frequencies for pain relief, coordination and strength development or for better regeneration after training and competition.

Mechanical stimulation devices

Various companies developed „floor-standing devices“ that transmit the amplitudes and frequencies to the body. The best-known manufacturers include Power Plate or Galileo. Their products are already used effectively in sports and fitness or for various problems in rehabilitation.

The current trend is also towards mobile devices. So convinced



Mechanical stimulation device in Praxis S. Breitenbach

for example, the Hypervolt from Hyperice already users in sports, but also therapists and rehabilitation facilities.

Advantages of the mobile vibration massage

Its 3 different frequencies as well as the different attachments allow the user to quickly apply mechanical stimulation. The Hypervolt enables the user to independently treat the arms and legs. The mobility of the device and the significantly lower price compared to large vibratory plates make it an attractive tool.

In addition to self-therapy, the Hypervolt offers trainers, coaches and therapists the opportunity to briefly treat the athlete before and after the competition and during breaks - whether to increase performance, reduce injuries or accelerate the regeneration. ■

„HEALTH AND GOLF“ AT HSG HÖSBACH

The Hanns-Seidel-Gymnasium opened its putting green in July. Students should clear their heads through sport and overcome stress. K-Active® supports this extraordinary project.

„Sport helps clear your head, activate your metabolism and overcome stress and aggression.“ - explained Professor Dr. Dietrich Grönemeyer, who opened the small golf course on the school grounds of the Hanns-Seidel-Gymnasium, the very important advantages of physical activity, especially for children. Grönemeyer is impressed by the harmony that prevails in the school center, despite 3,000 children of different school types and ages. For him, the putting green is the perfect place to teach children about the importance of sport and health.

For the headmistress Ulrike Wombacher, the design of the course was a logical step, because golf had already been offered in elective school courses and was well received by the students. The acceptance of the teachers for such a project also helped enormously in the implementation.

Physiotherapist Siegfried Breitenbach from the local K-Active® Europe GmbH helped with the financial support to make the golf course possible. The company offers all sorts of products to support sport and health, so it was a matter of the heart for Breitenbach to support the project. He is enthusiastic about the teacher's commitments, above all Christian Davis, who is committed to the construction of the sports facility.

„The school has to live“ Siegfried Breitenbach

The German Golf Association e.V. is also impressed. The association supports a wide variety of projects across Germany, and „the golf course in Hösbach is definitely one of the flagship projects,“ says representative Susanne Leimeister. She is happy that the children can make their first contact with golf at school, „that's a great thing“. ■



Putting Green at HSG in Hösbach

Speech by Dietrich Grönemeyer

WE INVEST - FOR THE SAKE OF THE ENVIRONMENT

The topics of environmental protection and renewable energy are more present in our everyday life than ever before.

We also want to contribute to save resources and protect the environment. For years now, the photovoltaic system on the roof

of the company building has been generating the energy for the daily work in the company. But we also want to reduce our garbage. This is

getting turned into filling material with the new cardboard shredder to fill out our shipping boxes. This way we save an enormous amount on filling material.

We certainly cannot make our planet better on our own, but at least we can contribute to it with a clear conscience. ■



why the organic garbage gets on the compost and then as fertilizer in the fruit and vegetable garden. Old cardboard boxes are not disposed of, but



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