

# RE **69** FLEX

THE KIESER TRAINING MAGAZINE



## Anyone with a high level of responsibility needs a strong back

Rudi Völler, Sports Director at Bayer 04 Leverkusen talks about training discipline and the new partnership with Kieser Training

INTERVIEW BY ADRIAN SCHRÄDER

**Mr Völler: You played professional football for 19 years and have worked in the sport for much longer. What is your relationship to training?**

I think I can honestly say that I always trained hard. As per the motto: No pain, no gain. You can only improve if you train smartly. You have to work constantly on your particular weaknesses. Talent is only the basis.

**Who taught you that?**

No one: Fortunately, the motivation came from within. I saw what others could do with the ball – their shooting technique, how they headed or dribbled the ball and I wanted to do the same.

**You are talking here of training with the ball. At the start of your playing career, did you do any strength training?**

Yes, even then. It started at the end of the seventies at the time my professional career really took off. Of course, it's mainly about the ball. After all, the game is called football. However, even as a youngster I realised that I was rather skinny and that I would need to add muscle mass if I were to hold my own – but only up to a certain point. It should never be overdone!

**At that time, was it all about the legs or did you do strength training for the entire body?**

It was for the entire body even then but more in the sense of general fitness. For example, back then we did not realise the importance of the back in football. The rapid changes of direction, sudden stops and starts, overextending the body when heading the ball, etc. put an enormous strain on the spine. Today, our training is much more targeted and so the exercises for the back muscles are more effective. Back problems are very common in football.

**Do you have back problems?**

Only the usual age-related problems (*he laughs*) but I dutifully do my back exercises before I go for a run. The knees are my problem area – cartilage damage; this is normal wear and tear after 19 years in professional sport.

**What are the differences in general between training then and now?**

Today, the role of fitness is in a quite different league. Players run much more and play more often. Thanks to science, players can train in a much more targeted and effective way and all of this is done under really expert guidance. After all, anyone can make a mistake when exercising and it is

essential to avoid that. However, even in my day we trained hard.

**What is your experience: Can targeted strength training prevent injuries? To what extent did strength training help you recover more quickly?**

Yes, there is no doubt that a good muscle corset can prevent many injuries, e.g. those triggered by an awkward move. In addition, particularly after injury it is very important to start training as soon as possible. However, the training needs to be cautious and tailored to individual needs. With scientific advances, we also have many more targeted exercises.

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**You are currently Director of Sport at Bayer 04 Leverkusen and have been closely connected with the club for many years. As a player, how did you find your way to the club?**

I was coming to the end of my career. I was 34 years of age and had just played in the World Cup in the United States. I was under contract to Olympique Marseille and wanted to move on and find another club for some two years. I had several approaches both from the Bundesliga in Germany and from Italy. Reiner Calmund, at the time Head of Sport at Bayer 04 Leverkusen, came to Marseille and invited me for a meal. We actually shared a bouillabaisse although I did not get my fair share and so I said to him: "I am still hungry. We will continue this in Leverkusen."

**Did you always think that you would remain in the sport after the end of your playing career?**

Not necessarily, but it is natural to consider what you understand best. I had always been attracted by management. I had done my clerical apprenticeship in the office of Kickers Offenbach and even then, I was interested in what went on behind the scenes. In contrast, becoming a football coach had never been on my agenda. I sort of fell into it.



**Can you describe your normal day?**

Hoping the entire week for maximum output (i.e. we win well) in return for minimum input (*he laughs*)! Broadly speaking, it is a mixture of media work, meeting sponsors or consulting the trainer, human resources, squad composition and contract work.



**From the outside, it seems that Bayer 04 Leverkusen is not a lavish club but relies on inhouse virtues: A strong team spirit combined with the targeted development of players seem more important than star names. Do you share that view?**

Yes, definitely. We invest in young players and then develop them in a targeted way. For example, we trained the new national player Kai Havertz here in Leverkusen. For a club, that is naturally the ideal scenario.

**Kieser Training has been a sleeve sponsor of Bayer 04 Leverkusen since the start of this season. Why do the two brands fit well together?**

It's simple: Kieser Training, like Bayer 04 Leverkusen, is focussed and professional in its work. We both respond to challenges in a targeted way and do this under expert supervision; without bells and whistles and without forgetting what really matters. For us, it is to play successful, attractive football. For Kieser Training it's about a strong, healthy body. And because the latter is a prerequisite for everything else, we are an ideal fit.

**How did the trainer Rudi Völler motivate his players? What did you say to them in the locker room?**

It's not a great secret. What happens in the locker room is sometimes overrated. Of course, your words can motivate the team and arouse their fighting spirit. Much more important, however is the daily work with the players – with each and every one of them. You support them and get to know them and their strengths and weaknesses. Then you can help them develop. Targeted training makes all the difference.

**In the past, there were often fascinating stories about players who skipped training. Is that still the case?**

No, it hardly ever happens in that form. Of course, you occasionally have to give someone a slight nudge but anyone who wants to play in the top league cannot afford to be lazy. That would take its toll immediately. In addition, the younger generation know very well where they want to be.



## Effect of strength training on sporting performance

### 1 Beef up your muscle engine

To trigger the neuromuscular adaptations required for muscle build-up, we must subject them to a training stimulus above a specific threshold. This is why we recommend high intensity strength training to the point of local exhaustion. In sport as well, beefing up your muscle engine can have major benefits as it provides functional reserves whether for football, cycling or running.

### 2 Improve performance

Progressive training cannot replace sport-specific training. However, it can improve performance parameters important in sport, e.g. maximum strength, maximum jump height, sprint speed and throwing or impact velocity.

### 3 Minimise injury

Sustained peak performance? Athletes can only achieve this if they remain free from injuries such as back pain and overload syndromes. Quite logical when you consider that such injuries can limit sporting performance or even end a sporting career. It does not have to be like that. Meta-analyses have shown that strength training can reduce sports injuries by two-thirds and overload syndromes by a half.

### 4 Not a waste of time

No ambitious athlete willingly spends time in the strength room if that time can be used to play their sport instead. We recommend high intensity strength training once or twice a week. It should cover the major muscle groups and each exercise should be done through the entire range of motion to muscle exhaustion: It's important to allow your muscles 48 hours to regenerate.

# Strength training improves performance indicators for football



Sporting performance depends upon many different factors. Strength training as a complement to football training has a positive effect on the individual performance indicators required for football.



## Increase maximum strength

Young footballers who did progressive strength training for four months twice a week increased the maximum strength of their upper and lower body by more than the group that “only” did football

training. Those in the strength training group increased the maximum strength measured on the leg press by an impressive 58.8%. Their fellow players in the football group only achieved 33.8%. Only the footballers who also did strength training were able to increase the strength of their upper body, and here the increase was 52.3%.



## Improve jumping ability

Similarly, the group that did strength training were also ahead in terms of the height they could jump. When

doing squat jumps, this group increased their jump height by an average of 31%, whereas the football group only increased it by 9.8%. With the so-called countermovement jump, the strength-training group increased their jump height by an average of 24.6%, whereas the football group only achieved 6.3%.



## Sprint faster

Admittedly, neither group achieved a significant improvement in 10-metre sprints. However, the strength training group did achieve an appreciable improvement in 30-metre sprints.

## It is clear

that in combination with specific football training, progressive strength training can be used to develop the physical capacities of young footballers. In addition, strength training reduces the risk of injury and so we should not underestimate the indirect benefit it has on sporting performance.

Provided it is used properly, strength training is safe and effective even for youngsters. Even more than natural growth, it helps youngsters build up their muscles and strength and so lay the foundations for life's daily and sporting challenges.



## MONIKA HERBST

Often a brief sneeze or laugh is all it takes: involuntary urine leakage. It particularly affects women who have a wider pelvis than men so that they have children. As a result, the retention and support function of the female pelvic floor has to work particularly hard and is often under excessive strain, e.g. after frequent surgery to the lower abdomen or childbirth, obesity or a connective tissue weakness.

In addition, the menopause and the associated hormonal changes often weaken the tissue further. In that case, physical exertion, such as coughing, laughing, climbing stairs or heavy lifting can cause an unintentional urine leakage. The problem is that the pelvic floor muscles have become weak and so the mechanism that keeps the urethra closed is

# Pelvic floor training supports your bladder



no longer reliable. This is referred to as stress incontinence and affects one woman in four.

The good news is that you can do something to combat it. A study by ZHAW, the Zurich University of Applied Sciences showed that targeted muscle training can help to reduce mild stress incontinence. In the study, 18 women between 40 and 65 years of age and affected by stress incontinence trained twice a week for three months on the A5 pelvic floor machine. This training machine was developed by Kieser Training and introduced into its centres in 2012. Many people do not know the correct

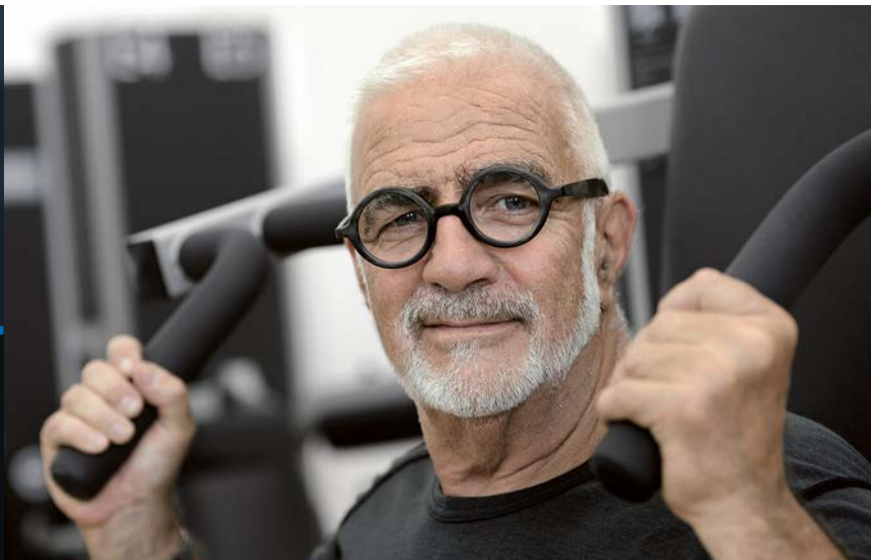
way to tension their pelvic floor muscles and so a feedback mechanism is particularly important with this machine. When training on the pelvic floor machine, users deliberately tense and then relax the pelvic floor muscles and so control a virtual ball on the screen as it moves along a predefined line. The machine's seat has an inbuilt pressure sensor that measures minimal changes in the strength generated by these muscles and transfers them to the screen. Users can see immediately how accurately they are training and the effect of changes in tension.

The results of the study are promising: After training for three months on the A5 pelvic

floor machine the participants were able to maintain for longer the strength produced by their pelvic floor muscles and do the exercises with greater precision. In addition, their stress incontinence had reduced.

## WERNER KIESER'S CORNER

TRAINING  
PRINCIPLES ARE  
ESSENTIAL



**Training Principle 5: Do each exercise until the relevant muscles reach local exhaustion, i.e. until you cannot do a complete repetition. If you can do the exercise for longer than 120 seconds, enter a note on your training card to increase the weight by about 5% at your next session.**

I am sometimes asked: "Why to local exhaustion?" It's about including, as far as possible, all available muscle fibres. No-body knows exactly at what percentage this is achieved. It may be that 95% is enough but how can this be measured? The only accurate measurement is the point at which the muscle actually fails, i.e. 100%.

The word "exhaustion" sounds rather drastic but it's not if you train correctly. If you do an exercise properly, then the point of exhaustion occurs quite suddenly. It is when no further movement is possible. When this happens, it is crucial to avoid trying to fit in one further repetition by straining every sinew or twisting the body because that only brings into play muscles other than the target muscles.

The best approach is to look at the clock when you start and finish the exercise and in between, just concentrate on the muscles being exercised.

*"The word 'exhaustion' sounds rather drastic but it's not if you train correctly"*

## Australian Football: Strength protects the body Cooperation with the Essendon Football Club in Melbourne

MONIKA HERBST

Australian Football is extremely demanding. "I believe it is the most demanding team game in the world," says Dave Rundle, Chief Physiotherapist at the Essendon Football Club in Melbourne, one of the largest professional clubs in Australia. As he explains, each game lasts some 100 minutes, during which players run between 13 and 15 kilometres, often at high speed. In addition to covering such a distance, players have to change direction quickly and there are frequent collisions. It is a full-contact sport, i.e. players are allowed to tackle and attack opponents directly. In contrast to American Football, they do not wear protective gear. The game puts an extremely high load on the body and players need to be robust. Regular strength training – twice or three times a week – is part of the weekly routine for the Essendon players. Strong muscles help them maintain their speed for the entire game and provide the strength required to rob the opponent of the ball.

"The risk of injury and long-term wear and tear are extremely high in Australian Football," explains Chief Physio Rundle. An Essendon player with first-hand experience of injury is Michael Hurley, who shared his experience with the AFL Players' Association: Hurley's back problems started in 2012 and his conditions deteriorated over the next few years. He suffered immense pain and sometimes was unable to run properly. He was even given PDAs, i.e. blocking of the spinal nerves to numb the pain. This at least allowed him to move



about. The cause of his problems remained largely unclear. The doctors were only able to identify a small curvature of the spine.

In mid-2016, his physios recommended Kieser Training. As Hurley explained to the Players' Association, he found the machine-aided strength training very pleasant. "I use machines that are specifically designed for the lower back, which allows me to strengthen the muscles that I otherwise do not use. In normal training, we often use weights but they are less targeted and so not as suitable." Since he started training at Kieser, his condition has improved significantly and he is now playing football without pain.

However, things should never have got that bad. Rory Alexander, Centre Manager at Kieser Training Essendon wants to expand the cooperation with footballers so that they come to the Centre for preventive reasons rather than rehabilitation. As we know, strong muscles protect, stabilise and reduce the strain on the body – including and in particular with demanding sports such as Australian Football.

**Strength is crucial for players in the Australian Football League as it allows them to compete at the highest level.**

## Imprint

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